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The Influence of College English Flipped Classroom on Self-efficacy of English Majors

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Abstract. The Flipped Classroom (FC) has gained international attention as a teaching approach in education due to the constant advancements in information technology and instructional theories. It has brought new life to the reform of college English and transformed the conventional teaching model. Currently, some researchers found that college English FC was conducive to cultivating the English Self-efficacy (SE) of English major students, but there is still a research gap regarding the correlation between English SE and classroom satisfaction. Therefore, this study took 107 English major students from a 211 university as the subjects, using the background information questionnaire and the English learning SE scale. SPSS was used to conduct correlation analysis and independent sample t-test to detect the relationship between students' preference for the FC in college English and their English SE, as well as the impact of the FC on the SE of English major students. The study found that there was a significant positive correlation between the preference of English major students for the FC in college English and their English SE; the level of English SE of learners under the FC model was higher than that under the traditional model, but the difference was not significant. This study fills the research gap on the relationship between English major students' preferences for FCs in college English and their English SE, promotes the interdisciplinary integration of education and psychology, and provides a theoretical basis for the reform of college English teaching and the enhancement of students' confidence.

Keywords: English learning SE scale, English SE, FC, English major students.

1. Introduction

The well-known American psychologist Bandura first put forth the idea of SE in 1977. According to Bandura, the term "SE" describes a person's anticipation, perception, confidence, or belief in their capacity to carry out the action process necessary to accomplish a certain goal. SE is a non-intellectual factor, which affects factors such as an individual's interest, motivation and self-confidence in an activity to achieve a goal [1]. His research shows that SE is the core of a person's self-regulation system. It is an individual's judgment on whether he is capable of organizing and executing a certain behavior, and it is a good "predictor" of self [2].

The concept of the FC was first proposed by J.Wesley Baker at the 11th International Conference on College Teaching [3]. As the concept and teaching model of FC have gradually matured in

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foreign countries, a reform wave of new teaching models has emerged in China. In 2017 and 2018, China successively issued several policies, establishing the strategic position and role of educational informatization in the overall education reform and development, and reaching a consensus that the profound combination of information technology and education is necessary. The FC is a typical new teaching model that integrates classroom teaching and information technology [4]. The purpose of this study is to explore the impact of FC on English majors' SE, in order to explore the help and significance of FC for English learning from the perspective of English majors.

2. Literature review

Albert Bandura, which first systematically proposed the concept of "SE," described as "a person's confidence in their capacity to plan and carry out actions to reach objectives in a specific context." Four sources of SE were identified: Mastery Experiences, Vicarious Experiences, Verbal Persuasion, and Emotional Arousal.

The FC was first implemented in primary and secondary schools in the United States. It began in 2007 and gradually spread to university classrooms. With the continuous deepening of the FC teaching practice, related application research has been growing, leading to a series of research outcomes. The application research abroad mainly focuses on the application effect of the FC in teaching practice, the comparison study with traditional teaching models, and the methods of the FC for teaching design and implementation. For example, American educational technology expert Strayer conducted a comparative study with traditional classrooms and verified that the FC has a substantial positive effect on developing learners' collaborative and innovative skills [5]. Scholars from California State University, Enfield, conducted a practical research on the interactive FC model, and the results showed that the FC had a remarkable effect in helping students internalize learning content, improving students' self-confidence and autonomous learning ability [6]. American scholar Davis confirmed the positive effects of the FC through empirical research and particularly pointed out that its personalized learning method enhanced students' learning motivation [7]. These studies are mainly for science and engineering courses, while the application research for liberal arts courses is relatively less. For example, two American university history teachers, Gaughan and Westermann, boldly innovated and attempted to apply the FC model in history courses [8,9]. Their research showed that the FC could increase students' engagement in the classroom, enhance their enthusiasm and motivation for participating in classroom discussions and interactions.

In the field of education, there is a correlation between SE and learning behavior. Nilsen pointed out that in order to achieve success, learners with high levels of SE will work harder because second language learners who believe they can succeed have a more positive learning attitude [10]. Kormos et al.'s research also revealed that second language learners who believe they can succeed have a more positive learning attitude [11]. SE builds an ideal self-image of a second language learner, stimulating motivational learning behavior, and thus achieving better learning outcomes [12]. Maricu oiu and Sulea, as well as Ben Eliyahu, et al.'s research also confirmed that SE is a key driving factor for participation in the FC [13,14]. However, until recently, there have been only sporadic studies in China that have focused on SE in the FC. For example, Liu Wenting and Guan Min conducted a survey comparing two groups of 120 subjects and found that the FC could enhance learners' SE, but there was no significant difference in SE among learners in the traditional classroom [4]. However, this study did not use the internationally recognized SE scale and only conducted a cross-sectional longitudinal comparison, without involving the correlation between SE and classroom satisfaction.

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This study will answer three basic questions: 1) To what extent are English majors' SE? 2) To what extent do English majors' fondness for college English FC affect their SE? 3) Can flipped College English classroom improve the SE of English majors?

3. Research design

3.1. Participants

In this study, 107 students majoring in English from a 211 university were selected as subjects, including 19 men and 88 women; Among them were 23 freshmen, 24 sophomores, 27 juniors, 17 seniors and 16 postgraduates.

