Construction and demonstration of information-based college English ecological classroom teaching mode

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Abstract: The wide application of multimedia platform, network information technology and communication network in teaching has had a great impact on the teaching environment, teaching concept and teaching mode. Information is not only the mainstream trend of future education development, but also the inevitable choice to promote the continuous development of teaching. In this paper, the information-based College English ecological classroom teaching mode is studied from the perspective of educational ecology, and the key teaching links to optimize classroom teaching effect are elaborated in detail. Effective ways to construct English ecological classroom are put forward through three dimensions: adaptation and development under situational knowledge, coexistence and competition under intensive knowledge, and bionics and optimization under writing knowledge. The teaching experiments are shared to illustrate the advantages and effectiveness of this model in practical teaching activities, aiming to comprehensively build a harmonious and stable English ecological classroom, realize the construction of information-based College English class, and effectively improve teaching efficiency and quality.

1. Introduction

Looking at home and abroad, we can see that: on the one hand, the application of computers in the field of language teaching is gradually realized with the development and progress of computer network technology itself, which has the technical nature of being brave in innovation. On the other hand, the application of computers in the field of language teaching is derived from the replacement and evolution of teaching theory and the increasing improvement of teaching requirements, which has a sense of keeping pace with the times [1]. In the information age, the college English teaching mode used in the past can no longer meet the needs of constantly updated big data, so it is necessary to actively create a completely new college English teaching mode [2]. However, during the period of college English teaching reform, it will be interfered by many factors, such as the large differences in students' learning level, the in-depth influence of traditional teaching models, insufficient attention to differences in students, simple assessment methods and poor practicability. However, if they are applied reasonably Big data technology can build an ecological teaching model, which can greatly improve the English learning level of college students [3]. Therefore, this paper puts forward the construction and demonstration of information-based College English ecological classroom teaching model. Based on the theoretical guidance of educational ecology, teaching strategies such as schema thinking, implicit learning and emotional intervention are timely introduced into the foreign language classroom under the computer network environment, so as to make foreign language teaching step into the compatible, dynamic and benign ecological development track again.

2. College English ecological classroom and ecological teaching mode

2.1. Overview of college English ecological classroom

In the second half of the 19th century, the famous German biological experts put forward the concept of ecology for the first time, and regarded everything in the world as a stable, coordinated and unified biological community composed of different parts. By the end of the 20th century,

American academic researchers had established a direct connection between ecology and education, and created the "ecological theory of education", and then a college English ecological classroom system appeared, which mainly consisted of English teachers, students and learning environment [4]. This kind of micro-ecological classroom system is not as simple as it is on the surface. In fact, it involves many complex factors. As a unified whole, it includes teachers' teaching concepts, teaching methods, teaching models, professional abilities, and students' learning interests, learning abilities, and learning. In terms of methods, teacher-student relationship, teaching activities, etc., in this system, teachers, classroom teaching environment, and students are inseparable connections. They influence each other and have internal connections, no matter what kind of change or the rejection of small factors that will cause the entire ecological micro-system to fall into an unbalanced state, which in turn will affect the efficiency and quality of college English teaching [5]. Several landmark events in the development of ecology can be clearly presented in Table 1.

Table 1 Summary of ecological development.

Time	Important events	Incident person
1858	The earliest use of the term ecology	Henry Thoreau (United States)
1865	The earliest explanation of the origin of the meaning of the word ecology	Reiter (Germany)
1866	The earliest definition of ecology	Haeckel (Germany)
1895	Translate "ecology" into "ecology"	Miyoshi (Japan)
1917	Propose the concept of ecological niche	Grinnell (United States)
1932	Propose the concept of classroom ecology	Waller (United States)
1935	Propose the concept of ecosystem	Tansley (UK)
1949	Propose the concept of ecological balance	William Vogt (United States)
1976	Propose and discuss education ecology	Lawrence Cremin (United States)

