

An Empirical Study on the Application of ESA Teaching Model in Middle School English Reading Classes

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Abstract

Listening, speaking, reading and writing are the four basic skills of English competence, among which the importance of English reading in English teaching is prominent. However, there are some problems in middle school English reading teaching under the exam-oriented background, such as teacher-dominated classroom, students' mechanical learning, dull teaching process, which make it difficult to motivate students' learning motivation in English reading classes, thus ultimately affect the effectiveness of teaching activities.

In view of the above problems, based on the methods of questionnaire survey, reading pre-test and post-test, and two-week teaching experiments with 20 students of Grade 7 from a local school as subjects, this research tries to introduce ESA teaching model into middle school English classrooms and analyze the specific influence of ESA teaching model on students' reading interest, classroom participation and reading achievement through a two-week teaching experiment. Through the statistical analysis of the data collected from the questionnaires and reading tests with the help of SPSS, it has been found that under the influence of ESA teaching model, students in the experimental group are more interested in reading classes, more active in classroom participation, and are more satisfied with their reading performance than those from the control group. Most important of all, the experimental group has achieved higher grades in the reading test after the experiment than the control group. Therefore, it can be concluded that the application of ESA teaching model in the middle school English reading classes can not only help teachers create relaxing and successful reading

classes, but also help students to improve their reading competence, thus maximizing the learning outcome in English classes.

Key words: ESA teaching model; English reading; Interest; Classroom participation; Reading achievement

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1. INTRODUCTION

Reading competence, as an important index of learners' English proficiency, has always been a key issue to be addressed in English classrooms in China. *The English Curriculum Standards for Compulsory Education* (2017) strongly advocates that all teaching activities in English classrooms should be carried out in a certain context close to students' real life so as to guide students to find, analyze and solve the problems in the process of English listening, speaking, reading and writing. For middle school students, their understanding of contexts has a great impact on their English learning, and may even determines their interest in English learning. However, the traditional teaching model of English reading comprehension aiming at improving students' scores in English tests is still very common in junior high schools in which the teacher explains the new words first, then asks the whole class to read the passage and find answers to the questions and finally checks the answers. Under this traditional teaching model, it is difficult to stimulate students' enthusiasm to participate in the English learning activities. The lack of background knowledge or context increases the difficulty of reading comprehension, which in turn reduces students' confidence in reading English, or even affects their

learning motivation, thus hinder students' improvement in English reading proficiency. It can easily be seen that there is a large gap between the current English reading teaching and the new requirements put forward in the *NECSCE*. Therefore, it is high time that the middle school English teachers explore new teaching methods or models to help cultivate students' genuine interests in reading English as well as get goods marks in reading comprehension tests.

A large number of researchers and experts at home and abroad have explored a variety of different models of teaching EFL reading since 1990s. In 1998, British educator Jeremy Harmer proposed ESA teaching model in his book *How to Teach English* based on his reflections on the traditional "Presentation-Practice-Production" (PPP) model, and the reference to motivation theory, the theories of language input hypothesis and language output hypothesis. ESA, namely, Engage, Study and Activate, brought about new vitality into the reforms of English teaching models. According to Harmer (1998), no matter what teaching contents are, the three elements of the ESA model are indispensable, under which he proposed three different types of lesson sequences, that is, Straight Arrows sequence, Boomerang sequence and Patchwork sequence.

In the past two decades, the ESA teaching model has attracted the attention of some researchers and teachers in China due to its student-centered feature and its emphasis on cultivating students' actual communicative competence. Some teachers have kept experimenting with this new model and applied it to the teaching of different language skills for learners of different ages. Li Yongning (2019) studied the application of ESA model in the extensive reading classes of junior high schools. He not only designed the new type of lesson sequences according to the linear model, but also made theoretical interpretations of each specific teaching step. Liu Jingyun (2019) applied ESA model to teaching English writing in junior high schools and concluded that ESA model can stimulate students' interest in writing, and can further improve their reading proficiency in the process of writing practices.

Although the ESA teaching model has been widely applied to English classrooms, many teachers do not have a complete and systematic understanding of the rationales behind this model as well as the detailed teaching procedures, resulting in the unsatisfactory learning outcome. In addition, many experts' researches on this teaching model are mainly conducted from the perspective of theoretical interpretation and lack abundant empirical evidences from teaching experiments to verify the actual effectiveness of ESA model. Based on the theoretical model of ESA proposed by Harmer (1998), this study intends to test the applicability and effectiveness of ESA model in teaching middle school students English reading.

Through the means of teaching experiments, questionnaire survey and interviews, this research aims to study the effect of ESA teaching model on students' interest in English reading, classroom participation and reading competence.

2. ESA TEACHING MODEL AND ITS APPLICATION IN ENGLISH CLASSROOMS

2.1 ESA teaching model

2.1.1 Three Phases of ESA Teaching Model

In 1998, Jeremy Harmer, an internationally renowned language educationalist, published the book *How to Teach English*, in which he put forward the concept of ESA for the first time and emphasized that language teachers should make students more engaged and active in communicative learning activities in classrooms.

Harmer (1998) believes that language acquisition in social life has the following advantages. Firstly, learners can have extensive access to language materials. Secondly, learners learn for communication, so they have the motivation to learn. Thirdly, learners have the opportunity to apply their knowledge of the language. Learning a language in a classroom is different from learning a language in society, but learners can also learn a language well if given the right situations. Just like language acquisition, learners need motivation and access to language materials and opportunities to use it. According to Harmer (1998), ESA teaching model includes three phases, namely, the Engage phase, the Study phase and the Activate phase, which are essential in creating a communicative environment for language learners.

