

## Research Article

# Design of the Mixed Oral English Teaching Method Based on the Hierarchical Aggregation Algorithm

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Received 9 October 2021; Accepted 29 January 2022; Published 8 March 2022

Academic Editor: Ateeq Rehman

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As a key skill for language learners, oral communication ability is one of the most important factors to measure one person's overall quality. Being a widely used language, English has become an important communicative medium worldwide. Oral English teaching is an important part of the whole process of English learning and is generally an emerging topic for the education circle. However, the traditional oral English teaching model has no significant effect on improving oral English performance. Therefore, this paper studies the mixed oral English teaching model under the guidance of core qualities. The connotation of core literacy of oral English is analyzed and the general framework of the core literacy system of oral English is constructed. Then, the relationship between the four elements of English subject core literacy is examined based on the classification of the spoken English teaching resources. Next, the integration of spoken English teaching resources is realized and the oral English knowledge ontology and the cultural differences between Chinese and Western analysis are explored. Finally, a task-based oral English teaching hybrid model is developed. The experimental results show that there is a significant difference in the oral English level of the students before and after the experiment. The model can improve the overall quality and overall performance of English learning for our society.

## 1. Introduction

With the advancement of the economy and technology, the pace of globalization is very fast and the communication among countries grows frequently and oral English becomes more and more important. Only when we communicate frequently with others in English, we can master English well. The English language plays an important role in international communication. Therefore, it is essential to devise effective methods to improve oral English for English learners [1].

In recent years, China has paid more and more attention to the development of English education and taken some effective reform measures. However, due to the influence of exam-oriented education, the National College Entrance Examination (NCEE), generally known as the gaokao, scores are still required for entrance into colleges at the undergraduate levels [2]. In English teaching, teachers still adopt the traditional teaching mode, which is teacher-centered in

the classroom [3]. Most of the time, the teacher gives lectures while the students take notes. Such “spoon-feeding” teaching makes students become passive machines to receive knowledge, and students have no time to think and analyze, in addition to lack of reflection and judgment on knowledge. Thus, students are affected to form their independent thinking and innovative thinking [4].

Nowadays, research on oral English teaching has been increasing. Research has also made great results, which help in improving spoken English language teaching. Native research for spoken language mostly emphasizes the oral English teaching methods, strategies, and environment [5]. Presently, with the conventional English teaching methods, many problems exist in the process of oral English teaching in China. Wen [6] examined the existing status of oral English teaching in a school of Hu-Bei Province using interview and questionnaire survey methods. This research confirmed the feasibility of oral English classes in schools after one semester's experiment. Wen [6] proposed the

teaching of spoken English via speech laboratory, where students express a higher enthusiasm, with reduced tension and anxiety. In this speech laboratory, the students will be more enthusiastic to use practical English and their oral communicative abilities will develop faster. Liu and Han [7] believed that, in the four language skills, speaking, listening, writing, and reading, more emphasis should be given to speaking, because one of the purposes of learning language is to communicate. Gaou [8] investigated the association between the methods for communicative English and the degree of spoken English. The results demonstrated that most Chinese students seldom use effective approaches in oral English communication. Huang [9] pointed out that, along with the curriculum reorganization, comprehensive ability, such as speaking, reading, and listening, should also be taken seriously and much attention should be given to these problems in rural schools.

The author in [10] pointed out that the fundamental objective of oral English language activities is to convey the application capability of the English language, rather than studying a specific part of this language, and the students should be able to use it flexibly and complete the task of spoken language. Paulson and Bruder [11] proposed that the language ability of an individual is the communicative capability, which can be the final goal of learning a language. Students should first learn the elementary facts of language form; however, better pronunciation and form do not mean that they can use them. Therefore, it is essential to use opposite language to deal with the different social environments. Hymes [12] believed that communicative English language teaching plays a critical part in evolving students' communicative abilities and it is the communicative language method that led to changes in English teaching methods. According to [13], the key to core literacy is the ability of creative thinking and the ability of complex communication. In China, "core quality" refers to "the personality qualities and key abilities that students gradually form in the process of receiving education in the corresponding study period to adapt to personal lifelong development and social development." From these views about oral English communication, the author can conclude that the research oral English teaching is gradually increasing. Therefore, this study believes that core literacy is the ability of students to adapt to and promote social development. To improve students' oral English level, this paper designs a mixed teaching model of oral English under the guidance of core literacy. To further verify the first mock exam's effectiveness in the cultivation of students' core competence in oral English, a case study was conducted in a class of the school. After the course, N students from different levels in the class were interviewed to analyze the students' oral proficiency and to study the effect of the model on the cultivation of core competence of English Majors at different levels.

