

## Research Article

# Special-Purpose English Teaching Reform and Model Design in the Era of Artificial Intelligence

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Research on English teaching reform and model design is the focus of the current society. It is a novel idea to use artificial intelligence algorithm to design an English teaching platform, which combines the current field of English teaching reform with the field of artificial intelligence network. The current method is to use the sincent algorithm in artificial intelligence to design the model. Its defect is that the single network education learning makes the learners feel boring. In order to solve these problems, this paper proposes an English blended education method based on artificial intelligence, which aims to study the integration of the network teaching platform and traditional education. This paper uses the artificial intelligence sincent algorithm to establish a teaching platform framework and simulate application strategies for the development of blended education. Through the investigation process of blended English teaching, the results show that the proportion of students who are generally satisfied with English teaching has reached 53.67% and the proportion of students who feel generally satisfied has reached 27.83%. The results of this survey indicate that the majority of students approve of this type of English blended education method.

## 1. Introduction

With the continuous integration and development of “Internet + education,” great changes have taken place in the way of information organization, the way of knowledge transmission, and the way of school teaching. Personalized development and customized teaching needs are an inevitable trend. In this context, blended teaching has flourished in recent years. The integration and development of knowledge in the information age requires matching advanced learning models and innovative thinking. We are in the “Internet +” era of innovation and development. New technologies bring huge space for innovation, and the key to innovation is talents. Talents pay more attention to soft skills, among which soft skills include courage to innovate, cross-border compounding, multidirectional thinking, and comprehensive quality. However, in the actual English teaching, the ninth grade faces the pressure of further education. Teachers pay attention to “filling the classroom” with language and often ignore students’ classroom experience and ability to use

language in practice, which will be detrimental to students’ sustainable development.

This research starts from the teaching practice of this paper, takes students’ weak points of English learning as a breakthrough point, and explores the innovative practice of English teaching based on blended teaching under the guidance of constructivist learning theory, situational learning theory, and microlearning theory. Specifically, the following studies were carried out: first, by systematically combing the relevant literature of blended teaching at home and abroad, the concept of blended teaching is defined, and the relevant research studies on blended teaching design, development, application, and evaluation are reviewed, which provides a theoretical and practical basis for the overall design of this study. Secondly, by analyzing the relevant literature and cases of English teaching at home and abroad, this paper explores the logical basis for blended teaching to support the innovative practice of English teaching and constructs a cooperative classroom teaching model based on blended teaching. On the basis of this model, focusing on the characteristics of primary school English,

blended teaching of primary school grammar, vocabulary, and discourse is designed and produced, so as to improve classroom teaching and enhance students' autonomous learning ability.

This paper has a novel idea and a rigorous framework. Starting from the constructivist learning theory, situational learning theory, and microlearning theory, a cooperative classroom teaching model based on blended teaching is constructed. The cooperative classroom teaching mode based on blended teaching is applied to actual teaching, and classroom teaching reform is carried out around junior high school English grammar, vocabulary, and discourse, which effectively improves students' comprehensive ability to use English in junior high school. It further deepens the theoretical research on the teaching mode of blended teaching, explores the application practice in the reteaching of blended teaching, and promotes the normalization and sustainable development of teaching applications.

## 2. Related Work

English teaching has become a top priority area at present, and from a global perspective, many scholars are conducting research in this area. Richards aimed to outline the role of language proficiency issues in the ELT literature. He described the professional language skills required to teach English through English, exploring the relationship between language ability and teaching ability [1]. Alhassan suggested that in the past two decades, there has been a surge in TESOL/applied languages calling for English as an international teaching [2]. Polat aims to design a scale to test teachers' attitudes towards the role of grammar in the English teaching process and to find out the reliability and validity of the designed scale and other psychometric qualities [3]. Rozhina and Baklashkova introduced the main methods that help to cultivate the highest communicative competence of young children, the problems and solutions in children's English teaching [4]. Ayçiçek and Yankar Yelpan proposed that flipped classrooms are commonly applied in higher education, including providing lecture materials outside of classroom contact, setting aside face-to-face classroom time for more interactive learning, discussion, integration, and application of content [5]. However, the above research is still only in the theoretical part and cannot be fully practiced.

For artificial intelligence, it has penetrated into all fields of life. The following are the opinions and research of many experts on artificial intelligence. Zhao et al. research discusses the basic situation of robot global path planning, the application, advantages, and improvement measures of the ant colony algorithm in robot path planning, which provides help for further research [6]. Payedimarri et al. study findings suggest that quarantine should be the best strategy to contain COVID-19. Nationwide lockdowns have also shown positive effects, while social distancing is only considered effective when combined with other interventions, including closing schools and businesses and restricting public transport [7]. Dolezel et al. introduced a specific neural network-based decision procedure that can be

considered for any traffic-characteristic-based network traffic processing controller. This decision-making process is based on a convolutional neural network that processes input stream features and provides decisions and it can be understood as firewall rules [8]. Maham studied the mechanical properties of two different types of recycled concrete (using wood and rubber) relative to pure concrete in terms of maximum load and natural frequency [9]. Visaggi et al. researched several options. Blood biomarkers offer an inexpensive, noninvasive screening strategy for cancer, and new technologies have allowed the identification of candidate markers for EC. The esophagus is easily examined by endoscopy, and endoscopic imaging represents the gold standard for cancer surveillance [10]. However, the current research on English education reform and model design in the era of artificial intelligence is still not based on traditional educational thinking, and there is a lack of in-depth analysis and exploration of the functionality of artificial intelligence. At present, only a hybrid English education method that combines the English education platform under artificial intelligence with traditional education can be achieved. This also hinders the high integration and advantages of artificial skills technology and education. The accuracy and data analysis of artificial intelligence cannot be brought into play, which also hinders the high integration and advantage of artificial skills technology and education. Therefore, further discussion is needed to tap the potential of artificial intelligence, improve the teaching ecology, and improve the level of education.

