Blended Teaching Mode Based on Rain Classroom in College English

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Abstract. The purpose of the study is to discuss the process of constructing the blended teaching mode based on Rain Classroom and explore the effects of blended teaching mode based on Rain Classroom on College English teaching. This paper concludes that the main components of the blended teaching mode based on Rain Classroom are pre-class study, during-class interaction, and after-class review and expansion. In addition, the blended teaching mode based on Rain Classroom has significant effect on improving college students’ comprehensive language level.

1. Introduction

Blended learning is an innovative learning method proposed by foreign scholars after in-depth analysis of the characteristics of traditional classroom teaching and online learning. Foreign scholars have studied and summarized the blended learning theory in depth. The blended learning theory has been widely used in education and enterprise training.

In theoretical research, foreign scholars mainly focus on the definition of blended learning, learning patterns, and constituent elements. Blended learning can be defined as the means to improve learning efficiency, make full use of the Internet and information technology, and integrate different forms of learning. American scholars Barnum and Paarmann (2002) propose the phases of the blended learning mode: network transmission, face-to-face processing, production of results, and cooperative expansion of learning. In terms of constituent elements, American scholar Jared (2002) proposes five elements possessed by blended learning, namely self-paced learning, real-time events, collaboration, evaluation, and materials that support performance. Blended learning has achieved certain results in education and enterprise training in foreign countries. Online learning, together with information technology, is used as a supplement to enrich classroom teaching, thereby to improve learners’ participation and learning enthusiasm.

Han and Ellis (2019) suggest that university instructors should help learners see values of learning through blended discussions and explicate how the face-to-face and online discussions are integrated. Stockwell and others (2015) perform a randomized controlled trial of blended learning. They find that in-class problem solving improves exam performance, and video assignments increases attendance and satisfaction. Porter and others (2016) apply a blended learning framework previously proposed to determine the degree to which institutional strategy, structure, and support measures facilitate or impede blended learning adoption among higher education faculty. Manwaring and others (2017) use structural equation modeling to gain a holistic understanding of learning environments, including the influence of personal characteristics, course design, and student perceptions of the learning experience on in-the-moment cognitive and emotional engagement. To investigate longitudinal relationships
between emotional and cognitive engagement, they employ cross-lagged modeling techniques. Their findings show that course design and student perception variables have a greater influence on engagement than individual student characteristics and that student multitasking has a strong negative influence on engagement.

At the 7th Global Chinese Computer Education and Application Conference, Professor He Kekang (2004) introduced the concept of blended learning for Chinese researchers for the first time. With the continuous development of information technology, the blended learning mode has been vigorously developed and actively applied in the field of education in China. From the perspective of research contents, the domestic research mainly involves three aspects: blended learning theory research, resources and platform construction research of blended learning, and blended learning application research. Xiangming and Song (2018) propose an affordance approach of material, affective and social dimensions so as to explore the learners’ engagement and disposition to share of using mobile learning technology. Their conclusion shows that the group exposed to Rain Classroom has a positive attitude towards the mobile technology tool. Chenglong (2016) mainly introduces the definition of rain classroom, compares rain classroom with MOOC and traditional classroom teaching models, and explores the characteristics of rain classroom, as well as its role in promoting teaching reform.

2. Introduction to the functions of Rain Classroom
(1) Before class. The tools are the PowerPoint 2010 and above, and WeChat. The functions of Rain Classroom before class are making courseware and pushing materials. Handouts, lessons, exercises, and personalized courseware can be inserted in Rain Classroom. Teachers can push information and release pre-study tasks. (2) During class. The tool is WeChat. The functions of Rain Classroom during class are scanning the teacher’s two-dimensional code, pushing titles, starting bullet screen, and doing data collection. The teaching activities are forming class teaching, students’ acceptance of PPT, teachers’ adjustment of the classroom progress according to student feedback, teachers’ conducting of classroom tests at any time, the interaction between teachers and students, teachers’ homework publishing and students’ exercise submitting, teachers’ collection of teaching data and adjustment of teaching activities. (3) After class. The tool is WeChat. The functions of Rain Classroom after class are reviewing the courseware and finishing exercises after class. Teachers can answer questions. Students submit exercises in text or audio format.

