



# A Study on Blend Teaching and Learning Mode of ‘English for Civil Aviation Service’ Based on *Rain Classroom*

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**Abstract.** The study explored and practiced the online and offline blend teaching and learning mode of ‘English for Civil Aviation Service’ course with the use of an education tool *Rain Classroom*. The general purpose was to present this study as an exploration into issues critical to hybrid teaching and learning reform that involve online and offline teaching and learning process and course evaluation system. The results show that the blend teaching and learning model can develop students' enthusiasm and performance in learning and help improve teachers' teaching efficiency.

**Keywords:** *Rain Classroom*; civil aviation; blend teaching and learning

## 1 Introduction

It is important to explore new forms of intelligent education, and promote the revolution of classroom teaching in undergraduate education. *Rain Classroom* — a blend teaching platform emphasizes ‘learner-centered’, provides online learning environment and classroom discussion that has gradually become the new normal in higher education. In this study, we conducted an exploration of the blend teaching and learning mode of ‘English for Civil Aviation Service’ course based on *Rain Classroom*. Under the traditional teaching mode which is mainly taught by teachers in class, the problems are often relate to lagging in updating teaching materials and unsound evaluation system, etc. Students are not enthusiastic in learning and the learning results are not effective enough. In order to change the existing teaching and learning mode and improve the teaching and learning efficiency, an exploration of the hybrid teaching and learning mode of ‘English for Civil Aviation Service’ is conducted based on *Rain Classroom*. After one academic years of practice, more significant results have been achieved. The course teaching and learning practice effect are discussed and summarized in this study. Suggestions have been made that online and offline blend teaching and learning mode are a trend, which associated with significant long term positive effects and thus provides a more efficient method of teaching. Teachers should be aware of what they do and how to do it in teaching is merely to develop students’ aviation communication skill and meet their professional demands.

## 2 Framework of online and offline blend teaching and learning

Blend learning is defined as the integration of face-to-face and online instruction, with coherence between the online and face-to-face elements to ensure that they complement each other [1] [2]. It is a learner-centered teaching model that takes the advantages of the extensive online resources and the flexibility of learning with the interactivity of traditional teaching. A blend learning approach has the potential to deliver cost savings for both learners and teaching institutions when compared with conventional classroom learning whilst still maintaining face-to-face contact [3] [4] [5]. There are some advantages of blend teaching and learning, Hiltz (1998) compares virtual classroom with traditional teaching and indicates that in the teaching conducted through the net learners have more frequent and versatile interactions and the learners have more opportunities of discussion. Compared with traditional face-to-face classroom teaching, which has been with problems like students lacking motivation in learning, blend learning has its favor in that it allows users to post messages on certain platform with having to design a web page and various resource and tools are available for students on the internet.

### 2.1 Rain Classroom

Rain Classroom provides multiple modes of online teaching, and offers a real-time and personalized analysis. It is one of the online teaching and learning platform where offline learning resources are brought to online sessions and teacher-student interaction are improved by 'Random Roll Call', 'Voting', 'Exercise', 'Contribution and 'Bonus' functions[7].Based on the information technology, various teaching materials, audios and videos, course thinking questions, exercises, tests, and other informational resources with rich contents will assist teaching and encourage students to participate in learning activities.

### 2.2 Blend teaching framework design of 'English for Civil Aviation Service' based on *Rain Classroom*

The impact of the COVID-19 pandemic on the feasibility of face-to-face interactions and teaching has been profound, making the use of technology enhanced learning a necessity rather than an option [8]. There is an ongoing trend to use online + off line learning, students take online classes from home frequently when teachers fast transitioning to lecturing via Internet. In the autumn semester of 2021, the classroom teaching of 'English for Civil Aviation Service' was conducted in the form of online and offline hybrid teaching mode with the aid of Rain Classroom due to the epidemic. The framework was designed by making full use of the online catechism and related audial and video materials built in Rain Classroom. It includes two major parts: teaching process and teaching evaluation system. The teaching process takes advantage of the characteristics of Rain Classroom to move the teaching from the lecture in classroom. It involves the pre-course preview and the post-course review feedback, forming a pre-course ---

online-course --- offline course framework. In this framework, teaching resources have become more abundant and easy access. In addition to the traditional teacher-made PPT courseware, the built-in online catechism and uploaded resources can be used as materials which are convenient for teaching and learning. In the design of the teaching evaluation system, the single assessment method of final exam grade is replaced by formative evaluation in which students' performance are recorded and evaluated based on data of students' performance collected in Rain Classroom. Under this evaluation system, the final grades of 'English for Civil Aviation Service' course reflect the students' mastery and application of English for civil aviation service and aviation knowledge more objectively and accurately.

### 3 Implementation of Hybrid Teaching Model of 'English for Civil Aviation Service' Based on *Rain Classroom*

'English for Civil Aviation Service' has much to do with language learning experiences which have focused on students' perceptions and practices, especially in the context of online or offline pedagogical innovations such as task-based design teaching and authentic language learning. As we know, learners perceive online language classes as less effective, Lee (2021) concludes that purposefully designing tonline courses can enhance learner satisfaction, and that students particularly appreciate prompt feedback from instructors, peer interaction, and effective task design [9]. The study focuses on language learners' learning outcome through online and offline blend teaching and learning. It is noteworthy that students' performance evaluation has been replaced by multiple evaluation on the switch from face-to-face to remote learning. In order to evaluate the effectiveness on educational outcomes of blend teaching and learning of 'English for Civil Aviation Service' based on Rain Classroom, an experiment has been conducted in adherence with new designed teaching and evaluation standards (see the table below)