## 3. Algorithm of Artificial Intelligence

**3.1. Sincnet Network Structure.** Sincnet is an interpretable convolutional neural network proposed. Different from traditional CNN, Sincnet improves the first layer of the network and introduces the sinc function to learn more effective filters for audio data [11]. In digital signal processing, the normalized sinc function is usually defined as

$$\sin c(x) = \frac{\sin(\pi x)}{\pi x}. \quad (1)$$

The purpose of introducing the sinc function is to obtain a rectangular pulse with an amplitude of 1 after the Fourier transform of the sinc function. When extracting the original speech signal, it is often combined with time domain and frequency domain information for analysis [12]. For frequency domain signals, filtering methods are often used to obtain characteristic information contained in different frequency bands. Therefore, when performing feature extraction on speech signals, narrowband information is extracted by selecting rectangular bandpass filters in the frequency domain. On the premise of reducing noise interference, the feature information in each frequency band can be extracted more efficiently as shown in Figure 1.

The Fourier transform can realize the conversion of information in the time domain and the frequency domain. According to the properties of the Fourier transform, the

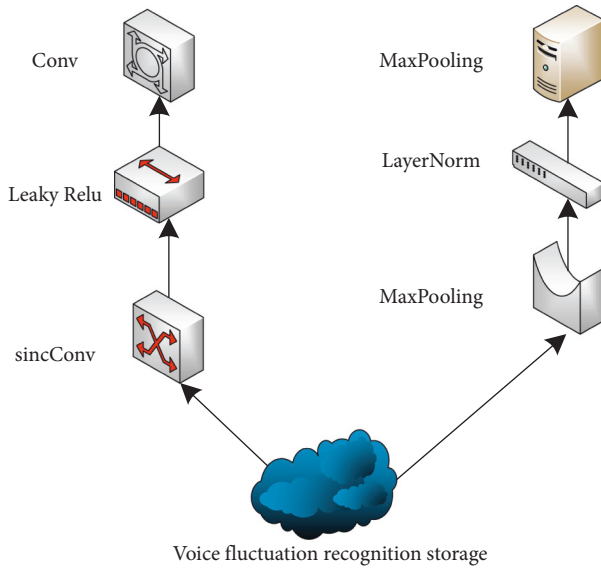


FIGURE 1: Sincnet network structure diagram.

multiplication in the frequency domain corresponds to the phase convolution operation in the time domain.

Among them,  $L$  represents the length of the filter. For speech recognition tasks, the input speech data is usually sampled at a specific frequency, so the original speech waveform data has high dimensionality. If the CNN network is used for the construction of the speech recognition model, the design of the first layer network is very important. If the selected filter is too small, the amount of calculation will increase, which will bring inconvenience to the training of the model. If the selected filter is too large, it will affect the feature extraction effect of the model on the input data, which is not conducive to the analysis of high-dimensional features.

The sincnet algorithm is novel in the application of the English education platform because it can process the speech signal so that the oral language part of the English teaching platform is also built.

**3.2. Connectionist Temporal Classification (CTC).** The speech recognition problem is essentially a sequence-to-sequence mapping problem. In the traditional speech recognition model, the mixed model method is often used. It obtains the mapping from input features to states through the acoustic model, uses a dictionary lookup method to achieve the mapping from phonemes to words, and then processes the language model to output the final audio recognition result [13]. The entire speech recognition model is composed of multiple modules, which need to be trained separately, so the learning of the entire speech recognition model becomes decentralized, which is not conducive to the overall tuning of the model.

After the input speech signal is processed by feature extraction and the sequence information of the LSTM network, the output layer contains each transcription label of the acoustic modeling unit (such as phoneme, note, or word) and a blank extra label, which represents an empty

launch. For a given input sequence  $x$  of length  $T$ , the output vector  $y$  is normalized by the softmax function to obtain the probability of the label corresponding to the  $k$ th index at time  $t$ , which can be expressed by as

$$p(k, t|x) = \frac{\exp(y_t^k)}{\sum_{k'=1}^K \exp(y_t^{k'})}. \quad (2)$$

It can be seen from the above,  $y_t^k$  represents the  $k$ th element of the output sequence  $y_t$  at time  $t$ . For a transcribed sequence  $\phi$ , it is a sequence of length  $T$  composed of units in the transcribed tag set and blank tags.

CTC solves the problem of strict alignment from input to output by increasing the many-to-one mapping between output sequences and actual labels. The essence of the CTC loss function is a maximum likelihood function, which trains a speech time series classifier end-to-end to maximize the probability of outputting target 1 when the input is  $x$  [14].

**3.3. Speech Decoding Algorithm.** In communication systems, speech decoding is quite important because, to a large extent, speech decoding determines the received speech quality and system capacity. In mobile communication systems, broadband is very precious. Low bit rate speech decoding provides a solution to this problem. On the premise that the decoder can transmit high-quality voice, if the bitbook is lower, more high-quality voice can be transmitted within a certain bandwidth.

The decoding process based on the CTC speech recognition model is actually a spatial search process. Like the search space used in model training, the decoding process selects the optimal path as the output within a limited time [15]. Commonly used decoding algorithms include Prefix Search and Beam Search. In this paper, Beam Search is used for model decoding output. The schematic diagram of the algorithm is shown in Figure 2.

