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Research Article

The Construction of College English Teaching Model from the Perspective of Internet-of-Things Wireless Communication

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The college English teaching model from the perspective of the Internet of Things is to introduce technology into the teaching process of college English. There are mainly students, teachers, and knowledge classrooms. The relationship between these roles in college English teaching is analyzed and researched. Then observing the wireless communication of the Internet of Things to manage the complex teaching management model in a hierarchical and modular form. A college English teaching model that is, constructs a student-centered, hierarchical classroom teaching model. Strengthen the cultivation of students' language application ability through the perception of English language and comprehensive language communication. And through the analysis of the understanding of the Internet of Things and the modules of college English teaching, the students, teachers, and knowledge in the classroom are organized in the classroom as a whole. The experimental results in this paper show that through the application of Internet of Things technology in college English teaching, students' English learning ability improves by 15–18%.

1. Introduction

Application of science and technology to strengthen foreign language teaching learning ability. It is common for teachers to be the main body and students to absorb knowledge as passive objects. Nowadays, teachers will combine computers and other tools to help them and will also pay to the teaching of English-related knowledge in the classroom, such as vocabulary spelling and memory peaks. It's just that in the past traditional classrooms, there were mainly limited resources for teaching, and the effect of this was often limited. Therefore, the knowledge of Internet of Things is introduced into the construction improve the absorption of teaching knowledge. The Internet of Things regards each student as an independent individual, and obtains students' personal learning information to provide targeted teaching plans.

Looking at student-centered education on the Internet, the student-centered education model also provides new ideas about textbook design. For example, let students master more information and knowledge through the whole process of interaction. Teachers can grasp the direction of teaching through guidance and coordination, which will also make teachers' interactive education practice deeper. Through experimental analysis and research, the teaching of the Internet of Things has been incorporated into the student-centered interactive learning mechanism of hierarchical management. This has changed the teacher-led Kweiyang structure in the past and created a student-centered and efficient college English education model to provide good ideas for the promotion of college English education.

There are many related studies introducing the process of college English teaching. Among them, Caulfield has been committed to related research on teaching modeling, and the Internet of Things is part of the construction of improving college English teaching models. Then study how to achieve high-efficiency teaching in the process of construction and want to know how to benefit more through this method, so the wireless communication is integrated into the construction [1]. Ding et al. found that lifestyles. The college

English course management system brings convenience to teachers and students, facilitates teachers to centrally manage students, and improves course efficiency. English teaching courses is a systematic project aimed at deepening education reform, improving the quality of courses [2]. In addition, Yang et al. believe modeling method based on data category tags, he proposed an IoT [3]. Not only the research on the Internet of Things, Zhang and Zhang have conducted relevant research on university courses with the support of the Internet of Things and edge computing methods, especially the construction of college English teaching models. In the context of pedagogy, the curriculum is edited and it is hoped that new technologies can be introduced into the curriculum and the students' learning ability can also be improved. However, on the other hand, it also pays attention to the privacy and data security of the Internet of Things teaching [4]. In related teaching activities, Afranj and Zivlak J discussed the impact of teaching activities aimed at spatial visual intelligence on students' performance in English for Specific Purposes (ESP). The ultimate goal is to determine whether the application of various language activities that encourage spatial visual intelligence can improve English learning. He tests the students' language knowledge at the beginning and end of a semester course [5]. When studying English as the main body, Elboubekri found that in the teaching and learning of English as a foreign language, contemporary theories seem to consistently advocate the cultivation of intercultural competence, in which language is regarded as a cultural structure. Given that it is based on cultural studies, the teaching directions and strategies of intercultural education focus in the recognized norms. He adopts a critical teaching method based on comparative and reflective practice to cultivate cultural awareness of the world [6]. Finally, Puasa et al. studied the performance of classroom conversation in bilingual classroom interaction. Classroom conversations include teacher-student conversations-including teacher's explanations, teacher's questions, teacher's feedback, and modifications to the teacher's speech, as well as students' answers and student questions. The research results show that the language options used by teachers in bilingual classroom interaction are affected by many factors, such as teachers' language ability, views on the role of two languages in bilingual interaction, etc. [7]. Rivera and Mazak aim to determine whether students' language attitudes will affect their perceptions of teachers' cross-language pedagogy. Based on cross-language as a feasible teaching option in the classroom, and these students are accustomed to working in an environment where code conversion and cross-language occur frequently, problems related to English as a feasible teaching option were conducted [8]. The above-mentioned documents mainly relate to the relevant research aspects of the Internet of Things and college English, but most of them still stay in the technical and theoretical aspects and do not apply too much research to practice. At the same time, the relevant mastery of the technology is still not enough, leading to the persuasiveness of the article being strengthened.

The main innovations of this article are: (1) The is introduced into the teaching process of college English. By changing the identities of teachers and students in the classroom to a certain extent, taking students as the center of the teaching mode. (2) Curriculum content for students to be noded has independent Internet thinking, and technology and teaching are connected, so as to realize the improvement of students' independent learning ability and achieve the goal of cultivating all-round college students. By comparing the standard deviation of the experimental group of 9.08082 and the standard deviation of the students of the experimental group of 8.8065, it can be seen that the higher the score, the higher the level of cross-cultural sensitivity.

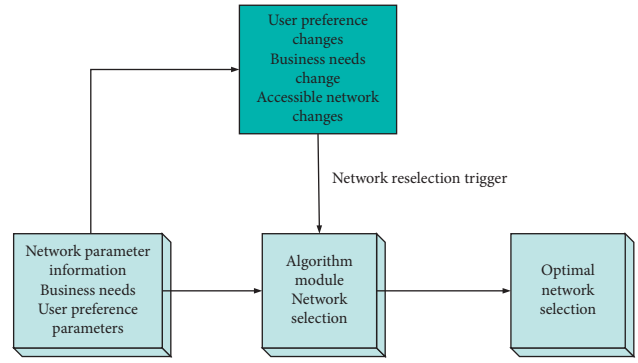

Figure 1: The implementation process of IoT wireless communication.

