

## **Research on Smart Teaching Design in College English from the Perspective of Educational Ecology**

**Sumei Wang**

*School of International Education, Qingdao Hengxing University of Science and Technology, Qingdao, Shandong, China*

**Abstract:** With the continuous reform of English teaching in higher education institutions, the elements within the teaching system are also undergoing constant changes. Traditional teaching methods can no longer meet the current course requirements. In light of this, from the perspective of educational ecology, how to construct an ecologically balanced teaching environment for future college English education and how to develop intelligent teaching management content have become critical issues that need to be addressed at this stage. This paper analyzes and discusses the management of smart teaching design in college English from the perspective of educational ecology.

**Keywords:** Educational Ecology; College English; Teaching Design

### **1. Introduction**

In traditional higher education English teaching, the various elements are relatively stable [1]. However, with the development of society and technology, as well as the ongoing reforms in higher education English teaching, the elements within the teaching system are constantly changing. College English teaching is a complete ecological system, possessing the basic structure and characteristics of an ecosystem. The interdependence and coordinated development among teachers, students, and the teaching environment within the system are essential for forming a harmonious and symbiotic college English teaching ecosystem [2,3]. Educational ecology can provide important theoretical references for examining the new changes and issues in college English teaching. By applying the principles of educational ecology to analyze the existing problems and causes within the current college English teaching ecosystem, we can propose optimization strategies aimed at promoting the healthy development of this ecosystem.

### **2. College English Teaching from an Educational Ecology Perspective**

Educational ecology has certain objective regularities, focusing on establishing a reasonable ecological environment both inside and outside the school, centered around ecological balance, environment and adaptation, population distribution and composition, and interpersonal relationships [4]. It primarily studies the relationship between education and the ecological environment, mastering the basic laws of education to enhance actual teaching efficiency and promote students' healthy growth. Constructing a college English teaching model from the perspective of educational ecology not only aligns with the practical needs of contemporary social development and higher education reform but also contributes to the steady improvement of the quality of college English teaching, holding significant practical implications for the innovation of college English teaching models.

#### **2.1 The Concept of Intelligent Education in College English from an Educational Ecology Perspective**

Foreign language teaching and research is a component of the entire ecological environment. Based on the "metaphor model" of ecological linguistics, college English teaching can be viewed as a complete language "ecosystem" composed of language, teaching subjects, and the teaching ecological environment. Each part that constitutes this system can be regarded as an ecological factor within the system. From a macro perspective, the ecological nature of college English teaching is primarily reflected in the dynamic ecological factors corresponding to the social environment, school environment, curriculum design, talent cultivation programs, and teaching syllabi [5,6]. The social environment, as the external ecological environment of teaching, ensures the sustainable

operation of the college English teaching ecological system and is the most significant factor influencing the teaching ecological system. From a micro perspective, the ecological nature of college English teaching is mainly manifested in the relationships among teachers and students, teaching methods, course materials, and classroom environments. Among these, teachers and students are the dominant factors in the micro-ecosystem, interrelated and mutually influential. In this complete system, each ecological factor is in a dynamic, developing, and open state, continuously adapting, interdependent, and interacting with one another. Therefore, any absence or imbalance of one or several ecological factors within the college English teaching system will disrupt the teaching ecological system. Only by updating teaching concepts, integrating various ecological factors, and maintaining the entire teaching system in a relatively stable balance can we construct a harmonious and unified classroom ecological system, thereby optimizing the effectiveness of college English teaching.

## **2.2 Conducting College English Education from an Educational Ecology Perspective**

From the perspective of ecology, the content of college English education requires a complete update and refinement of traditional English teaching models, firstly. Higher education teachers need to gradually strengthen their emphasis on this area, better integrating the social demand for English into their teaching. This involves incorporating social practice into English instruction and making targeted adjustments to the actual content of the teaching [7]. For professionals who are oriented towards societal needs, specific teaching objectives should be established to enhance the effectiveness of the teaching goals.

Secondly, it is essential to create a good learning atmosphere. Most college English education still relies on traditional teaching methods to impart knowledge, where students merely engage in rote memorization of concepts. While traditional teaching has its advantages, it also has drawbacks. Although systematic teaching by instructors can help students accurately acquire more knowledge of English, without practical guidance, most students in such a teaching system become exam-oriented rather than developing comprehensive skills. When they enter real-world situations, they often find a

significant difference from their daily knowledge learning, especially in regions where education is relatively underdeveloped. The lack of opportunities to speak English leads to a significant reduction in students' practical abilities within this traditional teaching model. A purely input-focused teaching environment is dull and uninspiring, making it difficult for students to cultivate and express their interest in learning. Additionally, learning a second language inherently requires the cultivation of interest as a prerequisite. In college English courses, there should be a greater emphasis on developing practical skills, enabling students to speak English and engage in mutual communication, thereby applying the knowledge learned in class effectively in their daily lives.