The Engage Phase - Warming up

Before learning new content, students need to prepare for learning English. The main purpose of this step is to make students actively involved in the class, stimulate their learning enthusiasm in class and mobilize their learning motivation. By introducing or designing various types of interactive activities, teachers arouse students' interest in language learning and get students prepared for the classroom learning. There are many activities to engage and immerse students in the class, such as listening to music, storytelling, games, showing pictures, discussions, brainstorming the vocabulary, which can stimulate students' interest in the upcoming learning tasks. It is important that the arrangement of warming-up activities should be highly related to the new content of this class. Once the engage phase has finished, students should be thoroughly warmed up and eager to begin the next part of the lesson.

The Study Phase-Leaning new things

Study is the core step of ESA teaching model where students will learn or review English language topics. The Purpose of this step is to help students learn and analyze language materials, grasp language points, and cultivate language learning ability. In this stage, teachers can use textbooks, study materials, videos and drilling exercises to help students learn and use the English language accurately. Teachers can explain the language materials or ask students to learn by themselves or in groups. Under the guidance of the teacher, the learning can be carried out step by step. When students have doubts or difficulties in understanding, the teacher can explain the difficult part in detail or go over the text again and ask more questions.

The Activate Phase-Using English practically

The final aspect of an ESL lesson is the activate phase, where students use what they have learned in activities such as role-plays, story-retelling, discussions, debates, surveys or interviews. In this stage students practice, apply and reinforce what they have learned in the study phase in a realistic situation. On the basis of students' understanding of the language knowledge points in this class, teachers should try their best to create activities close to students' real life so that students can use language knowledge in activities close to real situations. These practice activities help students to enhance the mastery of the language knowledge by applying it to practical communication in class.

2.1.2 Three Types of Lesson Sequences under ESA Teaching Model

Hammer (1998) believes that the three phases of ESA model can be sequenced flexibly in combination with specific learning tasks in order to help teachers carry out a variety of teaching activities effectively. Under the guidance of ESA teaching model, teachers flexibly design teaching activities according to the reading materials and students' reading ability. At the same time, according to the specific teaching practice, teachers flexibly combine the three elements into different types of lessons, namely, Straight Arrows sequence, Boomerang sequence and Patchwork sequence.

Straight Arrows sequence

The structure of a Straight Arrows lesson is Engage-Study-Activate (ESA), as indicated in Fig. 1 below. Firstly, the teacher tries to attract students' interest and maximize their participation in the class. Then, the teacher guides the students to learn the key language knowledge on the basis of text materials. Finally, the teacher organizes some communicative activities where students will apply the language knowledge they've just learned and hopefully internalize it. This teaching pattern may be effective for beginners, but may not be suitable for complex language learning tasks.

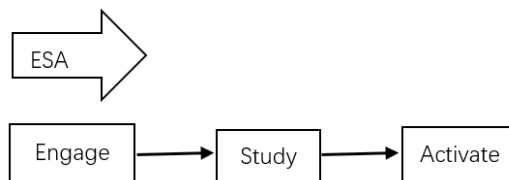


Figure 1
Straight Arrows Sequence (Harmer, 1998, p.27)

Boomerang sequence

The structure of a Boomerang lesson is Engage-Activate-Study-Activate (EASA), as indicated in Fig. 2. The teacher guides the students to get involved first, but skip the learning stage and directly enters the application stage so that the students can practice the language points in advance. During the initial activate phase, students will most likely be unable to use the language correctly. They will make mistakes with grammar, vocabulary and pronunciation, which will reveal gaps in the students' knowledge. Once the students have learned the new topic, they will then do the activity again, filling in any gaps they may have had at the beginning of the lesson. Then, the teacher will analyze, summarize and explain the language points or grammatical errors and difficulties encountered by the students, and the students will consolidate the learning through reading, discussion and finally flexibly apply them to the real life. The focus of a Boomerang lesson is to improve learners' accuracy in using English through abundant practices.

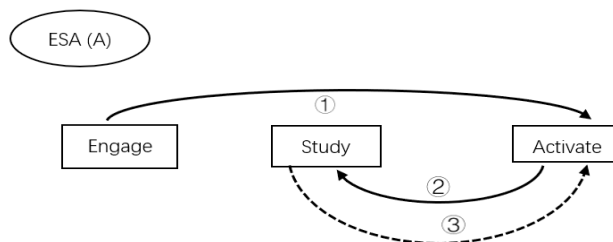


Figure 2
Boomerang Sequence (Harmer, 1998, p.28)

Patchwork sequence

A patchwork ESA lesson always begins with the engage phase and finishes with the activate phase. However, what happens between these phases can be arranged by the teacher as they see fit. An example structure of a patchwork lesson can be E-A-S-A-S-E, as indicated in Fig. 3. The teaching design of this pattern includes multiple ESAs. Compared with the other two patterns, the Patchwork sequence is more practical, more conducive to students' effective use of the knowledge they have learned. Students' enthusiasm can be effectively maintained.

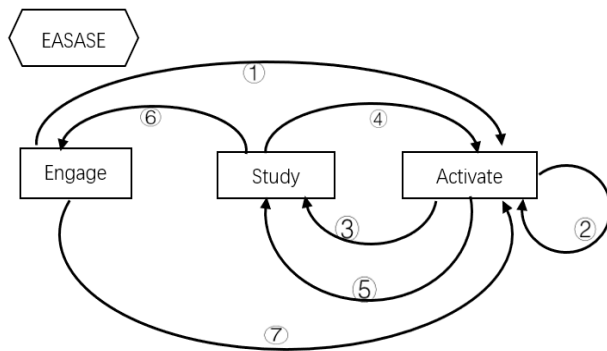


Figure 3
Patchwork sequence (Harmer, 1998, p.30)

The following is the proposed teaching procedures of a reading lesson (Harmer, 1998:75) under the pattern of Patchwork Sequence.

