Retraction

Retracted: Blended Oral English Teaching Based on Core Competence Training Model

Mobile Information Systems

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

(1) Discrepancies in scope

(2) Discrepancies in the description of the research reported

(3) Discrepancies between the availability of data and the research described

(4) Inappropriate citations

(5) Incoherent, meaningless and/or irrelevant content included in the article

(6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

[1] J. Gu, "Blended Oral English Teaching Based on Core Competence Training Model," *Mobile Information Systems*, vol. 2022, Article ID 2226544, 9 pages, 2022.

Research Article

Blended Oral English Teaching Based on Core Competence Training Model

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The traditional mixed oral English teaching model has many obvious shortcomings, such as the inability to correct the students' oral pronunciation errors and feed them back in time, which leads to the slow improvement of students' English learning level. For this reason, this paper proposes a guided teaching model based on core literacy. According to the structure of the oral English mixed teaching model, determine the application plan of the oral English mixed teaching model, design the development environment, obtain the corpus, design the oral training model, extract the oral features, identify the wrong pronunciation and correct it in time, clarify the evaluation purpose, obtain preliminary evaluation indicators, reduce evaluation indicators and determine indicator weights, obtain indicator feature information, generate fuzzy rules, obtain fuzzy matrices, achieve quantitative evaluation, and synthesize all evaluation scores to construct a result vector matrix to realize the study of mixed spoken language teaching mode. Research shows that the mixed teaching method is effective and feasible and can effectively improve the accuracy of the evaluation results of the mixed oral English teaching model.

1. Introduction

Teaching is an integral part of social activities. Social development and progress are closely related to teaching. In the application of information technology, the education industry has been in a leading position. The rise of Multimedia Assisted Teaching [1], network teaching, and intelligent classrooms has improved teaching and played a good role in promoting the development of information technology [2]. The oral English mixed teaching model is an advanced English teaching form that has widely been a concern in recent years. It is established under the guidance of core literacy [3], which has changed the traditional oral English mixed teaching model, and the arrival of the new media era makes the hybrid teaching model possible.

Blended learning is a formulism having amalgamation of classroom-based learning combined with e-learning. It deploys computer tools or network-oriented lessons for the classroom setup and creates sessions/trainings that are potentially connected to the Internet similar to scenario of real classroom. It also provides solution to combine various delivery approaches such as integrating software, provides training courses over the Internet, and uses knowledge management subjects. The teaching model of smart and traditional classrooms has changed fundamentally, and the thinking concept, curriculum design, and teaching objectives are very different. Therefore, the realization of hybrid teaching mode has been the focus of research in recent years. Reference [4] takes the higher mathematics course based on "learning through + nail live broadcast" as an example and puts forward the research on the hybrid teaching model of an online course. Taking the online teaching of higher mathematics course in Luliang University as an example, this paper puts forward the mixed online course teaching mode of "five preparations before class, five lectures in class, and five auxiliaries after class" based on "learning + nail live broadcast," constructs an online "short classroom," and discusses the teaching design, teaching process, teaching effect, teaching reflection, and implementation methods in the online course teaching. Practice has proved that this model can effectively improve students' interest in learning and enhance the effect of classroom teaching. Reference [5]

takes the attitude of urban learners towards scientific relevance as the research object and proposes a hybrid teaching method to test the importance of the environment. It uses the immersive nature of virtual reality 360 videos to present a design-based research iteration to test how this novel technology-intensive learning experience affects the attitude of nearly 400 urban primary school students towards science. These attitudes are labelled "behavioral beliefs" in this field. The parallel and convergent hybrid method design is adopted to conduct two-way multivariate analysis on the covariance quantitative data set, which transforms students' qualitative self-report into quantitative advantages in graphical form. Data support and design iteration emphasize the importance of environment as the design focus, which can benefit students who strive to regard science as a relevant factor to change their attitude. Personalized learning is a type of educational learning approach that focuses on customized learning methodology for every student's strong point, requirements, expertise, and benefits. Every student acquires a learning strategy that is built on whatever they are acquainted with and in what way they study best.

Although the above research has made some progress, the core literacy guidance research is not applicable. Therefore, this paper puts forward the research on the mixed oral English teaching model under the guidance of core literacy, which is tested through experimental analysis, so as to promote the popularization and practical application of the mixed teaching model.