2. College English Teaching Methods from the Perspective of Internet of Things Wireless Communication

2.1. College English Teaching Model Based on the Internet of Things. Technological aggregation is produced after a technology reaches a certain stage [9]. It is precise because of the vigorous development of this information industry that it is a new attempt to introduce the main reason for the reform of the teaching mode [10].

2.1.1. IOT Network Communication Coding. The broadcast characteristics of wireless channels make the idea of network coding, but the wireless channel has fading, time-varying characteristics, and some unfavorable factors such as noise interference, which make the system have a high bit error rate [11]. Channel coding (including HARQ) is a traditional technology to reduce the bit error rate and improve the quality of wireless channel transmission [12]. And from a certain point of view, network coding is also a special channel coding as shown in Figure 1:

Decision tree is based on the occurrence of known results, by forming a decision tree to find the expected value, through judgment and evaluation to analyze the feasibility method, it is a probabilistic analysis problem. The decision tree is a commonly used algorithm that intuitively uses statistical probability analysis to build models. The core of ID3 algorithm is "information entropy." Each attribute in the data sample is queried, and the attributes are divided according to different standards [13]. Constructing a

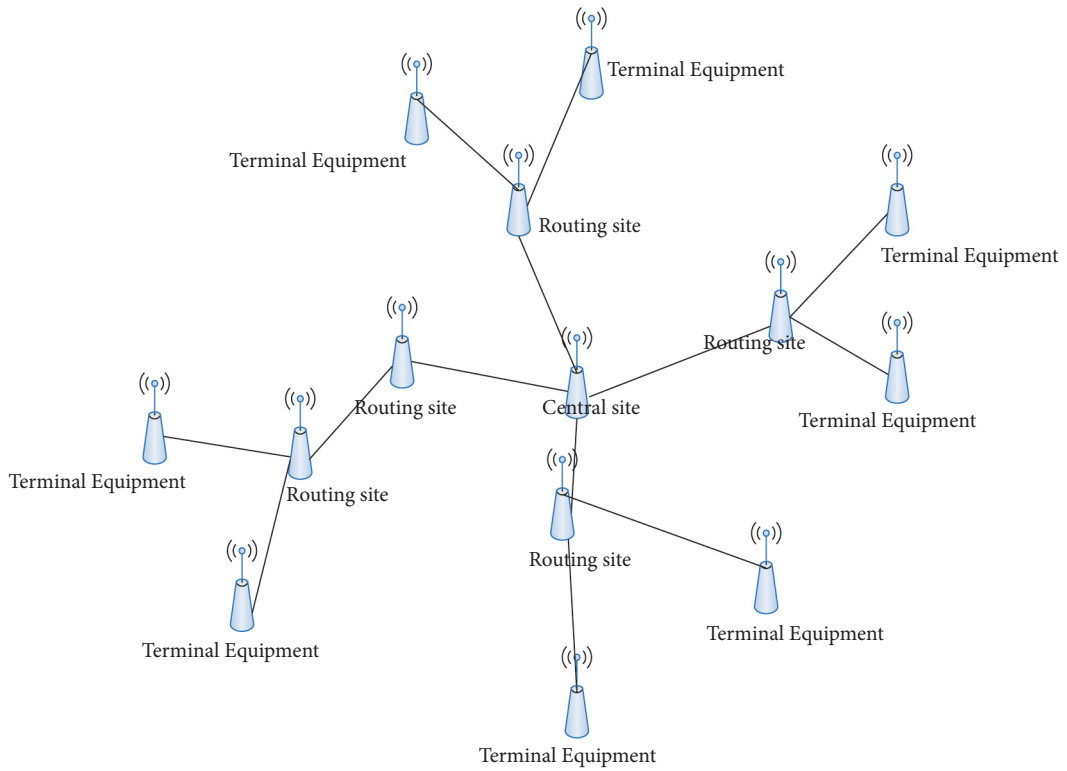

Figure 2: Structure diagram of the internet of things system. (The above terminals are all connected with sensors and single-chip microcomputers or PCs, and have simple data processing functions).

decision tree from top to bottom according to the acquired information, and then use high information gain as the root node [14]. The entropy classification of tuple Q is shown in the formula:

$$\text{Entropy}(Q) = -\sum_{i=1}^{n} P_i \log_2(P_i). \tag{1}$$

In the formula, 1 represents the probability of belonging to the class in the original ancestor Q, and Entropy (Q) is the classification information entropy of the original ancestor Q [15]. If the ancestor Q is divided according to a certain attribute, then the sample can be partitioned according to the m different values of the sample, then the entropy required for this classification is calculated as:

$$\text{Entropy}_W(Q) = \sum_{j=1}^{m} \frac{Q_j}{Q} \times \text{Entropy}(Q_i). \tag{2}$$

Among them, W represents an attribute value, and the branch node corresponding to this value is m. When $\text{Entropy}_W(Q)$ is smaller, the degree of data confusion is greater, that is to say, the credibility of the collected data is higher [16]. The corresponding structure diagram of the Internet of Things is shown in Figure 2.