3.2. Measurement

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3.2.1. Background information questionnaire

Statistics was collected on the acceptance and affection of students who had taken a certain course through the FC this semester regarding the FC.

3.2.2. English learning SE scale

(Filling method: Using the Likert 5-point scale (1 = strongly disagree, 5 = strongly agree)

3.3. Data analysis

SPSS is used to analyze the collected valid data, mainly including correlation analysis and independent sample t-test. The correlation analysis was used to examine the relationship between English major students' fondness for the FC of college English and their English SE; The independent sample t-test was used to compare the differences in English SE among learners in different classroom settings.

4. Results and discussion

4.1. Fondness for the FC of college English and English SE

This study conducted a correlation analysis of the data obtained (Pearson index). As shown in Table 1, there is a significant positive correlation between English major students' fondness for the FC of college English and their SE in English, indicating that the higher the fondness for the FC of college English, the higher the SE of English major students.

Table1: Fondness for college English FC and English SE

		Degree of fondness for the FC	English SE
The degree of fondness for the FC	Pearson correlation	1	
English SE feeling	Pearson correlation	.662**	1

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Note. * * < 0.01

4.2. A comparison of learners' English SE in different classroom environments

The independent sample t-test showed no significant difference in English SE between the two teaching Settings (t=0.172, p=0.864>0.05) (See Table 2). The average English SE of learners in the FC model was 3.291, with a standard deviation of 0.803; The average English SE of learners in the traditional classroom model was 3.248, with a standard deviation of 0.727. As a result, learners in the FC model had higher levels of English SE than those in the traditional model, but the difference was not significant.

Table 2: English SE of learners in different classroom settings

3. Have any teachers used the FC model in their regular classroom learning? (Flipped model: Students independently acquire fundamental knowledge by utilizing videos and reading materials, etc. before class, and the class time is used for discussion, practice, writing and problem-solving, with the teacher changing from a "lecturer" to a "guide".)		N	Mean (standard deviation)	t	p	Difference comparison
English SE	1	96	3.291 (0.803)	0.172	0.864	FC > Traditional classroom
	2	11	3.248 (0.727)			

4.3. Discussion

This study found that the English SE of English major students who learned through the FC model was higher than that of those who learned in the traditional classroom model, indicating that the FC is conducive to cultivating students' English SE. This finding is consistent with the conclusion of Liu and Guan regarding the positive impact of the FC(2). However, they conducted the experiment by dividing 120 non-English major students into an experimental group and a control group and only conducted a cross-sectional and longitudinal comparison, without involving the correlation between SE and classroom satisfaction; while this study selected 107 English major students directly for a questionnaire survey, did not set up a control experiment, but analyzed the relationship between the students' fondness for the FC of college English and their English SE, that is, the higher the degree of students' fondness for the FC of college English, the higher the SE they demonstrated. This finding fills the gap of previous research.

In conclusion, the FC of college English is conducive to cultivating the English SE of English major students. A key challenge for teachers lies in promoting both student adaptation to and engagement with this teaching approach. The FC does not imply the weakening of the teacher's position. On the contrary, in this model, the teacher plays an indispensable leading role. Therefore, it is necessary for the teacher to enhance their abilities in information technology, instructional design, and organization of teaching activities - before class, the teacher needs to produce high-quality teaching videos by leveraging modern information technology, and also needs to provide various learning resources to students through teaching platforms that match the textbooks or by using QQ

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network platforms, maintaining regular interaction and communication with students, monitoring students' autonomous learning progress, and thus building a learning environment that combines collaborative learning and individualized features for students. During class, as the guide and organizer of classroom activities, the teacher needs to master various strategies for organizing classroom activities and also needs to participate in students' tasks appropriately and provide real-time feedback based on the students' implementation of tasks [15].

This study has certain limitation, which is reflected in the fact that all the participants were from the same institution. Future research can investigate whether the effect of the FC on the SE of learners in different levels of institutions is also different, in order to determine the "optimal flipped ratio" for different levels of institutions, making the FC teaching strategy more targeted. In addition, future research can systematically investigate the influence of individual characteristics, such as learning styles and personality traits, on the acceptance of FCs. For instance, extroverted learners may be more likely to adapt to the interaction requirements of FCs, while introverted students may experience anxiety. This research direction can reveal the boundary conditions for enhancing SE in FCs, clarify the moderating role of individual differences, guide differentiated instructional design, and avoid the "one-size-fits-all" model from exacerbating learner differentiation.

5. Conclusion

Through research, this paper finds that college English FC is conducive to cultivating students' English SE, and the higher the degree of students' preference for the FC in college English, the higher their SE. Therefore, educators should constantly learn new technologies and new ideas, provide effective guidance and services to students and establish high-quality classrooms that are in line with the development characteristics of students, promoting students' adaptation and participation in the FC teaching model. The main contribution of this paper is to fill the research gap between students' preference for the FC in college English and their English SE. By revealing the intrinsic connection between teaching methods and students' psychological states, it promotes the interdisciplinary integration of education and psychology, which is conducive to guiding the direction of college English teaching reform to stimulate students' interest and enhance their learning confidence.

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