2. Design of Mixed Oral English Teaching Model

The mixed teaching mode of oral English is based on the Linux platform of Android, which has a wide range of openness and does not need any cost. The teaching mode structure is mainly divided into four parts, namely, Linux kernel, system runtime, application framework, and application.

2.1. Structure of Oral English Mixed Teaching Model.
The mixed teaching mode of oral English is based on the Linux platform of Android, which has a wide range of openness and does not need any cost. The teaching mode structure is mainly divided into four parts, namely, Linux kernel, system runtime, application framework, and application, as shown in Figure 1.

Part I: Linux kernel. The core service of hybrid teaching mode structure uses engineering computing GNU/ Linux kernel to provide services for the system. The kernel is located in the center of the design. It encapsulates the bottom layer and provides a convenient interface for the upper software in real time. Thus, it is the core part of the whole structure.

Part II: system runtime. It is composed of system library and runtime library. System library contains some C/C++ standard library files that can be used by any component in the Android system [6, 7], which provides convenience for the R&D personnel of the system platform. Runtime is mainly divided into two parts, namely, the core library

and Dalvik virtual mechanism. The core library is responsible for providing the functions required by the system platform to use Java programming; Dalvik virtual machine is responsible for storing data. It is a virtual device. Its middle code is completely different from the Java programming mechanism of the core library. When writing and developing, it began to envisage running the device with the least storage resources and supporting multiple virtual machines to work at the same time.

Part III: application framework. The application framework is the system's backbone, which shows the design concept of a hybrid teaching mode structure. The application framework layer is the theoretical basis for Android R&D. through the interaction between the framework and the last layer of Android, the R&D personnel can simplify the structural design of program R&D, but they need to follow the framework R&D concept. This part consists of components, windows, geographic information, communication, and other management services. All services are stored in the core of the structure. In the running process, various services occupy unique threads and can transmit data to each other.

Part IV: application. Java technology is used to write it in the virtual machine running program [8]. The workflow is as follows: compile the Java code and relevant resource files, generate an APK package, and set programs such as contact, home screen, and browser in Android. The R&D personnel of the application can provide convenience for the R&D personnel through the interface function of the application framework layer. Therefore, the openness of Android makes the system have a strong use space.

2.2. Application of Mixed Oral English Teaching Model.
The teaching mode application program adopts Java software with powerful programming language function, as shown in Figure 2.

Like Java SE, the system program needs to write the source Java file into a byte encoded file recognized by the computer [9] and convert all byte encoded files into DEX files according to DX software. In addition, the system comes with its packaging program, namely, adapt software, to speed up the generation of application packages. After adapting, the files of DEX, layout, and various resources in the program can be packaged to form apk form files, called application installation package APK. This installation package can be decompressed and installed on the mobile phone to generate executable programs. Dalvik virtual machine can obtain instructions and data to make the application work. After the APK file is installed, the system will optimize the DEX form file in the program before the program runs, generate the dey form file, and save it in the cache. The virtual machine can directly execute the optimized dey file to make the program work normally. After optimization, the file will remain in the cache until the APK file changes.
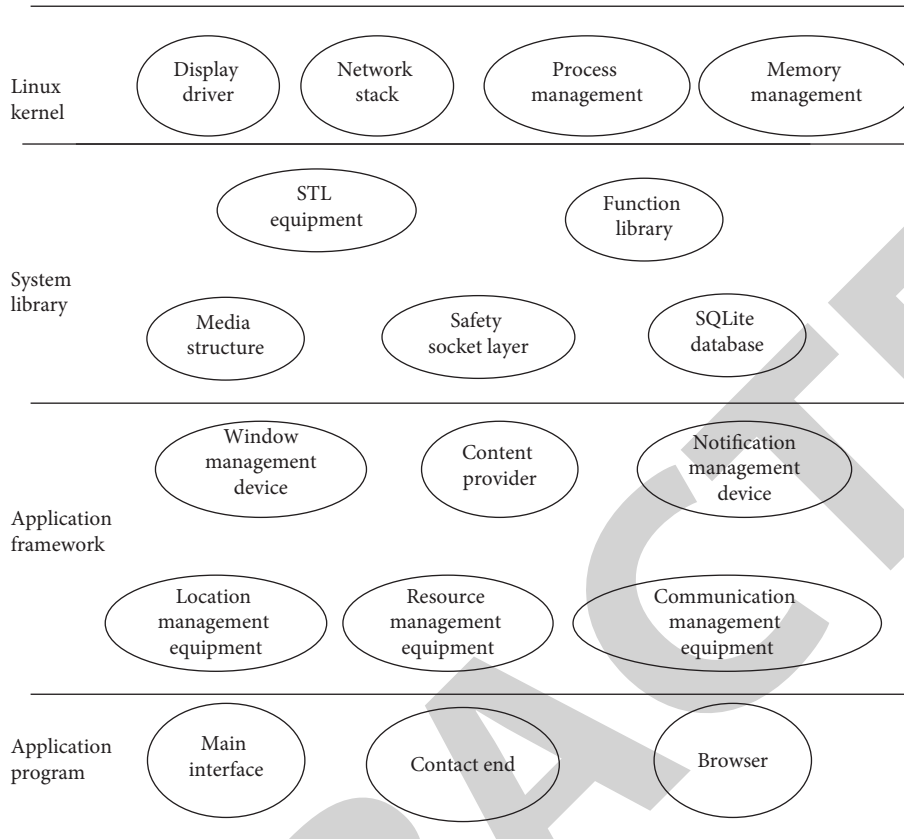
Figure 1: Structure of oral English mixed teaching model.