**Table 1.** Teaching and Learning Process & Evaluation System

<b>Teaching and Learning Process</b>			<b>Evaluation</b>	
Pre-course	Pre-learning courseware	<i>Rain classroom</i> Online Resources	Pre-course Activities 5%	Final Examination 60%
		Audio + video Resources		
	Questions	Uploaded to mobile phone		
Online Course	Lectures	PPT+ Handwriting board	Participation in on-line class 20%	
	Interaction	Random Roll Call, Voting, Exercise, Contribution and Bonus		
	Feedback	From the teaching and learning in class (orally and written ones)		

Off-line Course	Test	Unit tests quiz	Test + quiz 10%	
	After class Reading and Listening activities	<i>Rain classroom</i> Online Resources Internet Resources	Self-study + Home-work5%	

Hand-drawn table

### 3.1 Pre-course activities

For the purpose of encouraging students' interest and enthusiastic of learning, teachers use Rain Classroom to carefully design and prepare the pre-course materials and reflection questions before each class, thus students may access to the online classroom with questions and thoughts. For example, when teaching 'Check-in' Section, the video about 'baggage and boarding pass' and 'Mobile check-in' was uploaded to the Rain Classroom in advance through Rain Classroom's mobile courseware. Questions such as 'When and where can passengers make their check-in for a flight?' and 'How do airlines process the check-in service at the airport?' were added. By watching the video, students not only prepared the vocabulary and phrases used in check-in counter, but also reviewed the knowledge points related to 'check-in'. In the meanwhile, they had their own thoughts on how to provide a good service in such situation or any puzzles as to how to help passengers to do check-in. The teacher can see the students' feedback on the preview video and the reflection questions from the teacher side of the Rain Classroom to identify the difficult points and blind spots of the students, so as to adjust the focus and direction of the lecture in time, and improve the efficiency of on-line classroom teaching. In the process of pre-study, students' enthusiasm and initiative in listening to the lectures are significantly improved.

### 3.2 On-course activities

In on-course session, interactive link of 1-5min is necessary which not only focuses the students' attention at the right time and activates the classroom atmosphere, but also enables us to understand the students' learning situation and adjust the teaching strategy at the right time. PPT with important language knowledge points and easy-to-fail knowledge points are provided. In the main part of teaching, teacher used 'Random Roll Call', 'Voting', 'Exercise', 'Contribution', 'Pop-ups' and 'Bonus' functions of Rain Classroom to encourage students to participate in class activities. For example, when teaching the reasons for boarding from the left-hand side of airplane, the teacher used 'Bonus' to encourage to discuss and express their opinions and students showed great interest and participation. During the discussion, the teacher pointed out the possible answers. Through such effective interaction, classroom teaching is transformed from one-way knowledge transfer by teachers to two-way or multi-way information interaction with teacher-student interaction or student-student interaction. In the last part of in class activities, 2-5 exercises in which important language points or difficult points were are released and students submit their answers online within given time, so

that teachers can obtain data of finishers, score distribution, correct rate, and the list of students who made mistakes in time. According to the feedback, the teacher reviewed the classroom situation and understood students' learning difficulties and thus improved teaching methods and achieved the improvement of the overall learning efficiency of the class.

### 3.3 After-course activities

In the blend teaching mode, teachers can review the classroom situation after class by viewing the classroom data of Rain Classroom where learning difficulties and puzzles are presented in form of data collected in the platform. After each unit, teachers make test papers and release them to students through the "New Test Paper" function of Rain Classroom, feedback from test papers provides timely insight into students' mastery of the chapter content. In addition, textbook content needs to be updated in time, so self-study is an important way to extend learning after class, and this can be realized by accessing to the built-in Xue Tang online catechism in Rain Classroom, the relevant resources in video websites such as Youku, Tencent, B Station, YouTube and local video resources. For instance, after 'Check-in' session of the lesson, the teacher may assess students learning outcome by performing a test through the 'New Test Paper' function of Rain Classroom via weChat while the students may use B Station, YouTube or other form of resources to do further learning depending on their interest and capabilities. This kind of open learning mode can help students carry out self-directed learning to meet their personal need and share some expanded knowledge and practice on civil aviation service.

## 4 Effectiveness of the blend teaching mode of English for Civil Aviation Service' based on *Rain Classroom*

The effectiveness of the blend teaching mode of 'English for Civil Aviation Service' is evaluated according to the evaluation process system (See the table above). The study shows that students' learning performance improved significantly. Under the blend teaching mode based on the Rain Classroom, the percentage of students with good grades increased to 28.1%, and the failure rate decreased to 1.03%. This indicates that blend teaching and learning process with the basis of Rain Classroom allows for lots of course material to be viewed and practiced online, meeting the students' personal needs, increasing the learning efficiency. This in turn develop their performance in the evaluation process. The average grade of 'English for Civil Aviation Service' for students in 2022 improved significantly, from below 67 before the reform to 78.2. The data show that the blend teaching and learning mode reform based on the Rain Classroom has produced positive effects and effectively improved students' academic performance. Besides, students' satisfaction with course teaching was significantly improved, this can be seen from an anonymous questionnaire conducted among students involved. The results show that students' satisfaction with the course teaching has increased

significantly. 90.9% of the students think that the new teaching mode has a very good or better promotion effect on their learning, and they are satisfied with the teaching mode.

## 5 Conclusion

Educationists are shifting their traditional teaching method towards blend learning and teaching in which the combination of online and offline learning become a mainstream in high education especially during the pandemic. The study indicates that the use of Rain Classroom for online and offline blend teaching is not only conducive to teachers' integration of various teaching resources, optimizing teaching and evaluation process, but also stimulates students' interest in learning. The study suggests that the online and offline hybrid learning and teaching with the aid of Rain Classroom is a trend and more effective ways of developing students' flight service English proficiency. Further studies involving accommodating more detail methods from different aspects are expected to conduct aviation English teaching and learning reforms.

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