The rest of the paper is ordered as follows: in Section 2, the oral English teaching model is discussed. In Section 3, the proposed mixed oral English teaching model is illustrated. Section 4 is about results and discussion. Finally, the conclusion is given in Section 5.

## 2. Oral English Teaching Model

*2.1. The General Framework.* The new round of curriculum reform puts forward the development of Chinese students' core qualities, that is, the necessary and essential qualities and key abilities that Chinese students in the twenty-first century should acquire to meet the needs of lifelong development and social development [14]. The core quality of Chinese students' development is to be an "all-round person," which is divided into three aspects: cultural foundation, self-directed development, and social participation. It is comprehensively reflected in six aspects: cultural background, scientific spirit, learning to learn, healthy life, responsibility, and practice and innovation. The specific contents of the three aspects of core literacy development of Chinese students are shown in Figure 1.

Among the six aspects, the scientific spirit in the cultural background has the same performance as the critical thinking ability, mainly including rational thinking, critical questioning, and courageous inquiry. It is emphasized that students should pursue truth, keep thirst for knowledge, dialectical thinking, critical questioning, and independent analysis, and dare to practice. The interaction and integration of the three aspects constitute the core qualities of students' development and promote students to develop into comprehensive people. At present and even in future education and teaching, the cultivation and development of students' core qualities have always been at the center of educational reforms and frontline education positions [15]. After the start of the new Chinese curriculum reforms in 2017, the correspondence and correlation between various disciplines and core literacy have been clarified. Different disciplines promote students' different core literacy and there is no restriction on the cultivation of specific disciplines, and each learning section and multiple disciplines can correspond to one or more core literacy types [16]. Therefore, the English curriculum standards for senior high schools in 2017 define the general framework of the core literacy system for the development of English subjects, and the core literacy for English subjects is included in the curriculum standards for English subjects.

*2.2. Analysis of the Relationship among the Four Elements of English Core Literacy.* In China, the 2017 Edition of English Curriculum standards for senior high schools puts forward the core quality of English, which is composed of four essential elements: language ability, cultural awareness, thinking quality, and learning ability. These four elements are depicted in Figure 2. It can be seen that the four elements of core literacy are interconnected, integrated, and coordinated. It is an interactive comprehensive literacy, the educational goal of English discipline, and an important evaluation measure of English education in Chinese high school and students' English learning effectiveness.

As the basic quality of the core quality of English discipline, language competence lays the foundation for the development of the other three qualities [17]. The high school students' language ability is an important basis for the

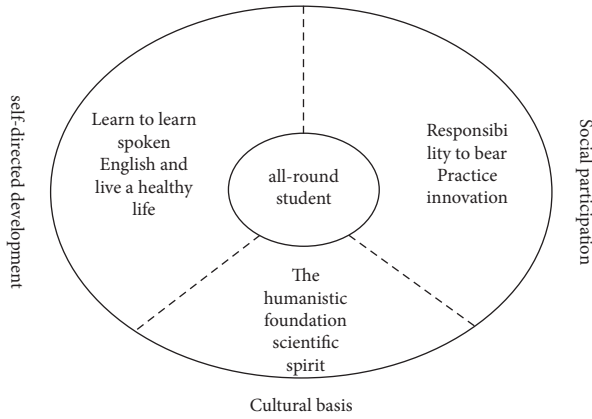


FIGURE 1: The general framework of the core literacy system for oral English students.

