

# Practical Research on PAD class in College English Intensive Reading

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**Abstract:** PAD class is a new teaching mode, which can change the situation that "teaching" separates from "learning" and less interaction between teachers and students in traditional class. This research group designs a PAD class teaching plan which is suitable for College English intensive reading and applies it in teaching practice to prove its teaching effect. The purpose of the project is to provide a new teaching mode for College English intensive reading. The research group found that the intensive reading class based on PAD class can improve the teaching effect, students' learning interest and self-learning ability in some degree.

## 1. Introduction

College English Intensive reading course is a basic course for college students to develop their reading comprehension ability, written expression ability and translation ability<sup>[1]</sup>. However, there are some problems in the traditional college English intensive reading class, such as the nose-up rate is not high and the lack of interaction between teachers and students. These problems seriously affect the teaching effect of College English intensive reading course. Therefore, how to improve the teaching effect of intensive reading course of College English has important practical significance.

## 2. PAD Class

PAD Class which is designed by Professor Zhang Xuexin, Fudan University combines the advantages of traditional teaching method and discussion-based teaching methods. It divides teaching into three parts in time: presentation, assimilation and discussion<sup>[2]</sup>. Its core is that half of the teaching time is in the form of discussion in student groups and in class, and there is an internalization process between teaching and learning<sup>[3]</sup>. This kind of teaching mode can effectively solve the situation that teachers' teaching is separated from students' learning after class, the few teacher-student interaction in class, students' passive learning and low learning initiative.

## 3. Research Objects

The research group randomly selected two classes from the 2017 freshmen of Science and Technology of Jiang Xi University of Tradition Chinese Medicine. Then divided them into experimental group and control group. The experimental group adopted the intensive reading teaching mode based on PAD class designed by the research group, while the control group adopted the traditional teaching mode. Both groups of students are enrolled in the National College Entrance Examination. Both groups use the same textbooks and taught by the same teacher.

## 4. Research Methods

### 4.1 Educational Experiment Method.

The research design the College English intensive reading teaching plan based on PAD class, and it is implemented in specific teaching.

## **4.2 Literature Research Method.**

The research team collected and collated the domestic monographs, literatures, and related teaching cases related to this topic through China Knowledge Network and Wanfang Data.

## **4.3 Investigation Method.**

The research team conducted a questionnaire survey on the two group students, which focused on students' interest in learning, autonomy in learning and learning effectiveness. Questionnaires are distributed centrally to the respondents through WenJuanXing. The respondents answer questions online independently, and submitted them on the spot. They aren't allowed to discuss during the process. At the same time, a questionnaire survey on the effectiveness of the classroom was conducted for the experimental class. The questionnaire was adapted to the sample provided in the DuiFene teaching platform. It mainly evaluated the process of the teaching and provided reference for the adjustment of the teaching design.

## **4.4 Mathematical Statistics.**

The data of the study were statistically analyzed with SPSS13. The chi-square test and the rank sum test were performed on the pre-test and post-test scores and student's final exam scores. A fuzzy comprehensive evaluation was conducted on the questionnaires of students' interest in learning at the end of the semester.

## **4.5 Effect Evaluation System.**

Teaching effectiveness was evaluated by means of examination results and questionnaires. In order to reflect the fairness and authenticity of the data, the test scores at the beginning of the semester are taken as pre-test results, and the test scores at the end of the semester are used as post-test results.

In order to ensure the reliability and validity of the pre-test and post-test papers, the types of two test papers are both reading comprehension, translation and writing, and the scores were 15 points, 10 points, 15 points, and a total score of 40 points. Both the pre-test and post-test items came from CET-4 of December 2016. At the same time, the final test results of the fall semester of 2017 were used. The total score of this test is 100, 20 of which are listening, the other parts are vocabulary, reading, translation, and writing, with a total score of 80. The data used are the students' total score after deducting the listening part. All data were analyzed by chi-square test and rank sum test with SPSS13.0. The results of the two groups were expressed by mean (+SD). T-test was carried out. The difference was statistically significant with  $P < 0.05$ .

A questionnaire survey was conducted after the experiment. Two groups of students self-evaluated according to their actual situation of the intensive English course. This paper mainly evaluated students' interest in English learning, autonomous learning and learning efficiency, and the data were carried out fuzzy comprehensive evaluation with SPSS13.0.