The expansion probability of a node is defined as  $p(W, t)$ , that is, the probability that the label corresponding to the output sequence at time  $t$  is  $W$ .

## 4. Design of English Teaching Model

**4.1. Teaching Mode Construction.** In the early stage of model construction, this paper mainly refers to the published "Personalized Online Learning Plan." The report clearly pointed out that, with the support of information technology, teachers rely on online resource platforms to teach online specifically as shown in Figure 3.

**4.2. Preliminary Model.** The model of this study is to be gradually improved through continuous revision on the premise that the preliminary model designed based on the existing research on individualized teaching and the teaching experience of this paper. Later, it was further modified and improved in practice, and finally an initial blended teaching model was designed, as shown in Figure 4. However, this model is only a preliminary idea, and the

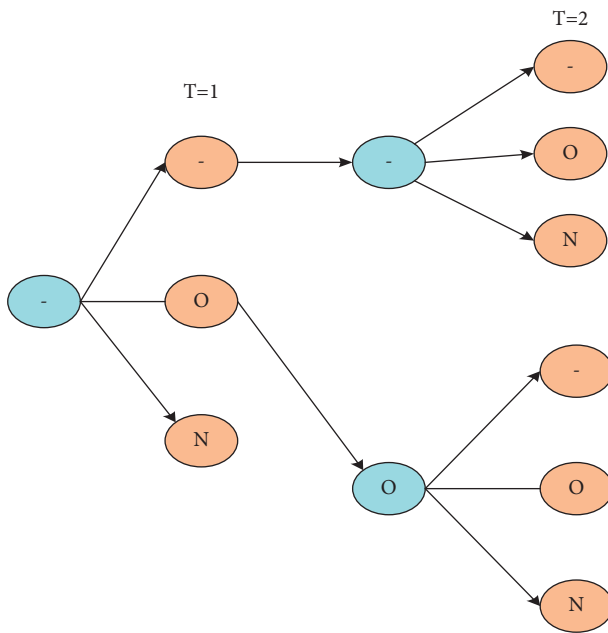


FIGURE 2: Schematic diagram of the improved algorithm.

model will be adjusted and improved in the future to form the final model.

Now we briefly introduce the preliminary model of the blended teaching mode of network resources. As shown in the figure, this model divides the teaching process into pre-class, in-class, and after class [16]. First of all, before class, mainly relying on the network platform, teachers select videos suitable for teaching tasks on the teaching platform and inform students to watch them independently, or students can arrange learning tasks independently according to their own learning progress, select suitable videos to watch, as long as they finally complete the learning tasks assigned by teachers. Secondly, in the classroom, teachers should divide into corresponding study groups according to the characteristics of students, or students should divide study groups independently according to their own interests [17]. Then the teachers organize corresponding teaching activities according to the teaching tasks. Before the teaching activity, the teacher first asked the corresponding questions according to the teaching objectives and arranged for the students to watch the video and the corresponding PPT again. After the end, the students showed their learning results. The form of learning outcomes is not limited to students' answers to questions, and students are responsible for their own speeches on topics. Finally, after class, according to the different performances of the students, a teaching evaluation is formed. The results of teaching evaluation not only have a certain impact on teachers' teaching but also can adjust students' learning goals according to the teaching evaluation. However, the setting of tasks should not be too complicated to avoid students losing interest in learning, resulting in an unsatisfactory teaching effect.

**4.3. Model Adjustment and Final Design.** In the adjustment stage of the model, this paper considers that the design of the initial model is still insufficient by consulting the relevant

literature. The Design and Practice of "Flip Classroom" Teaching Mode Based on Blended Teaching has an important guiding role in the design of this model [18]. Based on this literature, this paper modifies the model according to the definition of blended teaching. The teaching model design of this paper adopts the combination of online students' autonomous learning and offline teachers' classroom teaching. At the same time, the teaching stage is divided into before class, during class, and after class, as shown in Figure 5.

Primary school English is a basic subject, and the emphasis is on the cultivation of students' English application ability. Therefore, the main role of students must be more reflected in the model design. On the one hand, in the process of pre-class learning or small-class learning, teachers must let students learn with a purpose with problems, and learning without clues and goals may lead to poor learning results; on the other hand, for primary school students, this stage is in the stage of rapid development of language ability, their imitation ability and memorization ability develop rapidly. For blended teaching, it should focus on cultivating students' autonomous learning ability, let students develop the habit of independent learning in the classroom who be the master of the classroom, and make the English classroom more lively and lively, so that students fall in love with the English classroom.

In the pre-class stage, it is mainly advocated to focus on students' autonomous learning, using the form of problem-based learning to allow students to carry out pre-class learning with tasks. Teachers assign teaching tasks before class, which will make students think actively and stimulate students' learning motivation. However, the setting of tasks should not be too complicated to avoid students losing interest in learning, resulting in an unsatisfactory teaching effect. The theory of multiple intelligences states that each student has different intellectual strengths, and therefore different degrees of mastery of what they have learned. In this mode, teachers can guide students to formulate their own learning goals and learning plans according to their different foundations without exceeding the existing teaching goals. The tasks at this stage of the students' pre-class are completely carried out by the students themselves, and the teachers only provide learning resources and collect the difficulties encountered by the students when watching the video. Therefore, students in this stage of learning behavior can choose their own learning location, just watch the video.

