

# The Survey of PAD Teaching Mode on College English Reading Teaching Performance

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## Abstract

The presentation-assimilation-discussion (PAD) teaching mode combines the advantages of “lecture classroom” and “discussion classroom,” adopts the separation of presentation and discussion, and focuses on the formative evaluation system, which can improve students’ independent inquiry ability and thus obtain effective output. Based on an empirical study of the PAD teaching mode and a statistical analysis of teaching performance on college English reading, PAD can increase teaching performance significantly. Students are satisfied with the whole teaching process. Although traditional teaching methods can increase performance as well, a long cycle of instruction is needed. Moreover, according to a questionnaire analysis, students have negative attitudes toward traditional teaching. Therefore, the PAD teaching mode should become the dominant mode of college English reading teaching in China.

**Keywords:** PAD class, college English reading, teaching performance, teaching mode

## 1. Introduction

The input hypothesis (Krashen, 1982) and the output-driven hypothesis (Wen, 2013) believe that foreign language education should be a process from input to output. In China, College English is one of the most time-consuming and laborious courses for undergraduates at the basic stage of higher education. Still, the overall teaching performance is not optimistic. With the continuous compression of class time, it is difficult for teachers and students to accomplish both effective input of learning materials and efficient language output within the limited classroom teaching time. Therefore, the key point of college English teaching is to give play to the leading role of teachers and enhance the subjective role of students, to mobilize students’ enthusiasm for learning, and to give them sufficient time for practice and thinking, so as to improve their critical thinking ability.

The presentation-assimilation-discussion (PAD) teaching mode pioneered by Professor Zhang Xuexin (2014), Fudan University, combines the advantages of “lecture classroom” and “discussion classroom,” adopts the separation of presentation and discussion, and focuses on the formative evaluation system, which can improve students’ ability of independent learning and thus obtain the effective output. Therefore, the study proposes to adopt the PAD teaching mode on college English reading teaching, conduct experiments on two parallel classes, and explore the feasibility of adopting the PAD mode on college English reading teaching through the statistical analysis of teaching performance. Results indicate that this teaching mode can enhance students’ active reading and produce good learning effects. The PAD teaching mode is worthy of further testing and spreading as it may be an effective teaching mode suitable to the conditions of Chinese universities.

## 2. Literature Review

### 2.1 PAD Teaching Mode

The PAD teaching mode is a Chinese teaching mode proposed by Professor Zhang Xuexin. Unlike the traditional interactive teaching mode, the PAD teaching process is divided into two major parts: one is the traditional classroom teaching, and the other is the communication and interaction in the form of discussion; in terms of teaching time, it is divided into three processes: presentation, assimilation, and discussion (referred to as PAD), which there are sufficient time intervals between teaching and discussion, and students take advantage of the time gap to internalize and absorb knowledge at their learning rhythm; in the assessment method, the PAD mode emphasizes formative assessment, not only assessing the mastery of knowledge but also evaluating students' learning attitudes and innovative thinking. Therefore, the PAD teaching mode can prompt students to conduct independent inquiry learning, enhance the communication and interaction between students and teachers, and make students truly become the subject of the learning process rather than passive recipients, thus effectively improving teaching performance.