## **5. Research Contents**

Starting with the basic theory of PAD class, this paper chooses New Horizon College English (Third Edition) Reading and Writing Course 1, designs the teaching mode of College English intensive reading based on sub-classes and implements it in teaching.

## **6. Research Results**

### **6.1 Fuzzy Comprehensive Evaluation of Teaching Effect in Experimental Group and Control Group.**

The fuzzy comprehensive evaluation method is used to compare and analyze data of the learning interest, learning autonomy and learning efficiency of the experimental and control students before and after the experimental teaching. The data are shown in tables 1, 2 and 3.

Table 1 Evaluation of Learning Interest

Active participation	Experimental group		Control group	
	Frequency	Composition ratio(%)	Frequency	Composition ratio(%)
Very high	10	12.05	7	8.64
High	28	33.73	15	18.52
Medium	24	28.92	30	37.04
Low	15	18.07	18	22.22
Very Low	6	7.23	11	13.58
Total	83	100.00	81	100.00

Table 2 Evaluation of Learning Autonomy

Active participation	Experimental group		Control group	
	Frequency	Composition ratio(%)	Frequency	Composition ratio(%)
Very high	14	16.87	9	11.11
High	20	24.10	14	17.28
Medium	25	30.12	28	34.57
Low	17	20.48	21	25.93
Very Low	7	8.43	9	11.11
Total	83	100.00	81	100.00

Table 3 Evaluation of Learning Efficiency

Active participation	Experimental group		Control group	
	Frequency	Composition ratio(%)	Frequency	Composition ratio(%)
Very high	12	14.46	6	7.41
High	29	34.94	13	16.05
Medium	16	19.28	26	32.10
Low	18	21.69	26	32.10
Very Low	8	9.64	10	12.35
Total	83	100.00	81	100.00

The maximum degree of membership in the experimental group is "high", and the proportion was 0.349. The maximum degree of membership in the control group is "medium", and the proportion is 0.321. The proportion of "low, very low" in the experimental group is 0.313, while that of the control group is 0.445.

## 6.2 The Objective Evaluation Results of the Teaching Effect of the Experimental Group and the Control Group.

Chi-square test and rank sum test are used to analyze the data of teaching effect before and after the teaching experiment to objectively evaluate the teaching effect.

Table 4 shows that there is no significant difference in the intensive reading test between the experimental group and the control group before the experiment. The mean and standard deviation of the intensive test scores of the experimental group are  $21.7 \pm 4.4724$ , and the mean and standard deviation of the intensive test scores of the control group are  $21.5 \pm 4.5443$ ,  $P=0.786$ .

Table 4 Comparison of Intensive Test Scores before Experiment

Groups	Number of students(n)	Total Score ( $\bar{X} \pm SD$ )	Reading Score ( $\bar{X} \pm SD$ )	Translation Score ( $\bar{X} \pm SD$ )	Writing Score ( $\bar{X} \pm SD$ )
Experimental group	83	$21.7 \pm 4.4724$	$8.2 \pm 1.8923$	$5.3 \pm 1.3625$	$8.2 \pm 1.8051$
Control group	81	$21.5 \pm 4.5443$	$8.0 \pm 1.8707$	$5.4 \pm 1.4015$	$8.1 \pm 1.8354$
P Value		0.786	0.625	0.791	0.712

Table 5 shows that after the experimental, the mean and standard deviation of the scores of the

experimental group are,  $26.1 \pm 6.0203$ , which is higher than the average level of that of the control group, and the overall level of experimental group increases,  $P=0.000$ .

Table 5 Comparison of Intensive Test Scores after Experiment

Groups	Number of students(n)	Total Score ( $\bar{X} \pm SD$ )	Reading Score ( $\bar{X} \pm SD$ )	Translation Score ( $\bar{X} \pm SD$ )	Writing Score ( $\bar{X} \pm SD$ )
Experimental group	83	$26.1 \pm 6.0203$	$9.6 \pm 2.3044$	$6.5 \pm 1.6550$	$9.9 \pm 2.2918$
Control group	81	$23.3 \pm 3.3578$	$8.6 \pm 1.5047$	$6.0 \pm 1.0837$	$8.7 \pm 1.2908$
P Value		0.000	0.01	0.019	0.001

Table 6 shows that the mean and standard deviation of the scores of the intensive readings of the experimental group are  $64.1 \pm 8.0686$ , which is higher than that of the control group, and the overall level of the scores increases,  $P=0.038$ .