**4.4. Implementation Process of Primary School English Teaching Mode.** As a new product in today's information age, online network resources have attracted a large number of learners and researchers. The emergence of online resources not only enables learners to obtain more learning resources and changes the original learning methods, but also further expands the teaching methods of teachers. Referring to the applied research on blended teaching, it can be roughly divided into three types: before class, during class, and after class. The teaching mode of

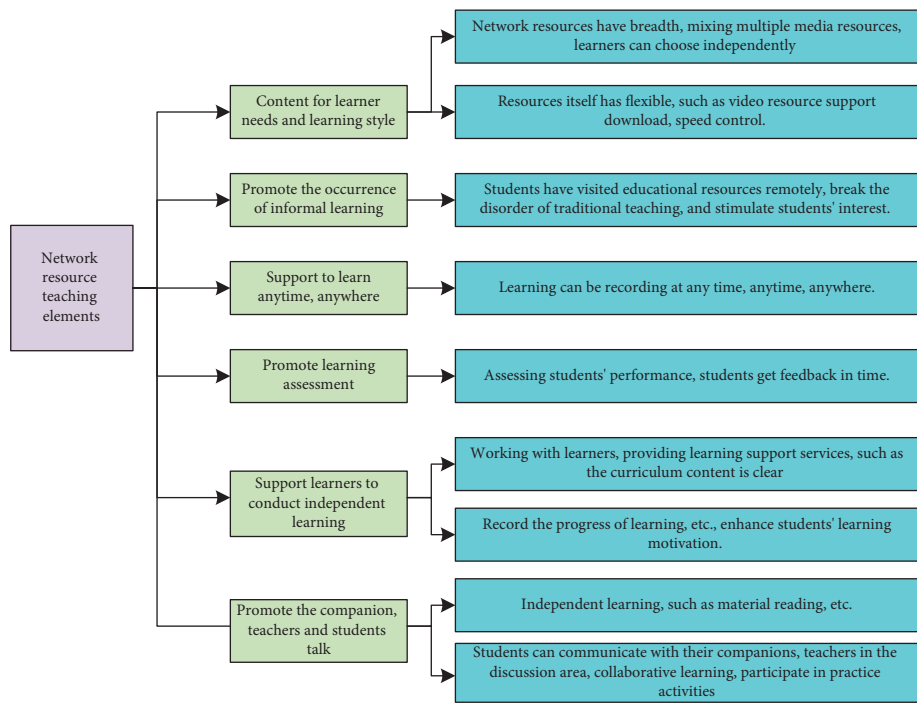


FIGURE 3: 6 elements of teacher network resource teaching in the network environment.

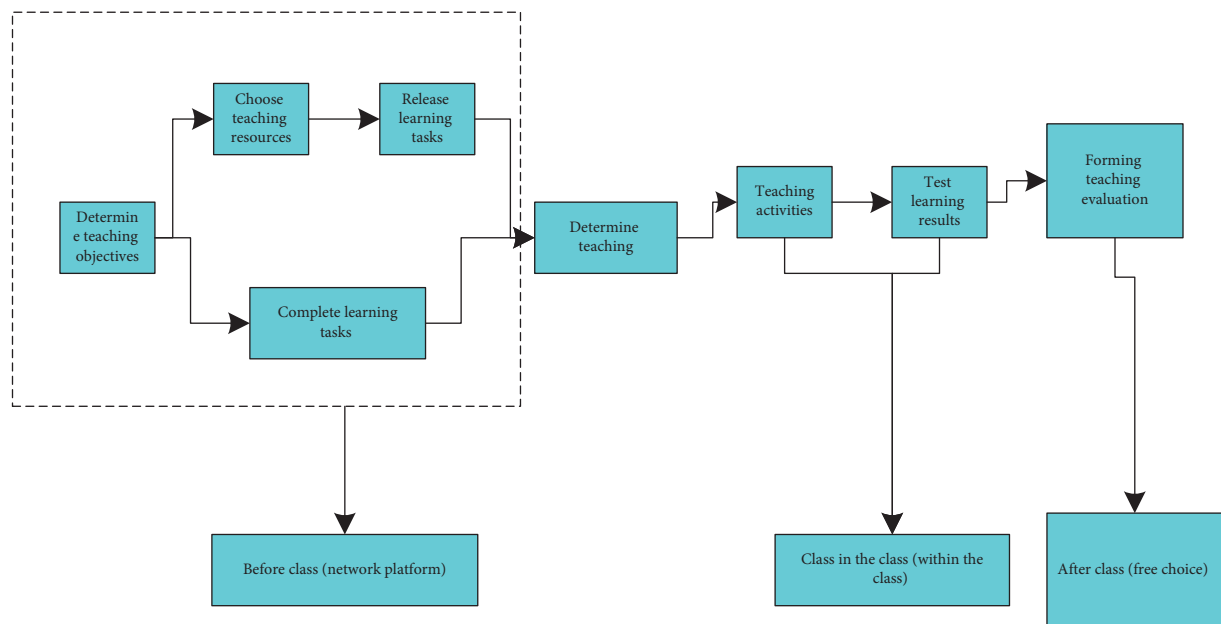


FIGURE 4: Preliminary model of blended teaching.

this research is under the premise of continuous modification and gradual improvement based on the existing research on blended teaching and further modification and improvement in three rounds of teaching practice. Finally, the mixed teaching mode of English for the upper grades of primary school is constructed, and the process is shown in Figure 6.

