Research on Intelligent Information Model of Evaluating Program for Oral English Teaching Using Artificial Intelligence Technology

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Abstract:In order to evaluate the quality of college English teachers' oral classroom teaching, this article proposes a method of using artificial intelligence technology to evaluate the quality of oral English classroom teaching, establishes a teaching quality evaluation model based on SOFM neural network, and proposes two types based on deep neural networks. A more noise-robust scoring algorithm for acoustic models. "Listening" is an important way for learners to acquire information, and the process also includes refining and reprocessing the information when acquiring information. "Speaking" is a direct way of information feedback, and the process includes the organization and reconstruction of information. (Goodness of Pronunciation), and the performance is improved by 7.6%.

1. INTRODUCTION

College English Education in a narrow sense refers to school education. The survey of this thesis is mainly based on questionnaires. This research is carried out by means of questionnaires to students after the research, which makes the evaluation system different [2] from the general classroom teaching evaluation system [3]. The questionnaires are designed around two aspects of oral English learning interest and oral English learning strategies [6]. The questionnaire is closed-ended. Ubiquitous learning has the potential to revolutionize education, removing many of the limitations of traditional learning. [7] feature mapping (SOFM) neural network. Based on the MATLAB R2013a platform, a SOFM network evaluation [8] model is programmed to test the classification effect of the SOFM [9] model under different training steps.

The simulation results show that the classification accuracy [10] of the oral English classroom teaching quality evaluation model based on the SOFM [11] neural network is high. In the actual large-scale oral examination [12] environment, compared with the controllable conditions [13] in the laboratory, the audio in the examination room is due [14] to the diversity of equipment and multiple people. At the same time speaking, the actual conditions of the examination [15] room and other factors inevitably bring unstable noise interference. In addition, the current mainstream [16] foreign language scoring technology is to establish an acoustic model (Acousticmodel) used to describe the probability [17] distribution of correct pronunciation through the speech data of large-scale native speakers, and perform voice recognition on the recordings of non-native speakers [18] and calculate the representative pronunciation fluency [19]. The posterior probability of, and other index characteristics related to pronunciation and language ability are used [20] as the basic basis for the machine to score and diagnose the examinee's audio [21]. Artificial intelligence, the English abbreviation AI (Articial Intelligence), is the theory, method and technology of studying [22] how to use computers to simulate human intelligent behavior. In recent years, the rapid development of

AI technology has caused an uproar in various fields of social life [23], and of course it has also brought about considerable changes in the education sector [24].

The combination of AI technology and education is of great benefit to the transformation of traditional education, the exploration of new educational models, and the improvement and improvement of teaching quality and evaluation methods. Education integrated with AI technology pays more and more attention to the essence of education, centering on the learner, so as to realize personalized learning. At the same time, the close development of AI and the education sector provides a broader technical support and learning platform for English learning, thereby promoting the reform of English education and evaluation. The ultimate goal of language learning is to output, and spoken language is the most commonly used method. The combination of AI technology and oral education evaluation provides a personalized platform for oral education and a more objective way for oral evaluation.

In addition, combining adaptive learning with ubiquitous computing and ubiquitous learning brings educational or compliance activities. This is a one-sided understanding of oral evaluation. This not only simplifies the teaching process, but also ignores the primary status of primary school students in the evaluation. Teachers should use evaluation to promote students' autonomous learning and improve students' ability to use language comprehensively. At present, domestic and foreign scholars and research institutions have proposed a variety of network information security monitoring systems to perform offline and online monitoring of the Internet and network assets such as hosts, borders, applications, and terminals.

Although these monitoring methods can effectively improve the ability of the network to actively monitor and detect risks, there are still shortcomings and gaps: (1) Internet outlets and extranet sites are not monitored, and the breadth and depth of security monitoring need to be strengthened; (2) Existing monitoring methods show a situation of "island" distribution, and the ability of joint analysis is weak; (3) There are problems of weak data relevance, un-convergence and large

amount of data in centralized monitoring, and the ability to respond to and deal with network information security incidents still relatively weak.

2. THE PROPOSED METHODOLOGY

2.1 The Application of Artificial Intelligence Technology In Spoken English

Based on the basic principles of deep learning speech recognition and oral evaluation, this article introduces the latest research on the automatic evaluation technology of middle school students' oral English test. Experiments were carried out on the large-scale unified examination audio data set actually collected by the examination system of the cooperative enterprise, and the effectiveness of the improved algorithm was verified. It is the likelihood (likelihood) probability, which can be calculated from the establishment of an It is a huge innovation and allows personalized learning according to the needs of students. The reliability coefficient of the student questionnaire (pre-test) in this study is .987, indicating that the overall reliability of the questionnaire is high, and the reliability coefficients of each dimension are 20.0, indicating that each obtained through a statistical language model (Language model).

One of the most important links in a complete teaching process is teaching evaluation. In traditional college oral English evaluation, the subject of evaluation is the teacher. But for most teachers, the teaching evaluation of spoken English is often more difficult than the evaluation of written English. The evaluation itself is mainly determined by the results of the final exam. This is called summative evaluation. For students, summative evaluation does not fully and realistically reflect the students' oral ability, and it is even more unfavorable to guide students to develop their enthusiasm for oral learning. The use of "human-computer interaction" speech recognition system for oral English assessment can overcome many shortcomings in oral assessment, and make primary school oral English assessment more targeted, objective, fair and scientific.

