

# Research on the Application of Rain Classroom in the Reform of Basic Accounting Teaching

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## Abstract

In the teaching practice of the "Basic Accounting" course, the introduction of Rain Classroom has brought significant changes. Rain Classroom, as an emerging smart teaching tool, deeply integrates modern information technology with advanced educational and teaching concepts, and stands out in the field of education with its unique advantages. In order to verify the application effect of Rain Classroom, the author selected 246 students from their teaching class to form an experimental group and a control group based on their own teaching practice. The two groups of students were subjected to teaching effect questionnaire surveys, performance assessments, interview surveys, and data analysis. The results showed that the experimental group performed better than the control group in terms of teaching effectiveness, exam scores, classroom participation, and post class feedback. The author concludes that the application of Rain Classroom teaching mode in the teaching of "Basic Accounting" course can effectively enhance students' interest and understanding of basic accounting knowledge, thereby improving teaching quality and student satisfaction.

**Keywords:** Rain Classroom, teaching reform, basic accounting, teaching effectiveness

## 1. Introduction

Basic accounting is a compulsory course for most students majoring in economics, and most schools offer it to freshmen in their first year. As an important branch of modern accounting, the basic accounting course elucidates the fundamental theories, methods, and skills of accounting, and is also a course content of the accounting professional qualification examination, which is related to whether one can find employment and be competent in accounting entry-level positions after graduation.

But this course is highly specialized, with abstract professional concepts and considerable difficulty in understanding. The course content also has strong systematicity. Freshmen have just started their college life and have never been exposed to accounting before. They have a lot of fear of difficulties in learning and find the content of basic accounting boring, obscure and difficult to understand. They also feel that basic accounting contains a large number of rules and details, which are not only numerous but also have similarities, making it easy for beginners to confuse. Some even think that accounting will be replaced by AI, unaware of the importance of this course in cultivating rigorous thinking habits, and underestimate the learning value of this course. The traditional mode of "basic accounting" classroom often focuses on the teacher's unilateral teaching, combining multimedia teaching with blackboard writing. However, this "cramming" approach often leads to students not fully understanding and being forced to keep up with the teaching pace, causing the inability to appreciate the value of accounting as a business language, resulting in a monotonous and boring classroom atmosphere, very low student engagement level and greatly reducing teaching effectiveness.

Rain Classroom is a smart teaching solution jointly developed by the Online Education Office of Tsinghua University and Xuetao Online, with data-driven teaching as the core goal, covering the entire process of pre class preview, classroom interaction, and post class evaluation. This tool connects teachers and students' smart terminals through WeChat and PPT plugins, supporting dynamic QR code check-in, AI one click question answering, bullet screen interaction and other functions. It has been used by over 10000 schools worldwide. As of February 2025, its latest version V6.2.3 has added dynamic QR code check-in method and AI one click question answering function, and has been certified by the Online Education Research Center of the Ministry of Education. Before class, teachers can use Rain Classroom to release preview materials, and students can complete preview through mobile devices such as smartphones. At the same time, teachers can also obtain real-time preview feedback to

accurately adjust teaching plans and ensure that teaching content is close to students' actual needs. The use of Rain Classroom smart tools in the classroom can completely overturn the situation where students passively receive knowledge. Students can ask questions and participate in discussions at any time, becoming active participants in the learning process. It is worth mentioning that the platform's built-in features such as real-time answering, bullet screen interaction, and random roll call not only make the classroom atmosphere lively and interesting, but also greatly enhance students' participation and learning enthusiasm. After class Rain Classroom also plays an irreplaceable role. Teachers can assign homework and push extended learning materials through this platform, and students can submit their homework online. Teachers can then grade and analyze the learning situation online, achieving closed-loop management of the teaching process.

In the teaching practice of the "Basic Accounting" course, the introduction of Rain Classroom has brought significant changes. Teachers are able to flexibly organize teaching content and use diverse teaching strategies to stimulate students' interest in learning; And students can engage in personalized learning based on their own situation, effectively improving learning efficiency and outcomes. To verify this effectiveness, we conducted a series of attempts, and the results showed that the application of Rain Classroom has indeed opened up new paths for basic accounting teaching, bringing unprecedented teaching experiences.

## **2. Research Subjects and Teaching Method**

### *2.1 Research Subjects*

This study selected three classes each of the 2024 Finance and Accounting majors from the School of Economics and Management at Shanghai Zhongqiao Vocational and Technical University as the research subjects. The students in the six classes were divided into an experimental group and a control group. The three classes of the 2024 Finance major were set as the experimental group (60 males and 64 females), using the Rain Classroom intelligent teaching mode. In addition, the three classes of the 2024 Accounting major were set as the control group (59 males and 63 females), using the traditional teaching mode. As freshmen of private vocational colleges, their college entrance examination scores are not very high, and they have problems such as unclear learning goals, weak self-learning ability, poor self-discipline ability, and lack of good study habits. Latecomers and absenteeism in class are common, but they have strong ability to accept new things and are willing to participate in various interesting activities.

