
Liu Weiwei

Basic Teaching Department, Shandong Huayu University of Technology, Dezhou, Shandong, China
253034
673559273@qq.com

Keywords: rain classroom, flipped classroom, college English, empirical research

Abstract: In recent years, with the deep integration and continuous development of information technology in college English teaching, the rain classroom and flip classroom have attracted great attention from many educators. Aiming at the comprehensive application of the two in the English teaching of higher vocational colleges, this paper has conducted a series of studies using empirical research methods. On the basis of understanding the current situation of English teaching in higher vocational colleges and the reasons for the analysis, the rain classroom and flipped classroom have been organically combined in the English teaching of higher vocational colleges. The new practical teaching of the “rain classroom + flipped classroom” teaching mode (“RCFC” or “Double Classroom”) has been carried out in vocational college English. Through the statistics and analysis of the data before and after the test, we can further understand and test the remarkable achievements of the college students' English teaching practice in the “double classroom”.

1. Introduction

Since the “Guidelines for College English Teaching” (2016) clearly requested the teaching methods, how do teachers “implement a hybrid teaching model based on classroom and online online courses?” How to better promote students' independent learning and enhance the interactive and mobility of college English teaching? Such issues have always been a research hot topic in the field of college English teaching.

Based on the training objectives of English talents in higher vocational colleges and the further interpretation of the requirements of teaching methods in College English Teaching Guide (2016), combined with the characteristics of students in higher vocational colleges, this paper constructs and practices college English based on rain classroom application. Flipped classroom teaching and innovative wisdom teaching mode to change the shortcomings of traditional college English teaching mode, in order to provide useful enlightenment for improving the quality of college English teaching, the comprehensive quality of students and the quality of personnel training.
2. The definition of concept

2.1 Rain Classroom

Rain Classroom is a hybrid teaching tool based on PowerPoint and WeChat platform launched by Tsinghua University and MOOC platform “School Online”. It integrates complex information technology into PowerPoint and WeChat, and can easily cover each teaching session (before the class - in class - after class). It is a lightweight, data-based, interactive and convenient teaching tool.

2.2 Flipped classroom

“Flipped Class Mode” or “Inverted Classroom” means re-adjusting the teaching process inside and outside the classroom, reversing the “learning after teaching” process in traditional teaching, turning it into “teaching after learning”. The core role of teaching & learning is transferred from teachers to students. Before the class, the students used teaching aids (videos, websites, etc.) to complete self-learning before class. In the classroom, the teacher did not teach the basic knowledge points more, but also communicated with each student and gave detailed guidance on difficult problems.

2.3 College English flipped classroom teaching mode based on rain classroom application (referred to as “Double Classroom” teaching mode)

Based on the push, name, barrage, test and other functions on the rain classroom platform, the pre-class materials are pushed forward, so that students can conveniently complete online self-learning tasks; individual tutoring of their content is given in the class. Use the rain classroom to carry out classroom teaching, better discussion and communication; after class, teachers use the rain classroom to push test training and development materials to understand the students' learning effects and extend the classroom content.

![College English "Double Classroom" Teaching Mode](image)

Figure 1 College English “Double Classroom” Teaching Mode

Through the analysis of big data, master the learning situation of the whole process of “before class - in class - after class” of students, increase the communication and interaction between
teachers, students and students, and maximize the input, internalization and absorption of knowledge. And output, providing an effective way to achieve the implementation of college English flipped classroom. The college English flipped classroom teaching mode based on rain classroom application (referred to as “Double Classroom” teaching mode) was constructed and implemented, which greatly promoted the development of flipped classroom in college English teaching. As shown in Figure 1

3. Research design

3.1 Teaching Procedures

Before-class: the teacher prepares the pre-study PPT, records the audio, and sends the pre-study items and tasks to the mobile phone of the student's rain class. The students have a preliminary understanding of the content of the new course through the preview, and the teacher can prepare and reasonably arrange the teaching content according to the students’ preview data, chooses a good teaching method that breaks through the difficulty and also cultivates the students’ self-learning consciousness.

In-class: Students will scan the code into the classroom. The teacher can easily attend the class. The teacher opens the rain classroom to teach the class, synchronizes the PPT to the student mobile phone receiving end. The student can save the PPT and review the course at any time. The button of “collection” and “do not understand” enables the teachers and students to maintain communication and interaction at all times. The teacher as a participant guides the students to exchange discussion, display the results of the discussion, and conduct classroom tests, using the “barrage” function of the rain classroom so that students can bring their ideas to the screen and share them with everyone.

After-class: The teacher creates the test for the content of the lecture, sets the answer time, pushes the test to the student, and controls the student's grasp of the content of the class in real time. The student makes further interactions with the teachers and students in the relevant discussion area. The data can be integrated and analyzed to quantify the learning outcomes of students by the teacher. The teacher can understand the learning outcomes of students, assess their teaching process, and adjust their teaching strategies and teaching methods.

3.2 Evaluation and verification

3.2.1 Comparison of results

The vocational students of the Grade 17 Class 1 majored in accounting who participated in the college English flipped classroom teaching was taken as the research object. Through the experimental class to carry out the “double classroom” teaching practice before and after the two semester of the college English final exam scores, the application effect of the flipped classroom teaching method in vocational English teaching can be analyzed by the “double classroom” teaching mode.