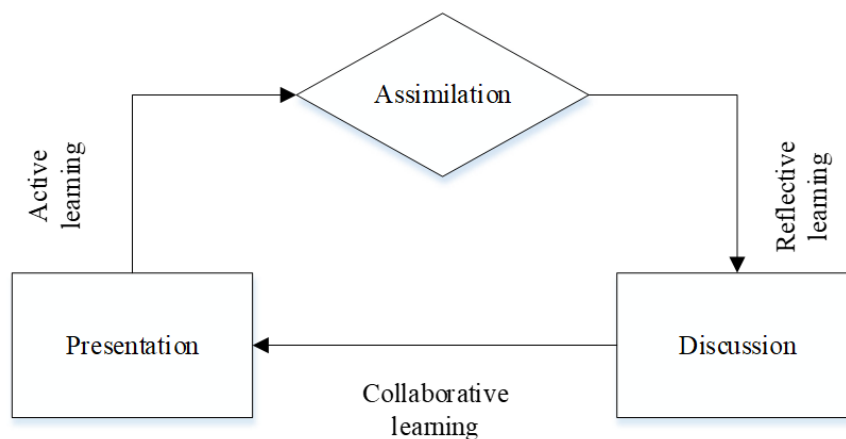


Figure 1. The PAD teaching mode

Chinese scholars have conducted a series of studies on the PAD teaching mode. Zhu (2016) analyzed the implementation process of PAD from five aspects: decision-making, planning, organization, coordination, and control, and proposed that a complete closed-loop control system should be established for PAD. Based on the process control, the deviation in the teaching process was found; through the information feedback, the reasons were analyzed, and the corrective plan was formulated so that education could return to the bilateral interaction between teaching and learning. Zhao & Zhang (2018), based on the PAD teaching mode, put forward a new teaching objective classification, which included four categories: reproduction, understanding, application, and creation (RUAC). Deep learning corresponded to the four levels of RUAC that were the basis of memory and understanding. This higher-order thinking ability is the core feature of deep learning, so PAD teaching mode could effectively facilitate deep learning.

Zhao (2016) designed and practiced the PAD mode, and found that this mode was an effective way to cultivate students' meta-learning ability; moreover, teachers could enrich students' metacognitive knowledge and enhance their metacognitive experience through the PAD class, to improve students' self-monitoring ability in the learning process. Cui & Yang (2019) investigated the influence of PAD on English learners' concept of autonomous learning and found the PAD had certain effectiveness in improving students' learning consciousness and using learning strategies. Hang (2022) constructed the theoretical path for the practice of the inquiry-based learning postgraduate political course. The PAD teaching mode was conducive to the promotion of the cultivation of academic inquiry ability of postgraduates and beneficial to the realization of the unification of theoretical rationality and practical effect of the political education. Wang (2024) investigated the effects of PAD teaching mode in reducing English majors' English writing anxiety. Results showed that English majors' writing anxiety was generally at a middle level. The PAD mode could effectively reduce general anxiety, including classroom teaching anxiety, conceiving anxiety, and confidence anxiety, but it showed no obvious effect on students' avoidance behavior. Also, the PAD teaching mode had a significant influence on students' writing anxiety with different writing levels, especially on those at middle and low levels. Through teaching practice, Su & Miao (2024) also discovered that the PAD teaching mode could stimulate and improve students' interests and abilities in autonomous learning, cultivate their capacity to tackle problems, establish the consciousness of

teamwork, enhance communication skills, and create lifelong learning abilities for college students.

The PAD teaching mode represents a progressive approach to education in China. By integrating traditional teaching with interactive discussions and emphasizing formative assessment, the PAD mode not only enhances student engagement but also improves overall teaching performance. As education continues to evolve, the PAD teaching mode stands out as a promising framework for fostering active learning and independent inquiry among students.

### 2.2 College English Teaching Performance

At present, there are two main forms of assessment systems for college English teaching performance (Luo et al., 2024), one of which is the summative assessment mode, i.e., after the completion of a teaching cycle, the degree of realization of the overall teaching objectives is evaluated through examination results. This assessment system can precisely quantify the degree of students' knowledge mastery, thus guiding the next stage of teaching (Bolliger et al., 2022). However, the summative assessment mode overemphasizes the teachers' authority and neglects the cumulative nature of the English teaching process and the development of students' learning ability (Gordon et al., 2022). The other is formative assessment, which focuses on all students' performances throughout the teaching process, emphasizes developability and comprehensiveness in the performance objectives, and favors the operability of evaluation tools (Juan et al., 2024). Compared with the traditional summative assessment mode, formative assessment is more scientific, but since it is difficult to quantify the changes of the students themselves during the teaching process, the formative assessment mode cannot completely shake the foundation of summative assessment.