Engage: Teachers show students a picture of a sunbather and then let students discuss it.

Activate: Students act out a conversation between a doctor and a sunburned man on the beach.

Activate: Students read articles about the effects of the sun on different people's skin and ask students to talk about their own feelings.

Study: Teachers should highlight key words to ensure that students understand their meanings and can use them correctly in the appropriate context.

Activate: Students describe people they know in the same way as it did in the reading material.

Study: Teachers focus students' attention on the syntactic structures used in the passage and perform some control exercises.

Engage: The teacher plays an advertisement videoclip and organizes a group discussion. For example: What is the advertisement for? What are the ways of advertising promotion?

Activate: Students write an advertisement about sunscreen.

2.2 Theoretical Basis of ESA Teaching Model

The rationales behind the ESA teaching model can be traced back to the two famous theories in the field of second language acquisition, that is, the Input Hypothesis proposed by Krashen in the 1970s and 1980s and the Output Hypothesis put forward by Swain in the 1980s.

2.2.1 The Input Hypothesis

According to Krashen (1985), if learners want to acquire language, they must be exposed to language materials that can be understood by themselves. If "i" is the learner's current proficiency level, the next stage of language acquisition should be "i+1", which means the input language should be slightly more advanced than the learners' current language level so that they can make progress.

Relevant theories and practices show that knowledge learning is a gradual process, so is language learning.

In the actual learning process, language learning is influenced by many factors, such as native language, native language culture, and learning environment, so learners encounter more difficulties and more complex problems in the process of learning a second language. Therefore, in the second language learning, teachers should pay attention to the selection of the input materials in order to obtain good learning results. Input hypothesis theory includes four aspects of "input" design. First of all, the input language materials should be comprehensible. In other words, learners can correctly understand the input language materials and knowledge, which is the basis of language learning. Only by ensuring that learners can effectively understand the input material and knowledge can they lay a good foundation for further language learning. Otherwise, it may have a negative effect on language learning. Secondly, the input language materials should be interesting and relevant, which can fully stimulate the interest of language learners in learning and make learners participate actively in learning. Thirdly, the input language materials should not be grammatically sequenced because the ultimate goal of language teaching is to help learners use the language in the real situations. Therefore, in the process of language input selection teachers should avoid excessive or rigid input, thus ultimately help learners improve their ability to use language flexibly. Fourthly, the input language should remain authentic because language is meaningful only when it is communicated in a real context.

ESA teaching model breaks the traditional teaching model. It does not advocate the excessive explanation of language points, but emphasize the importance of having interesting activities in class to introduce background knowledge and let students participate in the activities, thus creating a relaxing atmosphere in order to stimulate students' interest in learning, to enhance their confidence, and to help students understand knowledge. In the arrangement of teaching content, teachers will also pay attention to the gap between students' current level and the target level of the new language knowledge, and try to ensure the authenticity of the material and improve the interest of learners as much as possible so that learners can actively digest the part of input content above their current knowledge level and achieve the maximum learning outcome. In the teaching process teachers will create relevant context according to the theme or topic of this class, pay attention to the use of language, and enable learners to carry out meaningful language acquisition in a real language environment.

2.2.2 The Output Hypothesis

The theory of output hypothesis is based on the theory of input hypothesis, which holds that learning takes place when learners encounter a gap in their linguistic knowledge of the second language (L2). By noticing this gap, learners become aware of it and may be able

to modify their output so that they learn something new about the language. Swain (1985) thinks that learners use their own linguistic knowledge and skills to practice, make comprehensible output, and ensure that the output content matches their own linguistic competence in the process of output.

Swain (1985) believes that understandable output has three functions. The first is noticing function, which means through output learners can be made aware of the gap between what they want to say and what they are able to say, so they notice what they do not know or only know partially in this language. In this process, the internalization of learners' knowledge can be promoted so that they can truly master the language. The second is hypothesis-testing function, which means learners will test whether a certain language form or structure they assume in the learning process is correct or not through output which is the best guess formulated by the learners. The third function is metalinguistic function. It means that learners will reflect on the language they learn and use the target language knowledge to express their thoughts in the process of output, which in turn will promote learners' internalization of the linguistic knowledge.

ESA teaching model emphasizes language output. The ultimate purpose of learning English is to communicate. Only the correct expressions can allow students to truly master the language learned. Teachers will design various types of output activities in class to create a real communicative environment for students. What learners need to do is to perform output practice under the guidance of teachers. Practice takes a variety of forms, including questions and answers, conversations, discussions, retelling, story-telling, role playing, giving presentations, etc.

2.3 Previous Studies on the Effectiveness of ESA Model in English Classes

Since the introduction of ESA teaching model, a lot of teachers in China have conducted some experiments to testify the feasibility and effectiveness of this new model in classrooms of high schools or universities.