2.3. Development Environment. The application development environment of oral English mixed teaching mode selects the software with cross platform collection characteristics [10], namely, eclipse. Eclipse comes from the research and development of Java programming language. In the later stage, it began to support the integration of various plug-ins. Because of its good plug-in expansion ability, it is very flexible compared with other software programs. Eclipse structure is shown in Figure 3.

As it can be seen in Figure 3, eclipse includes an operating platform, java development tools, and various plug-in development environments. The operating platform is the main part of the system operation. The Java R&D tool provides the system with skills such as viewing, writing, regulation, and operation for plug-ins encoded in Java. Based on the eclipse platform and Java R&D tools, the plug-in development environment provides tools for system R&D plug-ins.

3. Pronunciation Correction in Mixed Oral English Teaching under the Guidance of Core Competence

3.1. Corpus Acquisition. From the perspective of oral English pronunciation, the corpus is the source of speech and knowledge base that needs to be used in speech recognition search. From the standpoint of performance evaluation, the quality of corpus directly affects the accuracy of evaluation results. The oral reading time is set as 20 minutes, the reading sentence is 800 sentences, and the total number of people is 100. The sentence contains 1600 common English words, and the fixed personnel mark the time level of each recorded word.

3.2. Oral Pronunciation Training Model. HMM model is selected for training according to system characteristics. The process is as follows:

Step 1: start model:

$$\lambda = (A, B, \pi). \tag{1}$$

In formula 1, A represents the transfer function equation when HMM is independent of time, B represents the monitoring value of the given state in HMM, and π represents the initial state space value in HMM.

Step 2: by monitoring and training O, new parameters are obtained, namely,

$$\overline{x} = (\overline{A}, \overline{B}, \overline{\pi}). \tag{2}$$

Step 3: repeat the previous step and optimize the model parameters until the $P(O|\overline{\lambda})$ converges.
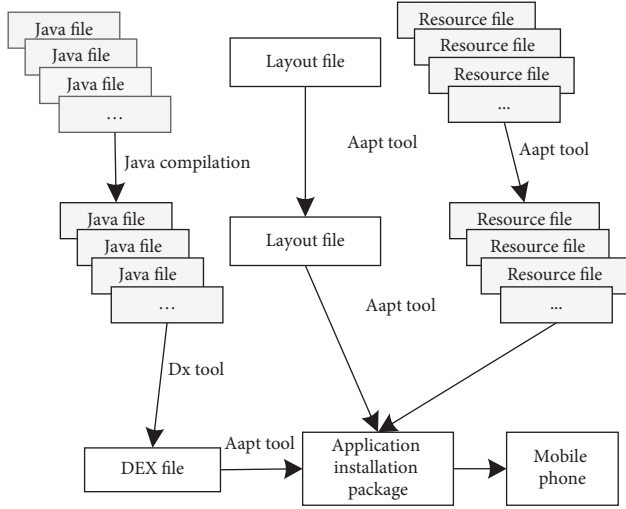
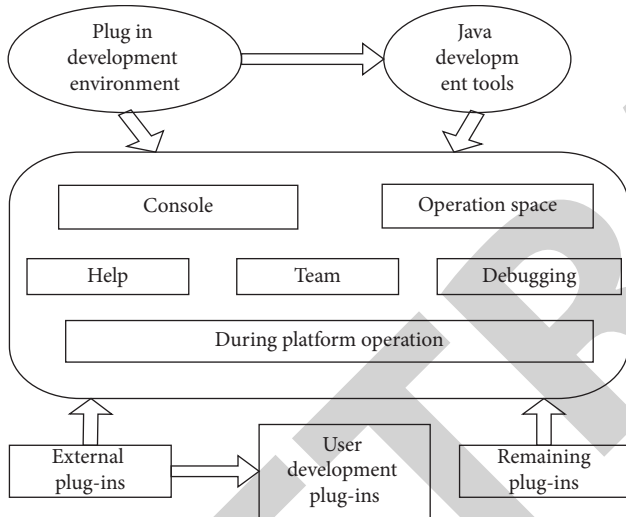FIGURE 2: Application program diagram of teaching mode.