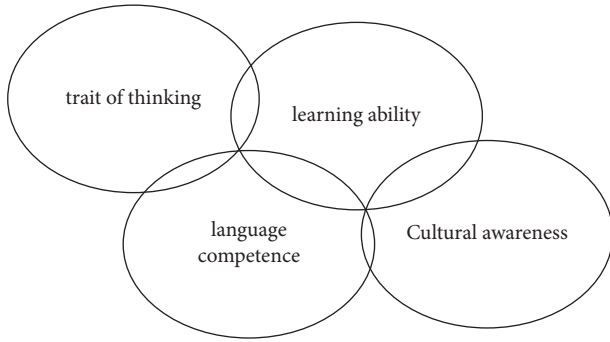


FIGURE 2: Core competence of English discipline.

development of core literacy. Cultural consciousness is the value orientation and the development direction of other elements. The quality of thinking is the mental characteristic and the main driving force for the development of other elements. Learning ability is the development condition of other elements, which affects how students deal with and treat their learning. The quality of thinking includes identification and classification, analysis and inference, generalization and construction, criticism, and innovation. The goal of quality of thinking is to cultivate students' logical, critical, and innovative thinking abilities.

*2.3. Classification of Oral English Teaching Resources under the Guidance of Core Literacy.* Under the guidance of constructivism, some English teachers actively use information technology (IT) to assist teaching, examine the structure of classroom teaching, and explore some different teaching modes [18]. According to the characteristics of oral English teaching and learning, English teachers mainly adopt the task-based teaching mode and adapt teaching strategies such as picture display, culture introduction, setting up the situation, and functional evaluation to achieve the teaching objectives and to classify oral English teaching resources so that teachers can effectively teach oral English.

Hierarchical aggregation, also known as hierarchical cluster analysis, is an algorithm that groups similar objects into groups called clusters. In this study, the hierarchal

aggregation algorithm is used in which the endpoint is a set of clusters, where each cluster is distinct from other clusters, and the objects within each cluster are broadly similar to each other. The characteristic leaf nodes constructed by grouping the hierarchical aggregation algorithm are selected to obtain Euclidean's distance metric between characteristic leaf nodes of spoken English resource information:

$$d_{ij} = \sqrt{\sum_{i=1}^m (x_{ik} - x_{jk})^2}, \quad (1)$$

where  $x_{ik}$  represents the feature weight of spoken English resource information and  $x_{jk}$  represents the observation vector of similar features of spoken English resource information. The likelihood logarithm decreases when different categories are combined into the same category and the distance between different categories changes.

When the likelihood log distance is applied to the combination and classification of oral English teaching resources, different variables are set to be independent.

The distance  $d(j, s)$  between category  $j$  and category  $s$  is defined as follows:

$$d(j, s) = x_j + x_s - x_{(j,s)}. \quad (2)$$

In (2),  $(j, s)$  represents the category obtained by merging.

Using the Bayesian information (BIC) criterion, the classification calculation results of the above processes are used to initially estimate the classification quantity of acquired oral English teaching resources. Between the two most similar category ratios in the initial classification, the number of clusters with the largest increasing distance is the final number of clusters [19]. The final combination and classification of oral English teaching resources can be calculated as follows:

$$\begin{aligned} \text{BIC}(R) &= -2 \sum_{j=1}^j x_j + m_j \log(N), \\ m_j &= R \left\{ 2H^A + \sum_{H=1}^{H^B} (L_H - 1) \right\}, \end{aligned} \quad (3)$$

where  $R$  represents the number of clustering,  $H^A$  and  $N$  are the total number of continuous variables and a total number of observations, respectively, in the process of merge sort, and  $m_j$  is the number of leaf nodes, for classification of oral English teaching resources. The merge sort classifies the value of the match, to achieve the spoken English teaching resources classification.

### 3. Realization of the Mixed Teaching Mode of Spoken English

*3.1. Ontological Study of Spoken English Knowledge.* Based on years of exploration in oral English teaching practice, it is not difficult to find that the learning of oral English should be as follows: pronunciation should be lighter than grammar, cultural differences between China

and the West should be understood, and relevant thematic cultural context knowledge should be constructed. Only in this way can we communicate with foreigners smoothly and conveniently and achieve language learning in the real sense.

### 3.1.1. Basic Knowledge of Phonetics

- (1) The basic sounds of 26 letters
- (2) The beginning of the head letter in the stressed closed head
- (3) Common vowel combinations that occur in stressed closed syllables
- (4) The sound of common consonants combined in words
- (5) The articulation of consonants

Articulation:

- (1) The stress of words
- (2) Word stress and sentence stress
- (3) The pronunciation of a meaning group
- (4) Even read, lost blasting, weak to read, and assimilation
- (5) Intonation and rhythm
- (6) Intonation (rising, falling) and pace (fast and slow)

### 3.1.2. Grammar Knowledge

Pronunciation rules for nouns and verbs when they are changed: the plural of the noun is pronounced as third person.