Both formative and summative assessments are usually investigated separately in the literature (Alqassab et al., 2023). Therefore, based on the concept of integrative use of formative and summative assessment, interaction-developmental assessment mode, the third generation of teaching performance evaluation system, is derived. The core idea is that the evaluator and the evaluated communicate with each other in the teaching process, make value judgments through the teaching facts, pay attention to the individual differences of students, emphasize the development and process, to construct the evaluation standards and quantitative indicators, and to promote the common growth of teachers and students.

## 3. Method

### 3.1 Subject Characteristics

Two parallel classes of undergraduates from Xi'an University of Science and Technology (XUST), with 123 freshmen students in total, were selected as the experimental subjects. Class 1 was the experimental class, and Class 2 was the control class. The basic information is shown in Table 1.

Table 1. The basic information of experimental subjects

	N	Male	Female	Average age
Class 1	63	39	24	18.5
Class 2	60	35	25	18.9
Total	123	74	49	18.7

The experimental subjects were freshmen, who were not under the pressure of the College English Test 4 (CET 4), and therefore they had less utilitarian learning purposes; they had more than 6 years of English learning experience and were capable of accepting the PAD teaching mode; the two parallel classes were equipped with the same English teacher, the same teaching materials, the same reading teaching environment, and the same teaching hours (3 hours/week), which could guarantee the reliability of the experiment.

### 3.2 Experimental Manipulations

The experiment began in September 2023 and ended in August 2024. It was divided into two phases, each totaling 32 teaching weeks (Phase I, September 2023 to January 2024, 16 teaching weeks; Phase II, March 2024 to August 2024, 16 teaching weeks). The pre-test was conducted at the beginning of the first phase; the mid-test was administered after the end of the first phase, and the post-test and questionnaire were issued after the second phase.

In the 32 teaching weeks, the experimental class (class 1) adopted the PAD teaching mode to learn college English reading, completing one unit every two weeks. In the first week, the teacher explained vocabulary, introduced the background of the article, analyzed reading skills, and distinguished long and difficult sentences according to the syllabus and teaching plans. Students were required to take notes in class and assigned corresponding homework after class. The homework mainly consisted of two parts: the first part was written homework, which required students to complete the corresponding written training; the second part was analysis and discussion homework, which required students to look for information according to the questions raised by the teacher, prepare an outline of the presentation, internalize and absorb what they had learned. In the first two hours of the second week, students in groups of 5-6 would have inter-group discussions to form an outline of each group's presentation. At the end of the discussion, one person from each group was selected to speak on behalf of the group and point out the problems in their discussions. In the last hour, the teacher made a summary, commented on everyone's speeches, and answered questions on common questions to get ready for the learning of the new unit.

The control class (class 2) used the traditional way to teach English reading, which was still one unit every 2 weeks. The teacher explained and analyzed vocabulary, sentences, and texts in detail, reviewed old knowledge points, learned new courses, and practiced repeatedly to deepen their impression and form language habits (Zhang, 2020).

### 3.3 Data Collection

This study used three tests and questionnaires as experimental tools. The test papers used in the three tests were all from the test bank of the College of Humanities and Foreign Languages of Xi'an University of Science and Technology; the difficulty of the test questions was in line with the requirements of the college English syllabus for freshmen, and the reliability coefficients of the three test papers were  $\alpha_1=0.854$ ,  $\alpha_2=0.863$ , and  $\alpha_3=0.865$  respectively. The tests of the two classes were completed at the same time, and after each test, all the papers were uniformly recycled, bound, and corrected by the same teacher according to the grading criteria. The questionnaire was compiled according to the Classroom Strategies Scale (CSS), using 5-level options, the higher the score, the greater the impact (Reddy et al., 2013).

The results of the three tests and the questionnaires were used as the data for the experimental analysis. The Statistical Package for the Social Sciences (SPSS 26.0) was used to analyze and discuss the experimental data results.

## 4. Results

### 4.1 Pre-test

To ensure that there was no significant difference in the English reading levels between the two classes at the beginning of the experiment, a reading comprehension pre-test was arranged first. The test paper was scored out of 100 grades and the statistical results are shown in Table 2.