The ecological language teaching evaluation view with non finality as the direction is essentially a "psychological construction" formed through "negotiation". Therefore, the ecological language teaching evaluation should adhere to the information of "value diversity" such as evaluator, evaluation content, evaluation purpose and evaluation conclusion), as shown in Figure 1. Oppose "managerialism tendency" and "technical rationality orientation".
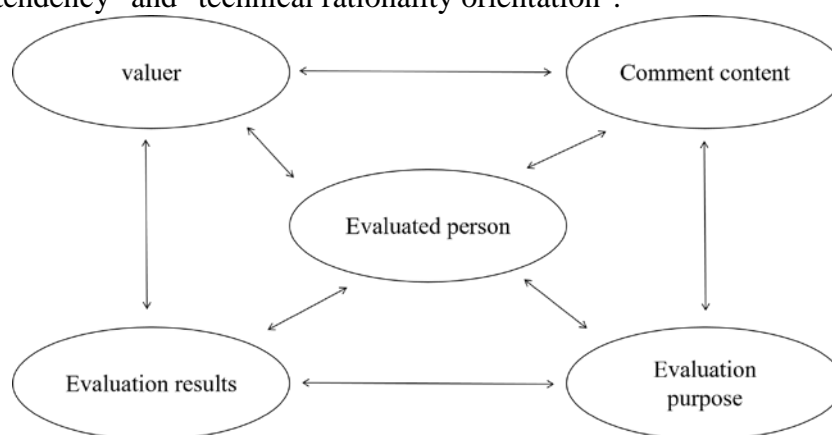

Figure 1 Evaluation of Ecological Language Teaching

Under this framework, the ecological language teaching evaluation concept overcomes the one-sided shortcomings of previous evaluation concepts, such as evaluation is measurement, evaluation is goal achievement detection, or evaluation is process representation, and gives comprehensive consideration to evaluators, evaluation contents, evaluation objectives and evaluation results.

Understanding from the three dimensions of structure, relationship and culture, the classroom environment not only affects the teaching and learning of teachers and students, but also changes under the influence of teachers and students. Teachers, students, the environment and their/their individuals interact and even blend, forming a network-like classroom ecological structure. As shown in Figure 2.
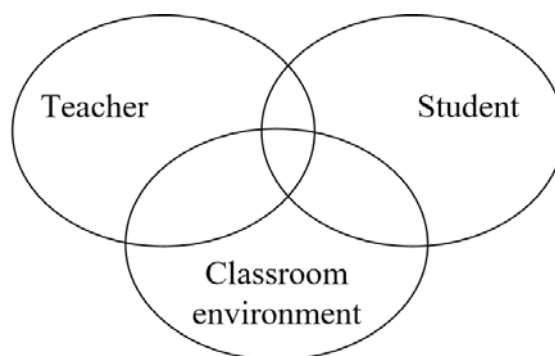
Figure 2 Classroom ecological structure

In addition, teachers and students who should actively interact with the outside world in the eco English system will have a decisive impact on the dynamics of the whole system. Therefore, this fully shows that when studying the deficiencies and problems existing in the teaching process of college English, we should look view the overall ecological system, not only analyze the factors such as teachers, students or external conditions, but also start with the related factors in the system and pay attention to the dynamic changes of their relations. Only in this way can we dig out the unsolved problems in the development of college English teaching, and then carry out in-depth exploration and summary of the problems, finally explore an effective solution path, and truly promote the stable development of the college English teaching.

2.2. Ecological Teaching mode

Ecological teaching mode is the direction of the healthy development of teaching mode. It is not only gradually explored and formed in the teaching practice of ecological classrooms, but at the same time, its construction can in turn promote the ecological development of classroom teaching. This model is guided by the theory of educational ecology, practiced the "student-oriented" educational philosophy, designed multi-dimensional interactive teaching activities and other forms of teaching activities according to students' ability levels and knowledge needs, and balanced a number of teaching components and ecology. The niche relationship of factors promotes the natural, harmonious and free growth and development of students under good artificial conditions [6]. The construction of the model aims to comprehensively consider the internal and external pressure of students' learning, students' nature, social norms and other objective factors, make use of the subjective consciousness and positive emotion of teachers and students of the ecological subject, develop and mobilize teaching cognition and other organic activities, create a harmonious, balanced and caring classroom interpersonal atmosphere, and let students realize independence, freedom and openness classroom ecological environment of cooperative inquiry learning [7].