First, it is necessary to determine the set of options X to be selected and the set of indicators Q used to make the judgment based on the problem, which means that there are m alternatives, which means that there are n judgment indicators, and then construct a multi-index judgment matrix:

$$Q = \left(r_{ij}\right)_{m\times n} = \begin{matrix} r_{11} & r & \ldots & r \\ r_{21} & r_{22} & \ldots & r_{2n.} \\ r_{31} & r_{32} & \ldots & r_{3n} \\ r_{n1} & r_{n2} & \ldots & r_{n4} \end{matrix} \tag{3}$$

Thus, the multi-index standardized decision-making matrix in the formula can be obtained. After the matrix is obtained, this method is generally used in multi-attribute decision-making for processing and ranking [17]. Various indicators are judged through the decision matrix in the formula, and a better decision plan is obtained through analysis and processing.

$$r_{ij} = \frac{1}{r_{ji}}, \quad r_{ii} = 1. \tag{4}$$

Because the types of judgment criteria are different, the dimensions of the element column vectors in the multi-index judgment matrix are different. According to the different nature of the judgment indicators, the better the performance of the network [5]. The worse the performance of the network [18].

2.1.2. College English Teaching from the Perspective of the Internet of Things. The Internet of Things has the characteristics of intelligent processing and application, and real-time relevant information can be obtained through sensor devices. Then use computer technology to intelligently process the collected data, and finally realize the intelligent

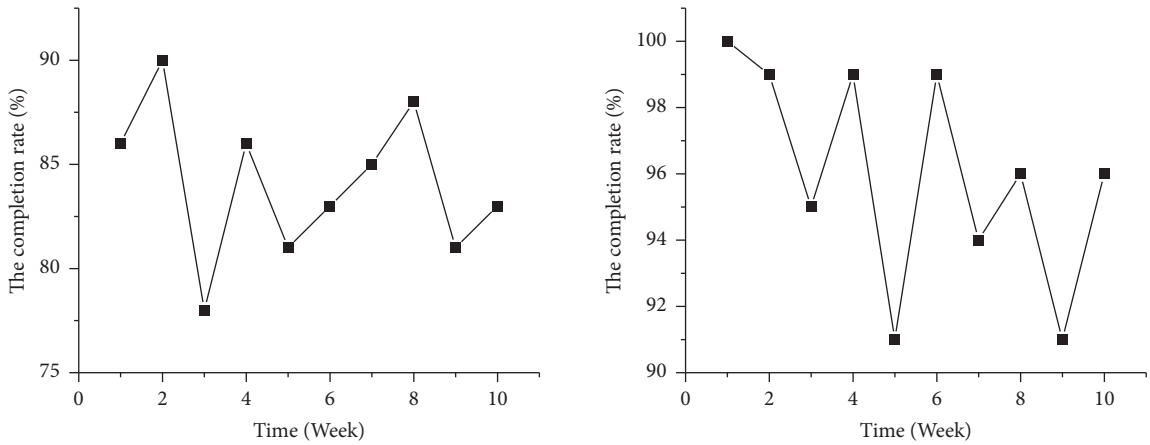

Figure 3: Student preview rate under the old and new teaching modes.

application of the Internet of Things inside and outside the classroom [19].

According to the application of the Internet of Things technology, the preferences for the content of the different sections of the English course are independent of each other. This preference can be calculated with a simple mathematical expression:

$$F_i = \sum_{i=1}^{n} P_j M_{ij}, \quad j = 1, 2, 3, \ldots m, \qquad \sum_{i=1}^{n} P_j = 1. \tag{5}$$

Among them, P_j is the user's preference weight value for the judgment index P_j.

Therefore, the best utility value F^* can be obtained as:

$$F^*_{\text{saw}} = \max\left(f_i | i = 1, 2, 3 \ldots m\right). \tag{6}$$

The corresponding decision-making plan is the best plan [20].

Discussing the mode of English teaching mainly starts from the ability to obtain better teaching effects and analyzes the relationship between different roles in the classroom [21]. Before the class starts, students can learn and interact independently through Internet technology. Differences in content between. The stage of students' autonomous learning is the stage of preclass learning. The ability of students' autonomous learning is evaluated according to the level of students' completion of exercises and their preschool feedback [22]. After completing the preclass learning link, students should feedback their self-learning situation to the teacher before entering the in-class learning link. The feedback on students' situations helps teachers to grasp the situation of students' learning, and to formulate and perfect the teaching design of the next stage according to the situation of students' learning, which is helpful to realize the internalization of the knowledge of the links in the class [23]. Before the introduction of the Internet of Things communication equipment for classroom teaching, teachers will use the Internet to ask students about their learning situation, and collect their learning feedback form as shown in Figure 3:

Like the students' collaborative learning ability, the evaluation basis of students' expressive ability also comes from the three links in the student's learning [24]. The use of students' preclass expression skills is mainly to encounter related problems and doubts in the process of autonomous learning and communicate with classmates or teachers in written and written forms. Therefore, the preclass learning feedback form submitted by the students and the questions and doubts raised are the main sources of measuring the students' preclass expression ability. The analysis of students' expression ability in class is mainly reflected in language. Students communicate with teachers and classmates in class, and conduct verbal communication, question discussion and questioning activities through the process of group cooperation, group discussion, and teacher's puzzle-solving [25]. The analysis of students' expression ability after class is the same as the analysis of students' expression ability before class, in which questions and works are presented in the form of written words. Then the teacher gives answers to the students' questions and evaluates the students' after-school works, which can improve the students' learning level. Through the analysis of the feedback form of self-learning before class and the completion of works after class, we can conclude that the students' expression skills have been improved before and after class. The expression ability of students in the course is mainly based on the students' attendance, questioning, discussion and collaboration for analysis and evaluation. As shown in Figure 4:

In Figure 4, we can observe the transformation of the roles of teachers and students in the classroom from the analysis of students' behavior in the old and new teaching modes. Among them, the students under the teaching of the Internet of Things are the center of the classroom, and they learn in an autonomous way, and then obtain better teaching effects [26–28]. According to the data of students' autonomous discussion, questioning, cooperation, and attendance under the traditional teaching mode and the Internet of Things teaching mode, the Internet of Things teaching mode is up to 98%, while the intelligence of the traditional teaching mode reaches 90%.