2.3.1 The Application of ESA Model in High School English Classes

Xue Jiao (2018) applied ESA teaching model to the reading classes in middle school and found that under ESA teaching model students could devote themselves to learning and actively construct their own knowledge framework and that the input of reading materials could trigger the output of language. Zhang Shiyu (2021) explored the effect of ESA teaching model on middle school students' English writing classes. The research results showed that ESA teaching model not only changed students' writing attitude, but also improved their writing quality. Li Wanling (2019) learned through the experiment that the ESA teaching model of senior high school English writing class was of great help to stimulate and maintain

students' interest in writing, teach writing strategies, and improve writing performance. Xu Juan (2020) found in her research that high school under the guidance of ESA teaching model English grammar classes enabled grammar learning to take place in a real environment with students' dominant role in class, stimulated their interest in learning, and significantly improved their classroom participation and learning autonomy. Gao Junli (2021) conducted an empirical study on the application of ESA teaching model in English vocabulary teaching in senior high schools. The findings showed that students were more active in vocabulary class and the learning outcome was significantly improved.

2.3.2 The Application of ESA in College English Classes

Liu Zhining (2004) tried to apply ESA model to the teaching practice of College English and achieved good teaching results. It is proved that ESA model is more practical than grammar-translation method or other traditional teaching methods. Liu Jingyun (2007) conducted teaching experiments on the sophomores of English majors for two consecutive years, and the results proved that students' enthusiasm and participation in learning English in class have been improved, and teachers and students have both made some progress. Lu Qiuping (2011) studied the implementing strategies of the ESA teaching model in College English classrooms, and emphasized that teachers must understand the individual differences of students in order to improve students' classroom participation. Only in this way can teachers flexibly use the ESA teaching model to improve teaching efficiency and students' awareness of autonomous learning. Cheng Rong (2016) combined ESA teaching model with oral English teaching in college preparatory classes, and finally found that oral classroom teaching under the guidance of ESA teaching model could effectively improve students' foreign language communicative competence. Weng Xinxin (2019) believes that the application of ESA teaching model in intensive reading classes reflects the center role of students, gives play to students' autonomy, and optimizes the learning effect. Yang Fengluan (2021) believes that ESA teaching theory can promote college students' English speaking performance, and advocates that teachers should make the best use of this ESA teaching model. Li Zhaoying (2021) applied ESA theory to the teaching of college English reading, and the results showed that students' reading performance and interest have been improved.

3. RESEARCH DESIGN

3.1 Research Questions

Through a teaching experiment on reading classes between two groups of students from one local junior

high school, this paper aims to explore the effectiveness of ESA teaching model on the teaching of English reading and tries to address the following questions:

- (1) Can ESA teaching model stimulate students' interest in English reading?
- (2) Can ESA teaching model enhance students' classroom participation?
- (3) Can ESA teaching model improve students' reading competence?

3.2 Subjects

20 students at grade 7 from a local school were selected as the research subjects. They were evenly divided into two groups, one as the control group (CG) and the other as the experimental group (EG). A pre-experiment English test was conducted to confirm that the English proficiency of the two groups is similar. According to the feedback of their school English teacher, the subjects are generally not interested in English reading, which leads to the low scores of the class in the English test, especially in the reading comprehension part.

3.3 Instruments

3.3.1 Teaching Experiments

This study adopted the traditional teaching method in the control group and the ESA teaching model in the experimental groups on the condition that the teaching content was the same, which was divided into 6 lessons taught by the same teacher. The teaching experiment last three weeks, with 2 lessons finished each week.

3.3.2 Questionnaires

The questionnaires used in this study was composed of the pre-experiment questionnaire and post-experiment questionnaire to investigate subjects' interest in English reading, learning attitude and learning expectations before and after the experiment. Both pre-questionnaire and post-questionnaire contained 9 questions, each of which had five choices: A (Strongly agree), B (Agree), C (Neutral), D (Disagree) and E (Strongly disagree), and they were graded on a 5-point Lickert scale. Students could only choose one item for each question according to their actual situation.

According to the characteristics of ESA teaching model, the questions in the questionnaire was divided into three parts with each part concerning the phase of engage, study and activate respectively. Questions 1 to 3 were about the *Engage* level in order to investigate whether students are interested in English reading. Questions 4 to 6 were about the *Study* level, in order to investigate students' participation in class. Questions 7 and 9 were about the *Activate* level in order to investigate students' self-evaluation on the progress they make in reading comprehension and in the ability of applying new linguistic knowledge.

3.3.3 Tests

Based on the English textbook of Grade 7, two sets of test papers with the same question types and similar difficulty level were written as pre-test papers and post-test papers.

The questions of the test papers were divided into three parts: cloze, reading comprehension and word use, with each part taking up 40 points, 40 points, and 20 points respectively. The total score of each paper is 100 points. By comparing the pre-test and post-test results of the experimental group and the control group, it is expected to prove whether the ESA teaching model is effective in improving students' reading achievement.

3.4 Research Procedures

The selected two groups of subjects participated in the teaching experiment from January 4th to January 18th. The teaching experiment can be divided into pre-experiment stage, while-experiment stage and post-experiment stage.

3.4.1 Pre-experiment Stage

Before the experiment, questionnaire survey was conducted in the two groups. A total of 20 questionnaires were distributed, 10 for the experimental group, 10 for the control group. The subjects were requested to answer questions independently within 5 minutes. After the questionnaires were completed, all the questionnaires were collected.

At the same time, English reading test was carried out in the experimental group and the control group. The test was controlled within 40 minutes. After the test, the paper was taken back for marking, and the subjects' test results were preliminarily analyzed. The results showed that there was no significant difference between the experimental group and the control group in English reading performance before the teaching experiment and that the two groups have a large room for improvement in English reading competence.

3.4.2 While-experiment Stage

The teaching process of the experimental group mainly included the following steps: 1) getting familiar with reading materials, 2) formulating effective teaching plans and carrying out interesting teaching activities based on the actual class conditions and characteristics of reading materials, 3) adjusting the teaching plan timely according to students' emotional needs and learning status.