Table 2. The independent samples T-test of pre-test

	N	M $\pm$ SD	F	Sig.	t	df	Sig. (2-tailed)
Class 1	63	53.51 $\pm$ 17.10	0.90	0.34	0.26	121	0.79
Class 2	60	54.27 $\pm$ 15.31					

In the pre-test, the mean of class 1 (experimental class) is 53.51, which is slightly lower than that of class 2 (control class) which is 54.27, but the means of both classes are not passed (60% of the total scores), which is in line with the current situation of college English teaching in China. In the independent samples T-test,  $F=0.90$ ,  $p=0.34$ , equal variances are assumed. At the same time,  $t=0.26$ ,  $df=121$ , and  $p=0.79>0.05$ , there is no statistical significance in the achievements between Class 1 and Class 2. Therefore, the reading levels of these two classes are essentially equivalent and can be statistically analyzed for the effect of the experimental test factor.

### 4.2 Mid-test

After 16 weeks of teaching, in to test the teaching effect of the PAD teaching mode, the English reading mid-test was conducted. The total score of the mid-test was the same as that of the pre-test, still 100 points, and the results are shown in Table 3.

Table 3. The independent samples T-test of mid-test

	N	M ±SD	F	Sig.	t	df	Sig. (2-tailed)
Class 1	63	56.30±12.71	1.73	0.19	0.21	121	0.84
Class 2	60	55.78±15.18					

Compared with the pre-test, the means of the two classes have improved to a certain extent, but they still do not pass the test (60% of the total score). At this time, the mean of the experimental class (56.30) is slightly higher than that of the control class (55.78). In the T-test for Equality of Means,  $F=1.73$ , and  $p=0.19$ , equal variances are assumed. Meanwhile,  $t=0.21$  and  $p=0.84>0.05$ , the difference in scores is still not statistically significant, which means after one semester's teaching practice, compared with the traditional college English reading teaching, the PAD teaching mode does not have obvious advantages.

#### 4.3 Post-test

The instruction continued for 16 weeks and then a post-test was scheduled. As in the previous two tests, the total score of the paper remained at 100 and the statistical results are shown in Table 4.

Table 4. The independent samples T-test of post-test

	N	M ±SD	F	Sig.	t	df	Sig. (2-tailed)
Class 1	63	64.10±12.17	4.57	0.03	2.92	121	0.00
Class 2	60	57.02±14.62					

In the post-test, the mean of the experimental class (64.10) increased significantly and exceeded the passing line. At this time, the comparative analysis of the scores of the two classes shows a significant difference under the homogeneity of variance. The post-test independent sample T-test shows that the PAD teaching mode is superior to the traditional college English reading teaching mode. Therefore, the PAD teaching mode can significantly improve the teaching performance of English reading.

#### 4.4 Further Investigation

There is a phenomenon worth concerning: in the mid-test, there is no significant difference between the two teaching modes, while in the post-test the performance of the experimental class is significantly improved; to further study the impact of these two teaching modes on college English reading, the differences with each class are compared by the paired samples T-test that can investigate whether significant intra-class pre-mid-post differences exist. The details are shown in Table 5.

Table 5. Paired sample test

	M ±SD	t	df	Correlation
Mid 1-- Pre 1	2.79±7.16	3.10	62	0.93**
Post 1-- Mid 1	7.79±7.73	8.00	62	0.81**
Post 1-- Pre 1	10.59±11.37	7.39	62	0.75**
Mid 2-- Pre 2	1.52±7.17	1.64	59	0.89
Post 2-- Mid 2	1.23±8.28	1.15	59	0.85
Post 2-- Pre 2	2.75±8.16	2.60	59	0.85**

Note. Pre 1= pre-test of Class 1, Mid 1= mid-test of Class 1, Post 1= post-test of Class 1, Pre 2= pre-test of Class 2, Mid 2= mid-test of Class 2, Post 2= post-test of Class 2; \*\* indicates passing the significance test at the 5% level.