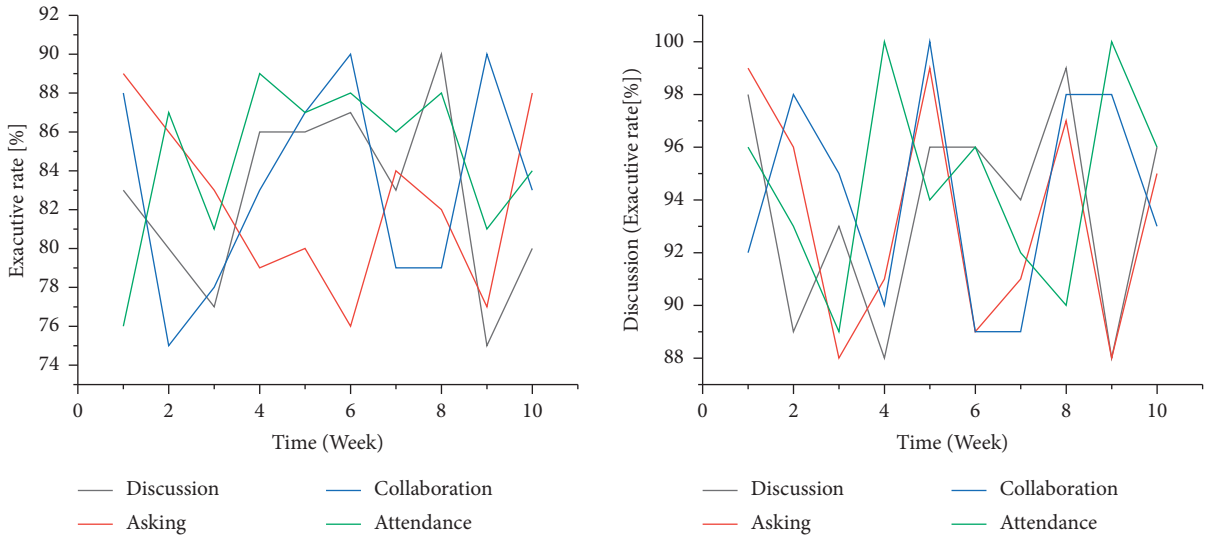

Figure 4: Analysis of student behavior in the old and new teaching mode.

2.2. Strategies for the Construction of College English Teaching Mode. Modern society pays more and more attention to ecology. Since the 21st century, ecological thinking has broken through simple biology and penetrated all aspects of human civilization. As far as education is concerned, it has also begun to find a harmonious relationship between different participating factors to achieve the ecological balance of the education system. As for college English teaching, it aims to establish ecological equality in the process of college English teaching.

2.2.1. Requirement Analysis of Building a Student-Centered Teaching Model. Relevant knowledge in the classroom. After class, relevant knowledge will be used and the basic skills of listening, speaking, reading, and writing will be mastered. Finally, feedback is obtained in practice to improve and then form a good teaching and learning cycle. Among them, the role of the Internet of Things in the process of English teaching can also be quantitatively analyzed [29, 30]. There are mainly several methods:

$$K^{+} = \sqrt{\sum_{i=1}^{n} \left(L_{ij} - L_{j}^{+}\right)^{2}}, \quad i \in M. \tag{7}$$

Using this formula to calculate the distance between the alternative plan and the negative ideal plan:

$$K^{-} = \sqrt{\sum_{i=1}^{n} \left(L_{ij} - L^{-}{}_{j}\right)^{2}}, \quad i \in M. \tag{8}$$

The degree of closeness between the alternatives obtained by formula (9) and the optimal solution is as follows:

$$f_i = \frac{S_i^{-}}{S_i^{-} + S_i^{+}}. \tag{9}$$

Finally, the solution with the greatest degree of closeness obtained by the formula, this solution is the best solution:

$$f_{\text{TOPSIS}}{}^{*} = \max\left(f_i | i = 1, 2, 3 \ldots, m\right). \tag{10}$$

Mutual supervision between students can stimulate their learning initiative to a certain extent. Should actively create conditions to encourage them to continue to tilt independently as a group. Students need an appropriate standard for autonomous learning. The standard should not only be objective, but also easy to operate.

2.2.2. Ideas for Constructing a Hierarchical Management Teaching Model. College English teaching is a comprehensive ecosystem in which the various elements are interrelated. However, traditional college English teaching divides teachers, learners, and the environment into different individual connections. As an element of the English ecosystem, teachers should play the roles of developers and organizers in English teaching. In fact, in teaching practice, teachers are the controllers of all classroom teaching procedures. Teachers decide what and how much they will teach. Students are passive listeners of the classroom. Therefore, this separation has led to the current college English teaching, including the lower motivation of students and the lower efficiency of teachers.