During the whole teaching process, students in the experimental group were guided to get familiar with and adapted to the ESA teaching model. In this stage, teachers mainly guided students to have a general understanding of the teaching content, stimulated students' interest in learning, and enabled students to activate their own language knowledge in the process of active participation. Meanwhile, the control group was taught by the traditional teaching method, that is, the teacher presented the main idea of the article to the students first, then asked the students to read the article with questions, and finally asked the students to show their understanding of the article by checking the answers to the questions.

In the first stage, unit 1 was taken as the key materials of teaching. Since students were not familiar with ESA model, Straight Arrows sequence was adopted so that

students could understand and adapted to the new teaching model as soon as possible. In the second stage, after students had some understanding of the ESA teaching model, Unit 3 adopted Boomerang sequence to increase students' classroom participation, let students further integrate into the reading class, and feel the changes brought by the ESA teaching model more directly. In the third stage, Unit 6 adopted the Patchwork sequence, which was the most flexible and most applicable pattern in ESA teaching model. With the development of teaching experiment, the difficulty of reading materials, especially the number of new vocabulary, phrases and difficult sentences, has increased compared with the previous units, so Patchwork sequence was needed to teach more challenging reading materials.

3.4.3 Post-experiment Stage

After the experiment, questionnaire survey was conducted again in the experimental group and the control group. The questionnaire was designed based on the actual situation during the experiment, aiming to understand the actual performance of the two classes under different teaching models. At the same time, the post-reading test which was similar in the difficulty level to that of the pre-reading test was conducted among the subjects in the two groups who were required to complete it within an hour.

3.5 Data Analysis

3.5.1 Reliability and Validity Analysis of the Questionnaires

Questionnaires were distributed to the control group and experimental group twice, with the pre-questionnaire collected before the experiment and the post- questionnaire collected after the experiment. A coefficient is used as the criteria to analyzed the reliability of the two questionnaires, and The KMO values are used to evaluate their validity. The test results of the pre-questionnaire and post-questionnaire are shown in Table 1 and Table 2 respectively.

Table 1
Reliability and Validity Test of the Pre-questionnaire

Group	Dimension	Item	Cronbach a	KMO
CG	engage	3	0.935	0.715
	study	3	0.901	0.738
	activate	3	0.869	0.700
EG	engage	3	0.951	0.722
	study	3	0.875	0.748
	activate	3	0.892	0.737

The Table 2 shows, analysis results show that the A coefficient of the control group and the experimental group in both questionnaires are all higher than 0.8 in each dimension, which means the data collected from the questionnaires is of high reliability. And the KMO values of the control group and the experimental group in both

questionnaires are between 0.7-0.8, indicating that the items in the questionnaires are of good validity.

Table 2
Reliability and Validity Test of the Post-questionnaire

Group	Dimension	Item	Cronbach a	KMO
CG	engage	3	0.901	0.725
	study	3	0.923	0.749
	activate	3	0.865	0.764
EG	engage	3	0.886	0.704
	study	3	0.853	0.725
	activate	3	0.816	0.719

For the data collected from the questionnaire survey before the experiment, SPSS was used to calculate the mean, std. deviation of each group in order to compare students' self-evaluations on their performance in English reading classes in order to ensure that there was no significant difference in their self-evaluation between the two groups of students. For the data collected from the questionnaire survey after the experiment, firstly, the descriptive statistics, such as mean, std. deviation were calculated. Then, an Independent Sample T-Test was conducted to find whether there was any significant difference in students' self-evaluations on their reading performance between the two groups after the experiment.

3.5.2 Analysis of English Reading Test Scores

Before the experiment, a reading test was given to the control group and the experimental group respectively, and then SPSS was used to compare the average scores of two groups through independent sample-T test to see whether there was significant difference in the reading achievement between the two groups before the experiment.

After the experiment, another reading test was given to the control group and the experimental group respectively, and then and then SPSS was used to compare the mean scores of two groups. After that, an independent sample-T test was done to see whether there was significant difference in the reading scores between the two groups after the experiment, which would be utilized to test whether ESA teaching model can improve students' English reading achievement in the experimental group.

4. FINDINGS AND DISCUSSION

4.1 The Effect of ESA Model on Students' Interest in English Reading

4.1.1 Descriptive Comparison of Students' Interest in English Reading

Firstly, the results of the questionnaire before the experiment are summarized in the dimension of the students' interest, as shown in Table 3:

Table 3
Comparison of Students' Interest before the Experiment

	Group	N	Mean	Std. deviation	Std. error mean
Q1	CG	10	2.9000	1.1005	0.34801
	EG	10	3.0000	1.1547	0.36515
Q2	CG	10	3.1000	1.1005	0.34801
	EG	10	3.1000	1.19722	0.37859
Q3	CG	10	3.7000	0.82327	0.26034
	EG	10	3.7000	1.05935	0.335

In question 1 "I'm really looking forward to English classes.", the mean of the control group and the experimental group are 2.9 and 3 respectively. In question 2 "I have a great interest in reading English.", the mean of the control group and the experimental group are both 3.1. In question 3 "I will do my prep work before class.", the average values of the control group and the experimental group are both 3.7. From the average values of these three questions, we can see that the students from the two groups have similar interest in learning English and similar habit of doing previewing work before class.

After the experiment, the questionnaire results are analyzed, as shown in Table 4.