5. Discussion on the Current Situation of English Teaching Reform

5.1. Students' English Learning Attitude and Difficulties. The student's learning attitude is the key factor that determines the student's learning result, and it is the performance of the learning motivation in the student's overall

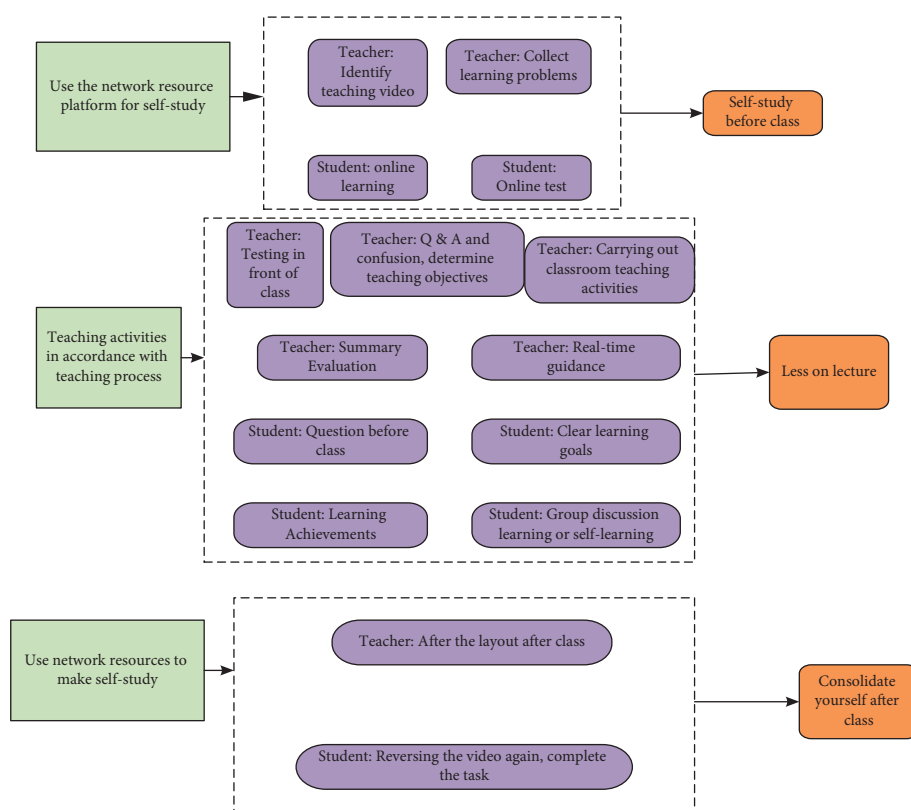


FIGURE 5: Teaching flowchart.

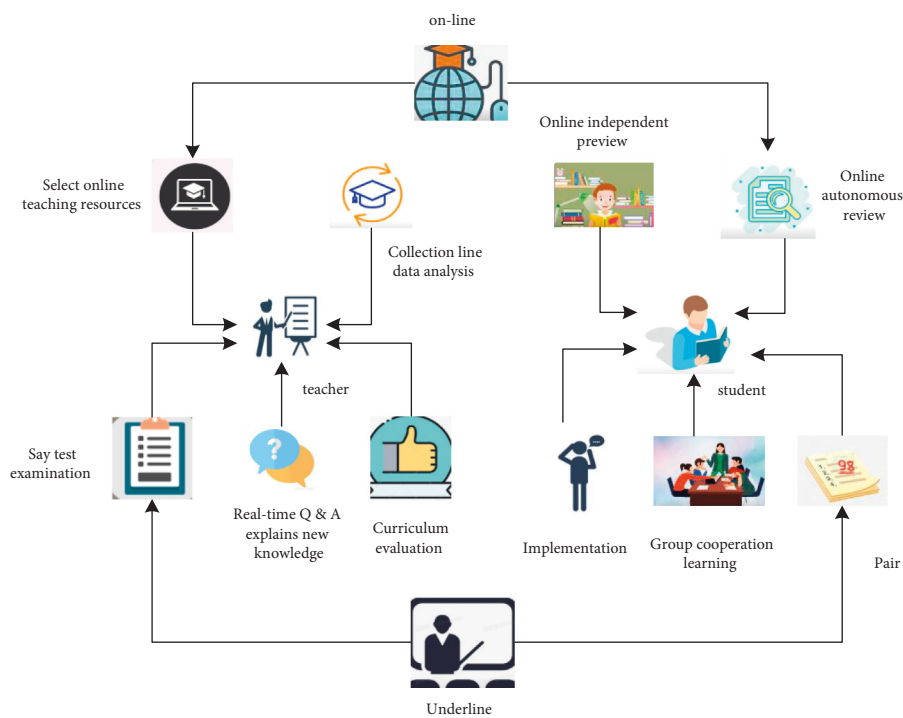


FIGURE 6: Flowchart of blended teaching mode.



learning activities. Therefore, this paper uses the network resources in artificial intelligence and artificial intelligence algorithm technology to conduct a survey and research on all students in a certain school. When students are interested in teachers' English courses and can actively and seriously engage in learning, students' own learning efficiency and learning results can achieve good results. However, when students learn English, they will inevitably encounter many difficulties, which requires teachers to carry out targeted teaching according to students' learning difficulties so that students' English learning can achieve good results [19]. The current goal of English teaching is to enable students to develop in an all-round way in listening, speaking, reading, and writing. However, when students are currently studying English, due to the large amount of course content and limited course time, students will encounter many difficulties in the process of English learning. In this survey, in order to have a clearer understanding of the current students' English learning difficulties, this paper has also conducted a survey on the biggest difficulties students think of English learning at present. All the survey results are shown in Figure 7.