Table 6 Comparison of Score of intensive readings Part before and after the experiment

Groups	Number of students(n)	( $\bar{X} \pm SD$ )	Maximum	Minimum
Experimental group	83	$64.1 \pm 8.0686$	75	45
Control group	81	$61.6 \pm 6.9490$	75	43
P Value		0.038		

Table 7 shows the statistical analysis of the Wilcoxon rank sum test on the final exam scores of the two teaching methods. The results of the two teaching methods have significant differences ( $P=0.004$ ,  $P < 0.05$ ).

Table 7 Comparison of Scores of Intensive Reading Part in the Final Exam between the Experimental Group and the Control Group

Score group	Experimental group		Control Group		Total	
	Frequency	Percent(%)	Frequency	Percent(%)	Frequency	Percent(%)
<50	11	6.71	10	6.10	21	12.80
51-55	4	2.44	4	2.44	8	4.88
56-60	7	4.27	16	9.76	23	14.02
61-65	13	7.93	29	17.68	42	25.61
66-70	36	21.95	17	10.37	53	32.32
>70	12	7.32	5	3.05	17	10.37
Total	83	50.6	81	49.4	164	100.00

Mann-Whitney  $Z = -2.865$ ,  $P=0.004$

## 7. Discussion

### 7.1 Subjective Evaluation of Learning Interest, Learning Autonomy and Learning Efficiency.

Table 1,2,3 shows that the self-evaluation of the experimental group in terms of learning interest, learning autonomy and learning efficiency is concentrated in three grades: high, high and middle, while the self-evaluation of the control group is concentrated in three grades: middle, low and very low.

In terms of learning interest, the very high and high proportion of the experimental group are 12.05% and 33.73%, respectively, higher than the control group's 8.64% and 18.52%. At the same time, the proportion of students with low and very low levels in the experimental group is lower than that in the control group. The proportion of students with low and very low interest in learning in the experimental group are 18.07% and 7.23%, while that in the control group are 22.22% and 13.58%.

In terms of learning efficiency, the experimental group concentrates on very high and high degree, accounting for 49.4%, while the control group concentrates on medium and low, accounting

for 64.2%.

In the evaluation of learning autonomy, a high proportion of experimental group accounts for 40.97%, which is 28.4% higher than that of the control group. The total proportion of low and very low in the experimental group is 28.91%, lower than 37.04% in the control group.

In this three aspects, the maximum degree of membership in the experimental group is "high", and the proportion is 0.349. The maximum degree of membership in the control group is "medium", and the proportion is 0.321. The proportion of "low, very low" in the experimental group is 0.313, while that of the control group is 0.445.

This shows that the experimental group students' learning interest, learning autonomy and learning efficiency, especially learning efficiency, remain at a higher level, while the control group in these three aspects is at a low level. Therefore, it can be inferred that the students in the experimental group have higher learning interest, autonomy and efficiency than those in the control group.

## **7.2 Objective Evaluation of Test Scores.**

In terms of objective evaluation, the mean of Pre-test of experimental group in reading comprehension, translation and writing are 8.2; 5.3; 8.2 and the total scores is 21.7. The mean of control group are 8.0; 5.4; 8.1, and the total is 21.5. The reading comprehension, translation and writing skills of the two groups are at the unqualified level, and basically the same. The scores of the three indexes in the post-test scores are improved. The means of the experimental group are: 9.6; 6.5; 9.9, the total score and its standard deviation is  $26.1 \pm 6.0203$ . That of the control group are: 8.6; 6.0; 8.7;  $23.3 \pm 3.3578$ ,  $P < 0.05$  (the difference was statistically significant). It can be seen from the relevant data that the score of three aspects and total score of the experimental group in the post-test are higher than the control group, which indicates that the experimental group scores are significantly improved after the new teaching mode.

Comparing the two groups' scores of intensive reading part in final exams, it is found that the average score of intensive reading part of the experimental group is higher than that of the control group. The scores of two groups are 64.1 and 61.6 respectively. Wilcoxon rank sum test is used to analyze the scores of intensive reading in the final exam,  $P = 0.004$ ,  $P < 0.05$ , the difference is statistically significant. This shows that there is a significant difference in the scores between the experimental group and the control group.