The pronunciation of inflected verbs in the past tense.

Types and pronunciation rules of interrogative sentences: general interrogative sentences often use rising tone, and special interrogative sentences often use falling tone, and choose questions. The intonation of the sentence generally rises before falling or rises after falling.

Tense and voice: pay attention to the passive voice, or you will be misunderstood when speaking.

Pronunciation: the correct pronunciation.

Group reading of complex sentences: understanding the structure of sentences can help students divide sentences into groups.

3.1.3. *Analysis of Cultural Differences.* The cultural difference between China and the West originates from the two different civilizations, which are rooted in different ways of thinking. Chinese and Western cultures have different preferences for abstract thinking and imaginative thinking. Chinese people prefer imaginative thinking while Western people prefer abstract thinking. The difference is mainly in language. "The signs of times point to the necessity of the reform of the financial system." The financial system needs reform. It can be seen that the translation differs greatly from

the original text, which is mainly reflected in the fact that the original text uses abstract nouns to express concepts, while the translation uses specific words (obviously, must) with clear meanings. In addition, the cultural differences between China and the West are also reflected in many aspects: for example, in terms of Chinese and Western traditional festivals, China has the Lantern Festival, Dragon Boat Festival, Mid-Autumn Festival, Spring Festival, and other traditional festivals, while the West has Thanksgiving, Halloween, Christmas, and other typical festivals. There are also great differences in the understanding of color in China and the West, such as brown loaf, brown sugar, the gray of the morning, and blue-bottle. For example, he went blue in the face. Western culture also has a different understanding of animals as opposed to Chinese culture. In English, "horse" and "sheep" are used. In "talk horse" and "a black sheep," it can be understood as a weak word, while "ma" in Chinese is "leading the way," and "Yang" in "he is as gentle as a little sheep" is a positive word [20].

There are also cultural differences between China and the West in lifestyle and learning. While communicating with foreigners, Western people taboo others to ask about their age, income, marriage, etc., while Chinese people like to take these topics as topics to understand others. In oral learning, foreign teachers let students call them by their first names, which reflects the equality and respect between teachers and students in Western culture. Its teaching methods are also quite different from local teaching methods. Foreign teachers can take the lead in learning Chinese tongue twisters from Chinese students, make a fool of themselves, and enhance students' self-confidence in learning English. They should enjoy losing face at any time and then teach students English tongue twisters to make it easier for students to accept this language teaching method [22]. Students speak freely in this equal and harmonious learning atmosphere, dispel their ideological concerns, and naturally make their oral expression more fluent. In China, teachers attach great importance to self-image and rarely take the initiative to lose face.

3.2. *Construction of a Mixed Model of Task-Based Oral English Teaching.* "Task-based" oral English teaching focuses on various learning tasks, introduces real materials into the learning environment, pays attention to the learning process, and acquires the language through communication. The "task-based" oral English teaching under information technology is divided into four steps: design task, presentation task, completion task, and evaluation task. These steps are explained in the following section.

3.2.1. *Design Assignment.* In oral English learning, tasks can be set according to students' occupational categories and needs, to stimulate students' enthusiasm for learning as much as possible. Participation is to make full use of the advantages of computer and IT and extend the teaching space and audio-visual and oral integrated comprehensive training so that students can participate in it. The testability should fully consider the students' cognitive psychological

law, provide timely feedback on the students' learning effect, and make the students pay attention to the assigned task.

**3.2.2. Rendering Task.** When presenting tasks, teachers need to make rational use of IT, try to arouse students' interest in learning, fully mobilize students' initiative and enthusiasm, stimulate students' learning motivation and interest, and let them learn oral English easily and happily in an active and friendly atmosphere.

**3.2.3. Complete the Task.** IT can provide students with information resources so that students can complete various tasks in a pleasant situation. Students' task is to use IT resources, according to the task chain to complete the task. The task of the teacher is to guide and help the students to carry out exploratory learning, guide the students to actively find ways and methods to complete the task, and carry out a lively and effective dialogue with the students around the relevant topics.