## **3. Instructional Design in College English Teaching from an Educational Ecology Perspective**

### **3.1 Principles of Instructional Design**

#### **3.1.1 Adherence to the Principle of Openness**

Adhering to the principle of openness is crucial for optimizing educational resources and effectively carrying out teaching. Creating a harmonious and open teaching environment helps reduce students' anxiety, allowing them to proactively express their views and develop a habit of exploration and innovation in learning. Establishing open course resources provides students with rich instructional materials and highly practical learning tools, facilitating the use of implicit resources and the optimization and configuration of diverse resources. Through varied instructional activities designed for open learning, students' language forms and content become more relevant to their lives, helping them use the language accurately and fluently, thereby effectively achieving the teaching objectives.

#### **3.1.2 Adherence to the Student-Centered Principle**

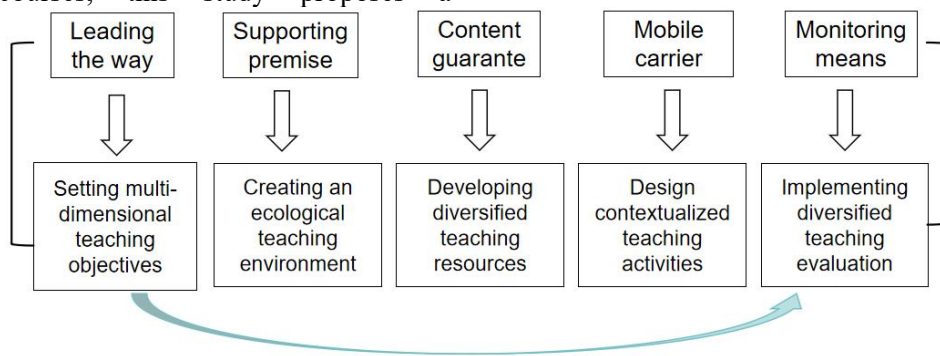
Emphasizing a student-centered approach requires teachers to fully consider students' cognitive characteristics, learning needs, and existing learning levels when designing classroom activities. Students are encouraged to collaborate, discuss, and participate, shifting the focus from "the teacher speaking" to "the students speaking." This approach enables students to truly understand and internalize knowledge, leading to deeper comprehension of

the material.

### 3.2 Teaching Design Framework

Based on the principles of educational ecology and considering the characteristics of college English courses, this study proposes a

framework for the teaching design of college English from five aspects: teaching objectives, teaching environment, teaching resources, teaching activities, and teaching evaluation. The basic framework is illustrated in Figure 1.



**Figure 1. College English Teaching Design Framework based on Ecology of Education**

#### 3.2.1 Establishing Teaching Objectives

Clearly defining teaching objectives is the primary task of instructional design. It serves as the basis and foundation for achieving expected learning outcomes and teaching effectiveness, organizing teaching activities, and implementing teaching assessments. The design of university English teaching objectives is based on the “College English Curriculum Requirements” [8] and the “College English Teaching Guidelines”[9] issued by the Ministry of Education in 2015. It aims to cultivate students' language application abilities, learning abilities, and research abilities from four aspects: knowledge, emotions, culture, and skills. When setting knowledge objectives, teachers should fully consider students' existing cultural knowledge levels, plan the scope of teaching, clarify the key and difficult points of the teaching content, define the depth and breadth of the content, and specify the degree and standards of explicit and implicit knowledge that students should master by the end of the course. Language teaching cannot be separated from culture, which most intuitively reflects the changing states of language in every historical and social context. In formulating cultural objectives, emphasis should be placed on cultivating students' cultural awareness, especially sensitivity to other cultures, enabling students to perceive and understand things from the perspective of other cultures. On a micro level, the focus should be on helping students delve from the expression of culture into its connotations, allowing them to understand various forms of civilization through cultural

characteristics and analyze the differences between cultures. Emotions are the driving force that stimulates students' learning and regulate and influence their internal and external responses. Therefore, teachers should pay attention to students' emotional states and provide timely care and guidance. When setting emotional objectives, it is essential to consider students' interests, attitudes, and adaptability. This involves finding ways to help students develop personalized qualities, such as teamwork, respect for others, and self-regulation, as well as achieving positive emotional experiences, such as a sense of self-efficacy and increased confidence, to make emotional objectives explicit.