The fully automated evaluation system incorporates the internationally leading voice intelligent evaluation system developed by iFlytek. The system can automatically complete the scoring of spoken language recordings. The scoring data has high stability and high credibility, and at the same time reduces the scoring of the teachers. Workload, reduce test costs, and solve the current problems of large classes, insufficient teachers, and difficulty in evaluating primary school spoken English. Language test evaluation has a close relationship with language teaching. Spoken language assessment is based on the principles of stimulating interest and encouraging success. While completing the test of students' language learning results and language ability, it also provides feedback on language teaching and learning. Therefore, oral assessment can greatly increase students' English reading, situational dialogue and other language practice opportunities in the classroom, and fundamentally eliminate the phenomenon of paper and pen test training in English classrooms.

2.2 The Oral English Teaching Evaluation Program

This article takes the teaching quality of 18 English The dimensions are ideal: the reliability coefficient of the student questionnaire (post-test) is .986, indicating that the overall

reliability of the questionnaire is high, and the reliability coefficients of each dimension are > 0.80. Since the experimental subjects are students in the third grade of high school, they are under great academic pressure, and consulted experts in related fields and school supervisors. The final evaluation index established covers four parts: the academic department, students, peers, and supervisors. Among them, the first-level indicator evaluated by the educational administration department is teacher ethics, and there are 3 second-level indicators; the first-level indicators for student evaluation include teaching content, teaching methods, teaching attitudes and teaching effects, and there are 8 second-level indicators; peer-evaluated The first-level indicators include scientific research ability and dedication to work, and there are 3 second-level indicators; the first-level indicators for supervision and evaluation include professional quality, teaching design and instrumentation, and there are 6 second-level indicators.

The application of deep learning in speech recognition has not changed the basic architecture of speech Therefore, the author selects his classroom teaching materials as the materials for oral language teaching (conducive to his review of the knowledge of the teaching materials), and conducts in-depth exploration of the oral language resources in the teaching materials output by the deep neural network by the prior probability obtained from the training data To approximate the likelihood of each state generated by the HMM, and replace the traditional likelihood obtained through the Gaussian mixture model (Gaussian mixture model, GMM), so as to obtain a significant improvement in performance. In most research literature, the traditional GMM model is called GMM-HMM, and the hybrid model based on deep learning is called DNN-HMM. This paper also uses this term. In order to facilitate the display of network-wide attack monitoring indicators, the system divides the severity of the attack into 5 different levels, and designs and implements the attack monitoring public table, the attack monitoring TOP table, the attack monitoring public trend table, and the detailed table of virus and Trojan horses. , Virus Trojan classification table, website attack type analysis table, asset IP table, asset basic information table and organization table and other database tables. The attack monitoring function can not only display the time trend of the day's attack events, the detailed classification and specific information of virus and Trojan horses, but also record the detailed information and IP addresses of network assets.

2.3 The Intelligent Information Model for the Evaluation of Oral English Teaching

Use the established SOFM network evaluation model to evaluate the teaching quality of 18 teachers engaged in English teaching in a university. The specific p Combining meme theory with spoken language teaching. Spoken language is a very important part of English teaching. Junior high school is a critical period for language learning and lays the foundation for future learning. Train the built model. After the training, the model will reflect the evaluation result in an intuitive form of the position of the winning neuron in the competition layer; test the generalization ability of the evaluation model, if the winning neuron is located in the competition layer The meta position is the same as the position of a certain standard training sample, which means that the evaluation results of the test sample and the corresponding standard training sample belong to the same category.

Among them, it is the posterior probability of a speech segment O that can be recognized as phoneme p. Q is a collection of all phonemes of a certain language (such as English). The numerator part of formula (3) is the phoneme-level likelihood, which can be obtained by the forced alignment of the GMM-HMM acoustic model for a given text, and the denominator part can be obtained through phone loop recognition by phone loop. Obtain the likelihood probability of q with the highest likelihood among all phonemes. Secondly, computer oral assessment reduces the workload of teachers' oral assessment and reduces the cost of testing. A computer room with 40 computers, each test 20 students, more than 3 hours can complete a 6-8 classes, a total of more than 300 students' oral assessment, which solves the problem of the school's current large class size and insufficient teaching staff. Thoroughly develop the problem of comprehensive and scientific primary school oral English evaluation.

Thirdly, through daily oral online platform learning and evaluation exercises, students can strengthen individualized learning based on shortcomings in oral learning. The network platform can increase students' interest and enthusiasm for learning, and can enhance their sense of security in the computer oral test environment, allowing students to perform more relaxed on the test site, and their oral output is more natural.

3. CONCLUSIONS

This paper proposes a method to evaluate the quality of college English teachers' classroom teaching using SOFM neural network, and establishes an evaluation model of teacher's classroom teaching quality. The specific response relationship between neurons in the competition layer and neurons in the input layer is used to classify the results of the model. Output in the form of visual graphics to test the generalization ability of the model. The simulation results show that the SOFM evaluation model has a classification accuracy of 100% for training samples and test samples, indicating that the model has strong generalization ability and verifying the effectiveness of the model.

4. REFERENCES

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