For the Internet of Things, the essence of the connection is the interaction between different nodes. When these nodes are aggregated together, they form a cluster of heads. Sensors can prevent interference from other factors or reduce the possibility of information leakage when receiving different information [31]. From the perspective of interference factors, the maximum entropy of the network when a controlled attack occurs is as follows:

$$H_m = \log_2(M). \tag{11}$$

When the attack occurs, the entropy value of the Internet of Things is as follows:

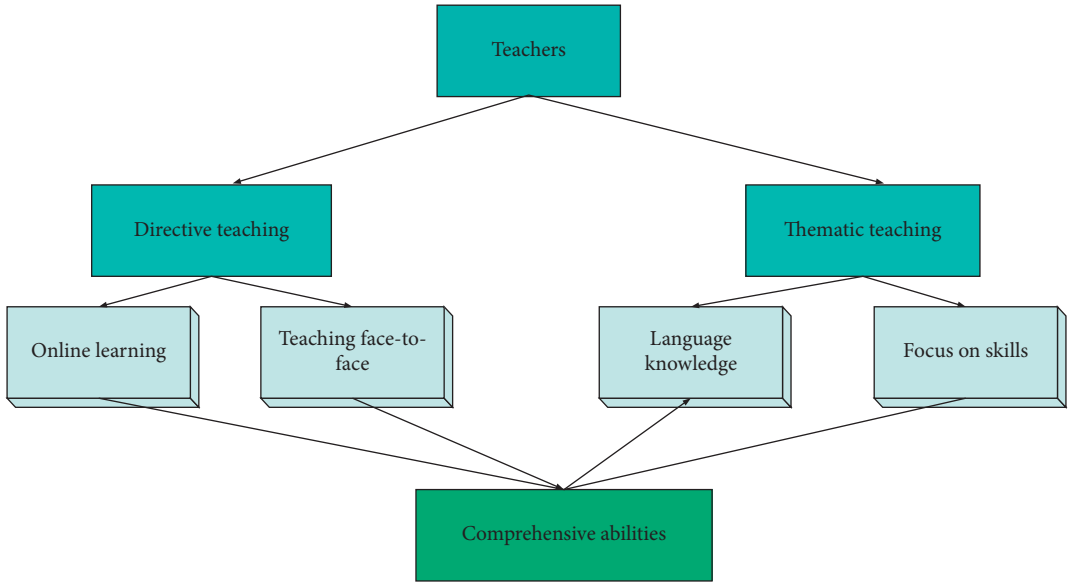

Figure 5: English teaching equation.

$$H(X) = -\sum_{i=1}^{N-P} \frac{1}{N-P} * \log_2\left(\frac{1}{N-P}\right). \tag{12}$$

Among them, $N-P$ is the representation of entropy, and the anonymity of the network at this time is as follows:

$$G = \frac{H(X)}{H_m} = \frac{\log_2(N-P)}{\log_2 N}. \tag{13}$$

It can be seen from the formula that G is a function of N and P. The simple understanding is that as the number of nodes controlled by an attacker increases, the anonymity of the network decreases. Finally, it can be concluded that when the Internet of Things is attacked by an external attacker, the entropy of the network is as follows:

$$H(X) = -\sum_{i=1}^{s} \frac{1}{S} \log_2\left(\frac{1}{S}\right) = \log_2 S. \tag{14}$$

Students are required to preview each unit before class to gain a general understanding of the entire unit, especially in class reading articles. During class time, the main focus is on the language points in the details. Including grammatical sentence patterns, as well as new words and expressions. At the end of each unit, there will be a review of the unit, including exercises.

2.3. College English Teaching Mode. Ecological concepts, not only affecting the environment, ethics, food and many other fields, but ecological thinking is also extended to.

2.3.1. The Enlightenment of Ecological English Teaching Mode. The ecological English teaching model. Student-centered, enabling students to develop all their potential abilities. As for English teachers, they will change the fixed classroom format and choose teaching materials suitable for the overall development of students. Teaching activities provide students with more freedom, they can think and solve problems independently. If so, the teaching system will be more harmonious and will be exposed to more knowledge input.

This model requires teachers to transform from teaching English language knowledge to cultivating students' ability to use English comprehensively. As shown in Figure 5:

Figure 5 is about the teaching process of English, which mainly reflects that teachers play a student-centered role, handle teaching and learning well.

Since college English is an integrated ecosystem, the ecological teaching model will take three factors from this system. For English learners, the ecological English teaching model believes that English learning is rooted in the Chinese ecological environment language, and social culture. Based on understanding and accepting English, using language and culture as a carrier, English learners and teachers guided by English can construct an English language system native language consistent with their English language system. The harmonious and balanced language between English and mother tongue can help English learners carry out dynamic, harmonious, and balanced language activities. As far as the English learning environment is concerned, the environment includes classroom learning environment, school learning environment, social and cultural environment, and the psychological environment of English learners. In the following ecological English teaching model, all involved environments should be in a dynamic and harmonious balance. Regarding the consideration of the student's total score in English learning, the performance effect can be seen in Figure 6:

For the college English teaching model, the digital integration method can be used to realize the linkage control of different modules when performing quantitative analysis through the geometric concepts, different listening, speaking, reading, writing and other aspects can be studied:

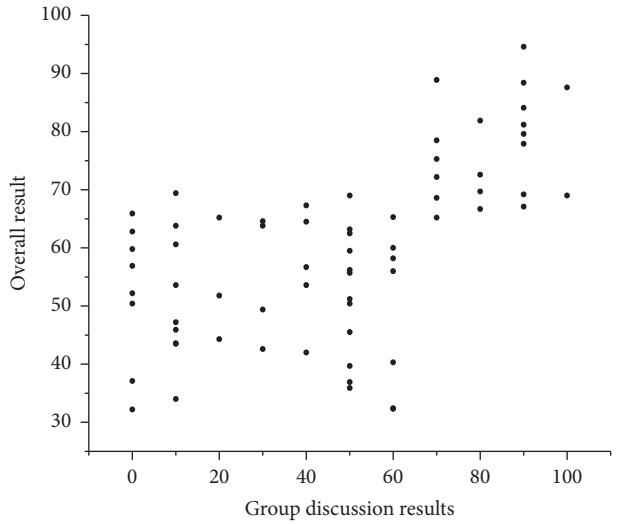

Figure 6: The relationship between student online discussion grades and total grades.