FIGURE 3: Eclipse structure.

3.3. Oral Pronunciation Feature Extraction.

According to the structural characteristics of the oral English mixed teaching mode, the Mel frequency cepstrum coefficient is used to extract the features of users' oral English pronunciation training. Mel frequency cepstrum coefficient refers to the real cepstrum of speech signal obtained after Fourier transform. It is very different from the general real cepstrum. According to the nonlinear Mel frequency mode, the result is the same as that of the human auditory perception system. Before calculating the Mel frequency cepstrum coefficient [11], it is necessary to set multiple band-pass filter devices within the spectrum range of spoken pronunciation in advance. The center frequency is evenly distributed in Mel frequency. Each filter device can overlap the other. The weighted sum of all signal amplitudes within the frequency of each filter device is regarded as the output result of the band-pass device. The output results are calculated by logarithm and discrete cosine transform [12, 13], and the oral English pronunciation features are extracted. The

conversion formula between frequency and Mel frequency in this process is

$$\text{Mel}(f) = g \times \frac{f}{(A, B, \pi)}. \tag{3}$$

In formula 1, g represents the eigenvalue coefficient of oral English pronunciation, and f represents the frequency of oral English pronunciation.

3.4. False Pronunciation Recognition.

The error elimination method is used to recognize the wrong pronunciation of the feature extracted pronunciation, and n is set to represent the fluctuation extreme value of the frequency vibration of the feature extracted spoken pronunciation [13]; P represents the extreme value of the trough of frequency vibration; D indicates the correct period of audio frequency; N represents the amplitude of meson transmission frequency; A_H represents the standard amplitude of oral pronunciation; t represents the frequency parameter, and the vibration audio E of feature extraction oral pronunciation is

$$E = \sum_{t=1}^{n} (N-1)^{-1} P(N-1) A_H^{-1} \times \frac{B}{D+1}. \tag{4}$$

Standardize and fill the resulting audio, that is,

$$\eta_E = \frac{1}{n'(n'-1)} \sum_{i=1} \frac{1}{T \times d_{ij}}. \tag{5}$$

In equation (5), n_E represents the discrete value in audio filling, n' represents the weight function difference between the filling maximum and minimum values, T represents the number of hops between two different audio nodes [14], and d_{ij} represents the nearest distance between nodes i and j. After filling, the data can be subject to attribute planning, resulting in

$$U_i = \frac{2 \sum_{i=1}^{i} \sum_{j=1}^{i} E\eta_E}{i(i-1)} + \sum_{i=1}^{i} E. \tag{6}$$

In equation 6, U_i represents audio index and i indicates the correct audio specific cycle parameter. Its attribute has been labelled and error elimination recognition operation is performed to obtain from the following equation:

$$V_i = RU_i(A^T S^{-1}) = \begin{pmatrix} M_{11} & \cdots & M_{1n} \\ \vdots & \ddots & \vdots \\ M_{n1} & \cdots & M_{nm} \end{pmatrix}, \quad n = 1, 2, \ldots, N-1. \tag{7}$$

In equation (7), A^T represents audio jitter, which is a parameter to measure notes, S^{-1} represents the value of audio attribute set and is a parameter for error elimination and recognition of audio, M represents the corresponding audio matching factor, R represents the elevation weight contained in the advanced audio, and V represents the limit value obtained by error elimination identification of audio [15].