In the survey, 29.7% of the students believed that their current difficulty in English learning lies in oral expression. Students believe that the main reasons for the difficulty of oral language learning are that teachers seldom create an oral language environment, and students do not use it well after class. 9.39% of students think that listening is the biggest obstacle, which is mainly reflected in listening, which accounts for less in daily exams. Teachers use Chinese in their daily teaching and other factors, and students do not understand because they do not listen enough. The proportion of students who think that grammar learning is difficult is 13.33%. The difficulty of grammar learning is mainly reflected in the understanding of grammar knowledge, and they do not know the various forms and flexible application of grammar knowledge. Word learning difficulties reached 12.73%, and this part of the students believed that the memory of words was an obstacle to English. Most of them use the way of marking the pronunciation of words to memorize words. This method not only makes English pronunciation inaccurate but also cannot achieve good memory effect. Only 4.85% of the students thought that there were difficulties in vocabulary, grammar, speaking, and listening. At present, most students believe that listening and speaking are the major obstacles in English learning. How to improve the listening and speaking skills of primary school students at this stage and further improve students' interest in learning is particularly critical [20].

## 5.2. Student Questionnaire

**5.2.1. Students' Views on the Curriculum Design of the Teaching Platform.** As shown in Figure 8, 62% of the students believe that the online "learning resource pack" provided in teaching practice is sufficient and helpful for self-learning new knowledge, but 18% of the students still think that the learning materials still need to be expanded,

indicating that there is still much room for improvement in resource construction. 80% of students believe that the "learning resource pack" is helpful for self-study in English and can improve their learning effect. 62% of students believe that the amount of tasks posted on the SPOC platform before class is suitable, and 12% of students believe that the amount of tasks can be increased. Therefore, in the pre-class learning on the network platform, it is necessary to pay attention to matching the personal situation of most students and then add personalized teaching modules and set up basic modules and expansion modules for different students to learn by division. More than 80% of the learners of the after-school homework assigned on the SPOC platform believe that the difficulty and quantity are reasonable, which is conducive to improving and consolidating the classroom learning effect [21].

The data surveyed in this paper reflects students' views on the SPOC platform and curriculum design. The evaluation grades are divided into five categories: A is very helpful, B is helpful, C is average, D is not helpful at all, and E is not helpful. More than two-thirds of the students believe that ten minutes of "English speaking" in the flipped classroom creates a full-English situation and enables them to quickly enter the learning state. Nearly three-quarters of the students recognized the role of the five-minute summary session in deepening knowledge learning in classroom teaching. Students think that situational teaching activities such as problem analysis and discussion in the classroom are very helpful for the mastery of English professional knowledge, and the proportion is 80%. The results are shown in Table 1.

**5.2.2. Analysis of Students' Satisfaction with the Teaching Platform Model.** The following survey is an analysis of students' satisfaction with the learning results. The evaluation grades are divided into five categories: A means very helpful, B means helpful, C means average, D means not helpful at all, and E means no help, as shown in the Table 2.

**5.3. Investigation on the Current Situation of English Teaching.** Understanding the current state of English teaching is one of the keys to this research. This paper conducts a questionnaire survey on students, and makes a relevant understanding of the current situation of English teaching in a primary school. It carried out statistics and analysis of the survey results and found some problems in teachers' teaching and students' learning as shown in Table 3.

It can be seen from the above table that 4.24% of the students think that it is very consistent with the current English teaching status, and teachers have used the form of blended teaching in teaching. 15.76% of the students believe that it is in line with the current English teaching status; 16.97% of the students think that the degree of teachers' use of blended teaching is relatively general, while 24.24% of the students and 38.79% of the students think that teachers use the blended teaching in English teaching does not meet or is very inconsistent with the current English teaching status. It can be seen that in the current English teaching process,

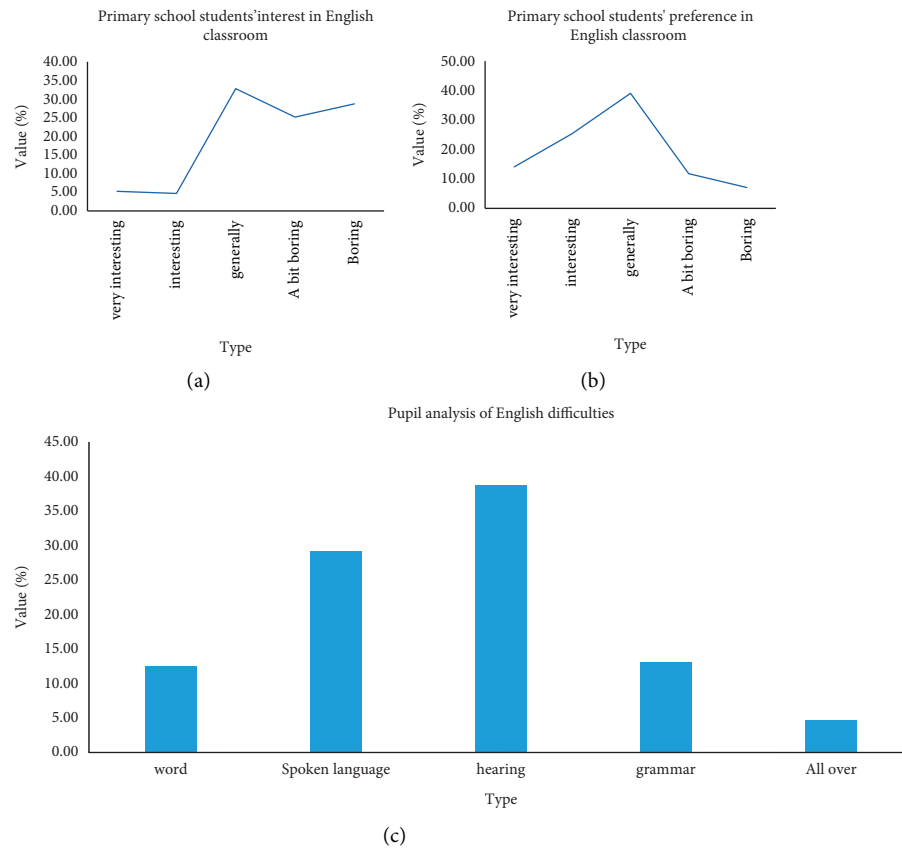


FIGURE 7: A survey of primary school students on English education classrooms. (a) Primary school students' interest in English classroom; (b) primary school students' preference in English classroom; (c) pupil analysis of English difficulties.