$$A = c\left(1 - \frac{m_2 - m_1}{m_1}\right). \tag{15}$$

The A in the formula represents the overall planning of the English course, and c is a constant coefficient, which can finally be used for quantitative analysis of the teaching of the course. However, in the evaluation of teaching courses that imitate reality, for different interfaces of the Internet of Things, different course objects are analyzed in different orders, and timely feedback can be obtained according to the following formula:

$$B_{cah} = B_c - MB. \tag{16}$$

In the simulation model, the measurement of the terminal of the Internet of Things is divided into three parts in total, namely the receiving English course content processing end, the Internet of Things transfer end, and the sending feedback processing end, which can be expressed by the formula:

$$R = r_a + r_b + \sum_{i=1}^{n}\left(r_{\text{pro}} + r_q + r_{\text{op}}\right). \tag{17}$$

Among them, r_a represents the sending end processing of English course-related data, r_b is the Internet of Things transfer end, and r_{pro} represents the propagation delay when the data is transmitted to the Internet of Things terminal.

When processing according to the communication method of microprocessing, there will be several main factors that affect the packet loss rate of the collected data. When performing simulation processing, for the simulated nodes distributed in the network, the packet loss rate can be calculated:

$$\begin{aligned} Q_a &= \text{loss} \triangleright \frac{\text{data}}{\sum y_i}, \\ Q_l &= 1 - (1 - Q_t)(1 - Q_a)^n. \end{aligned} \tag{18}$$

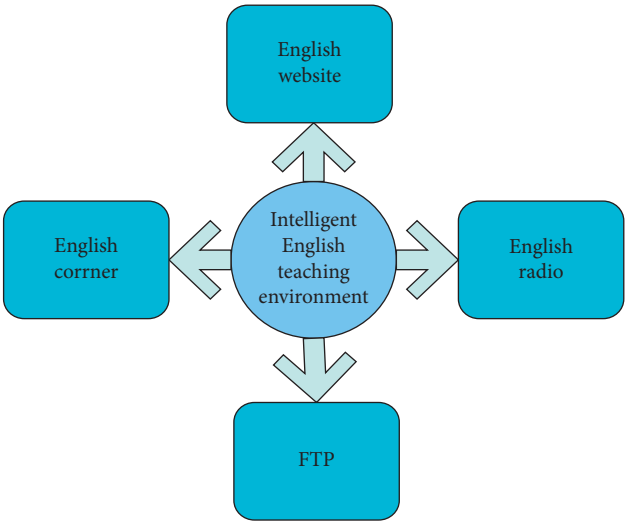

Figure 7: English teaching environment model.

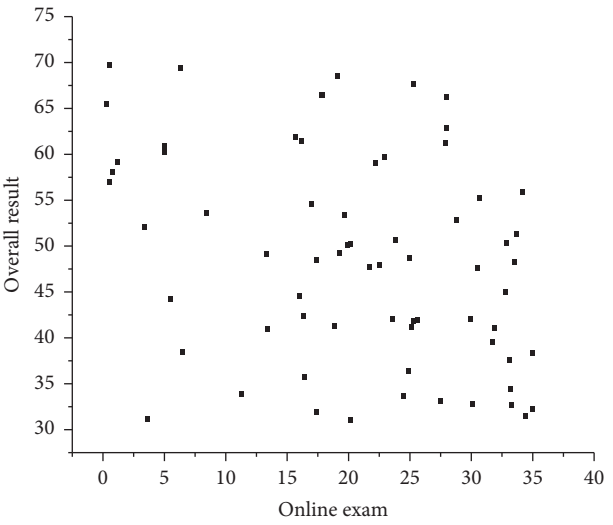

Figure 8: Scatter plot of student online test scores and total scores.

For simulation courses, for n-hop grids, Q_a represents the total number of packet loss data, and then the total formula Q_l, where Q_t is the error rate.

In short, ecological thinking is embodied in ecological English teaching, which regards the English learning system as a model for the integration of English teachers, students, and the environment. The ultimate goal of this teaching model is to enable learners to develop English teaching autonomously and independently in the learning process.

2.3.2. Research Models Related to Ecological Education and Ecological English Teaching. For the study of ecological teaching mode, the construction of ecological teaching mode is indispensable. The ecological teaching mode helps students improve their English, can stimulate their initiative, and build their self-confidence. Therefore, the design provides students with four types of self-learning after class. Including English learning website, English corner, FTP, and