3.5. Error Pronunciation Correction. Input the result of formula 7 into the system feedback control equipment for correction. The feedback control equipment needs to calculate the feedback path in advance. The calculation equation is

$$T\left(\omega_i, \omega_j\right) = \frac{\left[-\sum_{j=1}^i P(N-1)^{-1}\right]}{\left[P(N-1)^{-1}\right]}. \tag{8}$$

In equation (8), ω_i represents the convergence operator of feedback audio, ω_j represents the scale communication numerical parameter, and P indicates audio type parameter coding.

The feedback path and relevant parameters are obtained through formula 8. If M represents the audio failure value of pronunciation, the audio failure state is expressed in sequence. This method can well compare the audio and obtain the following formula:

$$M = d_T - P^{-1}. \tag{9}$$

In equation (9), d^T represents the weight of the comparison audio path.

The comparison results are digitally arranged by sorting method to effectively improve the accuracy of correction. The process comparison equation is

$$H_{MT} = \frac{\left(M_T - M^{-1}T^{-1}\right)^2}{n(n-1)}. \tag{10}$$

In equation (10), M_T represents the best parameter for audio measurement and n indicates the accuracy of audio correction within a specific range.

If the pronunciation accuracy is C_i and the actual pronunciation is C_q, the functional relationship obtained is

$$C_i = \frac{1}{l} \sum_{i \in l} \frac{C_q}{\sqrt{(t_l - t_i)^2 + 1}}. \tag{11}$$

In equation (11), t represents the feedback factor and l represents extreme frequency.

In order to ensure the accuracy of the correction results in the feedback process, the feedback process is processed by Luhua [16–18]. The Luhua algorithm can directly show the system usage and control the upper and lower order of audio to make the system work normally. The calculation formula of this process is

$$\omega_{ij}(k+1) = \omega_{ij}(k) + \eta\left(d_j - y_j\right)y_j\left(1 - y_j\right)f\left(1 - f\left(u_{ij}\right)\right)x_{ij}. \tag{12}$$

In equation (12), η represents the learning coefficient, k represents the number of iterations, ω_{ij} represents audio collection weight, d_j represents the distance between audio nodes, y_j represents the audio output value, u_{ij} indicates the audio collection speed, and x_{ij} represents the measured audio node.

By controlling the upper and lower order, it can effectively reduce the advanced error of pronunciation correction data and improve the pronunciation correction ability of oral English mixed teaching mode.

3.6. Punctuation. Punctuation consists of a set of marks which control and elucidate the implications of different texts. The objective of using punctuation is to satisfy the description of the texts by joining or separating the words, word-phrases, or word-clauses.

4. Construction of Expression Ability Evaluation Model of Oral English Mixed Teaching Model

Pronunciation is the method where a word/a language is normally spoken [19, 20]. This potentially refers to general agreement of sequence of sounds produced/used in the course of speaking for a specific word/a language in a certain dialect or simply saying that it is a method of how individual speaks/pronounces a word/a language.

4.1. Establishment of Evaluation Index System. The specific process of establishing the expression ability evaluation index system of oral English mixed teaching model is as follows: understand the evaluation purpose and determine the specific plan; select relevant experts participating in the evaluation and formulate investigation forms; get statistical expert opinions; and perform analysis of survey results. Under the guidance of core literacy, after a series of operations, more evaluation indicators are obtained, which can reflect all the qualities that the professional needs to have.

However, due to the large number of indicators, collecting information requires a lot of human and material resources. Even if things can be described comprehensively and accurately, it will bring some difficulties to the evaluation work. In addition, there will be some correlation between these indicators; that is, the content of indicator measurement will overlap. Therefore, it is necessary to further simplify rocesssing to avoid the intersection of Indicator information.

4.2. Evaluation Index Reduction and Weight Calculation. By calculating the distribution characteristic difference degree, major trend characteristic difference degree, and discrete trend characteristic difference degree of the index, and then combining these measures to construct the discrimination matrix and discrimination function, the final simplification result is obtained. The specific process is as follows: (1) index distribution characteristic difference degree. The difference of index distribution characteristics represents the difference of distribution positions, which can be reflected in the central trend characteristics. Therefore, in order to obtain the difference of index distribution characteristics, it is necessary to proceed around the distribution positions. The calculation formula of difference P_1 is as follows:

$$P_1 = \frac{\sum_{i=1}^n I(i')}{n}. \tag{13}$$

In equation (13), n represents the total number of indicators in the indicator set and $I(i')$ represents the indicator function.