Table 4
Comparison of Students' Interest after the Experiment

	Group	N	Mean	Std. deviation	Std. error mean
Q1	CG	10	2.9000	1.10050	0.34801
	EG	10	4.0000	0.81650	0.25820
Q2	CG	10	3.2000	1.13529	0.35901
	EG	10	3.9000	0.73786	0.23333
Q3	CG	10	3.7000	0.82327	0.26034
	EG	10	3.8000	1.03280	.32660

Table 5
Independent Sample T-Test of Students' Interest in English Reading

		Levene's test for equality of variances		t-test for equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% confidence interval of the difference	
									Lower	Upper
Q1	Equal variances assumed	.225	.641	-2.538	18	.021	-1.10000	.43333	-2.01040	-.18960
	Equal variances not assumed			-2.538	16.604	.021	-1.10000	.43333	-2.01592	-.18408
Q2	Equal variances assumed	1.241	.280	-1.635	18	.119	-.70000	.42817	-1.59956	.19956
	Equal variances not assumed			-1.635	15.452	.122	-.70000	.42817	-1.61031	.21031
Q3	Equal variances assumed	.471	.501	-.239	18	.813	-.10000	.41767	-.97748	.77748
	Equal variances not assumed			-.239	17.148	.814	-.10000	.41767	-.98062	.78062

4.2 The Effect of ESA Model on Students' Classroom Participation

4.2.1 Descriptive Comparison of Students' Classroom Participation

Firstly, the results of the questionnaire before the experiment are summarized in the dimension of the students' classroom participation, as shown in Table 6.

In question 1 "I'm looking forward to English class even more.", the average values of the control group and the experimental group are 2.9 and 4 respectively. In question 2 "I'm more interested in reading English.", the average values of the control group and the experimental group are 3.2 and 3.9 respectively. In question 3 "I'm focusing more on prep work.", the average values of the control group and the experimental group are 3.7 and 3.8, respectively. According to the data in the above table, it can be found that ESA teaching model adopted in the experimental group has greatly boosted students' interest in learning and they have greater expectations for English class and are more willing to preview texts before class.

4.1.2 Difference in Students' Interest in English Reading after the Experiment

Independent Sample T-Test was used to analyze whether there is a significant difference in students' interest in English reading between the control group and the experimental group after the experiment, and the results are shown in Table 5 below.

According to the data, the Sig.(2-tailed) of Q1 is 0.021, less than 0.05, while the Sig.(2-tailed) of Q2 and Q3 is 0.119 and 0.183 respectively, which are both higher than 0.05. We can conclude that there is a significant difference in the expectations of English classes (Q.1) before and after the experiment. It can be seen that compared with traditional teaching model, ESA teaching model is more likely to arouse students' interest in learning and make students look forward to English classes more. This is because the ESA teaching model often introduces topics in the form of pictures, videos or discussions, which can arouse students' curiosity quickly and make learning more interesting.

Table 6
Comparison of Students' Classroom Participation before the Experiment

	Group	N	Mean	Std. deviation	Std. error mean
Q4	CG	10	2.9000	0.87560	0.27689
	EG	10	3.3000	0.82327	0.26034
Q5	CG	10	3.1000	0.73786	0.23333
	EG	10	3.2000	0.63246	0.20000
Q6	CG	10	2.8000	0.78881	0.24944
	EG	10	3.0000	0.94281	0.29814

In question 4 “I can get into the swing of things quickly in class.”, the average values of the control group and the experimental group are 2.9 and 3.3 respectively. In question 5 “I can actively interact with the teacher and participate in classroom activities.”, the average values of the control group and the experimental group are 3.1 and 3.2 respectively. In question 6 “I can think actively and raise my hand to answer questions.”, the average values of the control group and the experimental group are 2.8 and 3 respectively. From these data we can conclude that most students in the control group and the experimental group can enter into the learning state in class quickly. In class, they can interact with the teacher and think about problems. There was no significant difference in classroom participation between the two groups before the experiment.

After the experiment, the questionnaire results are summarized, as shown in the Table 7.

In question 4 “I can be captivated and motivated to read at the beginning of class.”, the average values for the control group and the experimental group are 2.9 and 3.9 respectively. In question 5 “I am more active in classroom activities.”, the average values for the control group and the experimental group are 3.0 and 3.9 respectively. In question 6 “I can think more actively and raise my hand to answer questions.”, the average values for the control group and

the experimental group are 2.8 and 3.9 respectively. From these data, we can see that under the ESA teaching model, students in the experimental group were more motivated to read at the beginning of class and thought more actively in class activities than the control group.

Table 7
Comparison of Students’ Classroom Participation after the Experiment

	Group	N	Mean	Std. Deviation	Std. Error Mean
Q4	CG	10	2.9000	0.87560	0.27689
	EG	10	3.9000	0.87560	0.27689
Q5	CG	10	3.0000	0.81650	0.25820
	EG	10	3.9000	0.73786	0.23333
Q6	CG	10	2.8000	0.78881	0.24944
	EG	10	3.9000	0.56765	0.17951

4.2.2 Difference in Students’ Classroom Participation after the Experiment

In dependent Sample T-Test was used to analyze whether there is a significant difference in students’ classroom participation between the control group and the experimental group after the experiment, and the results are shown as follows:

Table 8
Independent Sample T-Test of Students’ Classroom Participation

		Levene’s Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Q4	Equal variances assumed	.512	.484	-2.554	18	.020	-1.00000	.39158	-1.82267	-.17733
	Equal variances not assumed			-2.554	18.000	.020	-1.00000	.39158	-1.82267	-.17733
Q5	Equal variances assumed	.074	.789	-2.586	18	.019	-.90000	.34801	-1.63114	-.16886
	Equal variances not assumed			-2.586	17.819	.019	-.90000	.34801	-1.63168	-.16832
Q6	Equal variances assumed	2.270	.149	-3.579	18	.002	-1.10000	.30732	-1.74565	-.45435
	Equal variances not assumed			-3.579	16.350	.002	-1.10000	.30732	-1.75035	-.44965

According to the data, the Sig.(2-tailed) of Q4, Q.5 and Q6 is 0.02, 0.019. and 0.002 respectively, which are all less than 0.05. We can conclude that there are significant differences in students’ classroom participation between the two groups after the experiment. Therefore, we can conclude that ESA teaching model can attract students’ attention and stimulate their enthusiasm at the beginning of class, which is conducive to students’ active participation and in class activities and more active thinking about problems. This is because the ESA teaching model mainly uses various types of activities to promote the reading process when students get a sense of participation in the classroom. This model can mobilize students’ learning enthusiasm and help them better integrate into the classroom.