3. Research methods
This study collects a large number of domestic and foreign literatures on the blended teaching mode, explores the theoretical basis of blended teaching and the current situation of teaching based on Rain Classroom in China, and obtains useful information. Two similar classes were taken as the experimental class (EC) and the control class (CC). The blended teaching mode based on Rain Classroom was adhered to in the experimental class. Through a trial experiment of one semester, the study discussed the effectiveness of the blended teaching mode based on Rain Classroom. Research questions in this study are: (1) how is blended teaching mode based on Rain Classroom in college English constructed? And (2) what effectiveness is the blended teaching mode?

4. Results and discussion
4.1. The construction of blended teaching mode based on Rain Classroom in college English
All the functions of the Rain Classroom are embedded in PPT and WeChat. After the teacher downloads and installs the Rain Classroom on the computer, the Rain Classroom option will automatically appear in the PPT. Teachers register through WeChat Subscription, fill in information, and create courses. After the creation, the two-dimensional code and the invitation code are automatically generated. Students can scan the two-dimensional code or join the class through the invitation code. With the Rain Classroom as the platform, teachers and students are connected through
the Internet to achieve the combination of offline classroom teaching and online internet teaching. Taking the Experiencing College English course as an example, its teaching mode is as follows:

4.1.1. Pre-class study
The Experiencing College English course involves various aspects of language knowledge and cultural background. Scores of new words and dozens of grammar points appear in each lesson. The content of each text involves social, cultural, historical, language, literature and other aspects of background knowledge. It is difficult to complete teaching tasks by three school hours’ classroom teaching in a week. If students want to improve their language knowledge and reading ability, it is necessary for them to transfer some teaching contents to the pre-study session. Teachers use the function of pushing courseware before class to push vocabulary and part of grammar knowledge to students in the form of PPT. Students can self-study through courseware and can click the menu of “Not Understand” on the PPT. Teachers can select the difficult points to teach intensively in class according to the students’ understanding. The “pre-study + intensive teaching” mode can greatly reduce the teaching time of language knowledge, and at the same time improve the teaching efficiency and gradually cultivate students’ autonomous learning ability.

There are options of interpolating MOOC videos and web videos in Rain Classroom. Teachers can choose related MOOC, social and cultural videos and other contents to push to students. At present, Rain Classroom supports video formats from mainstream media such as Youku, Tencent, and bilibili. Through the real and vivid picture, MOOC and videos show the cross-cultural communication scenes beyond the teacher’s classroom language. Aside from interest, cultural teaching and listening teaching are integrated to cultivate students’ intercultural communication ability in language learning.

4.1.2. During-class interaction
The texts in Experiencing College English are long, and they are mostly written language. The content is deep and the students’ interest in learning is not high. Even if the group discussion takes place in the classroom, due to time constraints, not all the students have the opportunity to express their views. There are shortcomings in mobilizing students’ language output, cultivating their critical ability and literary appreciation ability. Rain Classroom provides a new way for classroom interaction. Teachers’ and students’ mobile phones are connected to the projection screen via the Internet. Teachers’ mobile phone can be transformed into a remote control to motivate students through online interaction. In the mode of Rain Classroom, PPT courseware will be synchronized to the students’ mobile phones. Students mark the language points that they do not understand, and teachers will receive tips to adjust the progress of teaching at any time and effectively explain the difficult points. Students can use the “contribution” function to send examples, opinions, etc. to the teacher’s mobile phone in the form of texts or photos. Teachers can click on the “Transcreen” to put students’ submissions on the big screen. Rain Classroom can promote students to share learning experience and exchange ideas.

In the course of teaching, the teacher can organize the contents and topics of the articles through students’ group cooperation. After each group draws a mind map, students take photos and submit them. Students’ reading ability and literary appreciation ability are improved by practice. Teachers can also start the function of “Bullet Screen” so that students can send comments to express their views and actively participate in classroom teaching. Rain Classroom also has the function of instant test. The teacher inserts the exercises in advance in the courseware, and can send them to the students’ mobile phones at any time in the classroom. Students submit answers through their mobile phones, and the system will automatically produce evaluation results. At present, the Rain Classroom has the functions of bulk import of single answer choice, multiple choice, and voting, etc., and has the function of inputting subjective questions. Through classroom tests, teachers can confirm whether students have mastered the language points or not, and can immediately give the feedback.
4.1.3. After-class review and expansion

Using Rain Classroom, after-class study can become effective consolidation and expansion of classroom teaching. After the classroom teaching, PPT courseware will be stored in the Rain Classroom. Students can use their mobile phones to review at any time, and according to their own master of knowledge, they can ask questions through comments, private letters, etc. Teachers conduct one-to-one tutoring and explaining. Teachers can send targeted review questions, and students can take advantage of their spare time to answer the questions and consolidate classroom-teaching contents. Teachers can also put forward expanding topics in the discussion area. Students are free to express their opinions; therefore, the communication between the teacher and students, and among students, can be promoted and students’ critical thinking can be cultivated. After-class discussion makes up for the lack of classroom teaching time. Students can speak freely and broaden their minds.