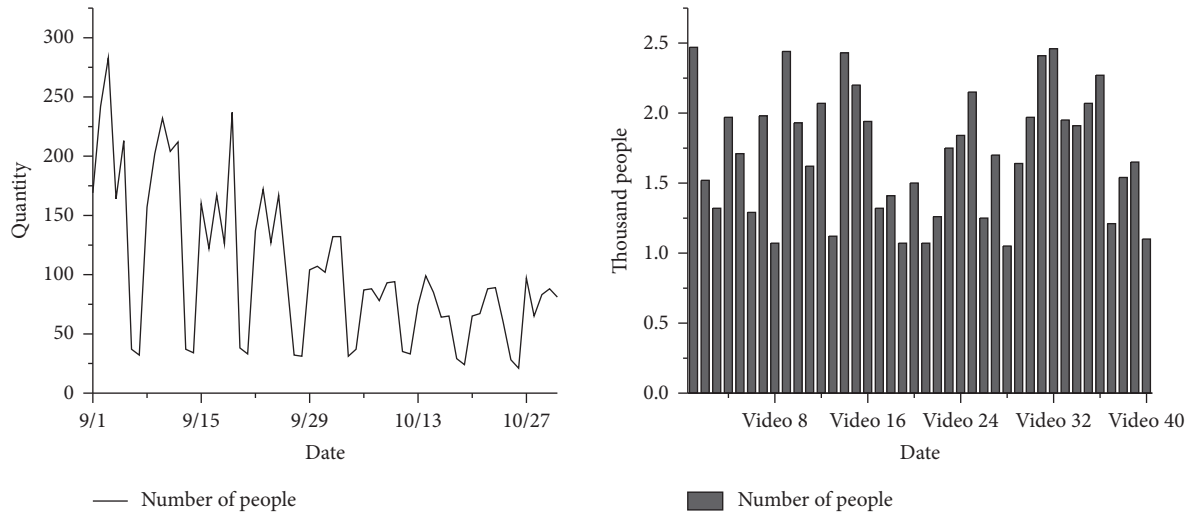

Figure 9: Change in the number of learners.

English radio, these functions can provide a good learning environment for students to learn English, as shown in Figure 7:

The establishment of the platform English corner provides all students with a space to practice English. They can exchange learning methods, share learning resources, and showcase their English talents on the platform. Students can exercise their English communication skills and improve their understanding and absorption can fully improve students' listening, reading, and writing skills, making English learning more interesting. Network-based multimedia teaching makes it possible for students to achieve personalized learning. The fluctuating results can be seen from the scores of different students in the English test, as shown in Figure 8:

The Internet of Things analyzes the students' learning data through the relevant indicators of the students' learning to obtain the students' comprehensive English learning performance. Judging from the situation of student online test scores in Figure 8, after students learn through the Internet of Things technology, student scores are generally scattered. This also provides a new way of thinking with the student-centered teaching model. It can be seen that the student's test situation is good.

3. Experiment and Analysis

3.1. The Effect of College English Teaching Model. Questionnaires are an effective way to collect data. The purpose of this survey questionnaire is to investigate the to provide suggestions for the current deficiencies in college English teaching. Based on the author's research on college English classroom teaching, this article designs two questionnaires for students and English teachers, because they are both influencing factors of the ecosystem. First, this article collects the personal information of students and teachers, including their age and major, as well as the teacher's education level and professional title. The content of the questionnaire includes classroom English teaching content, classroom teaching methods used by teachers, teacher role English, students' English quality, classroom environment, and teaching method evaluation. The reason for choosing these research contents in the questionnaire is that students, English teachers, and classroom environment are the three factors of classroom ecology. The number of online learning in this mode is shown in Figure 9:

Compared with the traditional form of single-modal oral teaching, multi-modal oral teaching has unique and obvious advantages in foreign language oral teaching. The traditional teaching mode is monolithic, the teaching method lacks vitality, cannot stimulate students' interest in learning, and cannot drive students' enthusiasm for learning. Also requires teachers to have updated educational concepts. It must be able in learning. First of all, teachers tap network resources in multiple dimensions to enrich, optimize and enrich oral teaching. For every spoken English teacher, find spoken language teaching resources suitable for students' learning, and incorporate a variety of multi-modal symbols and methods. Making good use of the various modalities in teaching and the mutual optimization of these modalities. The visual and auditory modalities are used in combination or alternately. It can change the monotonous teaching mode of textbooks, teachers and students in traditional teaching, making modern oral teaching rich and colorful, and students are therefore happy to learn. Second, multiple teaching activities are parallel. Making good use of the modality to mobilize students, and actively use the media to allow students to perform dubbing activities. Students can choose a paragraph or a few sentences of English dialogue or speech lines they like according to their hobbies. In-depth imitation with reference to the speaker's expression, demeanor, and tone of voice. The emotional investment of students in the process of imitation will further strengthen students' understanding and learning of speech, and cultivate their confidence in speaking English. Figure 10 shows the comparison of student unit tests, homework scores, and final grades.

In multi-modal oral teaching, teachers should actively seek and explore suitable oral learning resources for students.

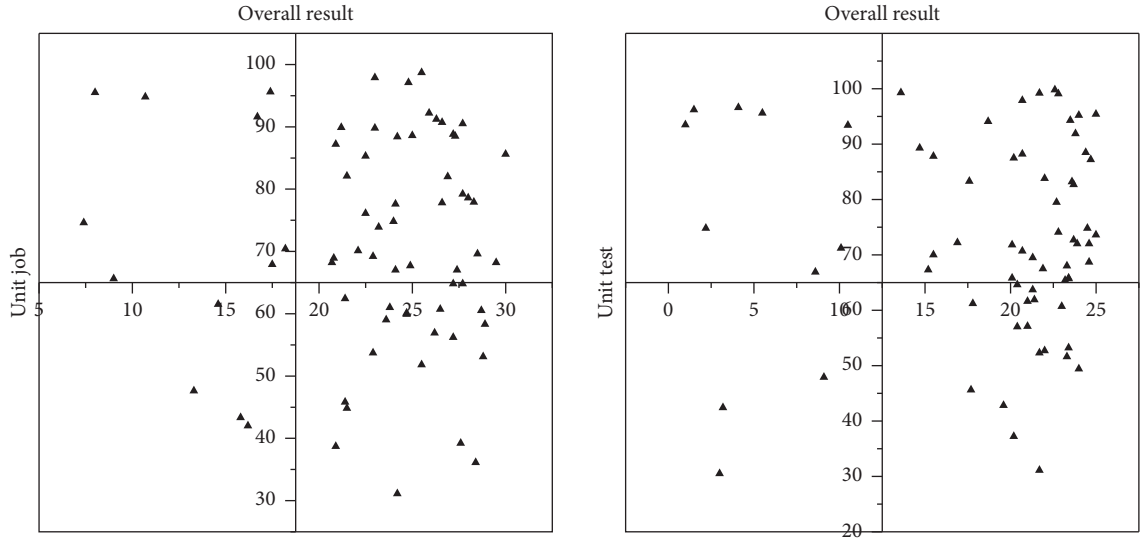

Figure 10: Comparison of student unit test and homework scores.