If the distribution position of a variable in the indicator set changes before and after reduction, the value is equal to 1; otherwise it is 0. The specific calculation process of equation (13) is as follows:

Step 1: for different variables, repeatedly test all optional distribution positions in the initial index, and determine the position closest to the initial index as the distribution type of this variable under the guidance of core literacy;

Step 2: check the variables of the same type after the specification. If the variables after the specification and the initial variables are of the same type, define the $I(i')$ value as 1, and vice versa as 0;

Step 3: if all variables in the set have been tested, the index distribution characteristic difference P_1 is obtained.

4.2.1. Central Trend Characteristic Difference.
The central trend characteristic difference P_2 can reflect the trend difference between various indicators, and the calculation formula is as follows:

$$P_2 = \frac{\sum_{i=1}^{n} I(i')}{n^2}. \tag{14}$$

The calculation results of equation (14) are the geometric average of the difference of trend characteristics in the index center. If there is a significant difference between indicators, the value is 1; otherwise it is equal to 0.

4.2.2. Discrete Trend Characteristic Difference.
The degree of difference of evaluation indicators is expressed as P_2, which reflects whether there is discrimination between indicators. The calculation formula is expressed as

$$P_3 = \frac{\sum_{i=1}^{n} I(i')}{n-1}. \tag{15}$$

Similar to the above, when the characteristic value of a discrete trend of the index is obviously different, the value of equation (15) is 1, and vice versa is 0.

4.2.3. Establishment of Discernibility Matrix.
Comprehensively analyze the characteristic difference value of the above indicators, and form a set of indicators with large differences as $N \times N$-order matrix element. For example, C_{ij} indicates the element that distinguishes row i and column j of the matrix. Under the guidance of core literacy, describe the evaluation target x_i and compare it with x_j.

4.2.4. Discrimination Function Establishment.
According to the index disjunction in matrix C_{ij}, the discrimination function is obtained by combining all the indexes, and the discrimination function is simplified by the absorption law.

The simplified result is the expression of the index reduction set, and the reduction sets are in parallel relationship. Generally, the set with less indicators is selected.

4.2.5. Index Weight Calculation.
Combined with the importance theory of fuzzy set, after deleting an index from the index system, the classification situation changes obviously, which shows that the index has high importance and high weight; on the contrary, the weight is small. The index weight can be calculated through the process. This method reduces the blindness of manually determining the weight, reduces the index, and reduces the amount of calculation.

4.3. Fuzzy Comprehensive Evaluation of Oral Expression Ability.
Combined with the generated fuzzy rules, the fuzzy comprehensive evaluation method evaluates the mixed oral English teaching model. The qualitative evaluation is transformed into quantitative evaluation mainly according to the membership theory. Due to the fuzziness of the evaluation index of oral expression ability, the evaluation process needs to be completed through a fuzzy comprehensive evaluation to ensure the clarity of the evaluation results. The detailed procedure is as follows:

Step 1: define the evaluation grade, which is expressed as excellent, good, medium, and poor.

Step 2: do single factor fuzzy evaluation to obtain the evaluation set. For example, combined with a secondary index in the primary index "oral expression," among k' experts, k'_1, k'_2, k'_3, and k'_4 experts believe that the evaluation object x'_i is excellent, good, medium, and poor; then,

$$r_i = \left\{ \frac{k'_1}{k'}, \frac{k'_2}{k'}, \frac{k'_3}{k'}, \frac{k'_4}{k'} \right\}. \tag{16}$$

Equation (16) is the single factor evaluation matrix.

Step 3: take the degree of language standardization, voice conditions, and language expressiveness as secondary indicators to form a secondary indicator evaluation matrix, which is called fuzzy matrix R_2.