4.3 The Effect of ESA Model on Students’ Reading Performance

This section will analyze the changes in students’ reading performance of the experimental group after the experiment by combing the data collected from questionnaire survey and reading test scores. In this research “reading performance” mainly refers to students’ self-evaluation on what they can achieve in reading classes, rather than their scores in reading tests.

4.3.1 Descriptive Comparison of Students’ Reading Performance

Firstly, the results of the questionnaire before the experiment are summarized in the dimension of the students’ reading performance, as shown in Table 9 below:

Table 9
Comparison of Students' Reading Performance before the Experiment

	Group	N	Mean	Std. deviation	Std. error mean
Q7	CG	10	3.3000	0.67495	0.21344
	EG	10	3.3000	0.67495	0.21344
Q8	CG	10	3.1000	1.28668	0.40689
	EG	10	3.1000	0.87560	0.27689
Q9	CG	10	2.4000	0.69921	0.22111
	EG	10	2.6000	0.69921	0.22111

In question 7 “My reading scores are in line with my own expectations.”, the average values of the control group and the experimental group are both 3.3. In question 8 “Upon completion of the reading, I can understand the main idea and key points of the text in a more comprehensive way.”, the average values of the control group and the experimental group are both 3.1. In question 9 “I have the ability to apply what I have learnt.”, the average values of the control group and the experimental group are 2.4 and 2.6, respectively. From the data in the Table 9, we can draw the conclusion that both the control group and the experimental group think their reading achievement meets their expectations. The vast majority of students also claimed that they could fully understand the general idea, key and difficult points of the articles and could apply the knowledge they had learned. Therefore, there was no significant difference in reading achievement between the two groups before the experiment.

After the experiment, the questionnaire results are summarized, as shown in Table 10.

Table 11
Independent Sample T-Test of Students' Reading Performance

		Levene's test for equality of variances		t-test for equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
									Lower	Upper
Q7	Equal variances assumed	.000	1.000	-2.121	18	.048	-.60000	.28284	-1.19423	-.00577
	Equal variances not assumed			-2.121	18.000	.048	-.60000	.28284	-1.19423	-.00577
Q8	Equal variances assumed	.263	.614	-1.187	18	.251	-.60000	.50553	-1.66207	.46207
	Equal variances not assumed			-1.187	16.553	.252	-.60000	.50553	-1.66876	.46876
Q9	Equal variances assumed	1.446	.245	-3.638	18	.002	-1.00000	.27487	-1.57749	-.42251
	Equal variances not assumed			-3.638	16.567	.002	-1.00000	.27487	-1.58109	-.41891

According to the above table, the Sig.(2-tailed) of Q7 and Q9 is 0.048 and 0.002, which are both less than 0.05. We can conclude that there are significant differences in Q7 and Q9 after the experiments. Therefore, we can conclude that ESA teaching model can improve students' knowledge application ability as well as the recognition of

Table 10
Comparison of Students' Reading Performance after the Experiment

	Group	N	Mean	Std. deviation	Std. error mean
Q7	CG	10	3.2000	0.63246	0.20000
	EG	10	3.8000	0.63246	0.20000
Q8	CG	10	3.1000	1.28668	0.40689
	EG	10	3.7000	0.94868	0.30000
Q9	CG	10	2.4000	0.69921	0.22111
	EG	10	3.4000	0.51640	0.16330

In question 7 “My reading scores are in line with my own expectations.”, the average values for the control group and the experimental group are 3.2 and 3.8 respectively. In question 8 “I can better understand the text and master the key points of the text after the reading is completed.”, the average values for the control group and the experimental group are 3.1 and 3.7 respectively. In question 9 “My ability to apply what is learned in reading classes has improved.”, the average values for the control group and the experimental group are 2.4 and 3.4 respectively. From the data in Table 9, we can see that more students in the experimental group claimed that they could better understand the article and master the key and difficult points after reading than those from the control group. In addition, more students in the experimental group reported an increase in their ability to use the linguistic knowledge.

4.3.2 Difference in Students' Reading Performance after the Experiment

Independent Sample T-Test was used to analyze whether there are significant differences in students' reading performance between the control group and the experimental group after the experiment, and the results are illustrated as follows:

their reading achievement. Because ESA teaching model gives students the central role in classroom, it advocates abundant activities to provide opportunities for students to apply the knowledge in the activities to improve their reading strategies.

4.4 The Effect of ESA Model on Students' Reading Test Results

4.4.1 Comparison of Students' Reading Test Scores before the Experiment

Firstly, the reading scores of the control group and the experimental group before the experiment, as shown in the Table 12.