### *2.2 Teaching Methods*

Conduct full Rain Classroom teaching for the experimental group consisting of three classes in the 2024 finance major. Before the start of the course, teachers use the WeChat platform to push course materials, and students can provide feedback on any doubts they encounter during the preview process through the "I don't understand" button at the bottom of the student PPT page. Teachers can receive real-time feedback and provide timely guidance to students. In the classroom, bullet comments and submission functions create a relaxed and flexible environment for students to express themselves, greatly promoting positive interaction between teachers and students. After the course, the teacher will provide review materials to assist students in consolidating their learned knowledge. At the same time, with the help of the platform's data analysis function, the learning status of students will be presented in a quantitative form, and targeted teaching activities will be carried out to truly achieve accurate teaching according to students' aptitude.

The control group consisting of three classes in the accounting major of 2024 will be taught using traditional teaching methods, with the teaching teacher as the core, and classroom knowledge will be imparted to students through PPT. Students will mainly focus on listening to lectures. The specific process is as follows: First, review the content of the previous class and ask questions to understand the students' mastery of the knowledge from the previous class; Next, provide a detailed explanation of the content of this lesson, clearly identifying the key and difficult parts; a classroom test is held 10 minutes before the end of each class to assess students' mastery of key knowledge[1].

## **3. Evaluation Indicators for Teaching Effectiveness**

### *3.1 Questionnaire Survey*

To further understand students' learning outcomes, the author also conducted a satisfaction questionnaire survey on teaching effectiveness. The questionnaire includes five dimensions: practicality, participation, interest, clarity, and overall satisfaction. The evaluation of each dimension ranges from "strongly agree" to "strongly disagree", with a total of five levels[2]. At the end of the semester, teachers use Questionnaire Star to create and publish a survey questionnaire, requiring each student to answer questions carefully based on their own feelings and submit the questionnaire results in a timely manner.

### 3.2 Data Comparison

Collect relevant data on classroom attendance and homework completion between experimental and control classes for comparative analysis[1], in order to observe the differences in learning motivation between the two groups of classes. The data of the experimental group can be directly obtained from the Rain Classroom platform, while the control group requires the teacher to conduct roll call for each class, collect and count the number of submissions in a timely manner after assigning homework.

### 3.3 Final Exam

Before the end of the semester teaching activities, teachers will conduct evaluation work based on the established teaching syllabus and unified propositions. Teachers need to create three sets of ABC test papers at the same time, each with at least five types of questions. The total score of the exam paper is 100 points. The exam takes 80 minutes. The number of questions should be moderate. The difficulty of the exam should balance comprehensiveness and gradient, covering different levels of difficulty while forming a reasonable gradient to ensure that students' abilities are fully evaluated. The exam content and schedule for the two classes are strictly consistent.

### 3.4 Random Sampling Interviews with Teachers and Students

To use Random sampling method, it's necessary to select several students from the experimental and control classes and several teachers who entered the class to listen to the lecture for in-depth interviews. We can obtain feedback information from research subjects on the teaching process through this method.

### 3.5 Statistical Analysis Methods

The data processing work was completed using the SPSS 27.0 statistical software package. The counting data is presented in the form of "person (%)" and analyzed using chi square test; Measurement data is expressed as mean  $\pm$  standard deviation ( $\bar{x} \pm s$ ) and comparative analysis is performed using t-test. A P-value less than 0.05 is considered statistically significant.

## 4. Experimental Results

### 4.1 Survey Results

A total of 246 questionnaires were distributed, with 124 valid questionnaires collected from the experimental group and 122 valid questionnaires collected from the control group. The questionnaire results showed that the overall satisfaction ("strongly agree"+"agree") of the experimental group students with the Rain Classroom smart teaching mode reached 93.5%, with the highest satisfaction rate in terms of classroom interactivity and improving learning interest. However, the overall satisfaction rate of the control group with the traditional teaching mode ("very satisfied"+"satisfied") was only 50%. The most unsatisfactory part for students was that the classroom atmosphere of the traditional teaching mode was not active enough, which prevented students from developing interest in learning. Please refer to Table 1 for detailed data.

Table 1. Teaching Questionnaire Survey Results [n (%)]

item	experimental group(n=124)					control group(n=122)					P
	strongly agree	agree	neutral	disagree	strongly disagree	strongly agree	agree	neutral	disagree	strongly disagree	
I have a high level of understanding of the knowledge points	64(51.6%)	53(42.7%)	7(5.7%)	0(0)	0(0)	24(19.7%)	43(35.2%)	46(37.7%)	9(7.4%)	0(0)	<0.05
I have a high level of participation in class	66(53.2%)	50(40.3%)	8(6.5%)	0(0)	0(0)	21(17.2%)	38(31.1%)	50(41%)	13(10.7%)	0(0)	<0.05
The lively classroom	70(56.5%)	45(36.3%)	9(7.2%)	0(0)	0(0)	21(17.2%)	35(28.7%)	50(41%)	16(13.1%)	0(0)	<0.05