Step 4: form the evaluation vector of the primary index into the matrix R_1, using the following equation:

$$B_1 = A_1 \times R_1. \tag{17}$$

Be able to obtain the value of B_1 and fuzzify it to determine the evaluation score of the evaluation target x'_i. At this time, the evaluation score has been determined, but if the grade is divided according to the above evaluation score, some fairness will be lost. The evaluation results obtained are not applicable to score grading. If 5 points mean excellent, while 4.9 points mean good, there is only a gap of 0.1 points, but they are divided into different levels. In fact, 5 and 4.9 belong to fuzzy classification, and there is no obvious difference between them. Therefore, this paper realizes the dynamic evaluation of oral expression ability by means of fuzzy clustering. Cluster analysis is a multivariate analysis

method in statistics. The relationship between different objectives can be determined by fuzzy mathematics, and the evaluation results of objectives can be obtained more objectively. In the clustering process, the score result vectors of all evaluation targets are formed into a matrix through the following equation:

$$r_{ab} = \begin{cases} 1 \, (a = b), \\ 1 - C \sum_{L=1}^{n} |X_{aL} - X_{bL}| \, (a \neq b). \end{cases} \quad (18)$$

Construct the fuzzy relation matrix R, where C takes $c \leq r_{ab} \leq 1$ as the value criterion and x_{aL} and x_{bL} are the scores given by experts for the evaluation objectives under the constraints of the first-class evaluation index L. Then, the fuzzy relation matrix is self-multiplied until the following requirements are met:

$$R^{2L} = R^L. \quad (19)$$

Combined with the confidence level α ($\alpha \in [0, 1]$), fuzzy clustering is carried out on the basis of (19) to obtain the final level of the evaluation target. Fuzzy comprehensive evaluation can effectively solve the grade evaluation problem with little difference in scores and make the evaluation results more reasonable, so as to complete the research on the mixed oral English teaching model under the guidance of core literacy.

5. Experimental Analysis

The investigation was completed on the visual studio platform. The experimental environment was 8-core i7-5960x and cup4.0 GHz. The ultimate goal of designing an oral English mixed teaching model is to serve teachers and students, so it should meet the needs of teachers and students. Before the experiment, several system performances most concerned by users were obtained through actual investigation, including system step response, scoring efficiency, and Gaussian function cenetr value results. These indexes are used as evaluation indexes to compare the performance of this method, the method in [4], and the method in [5].

5.1. Comparative Analysis of Step Response. This paper uses the method of this paper, the method of [4], and the method of [5] to test the performance of the mixed oral English teaching mode and compares the step response of three different methods. The higher the step response coefficient, the higher the running speed of the representative system. Let the unit of step response be m, which means that the output of the system changes from 0 to 1 in a very short time. The comparison results of the three different methods are shown in Figure 4.

By analyzing Figure 4, it can be seen that the step response curve of the method in this paper fluctuates at the initial stage of response and approaches the stable value at 10 s. The step response curves of the methods in [4] and [5] fluctuate greatly. It can be seen from the comparison that the

step response of this method is better than that of [4] and [5], because this method uses the central operation module to analyze and process instructions. The central operation module is the program main line of the controlled end of the oral English mixed teaching mode. This module can change the output of the oral English mixed teaching mode from 0 to 1 in a short time and maintain a stable state, which shows that the method in this paper has high availability.

5.2. Scoring Efficiency Analysis. The scoring speed of oral English pronunciation is tested through the sampling period T of oral English pronunciation data. The impact of sampling period T on scoring speed in the mixed oral English teaching mode under the guidance of core competence is shown in Table 1.

It can be seen from Table 1 that the collection cycle T has a great impact on the scoring speed in the oral English pronunciation quality scoring system based on virtual reality. When the collection cycle T is 3~4, the speed of the scoring system is 31 s~40 s, which is significantly higher than that in other intervals, indicating that the scoring of this teaching mode is timely. It further proves the realizability of the mixed oral English teaching model under the guidance of core literacy.

5.3. Gaussian Function Center Value Result. It is assumed that there are three input variables (m_1, m_2, m_3) and six fuzzy rules $(n_1, n_2, n_3, n_4, n_5, n_6)$ are generated. Compare the similarity of the fuzzy rules generated by this method with the methods in [4] and [5]. Gaussian function needs to be used in similarity calculation. The values of Gaussian function center β and width σ set in this experiment are shown in Tables 2 and 3, respectively.

Based on Tables 2 and 3, the similarity results of fuzzy rules of different methods are shown in Table 4.

As can be seen from Table 4, the similarity of fuzzy rules generated by this method is higher than 0.5. Generally, rules can be merged only when the value of similarity is greater than 0.5. However, both the methods in [4] and [5] are lower than 0.5, which makes some rules unable to be merged. This shows that this method has good similarity to fuzzy rules and can ensure more reasonable rules, reduce the loss of fuzzy information, and improve the accuracy of the ability evaluation results of the mixed oral English teaching model under the guidance of core literacy.