Teachers should systematically integrate these resources, further improve the availability of resources, improve teaching efficiency, and realize the "learning is the process of the student experience, experience, and recreation" advocated by American education experts.

3.2. Comparison of the Difference Between the Experimental Group and the Control Group. First, the total scores of the experimental group and the experimental group of students in the control group were measured in the prediction. The total score is compared and analyzed with the independent sample *t*-test, as shown in Table 1:

The numbers in Table 1 reflect the comparison of the overall level of cross-cultural sensitivity scales between the two groups of subjects. It is the average score and the corresponding standard deviation before the start of the teaching experiment. The cumulative score of each item reflects the overall level of the test subject. The higher the subject score, the higher the level of cross-cultural sensitivity.

The following part is the result of the questionnaire survey to help the author make a fair judgment on the status quo of the college English classroom, as shown in Table 2:

78.6% of teachers believe that they teach language knowledge in English classroom teaching. 85.1% of students believe that they learn language knowledge in English classrooms. 65.3% of teachers and 42.3% of students believe that language skills in English classroom teaching. Only 21.5% of teachers think they teach learning strategies to students, and 7.7% of students think they can learn how to learn English. 22.9% of teachers believe that they understand cultural factors in English classrooms, and 18.7% of students are culturally aware.

In the process of college English teaching, the relationship between teachers and students needs to be considered, as shown in Tables 3 and 4:

In this table, it can be found that 54% of teachers played the role of organizers in the activities. Teachers expect to play a higher percentage of all roles in teaching than they can play in actual teaching. In other words, most teachers hope they can play as organizers, trainers, and evaluators. However, in actual teaching, only a small number of people can do this. For students, they expect the teacher to play the role of a trainer. But only 38% of students believe that teachers do play this role in their teaching. 35% of students hope that the teacher can act as an evaluator to judge whether they are doing well. In fact, 6% of students believe that teachers are evaluators in their teaching. 85.1% of the students believe that they learn language knowledge in English classrooms, and in actual teaching, only a few people can do this, which shows that the effect is not obvious. The experimental results by expected data values and actual data values are both unsatisfactory, and the actual results are always lower than the expected results.

Table 1: Descriptive statistics for predicting the total score of the cross-cultural sensitivity scale.

Groups	*N*	Maximum	Minimum	Std. deviation	Mean
Experiment group	72	118	61	9.08082	80.65
Control group	75	99	63	8.8065	82.87

4. Discussion

Internet of Things mainly emphasizes the ability to obtain efficient learning effects in the classroom. By treating each learner as a different independent node, and then dividing it by the knowledge and information obtained. Only by digesting the existing knowledge can they improve their learning while strengthening their English application ability. When the Internet of Things is introduced into and information that students transfer to each other are often deep. The main body is the students, through the auxiliary role of the teacher's guidance, grasp the overall direction of

Table 2: Attitudes of teachers and students to teaching content.

	Language skills (%)	Language knowledge (%)	Learning strategies (%)	Cultural awareness (%)
Students' attitudes	42.3	85.1	7.7	18.7
Teachers' attitudes	65.3	78.6	21.5	22.9

Table 3: Expected roles of teachers and students.

	Teachers' role	Organizer (%)	Coordinator (%)	Trainer (%)	Guide (%)	Evaluator (%)	Planner and developer (%)
Questionnaires for students	The expected role you think teachers should be	66	61	38	55	35	68
	The actual role you are in teaching	59	50	44	30	66	42
Questionnaires for teachers	The expected role you think teachers should be in teaching	54	61	36	43	80	56
	The actual role you are in teaching	58	66	42	40	77	48

Table 4: The actual roles of teachers and students.

	Students' role	Knowledge recipients (%)	Active constructing knowledge (%)	Information collector (%)	Information collector (%)
Questionnaires for students	The expected role you think student should be	52	77	51	60
	The actual role you are	78	40	28	18
Questionnaires for teachers	The expected role you think students should be	47	75	58	61
	The actual roles student are	72	30	25	19

the classroom from the general direction, and then promote the interactive practice between teachers on a deeper level. College English teaching is centered on improving students' overall mastery and application ability. It is to comprehensively improve students' language practice ability, so it is important to choose the relevant content of the constructed model and how to teach.

5. Conclusion

This article mainly studies the model construction. Through the related introduction to related introduction of the college English teaching courses, we compare and compare the traditional English teaching methods. And through a combination of quantification and theory, this article explores the recognition mode of the Internet of Things, and finally builds a more efficient college English teaching course. Then this article explores the improvement rate of the improved teaching model. In the end, it is concluded that the introduction of Internet of Things technology into the construction of college English teaching mode has increased by 15–18% compared with the traditional teaching mode. The effect of traditional education and Internet of Things education is reflected by the total scores of students in the experimental group and the experimental group. The results show that the traditional education is the lowest at 61, the Internet of Things education is the lowest at 63, and the Internet of Things education is better.

Data Availability

No data were used to support the findings of the study.

Conflicts of Interest

The authors declare that there are no conflicts of interest.

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