In all score levels of final exam, the high grade ( $>70$ ) of the experimental group accounts for 7.32% of the total number of the two classes, compared with 3.05% of the control group, which is twice as much as that of the control group. From 66 to 70 grades, the proportion of the experimental group is 21.95%, twice as much as that of the control group (10.37%), which indicates that the number of excellent in the final test of the experimental group is twice as much as that of the control group. At last, 43.69% of the experimental group passed 50 points (passing mark) is higher than 43.5% of the control group. It can be seen that the average score, excellent rate and pass rate of the experimental group are higher than those of the control group. This shows that the teaching effect of the experimental group is better than that of the control group.

## **8. Summary**

### **8.1 PAD Class Changes the Traditional Teaching Methods and Learning Methods, and Improved the Teaching Effect.**

In the PAD class, the processes of internalization and discussion are added to the traditional teaching. In the process of internalization, students have time to understand and remember and the teaching content. Through group discussion, students can understand the content further. This process urges students to participate in class teaching and think positively. The learning way is changed from passive to active. The teaching method is changed from cramming education to combining teaching with mutual learning. The role of the teacher is changed from teaching to guiding. In PAD class, students learn the same content three times in a week through teacher's

teaching, after-class review and group discussion, effectively slowing down the forgetting speed <sup>[4]</sup>. As a result, learning becomes more effective and the teaching effect is improved.

## **8.2 PAD Class can Enhance Students' Self-confidence, Students' Interest in English Learning, and Develop the Ability of Autonomous Learning.**

Discussions in PAD class can be divided into question-answering discussion and sharing discussion. During Q&A discussion, the students in the same group discuss the difficulties that they have in the internalization process. Since the discussion is among students, avoiding the pressure of facing teachers, it provides a safe environment for those timid students or poor grades to participate in it. Students with good grades will increase the sense of pride during solving poor grades' puzzles, which let them participate more actively in discussion and studying. Sharing discussions is to share the results of their own thinking within the group, usually used in writing teaching, translation teaching and critical thinking. Discussion happens after the internalizing and preparing, so that students can express their opinions in the discussion, which makes them more confident, enhance their willing of participating in discussion and study.

Different from the traditional classroom teachers, the teachers only teach the basic framework and the difficulties in PAD class, leaving the students a space to further explore, which can make students learn more actively <sup>[4]</sup>. Therefore, PAD class provides a platform for all students to communicate, learn and self-presentation. In order to express themselves in this platform, students must master more knowledge, which urges them to continue learning and improve their ability to learn independently. At the same time, because of the recognition in the discussion, it also increased their interest in English learning.

## **8.3 PAD Class Develop Students' Cooperative Ability.**

An important feature of PAD class is that students share and discuss what they have learned in group discussion and class discussion after internalizing. In this process, only when the group students understand the tasks, listen to others' explanations carefully, express themselves clearly, and encourage each other, they can complete the group tasks successfully. Therefore, in this process, students learn to listen careful others and understand them, take care of others' emotions, express themselves, and develop their ability to cooperate with each other.

## **9. Suggestions**

### **9.1 Teacher Monitoring During the Discussion.**

In session of group discussion, the teacher should observe whether each group is discussing in an organized and effective way to avoid invalid discussion. If teacher finds the discussion is abnormal, such as: students do not join the discussion, the teacher should promptly ask the situation and correct it. During the discussion, the teacher also needs to check the results of the group discussion in time to see if the group complete the task actively and effectively. When the students have difficulties, they also should guide students to complete the task.

### **9.2 Teacher Assigning a Spokesperson Randomly During the Course of the Speech.**

In order to promote group cooperation, and avoid only a few students speaking in group sharing session, teachers must randomly designate group spokespersons. The expression of the spokesperson is the basis for the group's performance evaluation. Therefore, in order to improve the group's marks, all the team members must grasp the group's discussion results. So for the sake of the group's common interests, good grade in the group should promote the poor grade to master the results.

### **9.3 Evaluating Not Only the Learning Effect, But Also the Learning Attitude.**

In the evaluation system, the evaluation of learning attitude is mainly based on whether the students complete the after-school tasks and the degree of enthusiasm to complete the tasks. The evaluation of learning effects mainly evaluates the results of student learning. The formative

evaluation of teaching also points out that it is necessary to "evaluate students' performance, achievements, emotions, attitudes and strategies reflected in their daily learning process"<sup>[5]</sup>. Therefore, while evaluating students' learning effects, it is also necessary to evaluate their learning attitudes.

#### **9.4 Arranging Time Flexibly<sup>[6]</sup>.**

In the teaching process, the ratio of teaching and discussion can be arranged according to the actual situation of the teaching, without being constrained by the ratio of 1:1.

#### **Acknowledgement**

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