6. Conclusion and Prospect

6.1. Conclusion. Under the guidance of core competence, the step response of the mixed oral English teaching model is better than the literature method. The scoring of the teaching model is timely, which proves the reliability of the hybrid teaching model of oral English under the guidance of core literacy proposed in this paper. The mixed teaching model in this paper has good similarity to fuzzy rules, ensuring that the practices are more reasonable, reducing the loss of incomplete information, and improving the accuracy of the
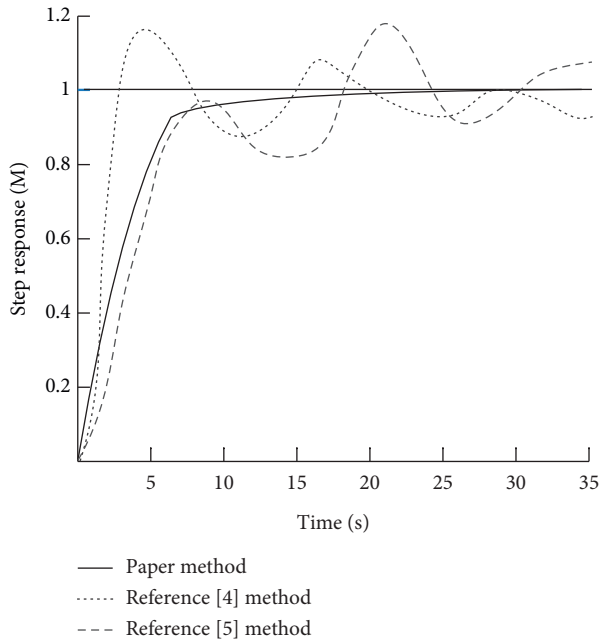
FIGURE 4: Step comparison results of different methods.

TABLE 1: Scoring speed of collection cycle AA in different collection intervals.

Experiment serial number	Acquisition cycle T	Scoring speed (s)
1	2	24
2	3	31
3	4	40
4	5	46
5	6	51

evaluation results of the mixed teaching model of oral English under the guidance of core literacy.

6.2. Prospect. The construction of oral English mixed teaching model is a complex process with complex and interactive elements. The research and application of oral English mixed teaching model are still in their infancy, and there are many places to be improved and improved. The following aspects can be further studied in the future:

(1) Mixed oral English teaching should have different implementation modes according to the characteristics of different disciplines, courses, and students' cognitive stages and levels. The specific implementation of mixed oral English teaching varies from school to school and from student to student. For the implementation of specific courses, the mixed teaching still needs further thinking.

(2) The feasibility and popularization of the mixed oral English teaching model need to be further verified.

(3) The mixed oral English teaching model is a research based on the current background of the times. With the further changes of the times and the further

TABLE 2: Center value results of Gaussian function.

Fuzzy rules	m_1	m_2	m_3
n_1	2.625	1.308	2.874
n_2	3.214	1.058	2.874
n_3	1.478	1.087	1.985
n_4	2.887	1.689	2.274
n_5	3.958	1.667	2.078
n_6	2.741	2.070	3.745

TABLE 3: Width values.

Fuzzy rules	m_1	m_2	m_3
n_1	1.355	4.825	1.775
n_2	3.458	4.986	2.785
n_3	5.976	5.774	3.389
n_4	1.874	2.784	1.477
n_5	1.622	4.075	4.407
n_6	1.074	1.241	3.662

TABLE 4: Fuzzy rule similarity results of different methods.

Method	m_1	m_2	m_3
Paper method	0.574	0.510	0.411
Method in [4]	0.663	0.498	0.587
Method in [5]	0.787	0.326	0.661

renewal of teaching ideas and educational ideas, follow-up research and development will be carried out. The coevolution of people and technology forces the further reform of teaching mode, and the exploration of oral English mixed teaching mode will not become the terminal. At this stage, oral English mixed teaching mode is only used in a small number of subject courses. With the renewal and development of teaching philosophy and modern science and technology, it will become a hot spot to explore the mixed teaching mode of oral English with subject characteristics.

Data Availability

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

Conflicts of Interest

The author declares no conflicts of interest or personal relationships that could have appeared to influence the work reported in this paper.

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