**3.2.4. Evaluate the Task.** This stage can be completed by students' self-assessment, group mutual assessment, and teacher's general assessment. The teacher may have several students where each student gives brief presentations or one or two groups of students give full presentations. The students who summarized the report exercised their oral English, and the other students also listened to the learning process. In addition, teachers can guide students to reasonably use IT man-machine dialogue and mutual exchange and strive for new progress.

After the above analysis, combined with the development of oral English, this paper designs a mixed teaching model of oral English under the guidance of core literacy. To validate the first mock exam's effectiveness in the cultivation of students' core competence in oral English, a case study was conducted in a class of the school. After the course, N students from different levels in the class were interviewed to analyze the students' oral proficiency and to study the effect of the model on the creation of core competence of English Majors at different levels. The mixed teaching mode of oral English under the guidance of core literacy is shown in Figure 3.

Before the class, students use the oral English learning platform (such as "work together") under the guidance of teachers to complete certain learning tasks. The oral English learning platform provides immediate feedback, and students revise it in time after receiving the feedback. The teacher's mobile terminal receives the big data analysis results of the students' tasks at the same time. The teacher then collects and summarizes the problems in the students' preview, and the students can communicate the problems. Based on problem analysis and textbook analysis, the teacher formulates the oral English teaching content and teaching specific implementation methods. In the classroom, the teacher teaches with the help of the smart classroom system. Students use e-book bags to learn the corresponding contents. The smart classroom is

connected with e-book bags. Teachers teach and demonstrate the teaching contents in the first 5–15 minutes, and students learn the corresponding teaching contents by themselves or in cooperation in the middle 10–15 minutes. They carry out in-depth learning under the guidance of teachers to complete the training of cultural awareness assigned by teachers. The tasks of high-level thinking ability and learning strategies may be guided by teachers. Students find problems, raise problems, solve problems or question each other, and summarize the learning strategies of this lesson. In the last 5–10 minutes of the class, the students expand the learning or display and summarize the lessons learned hierarchically. After class, students complete oral English language practice activities or extracurricular reading based on learning this course. Teachers supplement corresponding materials through the online platform or interactive software and guide students' language practice in time. The teaching model is designed and practiced based on the information-based oral English learning model, combined with the students' learning situation and the existing information level of the school. It makes full use of the existing IT resources in schools and students' homes, optimizes teaching resources, carries out the teaching practice of oral English mixed teaching mode, and promotes students' oral English core literacy on this basis.

## 4. Experiment

**4.1. Experimental Scheme.** To evaluate the effect of the mixed oral English teaching model under the guidance of core competence, this study carried out an oral English teaching experiment. This study collected and arranged the data of the mixed oral English teaching experiment, including the pretest and posttest data, and made statistical analysis using SPSS 22.0 software.

To evaluate the effectiveness of the proposed oral English mixed teaching method, the students were divided into control and experimental class, respectively. To find the differences between the experimental class and the control class, the oral test was carried out in the control class and the experimental class before the study, and the individual analysis was carried out on each dimension of students' oral English performance. After the mixed oral English teaching experiment, the second oral test was carried out for the control class and the experimental class, and the individual analysis was carried out on each dimension of students' oral performance. Finally, by comparing the scores of each dimension of oral English between the two classes, changes in students' oral English scores in specific dimensions were recorded. Through the quantitative analysis of the oral English performance of the two classes, the experimental results were obtained, and the specific reasons for the experimental results were analyzed. After the experiment, the students in the experimental class were investigated on the learning attitude of oral English mixed teaching and analyzed in each dimension.