#### 3.2.2 Creating an Ecological Teaching Environment

Environmental factors can directly provide cognitive nourishment for perception and action, and this cognitive nourishment can evoke certain perceptual-driven behaviors. An ecological environment includes both micro and macro ecological environments. The micro ecological environment encompasses the psychological environment of students and teachers, among others. When these environmental factors mutually constrain, depend on each other, and coexist harmoniously, they promote the dynamic development of the entire system towards a healthy direction. A relaxed psychological environment is conducive to cultivating learners' interest in learning, innovative consciousness, and critical thinking. The macro ecological environment primarily refers to the foreign language teaching environment. A multimedia

teaching environment creates a learning atmosphere that integrates audio and visual elements, enriched with text and images. Therefore, teachers should shift their original teaching concepts, actively explore the integration of teaching and information technology, and fully utilize modern educational technologies such as PPT and Rain Classroom to assist in teaching, supplementing, summarizing, and deepening the content being taught to achieve the best teaching outcomes. In addition, instructors should align teaching resources (such as texts, audio, video, etc.) with course requirements and the personality traits of learners, re-editing or re-cutting challenging texts to optimize resource allocation and maximize control over the quality and quantity of input.

### 3.2.3 Developing Diverse Teaching Resources

#### (1) Optimizing text resources

Traditional college English textbooks focus on explaining language knowledge points, containing a large amount of vocabulary and grammatical structures, and carry a strong "exam-oriented" flavor. For example, many exercises after the lessons are designed based on the question types of the College English Test Band 4 and Band 6. While this is beneficial for exams, the textbooks overlook the content's interest and cultural aspects, and the material is often disconnected from real life, lengthy, and lifeless, which is not conducive to cultivating students' interest. Therefore, the selection of content in textbooks should emphasize its interest, operability, and practicality, ensuring dynamic, multidimensional, synergistic, and interconnected relationships between different sections. At the same time, the relationship between text and images should align with students' cognitive characteristics to better cultivate their diverse reading abilities.

#### (2) Rationalizing the use of multimedia resources

Multimedia materials can integrate various forms such as text, CDs, PPT presentations, images, audio, and video, engaging students' senses and stimulating their enthusiasm for learning. Based on modern information technology, building a network teaching platform that matches the textbooks and creating interactive classrooms is the direction and trend of English teaching reform. Only by properly managing the relationship between multimodal teaching resources and multimedia can we

maximize the advantages of the platform. The content of the online platform should not simply reproduce the teacher's handouts or the videos watched in class, but should be learner-centered, constructing a reasonable and rich data platform of media resources.

(3) Designing contextualized teaching activities  
Context can effectively evoke the existing relevant knowledge (cultural background, language structure) in the minds of second language learners, thereby aiding in the acquisition and understanding of new knowledge. In designing teaching activities, teachers should fully consider students' cognitive levels and learning characteristics, allowing students to continuously improve their language skills and knowledge application abilities in vivid contexts.

#### (4) Implementing Diversified Teaching Evaluation

Teaching evaluation plays a positive role in the ecosystem of college English teaching and runs through the entire teaching process. An ecological teaching evaluation system refers to the development from a traditional single evaluation system to a diversified evaluation system, shifting from a focus solely on results to an emphasis on processes, attitudes, and participation, and adopting a combination of formative and summative evaluation methods. The proportion of each assessment can be reflected in the revision of course standards based on the nature and status of the course. First, the evaluation subjects should strive for diversification. Effectively combining self-evaluation by students, peer evaluations among students, teacher evaluations of students, and student evaluations of teachers can help students understand their learning status, identify existing problems, and timely adjust and optimize their learning strategies during autonomous learning. Second, the evaluation content should aim for multidimensionality. It should focus not only on the quality of students' assignment feedback and test performance but also consider factors such as classroom participation, learning attitudes, teamwork spirit, and the application of learning strategies. This combination of knowledge, abilities, and competencies allows for a comprehensive understanding of students' learning conditions and facilitates objective assessments of students. Finally, the evaluation strategies should strive for diversity. Teachers can choose appropriate

evaluation strategies based on the learning situation, such as establishing student portfolios, conducting surveys, and interviews, to effectively observe, evaluate, and monitor students' learning processes.

#### 4. Conclusion

The perspective of educational ecology provides new macro ideas and development directions for the construction of English teaching models in higher vocational colleges. To promote the scientific development of English teaching in universities, the construction of English teaching models should scientifically grasp the elements of the educational environment, human and material resources, the transformation process, and talent output during the practical teaching process based on the perspective of educational ecology. It is essential to organically integrate the educational environment with teaching individuals and groups, actively overcome local disturbances in the ecological environment, and establish interactive and harmonious relationships within teaching groups. In the context of the new era, the innovation of English teaching models in higher education is crucial to meet the demands of socialist modernization. This requires a strong focus not only on the cognitive and skill development of students but also on their practical cultivation in terms of qualities and behaviors, aiming to nurture students into the composite talents needed for socialist modernization.

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