In the practical application of ecological Teaching mode in classroom teaching, it should not only be reflected in the rational layout of a single teaching mode, but also strive to achieve the complementary adaptation and coexistence development among various teaching modes, that is, according to different teaching contents, specific student groups and changeable teaching environment, select the appropriate teaching mode to complement each other's resource advantages [8]. It should be noted that to truly realize the ecologicalization of teaching mode, it is necessary to realize the compatibility and adaptation of various teaching modes according to actual teaching needs, and avoid simply applying the traditional and advanced teaching mode directly into the new class, causing a new round of teaching imbalance.

3. Construction and Demonstration of Information-based College English Ecological Classroom Teaching Mode

3.1. Ways to construct college English ecological classroom under the background of Informatization

Adaptation and development are two interrelated aspects in the process of ecosystem operation.

Language is the carrier of culture. To master a language skillfully, we must deeply understand its cultural phenomena. Therefore, it is very necessary to use multimedia information technology to help students strengthen their adaptation and development of British and American cultural background knowledge.

Coexistence and competition are the relationships between different ecological subjects and teaching ecological subjects and their environment under classroom ecological conditions. In the teaching process, various ecological factors will form a relatively unified ecological system according to coexistence and competition. Detailed to the modern college English classroom, two teaching methods can be derived: ecological coexistence and competition.

Bionics is a science that stimulates innovative thinking in engineering technology based on the analysis of the properties and structures of biological systems. The main task of bionics is to promote the advantages and similarities and differences of biological systems, further optimize the generated theories, and then apply them to the production of advanced new equipment.

3.2. Experimental design and analysis

In order to test the practical application effect of information college English ecological classroom teaching mode in English teaching, this mode was introduced into classroom teaching, and a comparative teaching experiment was conducted in the second semester (16 teaching weeks) of 2018-2019 academic year. The selected subjects were 75 students of 2017 in a college. Class a (40 students) is the experimental class, and the teachers use the information-based college English ecological classroom teaching mode to teach, while class b (35 students) is the control class, which follows the traditional teaching form. Before the experiment, the college entrance examination scores of the two classes are calculated. The English proficiency of the experimental class and the control class are basically the same. The two classes are taught by the same team member teacher with eight years of teaching experience, and adopt the same textbooks and teaching progress. This experiment uses questionnaire survey and test comparison method as research tools.

Before the experiment, the satisfaction of the experimental class and the control class with English classroom teaching was almost the same, 65% and 68% respectively. After a semester of English learning, the difference in satisfaction widened. The students' satisfaction with English classroom in the experimental class reached 86%, which increased significantly, while the satisfaction of the control class was 70%, which did not increase significantly. It shows that the information-based English ecological classroom teaching mode has been fully recognized by students in practical application.

It shows that Information-based College English Ecological Classroom Teaching Mode can effectively improve students' comprehensive English application level and classroom teaching effect. Of course, due to the full complementation of the networking teaching, the experimental cycle only lasted for one semester, and the influence of other objective factors, the shortcomings and limitations in the experiment need to be improved in future research.

4. Conclusions

In the context of information age, the college English classroom is affected by various factors in the teaching process, resulting in a certain degree of imbalance in its ecological classroom. Rebuilding the English ecological classroom in universities is an inevitable choice to improve the quality of university English teaching. A healthy, stable, harmonious and free college English ecological classroom is of great significance to students' English application ability and language expression ability, and directly affects their overall development in the future. At the same time, it is the mainstream development trend of college English in the future. The correlation analysis of the questionnaire and the results of the pre-test and post-test shows that students generally hold a positive attitude towards the information-based college English ecological classroom teaching mode. The implementation and application of this mode in classroom teaching can effectively improve students' mastery of English knowledge and comprehensive language application ability. Therefore, the construction of English ecological classroom should strive for the various elements in the

ecological system, to influence and interact with each other, to make progress together, to combine harmoniously and uniformly, to maximize the inherent potential of each element, to actively utilize network information technology, to create a relaxed and comfortable learning atmosphere for students, to provide better teaching services, and to jointly create a beautiful ecological classroom. In the context of information age, the previous ecological English teaching system has undergone major changes, and it has also promoted English teaching to have an English ecological education system. This not only provides a large number of learning resources for university English, but also enables the English teaching environment to develop in a more coordinated, comprehensive and scientific direction.

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