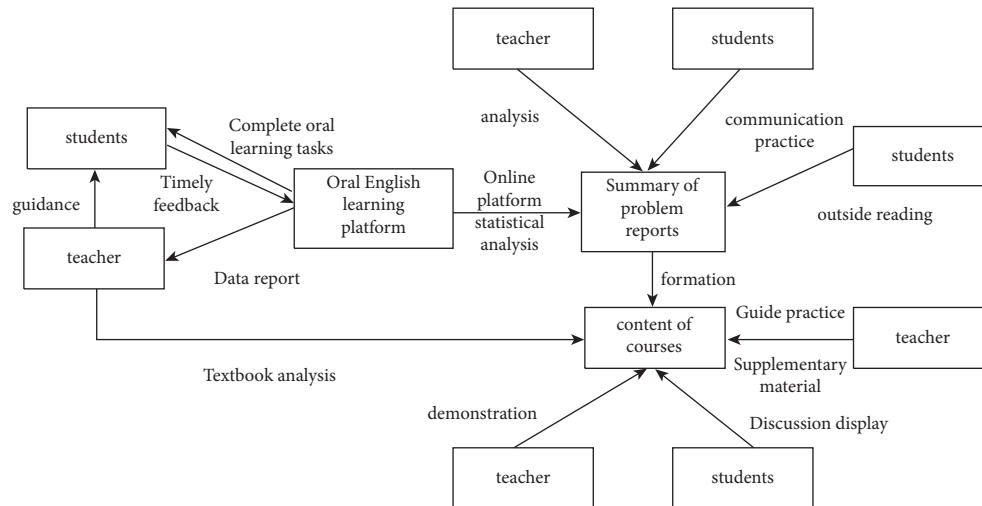


FIGURE 3: The mixed teaching mode of oral English under the guidance of core literacy.

**4.2. Comparative Analysis of Pretest and Posttest of Oral English.** Before the experiment, the students were tested for their oral English level, and the total score of oral English was tested by an independent sample *t*-test. The results showed that when  $t = 1.842$ ,  $SIG = 0.56 > 0.05$ , indicating that there was no significant difference between the two classes before the experiment, and they had the same conditions for teaching experiment. After the experiment, the total scores of the control class and the experimental class were statistically analyzed. It was found that the total scores of the two classes were  $t = 1.894$  and  $SIG = 0.004 < 0.05$ , which indicated that there were significant differences between the two classes after the experiment. There is no significant difference between the experimental class and the control class in the three dimensions of language content, language accuracy, and pronunciation and intonation. There were significant differences in language content, language accuracy, and pronunciation and intonation in the posttest results. The experimental results are shown in Table 1 which is the overall reflection of the effect of the oral English mixed teaching model on oral English teaching. The research data results were analyzed by SPSS22.0. The data provided include mean score, standard deviation, *t*-value, and significance *p*-value. Initially, the results of the pretest and posttest scores of the control class and the experimental class were compared. To refine the experimental results, the pretest and posttest changes of the total oral scores were analyzed from three aspects: language content, language accuracy, and pronunciation and intonation. The results show that the experimental class is significantly improved in language content, language accuracy, and phonetic content. The control class was also improved in language content, language accuracy, pronunciation, and intonation, but the improvement range was smaller than that of the experimental class.

As shown in Table 1, before the implementation of the oral English mixed teaching model experiment, the oral English status of students in two classes was tested. Prior to experiment, the average score of oral English in the control

class was 58.72, and the standard deviation was 5.87. The average score of the experimental class was 58.68, and the standard deviation was 5.56, respectively. The difference between the total average score of the pretest between the control and experimental classes was only 0.14, which was not much different. The independent sample *t*-test of the two classes showed that the *p*-value is 0.530 ( $p > 0.05$ ), which shows that the oral English ability of the two classes is the same. After the oral English mixed teaching experiment, the oral test results of the two classes were analyzed. It is found that the average oral performance of the control class is 78.87 and the standard deviation is 6.28, while the average performance of the experimental class is 73.01 and the standard deviation is 5.22. The average score of the experimental class is 5.14 points higher than that of the control class, and the *p*-value is 0.003 ( $p < 0.05$ ), which proves that there is a significant difference in oral English level between the two classes after the experiment. This confirmed that the oral English mixed teaching experiment in one semester has a significant impact on the students' total oral English score, and the score is the most intuitive reflection of the teaching effect, as students make progress in an oral mixed teaching classroom.

## 5. Discussion

In middle schools, oral English teaching plays a vital role in the whole process of English learning and is usually a developing topic for the education circle. In a traditional oral English teaching environment, teachers focus on the teaching material of a language and minimize the language knowledge in the practical environment; as a result, the students accumulate a large number of sentences, but because of a lack of oral practice of English language, they cannot perfectly use these sentences in real-life communication. The oral English mixed teaching can greatly change the status quo, subvert traditional language learning, eliminate students' passive participation, and emphasize teaching students through different modal transformations

TABLE 1: Pretest and posttest *t*-test of oral English in control and experimental classes.