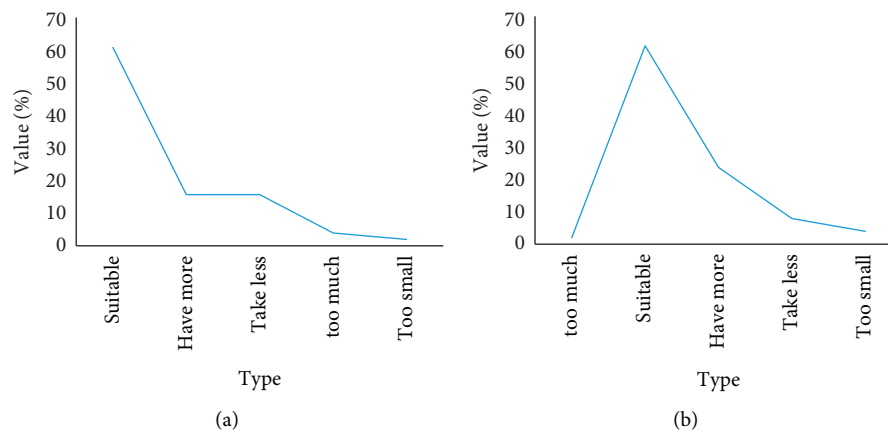


FIGURE 8: Survey of students' attitudes towards teaching platforms. (a) Data on students' attitude towards teaching resources. (b) Data on students' attitude towards pre-class tasks.

TABLE 1: Survey of students' attitudes towards teaching platforms.

Evaluation indicator	Evaluation results				
	A (%)	B (%)	C (%)	D (%)	E (%)
Ten minutes "English said"	7/14	30/60	9/18	4/8	0/0
Five minutes summary	15/30	28/56	7/14	0/0	0/0
Group mutual evaluation	9/18	27/54	14/28	0/0	0/0
Forum	11/22	26/52	12/24	1/2	0/0



TABLE 2: Analysis of student satisfaction with learning outcomes.

Evaluation indicator	Evaluation results				
	A (%)	B (%)	C (%)	D (%)	E (%)
Improve learning efficiency	12/24	30/60	7/14	1/2	0/0
In-depth grasp of full English knowledge	11/22	30/60	9/18	0/0	0/0
Improve operational skills	9/18	28/56	13/26	0/0	0/0
Improve problem-solving ability	10/20	30/60	10/20	0/0	0/0
Improve independent learning skills	9/18	34/68	7/14	0/0	0/0

TABLE 3: Questionnaire about the current situation of English teaching.

Question	Option	Percentage
At present, English teachers use the way of mixed teaching	Consistent	4.24
	Meets the	15.76
	Generally	16.97
	Incompatible	24.24
	Unqualified	38.79
You think the teaching resources provided by English teachers are lacking	Consistent	27.12
	Meets the	32.42
	Generally	18.97
	Incompatible	11.18
	Unqualified	10.3
In English class, teachers often use multimedia to teach	Consistent	23.64
	Meets the	32.73
	Generally	26.06
	Incompatible	9.09
	Unqualified	8.08

teachers seldom or hardly adopt the method of blended teaching. In the teaching, the traditional classroom teaching mode is still adopted in which teachers teach in the classroom and students listen to the lectures below. This kind of teaching method makes the students' participation in the classroom not high, and the teacher's indoctrination is more, which seriously reduces the teaching quality [22].

Through the analysis of the results of the questionnaire, it can be seen that 78.51% of the students believe that the teaching resources provided by English teachers are lacking or the teaching resources are relatively general. Only 21.48% of the students believed that the teaching resources provided by English teachers were rich or very rich. The lack of teaching resources provided by teachers is still one of the problems existing in English teaching at present. Providing abundant teaching resources is the key to ensure the learning effect of students and the teaching effect of teachers.

**5.4. Network Resource Requirements.** Blended teaching is the combination of online learning and classroom teaching, and it is extremely important to know what kind of teaching form students expect teachers to use in the teaching process. In addition, the experimental subjects selected in this study are primary school students. Whether the type of network resources selected by teachers before class can stimulate students' interest in learning is also one of the issues to be paid attention to in this investigation and research [23, 24]. At the same time, the duration of online resources and videos expected by students is the focus of this

questionnaire. Therefore, this paper investigates the above questions and presents the survey results as shown in Figure 9.

#### 5.5. Survey of Primary School English Teaching Based on Artificial Intelligence

**5.5.1. Analysis of Student Questionnaires.** Teachers' classroom teaching and students' autonomous learning after class are mutually integrated and mutually supportive. The teaching video provided by the network platform is the extension of teachers' classroom teaching knowledge after class, and the teacher's classroom teaching also provides directional guidance for students to learn network resources independently after class. In this section, this paper investigates the effect of the teaching experiment, using two methods of questionnaire survey and interview, to discuss and analyze the survey results [25, 26]. First, a questionnaire survey was carried out on whether primary school students were satisfied with the teaching resources provided by teachers, whether they were autonomous in their learning, and whether they could improve students' interest in English learning. The results of the survey are shown in Table 4.