Table 12
Comparison of Students' Reading Scores Before the Experiment

Group	N	Mean	Std. deviation	Std. error mean
CG	10	64.8000	7.95543	2.51573
EG	10	63.6000	7.87683	2.49087

Table 13
Independent Sample T-Test of Students' Reading Scores before the Experiment

	Levene's test for equality of variances		t-test for equality of means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
								Lower	Upper
Equal variances assumed	.022	.885	.339	18	.739	1.20000	3.54024	-6.23778	8.63778
Equal variances not assumed			.339	17.998	.739	1.20000	3.54024	-6.23783	8.63783

4.4.2 Comparison of Students' Reading Test Scores after the Experiment

Below are the average scores of the control group and the experimental group after the experiment.

Table 14
Comparison of Students' Reading Scores after the Experiment

Group	N	Mean	Std. deviation	Std. error mean
CG	10	69.6000	6.02218	1.90438
EG	10	77.2000	9.43751	2.98440

Table 15
Independent Sample T-Test of Students' Reading Scores After the Experiment

	Levene's test for equality of variances		t-test for equality of means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% confidence interval of the difference	
								Lower	Upper
Equal variances assumed	2.505	.131	-2.147	18	.046	-7.60000	3.54024	-15.03778	-.16222
Equal variances not assumed			-2.147	15.287	.048	-7.60000	3.54024	-15.13353	-.06647

As shown in the table, the sig. (2-tailed) of the control group and the experimental group after the experiment is 0.046, which is slightly lower than 0.05, so we can see that there are some significant differences in the reading test scores of the control group and the experimental group.

After the three-week ESA teaching experiment, the reading achievement of the experimental group was generally better than that of the control group. Specifically, students in the experimental group had a more comprehensive understanding of the meaning of the

As shown in the table, the average score of the control group was 64.8 compared to the average score of 63.6 for the experimental group, with the former group slightly higher than the latter one, which indicated that there was not much difference in the reading achievement between the two groups before the experiment.

In order to confirm whether the above difference is significant or not, an independent sample-T test was conducted, as shown in the table below. As shown in the Table 13, the Sig.(2-tailed) of the control group and the experimental group before the experiment is 0.739, which is greater than 0.05, so it can be concluded that there is no significant difference in the reading achievement between the two groups before the experiment. In other words, students' English reading achievement of the two groups is the same.

As shown in the above table, after the experiment, the average score of the control group was 69.6, and that of the experimental group was 77.2. It can be seen that the English reading test scores of the experimental group are much higher than those of the control group.

In order to confirm whether the above difference is significant or not, an independent sample-T test was conducted, as shown in the table below.

article, grasped the key points of the text more accurately, and read faster than students in the control group. It can be concluded that ESA teaching model has improved students' reading achievement better than traditional teaching model.

CONCLUSION

Based on the teaching experiment and questionnaire surveys combined with quantitative analysis, it has been found that ESA teaching model has a positive effect on

middle school students' reading performance, which is mainly reflected in the improvement of their reading interest, classroom participation and reading competence, which can be illustrated in detail as follows:

Firstly, students' interest in English reading has been greatly stimulated after the ESA teaching model is introduced into the actual classroom teaching. Students not only look forward to English reading classes, but also have greater interest in English reading. Especially, students who are taught under ESA teaching model work harder on the prep work before class. In contrast, under the influence of traditional teaching model, students generally do not pay enough attention to do the prep work. Secondly, students' classroom participation has been greatly enhanced under ESA teaching model. Influenced by the traditional teaching model, students are used to receiving knowledge passively rather than discovering knowledge actively. Since the ESA teaching model emphasizes the dominant position of students in class, teachers conduct teaching activities with students as the center, thus mobilize students' interest in class, and enable students to participate in class more actively. Thirdly, the vast majority of the students think that their reading achievement is in line with their expectations, which indicates that the students are satisfied with their current level before the experiment, but most of them still think that they cannot fully grasp the key points and difficult points of the text, nor do they have the ability to apply the knowledge they have learned. According to the results of the questionnaire survey after the experiment, all the students in the experiment group believe that their English reading performance has been significantly improved under the ESA teaching model, including the improvement in the mastery of the key and difficult points and their ability to use English. Last but not the least, according to the pre-test and post-test results, the English reading scores of the experimental group is obviously higher than that of the control group, which is consistent with the results shown in the questionnaire survey. It can be concluded that the ESA teaching model can help middle school students improve their reading achievement in English tests.

Some pedagogical implications can be drawn from this research as follows:

a. Teachers should teach students according to their aptitude and make the classroom activities rich and varied in format. Good learning environment is an important factor affecting students' learning. Teachers should create a relaxing and interesting learning environment for students. In addition, teachers should scientifically use ESA teaching model to effectively stimulate students' initiative, so as to help them understand the reading materials. For example, according to the distinct themes of the teaching content, appropriate activities can be adopted. Students' seating arrangement can be adjusted

accordingly to cater for the need of group activities, and interesting speeches can be made before class to relieve students' learning pressure and stimulate their interest in reading, and then help students to actively integrate into the class and enhance their participation.

b. Teachers should change their stereotyped teaching rational and adopt various teaching methods. For teachers who are used to traditional teaching model, the application of ESA teaching model imposes more demand on the teachers' professional quality, which poses more challenge for them. According to students' learning conditions and different teaching contents, teachers need to prepare the lessons carefully, predict problems that may occur in the classroom, and make countermeasures in advance. In addition, ESA teaching model requires teachers to combine the three elements flexibly. In other words, the future teaching of English reading requires teachers to change their roles and rationales they are accustomed to. Instead, teachers should become more innovative, creating a variety of ESA lesson sequences, and providing students with a relaxed and comfortable learning environment so that ESA teaching model can be constantly improved and developed in practice to achieve the maximum teaching effectiveness.

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