Through the paired sample test, it can be found that the performance of the experimental class keeps improving, and at the end of the first stage, there is a significant difference between the mid-test and the pre-test ( $p < 0.05$ ), which indicates that the impact of the PAD teaching mode on the performance of college English reading teaching is significant; with the deepening of teaching, there are significant differences between post-test and mid-test, and between post-test and pre-test ( $p < 0.05$ ). Therefore, in the experimental class, the PAD teaching mode can significantly improve the reading level and enhance the performance of college English reading teaching.

In the control class, although the performance has been also improved, it is found that the differences are not significant through the comparative analysis of the mid-test and pre-test as well as the post-test and mid-test,

which indicates that the improvement of the performance is only a natural improvement of the learners' level and that there is no significant improvement in the teaching performance; However, by further comparing the post-test and pre-test of the control class, it can be found that there is a significant difference at this time ( $p < 0.05$ ), which shows that the traditional college English reading teaching mode requires a longer teaching process, so the improvement is not obvious in the short term, but in the long term, the traditional teaching mode can also significantly improve the learners' reading level.

#### 4.5 Questionnaire Analysis

At the end of the second stage, a questionnaire survey was conducted to collect students' feedback and evaluation on the teaching mode of college English reading. The questionnaire consisted of 15 questions which were divided into three indexes: lecture, after-class learning, and classroom discussion. Since two students in the experimental class asked for leave and three students in the control class were absent, the valid questionnaires collected were 118, and the statistical results are shown in Table 6.

Table 6. Questionnaire analysis

		N	M $\pm$ SD	F	Sig.	t	df	Sig. (2-tailed)
Lecture	Class 1	61	4.24 $\pm$ 0.41	5.57	0.02	1.53	116	0.13
	Class 2	57	4.14 $\pm$ 0.28					
After-class learning	Class 1	61	4.45 $\pm$ 0.26	14.60	0.00	20.56	116	0.00
	Class 2	57	3.13 $\pm$ 0.43					
Discussion	Class 1	61	4.52 $\pm$ 1.32	0.80	0.37	7.66	116	0.00
	Class 2	57	3.12 $\pm$ 0.36					
Total	Class 1	61	4.04 $\pm$ 0.47	0.23	0.63	13.38	116	0.00
	Class 2	57	3.47 $\pm$ 0.24					

Through the analysis of the questionnaire, it can be found that students in the experimental class have a higher level of agreement with the "lectures", "after-class learning", and "classroom discussions", which are 4.24, 4.45 and 4.52, respectively, while students in the control class generally have a lower level of agreement than the experimental class. However, there is no significant difference between the two classes in "lectures" ( $p > 0.05$ ), which indicates that the assessment of lecture is similar between the two classes; since students in the experimental class need to take part in class discussion with their homework, there are significant differences between the two classes in two indexes ( $p < 0.05$ ), which shows that the PAD teaching mode can leave space for students to explore independently, promote them to internalize the knowledge learned in class, conduct high-quality after-class learning, and actively participate in class discussion to improve students' learning initiative.

## 5. Discussion

The empirical results of this study demonstrate the effectiveness of the PAD teaching mode in enhancing college English reading instruction. This innovative approach, which integrates the strengths of traditional lectures and interactive discussions, has shown significant improvements in both teaching outcomes and student satisfaction levels (4.04 on the satisfaction scale). The findings suggest that the PAD teaching mode addresses several critical shortcomings of conventional teaching methods while introducing new pedagogical advantages.

While traditional teaching method does yield some improvements in English reading proficiency, it requires substantially longer instructional periods to achieve comparable results. This extended duration, coupled with lower student satisfaction rates, particularly in areas of after-class learning and classroom interaction, highlights the inefficiencies inherent in conventional approaches. These findings align with the broader context of English language teaching in China, where prolonged instructional time often fails to translate into proportional learning gains.

The PAD teaching mode represents a significant advancement on college English reading teaching, offering a comprehensive solution to the persistent challenges in English language teaching. By combining structured knowledge delivery with active learning components, this mode not only improves immediate learning outcomes but also fosters the development of essential skills for academic and professional success. The mode's emphasis on student engagement, critical thinking, and practical application positions it as a promising framework for the

future of English language teaching in China and potentially in other similar educational contexts.

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