It can be seen from the table that 23.18% and 50.86% of the students believe that the network resources selected by the teacher have played a certain role in their English learning; 6.84% and 3.71% of students believe that the online resources selected by teachers are not helpful to their English learning, which shows that most of the students are satisfied

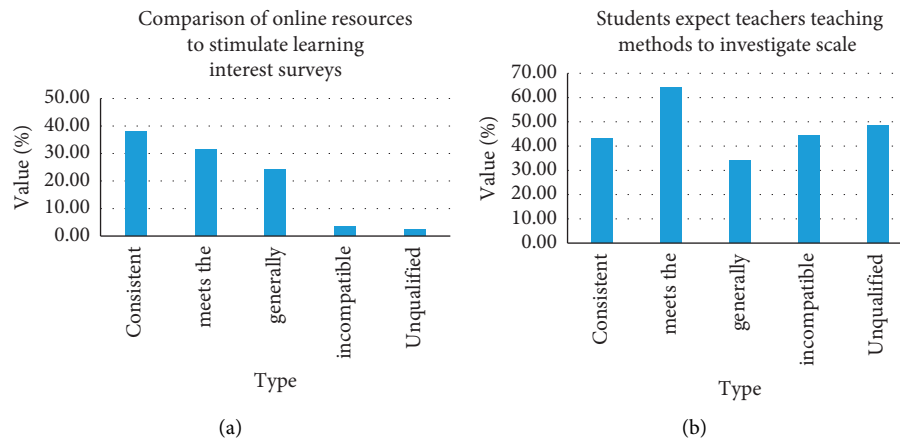


FIGURE 9: Statistical chart for the analysis and comparison of network resources for students' needs. (a) Comparison of online resources to stimulate learning interest surveys. (b) Students expect teachers teaching methods to investigate scale.

TABLE 4: Student questionnaire posttest results questionnaire.

Question number	Title statement	Consistent (%)	Meets the (%)	Generally (%)	Not in line with (%)	Incompatible (%)
1	Teachers choose network resources play a certain help to my English learning	23.18	50.86	15.41	6.84	3.71
2	Teacher's mixed teaching model has stimulated my English learning interest	53.67	27.83	10.42	5.69	2.40
3	Compared with traditional teaching modes, I prefer mixed teaching models	23.67	32.74	19.52	16.80	7.37
4	I will watch the network platform video in accordance with the teacher's request before class	24.31	34.41	20.72	5.41	15.15
5	For questions you do not understand, I will watch teaching videos after the class	6.30	16.08	17.99	27.15	32.48

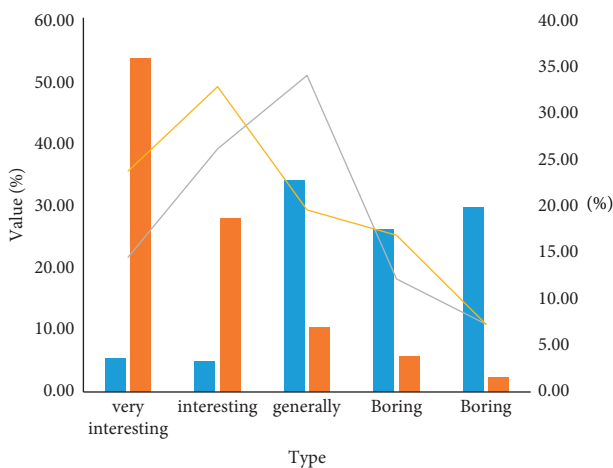


FIGURE 10: Comparative analysis of the degree of interest and love of the course before and after.

with the resources selected by teachers, which has played a certain role in promoting their English learning. The teaching mode of teachers has stimulated my interest in English learning. 53.67% of the students chose to be very consistent, 27.83% of the students chose to be in line, 10.42% of the students chose to be average, 8.09% of the students

chose not to be in line with very inconsistent, which shows that most of the students believe that the current teaching method can stimulate their interest in learning English. Figure 10 shows a statistical chart of the comparison and analysis before and after the interest and love of English courses.

It can be seen from Figure 10 that in the later stage, most of the students' preference for English courses has increased significantly compared with the pre-test, but there are still some students who do not like English courses, but their dislike of the teaching mode adopted by teachers has increased compared with the pretest.

## 6. Conclusions

The blended teaching based on artificial intelligence not only improves the students' interest in English learning, but also improves the students' learning enthusiasm, and the teaching experiment effect is remarkable. This study believes that under the guidance of the blended teaching model, teachers' teaching atmosphere has also undergone relatively obvious changes, students' participation in the classroom is higher, and classroom communication is significantly improved. Although the blended teaching model based on artificial intelligence can effectively improve students'

interest in English learning and academic performance, it has higher requirements on students' autonomous learning ability and is not suitable for students with poor autonomous learning ability, which is the blended of this teaching method. The quality of blended teaching depends not only on teachers' classroom teaching, but also on students' autonomous learning after class. As an online course, network resources have the advantages of openness, breadth and immediacy of teaching content far more than traditional classrooms, but at the same time, it puts forward high requirements for students' autonomous learning and self-control. Although the teaching forms of network resources are rich and colorful, the teaching forms are relatively simple and all teaching is presented to learners in the form of videos. For learners, the learning process lacks the supervision of teachers and parents, and the learning effect is difficult to guarantee. Therefore, in the future, traditional teaching and online teaching should be mixed to ensure the learning effect of students [27].

## Data Availability

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

## Conflicts of Interest

The author states that this article has no conflicts of interest.

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