4.2. Teaching effects of blended teaching mode based on Rain Classroom

This study collects the data before and after the experiment of one semester. Table 1 shows the descriptive statistics of EC and CC. The higher mean in posttests of both EC and CC than that in pretests illustrates that students both in EC and in CC make progress in their one-semester learning. While in EC, standard deviation in posttest is lower than that in pretest, in CC, standard deviation in posttest is higher than that in pretest. So is the standard error mean in pretests and in posttests in both EC and CC. All the data above reveal that all students make certain progress after the experiment.

Table 1. Descriptive Statistics of EC and CC

| Group | Tests | N  | Mean | Std. Deviation | Std. Error Mean |
|-------|-------|----|------|----------------|-----------------|
| EC    | Pretest | 45 | 8.657 | 3.380 | 0.487 |
|       | Posttest | 45 | 10.492 | 3.102 | 0.345 |
| CC    | Pretest | 42 | 8.367 | 3.253 | 0.501 |
|       | Posttest | 42 | 9.123 | 3.304 | 0.513 |

Paired Samples T-Test in Table 2 shows clearly that the T value in EC is -14.681, and -6.125 in CC. The different T value shows different mean differences. Larger absolute value of T value reveals larger mean difference. According to the P value (both are lower than 0.05), there is a significant difference between the pretest and posttest in both EC and CC. The above facts can be considered as the evidence that all students in both EC and CC make much progress in their one-semester learning.

Table 2. Paired Samples T-Test

| Group | T  | df | P    |
|-------|----|----|------|
| EC    | -14.681 | 44 | 0.000 |
| CC    | -6.125 | 41 | 0.000 |

The results of Independent Samples T-Test in Table 3 shows that the comprehensive language level of students in both EC and CC has no significant difference (P=0.376>0.05) in pretest while students’ comprehensive language level has significant difference in posttests (P=0.040<0.05) in EC and CC. The result shows that students have achieved greater process in EC. All the above facts can be the convincing evidence of a significant improvement of the comprehensive language level in EC.

Table 3. Independent Samples T-Test

| Tests  | T  | df | P    |
|--------|----|----|------|
| Pretests | 0.705 | 85 | 0.376 |
| Posttests | 2.081 | 85 | 0.040 |

The conclusion can be drawn from the statistics above that the two groups show no magnificent difference in comprehensive language level before the experiment, while a significant difference after the experiment, which clearly reveals that the blended teaching mode based on Rain Classroom can improve students’ comprehensive language level. Thus, the blended teaching mode based on Rain Classroom can be considered as an effective method to cultivate students’ comprehensive language level in college English study.
5. Summary
Blended learning is a popular learning mode today. This study improves the blended learning theory. In order to solve the problems existing in the blended learning mode, this study designs the blended learning mode based on Rain Classroom and extends the existing blended learning mode. By applying Rain Classroom to teaching practice, this study makes it possible for students to enjoy a completely new learning experience before, during and after class. This study combines Rain Classroom and WeChat based on PPT to enable students to experience English learning anytime and anywhere.

Using Rain Classroom, teachers can push pre-class courseware with MOOC videos, exercises, and voice to students’ mobile phones, and teachers and students can communicate with each other in a timely manner. Real-time answers and bullet-screen interactions in the classroom provide a perfect solution for the interaction between teachers and students in traditional classroom teaching. The Rain Classroom covers scientifically every teaching session before, during, and after class, provides complete three-dimensional data support, personalized reports, and automatic task reminders for teachers and students, and makes teaching and learning clearer. This study combines the advantages of traditional classroom teaching and mobile autonomous learning, uses educational informatization to drive education modernization, and integrates modern teaching methods and techniques into classroom teaching. This study not only pays attention to the guiding, enlightening and monitoring role of teachers, but also fully embodies the subjectivity and creativity of students in the learning process.

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