Test dimension	Class	Sample size	Average	Standard deviation	<i>t</i> -value	Significance (double test)
Total pretest score	Control	53	58.72	5.87	0.632	0.530
	Experimental	54	58.68	5.56		
Total posttest score	Control	53	72.87	6.28	3.027	0.003
	Experimental	54	78.01	5.22		
Pretest language content	Control	53	22.36	2.05	0.404	0.687
	Experimental	54	22.70	2.26		
Posttest language content	Control	53	30.53	2.49	0.703	0.686
	Experimental	54	29.97	3.03		
Pretest language accuracy	Control	53	16.12	1.41	1.259	0.213
	Experimental	54	16.70	1.53		
Posttest language accuracy	Control	53	22.26	2.82	3.753	0.026
	Experimental	54	25.45	1.50		
Pretest phonological intonation	Control	53	16.03	0.64	0.119	0.905
	Experimental	54	16.09	0.58		
Posttest pronunciation and intonation	Control	53	22.56	2.77	3.282	0.032
	Experimental	54	24.41	1.38		

to actively participate in meaningful learning. The oral English mixed teaching method stresses creating the real language learning environment which enables interactive cooperation between students for learning a language and improves the overall learning effect of students.

In the oral English mixed teaching class, the audio learning mode can be used to wake up the students' hearing organs, and students can better participate in the classroom learning by playing the audio of the mixed teaching in oral English class. In the process of listening or video playing, students take notes by hand. To some extent, the tactile mode is also involved in the learning process, and the simultaneous mobilization of multiple senses is helpful for the concentration of students. The integration of visual and auditory modes in teaching input greatly activates the scope and context of language use in students' minds. In addition, the group-based hybrid teaching activity form of interaction, such as role playing, group discussion, and group report, can help to construct a variety of words. In the process of interaction, the students will also be able to make up for the traditional single oral information structure students rely on to express imagination, speaking opportunities and interactions between students are also increased, and the quality of spoken English is further improved.

The learning process of spoken English is a process of cooperation and participation of various senses. Mixed teaching of oral English fully mobilizes students' visual, auditory, and tactile senses, so that students can fully participate in the teaching process to achieve good teaching results. Because of the limited contents of the traditional oral English teaching, teaching material itself is too ideal to ridicule whereas oral English mixed teaching can broaden the scope of teaching materials. The mixed symbol resources can help students construct meaning, improve the ability of expression, better understand the nature of oral expression, and actively make good use of source and auxiliary oral expression way. In the oral English mixed teaching methods, the students' enthusiasm for oral English learning is further improved, leading to improved performance of oral English learning.

Foreign language learning requires comprehensive improvement of students' skills in listening, speaking, reading, writing, translating, and other aspects. Oral English, as one of the most important indicators that can directly reflect students' comprehensive strength, requires students to be able to communicate with the outside world fluently on different occasions and have high practical skills. In mixed English teaching, students can learn in a more natural environment, and various modal symbols can also help to construct meaning intuitively, highlight the situation and pragmatic scope, and promote more contextual input. Traditional oral teaching is a little inadequate in this aspect, students are difficult to expand the scope of communication with the help of multimedia, and the oral output is often dry. The mixed teaching environment can promote the extension and expansion of students' communication context, and simulated situations similar to reality can also help students naturally acquire language skills.

## 6. Conclusion

The oral communication ability of an individual is one of the most important factors to measure the overall quality of learning a language. Since the English language has become an important communication language worldwide, learning the English language has become indispensable. However, the conventional oral English teaching methods have no significant effect on improving English learning. This article proposed the oral English mixed teaching model for English learning using a hierarchical aggregation algorithm. In this study, the connotation of core literacy of oral English is analyzed and the general framework of the core literacy system of oral English is constructed. Next, the association between the four elements of English subject core literacy is examined based on the classification of the spoken English teaching resources. Moreover, the resources of the spoken English teaching are integrated and the oral English knowledge ontology and the cultural differences between Chinese and the Western analysis are analyzed. Finally, a task-based oral English teaching mixed model is developed.