By comparing the scores of the college English final exams for the two semester of the same class, we can see that the average score of the college English final exam for the first grade semester of the 2017-2018 school year is 71.07 points. The number of 80 points or more is 19 people, accounting for 42.22%, and the number of passers is 40, accounting for 88.89%, while the average score of the college English final exam for the second semester of the 2017-2018 school year after the implementation of the “double classroom” teaching practice was 78.67 points, the number of 80-89 students is 22 people, accounting for 48.89%, and the number of passers was 45
people, accounting for 100%.

It can be seen that the pass rate, good rate and excellent rate of the college English final scores of the experimental class have been significantly improved after the “Double Classroom” teaching practice. The students' interest in learning is improved, while the comprehensive application ability of English is also improved significantly. As shown in Figure 2:

![Comparison table of “Double Classroom” teaching mode before and after practice](image)

Figure 2 Comparison table of “Double Classroom” teaching mode (Before & After)

### 3.2.2 Questionnaire survey

In order to further understand the teaching effect after the implementation of the college English “Double Classroom” teaching mode, we conducted a random questionnaire survey. We selected 133 students from the experimental class to conduct a questionnaire survey. Through the survey, we learned that 75.19% of the students realized the necessity of pre-study in college English. 92.48% of the students thought that it is helpful to improve their own self-learning ability through the application of the rain classroom. 89.47% of the students indicated that the college English flipping classroom based on the rain classroom application is conducive to improving students' enthusiasm for learning. (As shown in table 1), It is shown that the practice of college English flip classroom teaching based on rain classroom applications has been welcomed and liked by most students.

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Title option</th>
<th>Number of samples</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is there a need for pre-study in college English courses?</td>
<td>It is necessary</td>
<td>100</td>
<td>75.19%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No need</td>
<td>8</td>
<td>6.02%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes, but the task is not too heavy</td>
<td>25</td>
<td>18.8%</td>
</tr>
<tr>
<td>2</td>
<td>Do you like this scientific and reasonable way to use your mobile phone to learn college English courses?</td>
<td>Like</td>
<td>101</td>
<td>75.48%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do not like</td>
<td>9</td>
<td>6.75%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Generally acceptable</td>
<td>23</td>
<td>17.28%</td>
</tr>
<tr>
<td>3</td>
<td>Is flipped teaching based on rain classroom application helpful for improving your enthusiasm for learning?</td>
<td>Yes</td>
<td>119</td>
<td>89.47%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>14</td>
<td>10.53%</td>
</tr>
<tr>
<td>4</td>
<td>Does the application of the rain classroom help students improve their self-learning ability?</td>
<td>Helpful</td>
<td>123</td>
<td>94.98%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Did not help</td>
<td>10</td>
<td>7.52%</td>
</tr>
<tr>
<td>5</td>
<td>Do you like the application of flip teaching based on rain classroom applications in college English?</td>
<td>I really like</td>
<td>36</td>
<td>24.11%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Like</td>
<td>62</td>
<td>46.65%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do not like</td>
<td>7</td>
<td>5.26%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Uncertain, to be understood in depth</td>
<td>8</td>
<td>6.02%</td>
</tr>
</tbody>
</table>
3.2.3 Sample interview

In the implementation process of college English flipped classroom teaching based on rain classroom application, semi-open interviews were conducted with relevant teachers so that we can gain a deeper understanding of teachers and students' views on the application of teaching models and further evaluate and verify the implementation effect of the “Double classroom” teaching mode.

In the interview, it was found that in terms of the feelings of the college English course, the teachers and students gave a high evaluation of the effect of improving the teaching effect. First of all, the students' classroom discipline and learning attitude have been significantly improved. In addition, the students have greatly improved their preparation before class, and the students are very active in preparation before class, for example completing the study task list. The biggest improvement is to increase students' interest in learning.

As far as the workload of teachers is concerned, the workload has indeed increased. For materials to be pushed to students on mobile phones are needed to be selected. The workload of classroom design has also increased, such as: what kind of questioning method is more appropriate, whether it is open or traditional mode, and so on. However, in the long run, as long as the preparation of lessons is sufficient, the classroom teaching effect should be greatly improved.

4. Conclusion

This paper uses the combination of theoretical analysis and empirical analysis to study the practical application of the “double classroom” teaching mode in college English teaching in higher vocational colleges. It can further understand the students of higher vocational colleges for “double classroom”, the attitudes and teaching effects applied to the teaching mode in college English teaching. The study draws the following basic conclusions.

(1) For students, It is more convenient for college English to introduce the rain classroom into college English teaching. The participation of students in English classroom learning, interest in learning and basic English skills of students have been improved by the application of “double classroom” teaching mode in college English teaching.

(2) For teachers, the “Double classroom” teaching has greatly enhanced the learning interaction between teachers and students, and improved the teaching effect. The teachers should attach great importance to the optimization and design of teaching content and give full play to the guiding role of teachers. The role of the English classroom learning content and form become rich and colorful. Meanwhile the teachers should use the mobile learning terminal and the rain classroom to carry out teaching activities to achieve English knowledge teacher-student interaction, knowledge sharing and learning effect monitoring.

Acknowledgements

This work was supported by the projects of vocational education teaching reform research project in Shandong Province in 2017(Project Code: 2017306)

References

[3] Zhao Xiuhong. Based on the MOOC and the “rain classroom”, Tsinghua University has driven 62 colleges and universities to carry out mixed teaching reforms – the classroom changes you, you change the classroom [N]. China