item	experimental group(n=124)					control group(n=122)					P
	strongly agree	agree	neutral	disagree	strongly disagree	strongly agree	agree	neutral	disagree	strongly disagree	
atmosphere helps me enhance my interest in learning											
The teacher's teaching content is clear and the interactive Q&A is effective	73(58.9%)	41(33.1%)	10(8%)	0(0)	0(0)	27(22.1%)	46(37.7%)	40(32.8%)	9(7.4%)	0(0)	<0.05
I have a high overall satisfaction with the entire teaching process	65(52.4%)	51(41.1%)	8(6.5%)	0(0)	0(0)	23(18.9%)	38(31.1%)	48(39.3%)	13(10.7%)	0(0)	<0.05

#### 4.2 Comparative Analysis of Data

Comparing and analyzing the data automatically recorded by the Rain Classroom platform in the experimental group with the manually recorded data in the control group, it can be seen that the attendance rate of students in the experimental group reached 98.2%, and the homework submission rate was 96.9%; The corresponding indicators for the control group were 95.4% and 94.5%, respectively. The data shows that the Rain Classroom teaching mode has a significant improvement effect on students' attendance and homework completion quality.

#### 4.3 Comparison of Final Exam Scores

Through a systematic comparison of the final exam scores between the Rain Classroom teaching mode class and the traditional teaching mode class, it was found that in terms of learning effectiveness, the average score and pass rate of the experimental group students were better than those of the control group. Please refer to Table 2 for detailed data. With the t-value is -7.781 and a P-value less than 0.05, the test result is significant, indicating that there is indeed a difference in the average scores between the two groups. The application of the Rain Classroom teaching mode has indeed had an effect on improving students' exam scores.

Table 2. Comparison of final exam scores and pass rates between two groups (points,  $\bar{x} \pm s$ )

item	experimental group (n=124)	control group(n=122)	t	P
final exam scores	92.0±1.6	85.0±2.4	-7.781	< 0.05
pass rates	95.1%	83.6%		< 0.05

#### 4.4 Summary of Interview Feedback

The author conducted random interviews with students in the experimental and control groups. The interview results showed that most of the experimental group students had a positive evaluation attitude towards Rain Classroom. The unique interactive feature design is believed to stimulate interest in learning; The convenience of pre class preparation and post class review has also been widely recognized. These students expressed a strong desire to continue using the intelligent teaching tool in other courses. On the other hand, the control group students reported that the traditional teaching mode lacked interest and encountered many difficulties in self-directed learning after class.

The author also invited teachers from the same research group to observe in the classroom. The feedback from these teachers showed that the experimental group had better classroom participation, learning atmosphere, and classroom discipline than the control group. Although teachers are familiar with traditional teaching methods, the students in the control group are mostly offline in class, resulting in a reduced teaching effectiveness.

## 5. Conclusion

The author of this article verified the teaching effectiveness of Rain Classroom in the course of "Basic Accounting" through empirical methods. The data shows that classes using Rain Classroom teaching are significantly better than traditional teaching classes in multiple indicators such as exam scores, classroom participation, and student satisfaction. Specifically, classes using Rain Classroom showed an average improvement of approximately 8 percentage points in final exams and an 11.5 percentage point increase in pass rates compared to classes using traditional teaching methods. The level of classroom activity has significantly increased. The student satisfaction survey results reached 93.5%. It can be seen that this intelligent teaching model has a substantial helping effect on improving teaching quality and enhancing students' learning enthusiasm. Although it requires a significant amount of preparation work from teachers in the initial stage, it is worth promoting and has high practical value from a long-term development perspective.

However, the experiment also exposed some problems, such as some students sending course invitation codes to absent students, creating a false impression of their attendance. How to deal with classroom discipline in the Rain Classroom teaching mode also tests the teacher's ability to adapt on the spot. For example, some students may use bullet comments or quiz periods to play games or surf the internet; Or when posting bullet comments, they may like to use words unrelated to the discussion content, such as "666" or "haha". Although Rain Classroom has numerous functions and powerful data processing capabilities, if teachers do not consider the adaptability between the various functions of this teaching tool and students, and do not delve into the reasons behind various data, such teaching will also be difficult to succeed, and even worse than traditional teaching effectiveness. As long as we stand in the shoes of students and continuously optimize various aspects of teaching using the various functions and data of Rain Classroom, teaching based on Rain Classroom can become a learning mode that students accept and love. Therefore teachers need to constantly transform the disadvantages of online teaching, leverage its advantages, be more careful in practical teaching practice, play the role of teacher education, guide students correctly, rather than relying solely on advanced technological means and ignoring the core values of teachers themselves. Only when teachers' professional value and technological means complement each other can we truly promote the improvement of education quality.

## Author Introduction

Yun Jiang (1980.07-), female, Han ethnicity, from Anqing, Anhui Province, holds a master's degree and is a lecturer. Her research interests include commercial bank credit management, investment and financial management, and financial accounting

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