The experimental results show that the spoken English level of the students is improved significantly after the experiment, which demonstrates the effectiveness of the proposed hybrid teaching model of spoken English.

### Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

### Conflicts of Interest

The authors declare that there are no conflicts of interest.

### References

- [1] Z. Yifang, "Application of OM in oral English teaching in higher vocational colleges under the background of start-ups and innovation," journal, *Of Zhengzhou Railway Vocational and Technical College*, vol. 31, no. 03, pp. 78–80, 2019.
- [2] P. M. I. Seraj, H. Habil, H. Habil, and M. K. Hasan, "Investigating the problems of teaching oral English communication skills in an EFL context at the tertiary level," *International Journal of Instruction*, vol. 14, no. 2, pp. 501–516, 2021.
- [3] H. K. Lee, "A study on the English teacher quality as an English instructor and as an assessor in the Korean secondary school," *English teaching*, vol. 62, pp. 309–330, 2007.
- [4] Y. M. Zhang, "The cultivation of students' oral communicative competence," *Educational and Scientific Research Forum*, vol. 2, no. 6, pp. 50–51, 2006.
- [5] L. F. Sun, *A Feasible Experiment on Improving Students' Oral Ability in Rural High Schools in Hebei Province*, Huazhong Normal University, Wuhan, China, 2008.
- [6] Q. F. Wen, *Evaluation of Oral Language Teaching in Language Laboratory*, Foreign Language World, no. 1, pp. 30–33, China, 1998.
- [7] R. Q. Liu and B. C. Han, "Review and reflection on English education in basic education in China," *Foreign Language Teaching and Research*, no. 2, pp. 150–156, 2008.
- [8] H. H. Gao, "How to develop oral English teaching for college students," *Audio-visual Foreign Language Teaching*, no. 76, pp. 3–6, 2006.
- [9] B. W. Huang, "Problems and solutions of spoken English in rural middle schools," *Success*, vol. 10, no. 5, pp. 50–51, 2011.
- [10] J. Harmer, "How to Be a good teacher," *Basic Educational Research on Foreign Language Teaching*, no. 5, pp. 46–49, 2000.
- [11] C. B. Paulston and M. N. Bruder, *Teaching English as a Second Language: Techniques and Procedures*, Cambridge University Press, Cambridge, 1992.
- [12] D. Hymes, "On communicative competence," in *Sociolinguistics. Selected Readings*, J. B. Pride and J. Holmes, Eds., no. 4, pp. 110–114, Penguin, Harmondsworth, England, 1972.
- [13] X. Li and Y. Xie, "Application of virtual reality technology in oral English teaching for college English Majors," *Journal of Physics: Conference Series*, vol. 1820, no. 1, pp. 132–148, 2021.
- [14] A. K. Bartella and B. F. Lethaus, "The benefit of "Youtube" in teaching Oral- and Maxillofacial Surgery in dental students," vol. 12, no. 2, pp. 54–67, 2020.
- [15] J. Li and H. Chen, "Construction of case-based oral English mobile teaching platform based on mobile virtual technology," *International Journal of Continuing Engineering Education and Life Long Learning*, vol. 31, no. 1, pp. 87–96, 2021.
- [16] Z. Rui, "Modeling and simulation of English speech rationality optimization," *Computer Simulation*, vol. 034, no. 002, pp. 289–292, 2017.
- [17] C. Ni, "The human-computer interaction online oral English teaching mode based on moodle platform," in *Proceedings of the 2021 IEEE Asia-Pacific Conference on Image Processing, Electronics and Computers (IPEC)*, IEEE, Dalian, China, 14 April 2021.
- [18] Y. Karadağ, M. Aydoğmuş, and A. Kesten, "Contract teaching and oral exam: what do the teacher candidates think?" *Journal of Qualitative Research in Education*, vol. 8, no. 1, pp. 237–266, 2020.
- [19] L. Liu and R. Zhou, "Optimization of oral English teaching system based on computer-aided technology," *Computer-Aided Design and Applications*, vol. 21, no. 17, pp. 147–157, 2020.
- [20] J. Wang, "The enlightenment of second language ego to oral English teaching in senior high school," *Theory and Practice in Language Studies*, vol. 10, no. 10, pp. 1310–1322, 2020.