

# Exploring the Path of English Classroom Teaching in Colleges and Universities under the Perspective of Information Ecology

Qi Liu, Yijin Wang

Qingdao City University, Shandong Qingdao 266106

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**Abstract:** This article discusses the information ecology perspective and proposes strategies to address the three major challenges to English classroom teaching in colleges and universities: uneven integration and application of technology, variability in student engagement and motivation, and lagging behind in the updating of teaching methods and content. The article first analyses the importance of promoting the deep integration of technology and teaching, and creating immersive learning environments through the introduction of technologies such as virtual reality, in order to enhance teaching and learning. Next, it discusses the necessity of constructing personalized learning paths and using adaptive learning platforms to meet students' individual needs, thereby enhancing learning motivation. Finally, the article advocates updating the teaching content and methods to enhance students' practical application and intercultural communication skills through innovative pedagogies such as project-based learning. These strategies aim to respond to the new requirements of the information age, improve the quality of English teaching, and cultivate globally competitive talents.

**Keywords:** information ecology perspective, college English, classroom teaching, teaching strategy

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## Introduction

For English classroom teaching in colleges and universities, the information ecology perspective provides a new framework to achieve innovation in teaching methods and content. The information ecological perspective, as a metaphorical concept borrowed from ecology, emphasizes the systemic and dynamic nature of people, technology, practical activities and their interactions in a given environment. It provides us with a new perspective to understand and improve the practice of English language teaching and learning, and in this context, it becomes particularly important to explore effective strategies for teaching English in college English classrooms.

### 1. Overview of the information ecology perspective

The information ecology perspective, as an innovative theoretical framework, offers new perspectives for understanding and responding to complex issues in contemporary education. Drawing on the principles of ecology, the perspective emphasises that in a given information environment, people, technologies, practical activities and their values constitute a dynamic and interacting system<sup>[1]</sup>. In this framework, knowledge is viewed as a non-isolated entity that flows between the various parts of the system and through these interactions facilitates the generation, dissemination and application of knowledge. This perspective places particular emphasis on the interdependence and dynamic changes between knowledge and the environment, revealing that the educational process is not just about the application of technology, but more importantly about the relationship between technology, human behaviour and pedagogical practices.

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The core features of the information ecology perspective include systemicity, diversity, synergistic evolution, key "species" and territoriality, which together form the basis of a healthy teaching ecosystem. In college English classroom teaching, applying the information ecology perspective means building an open system that integrates diverse teaching resources and methods and promotes collaborative progress between teachers and students. This requires teachers to identify and nurture key players in the teaching and learning process, such as innovative teachers and active learners, and it also requires them to consider the impact of regional cultures on teaching strategies and how they can be utilized to meet the needs of diverse learners.

## **2. Analysis of the Current Situation of English Classroom Teaching in Colleges and Universities**

### **2.1 Uneven integration and application of technology**

Although the rapid development of information technology provides unprecedented opportunities for language teaching and learning, the integration and application of technological resources show significant disparities between different universities, and even between different disciplines within the same university. This unevenness is not only reflected in the availability of hardware facilities, but also in a number of dimensions, such as teachers' mastery of technology, the innovativeness of instructional design, and the support of educational policies. For those colleges and universities with limited resources, the lack of necessary technical support and training often makes it difficult for teachers to break through the limitations of the traditional teaching mode, which in turn affects the improvement of teaching effectiveness. In the era of information technology, teachers should have solid language teaching skills, master the corresponding technical knowledge, and be able to flexibly use various information technologies to design and implement teaching activities. However, in reality, teachers' training and development in this field are often neglected, making it difficult for them to effectively use technological resources for teaching innovation<sup>[2]</sup>. The reform and development of English classroom teaching in higher education also requires strong support from educational policies. This includes the provision of adequate technological resources, the establishment of a continuous professional development mechanism for teachers, the encouragement of pedagogical innovation and research, and the construction of an open learning environment. Only when these conditions are met can the imbalance of technology integration and application be fundamentally resolved, thus promoting the development of English teaching practice in colleges and universities in the direction of more efficient, personalized and interactive.

### **2.2 Differences in student engagement and motivation**

There are individual differences in students' backgrounds, learning styles and interests, which are not adequately reflected and catered for in an unchanging teaching model. Traditional teaching methods focus on the transmission of knowledge to the neglect of the learner's subjectivity, resulting in varying levels of student engagement and fluctuating motivation in the classroom. Especially when the teaching content is out of touch with students' real life and future career development, students' interest in learning and self-drivenness will be greatly weakened. Second, the uneven integration of technology applications in college English teaching exacerbates the differences in students' engagement and motivation. In some well-resourced teaching and learning environments, the interactivity and opportunities for practice created by the use of information technology can significantly enhance students' motivation and engagement. In contrast, instructional environments that lacked such technological support struggled to motivate students, resulting in a reduced sense of engagement and fulfillment in their learning process. Finally, the lack of targeted updating of teaching strategies and methods, as well as the lack of awareness of students' diversity, limit the effectiveness of teachers in motivating and engaging students.

### **2.3 Lagging behind in the updating of teaching methods and content**

The problem of lagging behind in the updating of teaching methods and content is rooted in the disconnect between the rapidly evolving information age and traditional teaching practices, which in turn affects the quality of education and the effectiveness of student learning. At present, the rapid development of information technology has brought

unprecedented opportunities for language teaching, but the updating of the content and methods of teaching English in colleges and universities has failed to keep pace with it. Most of the courses still rely on traditional teaching modes, such as teacher-centred lectures and fill-in-the-blanks teaching with emphasis on grammar and vocabulary, to the neglect of the learner's subjectivity and the actual language-using environment. In addition, the content of textbooks is often not updated in time to reflect the actual context and cultural diversity of the current use of English, resulting in students not being able to effectively apply what they have learned in real-world communication. At the same time, the homogenization of teaching methods also limits the cultivation of students' critical thinking and creativity, and diminishes the possibility of classroom interaction. In the information ecology perspective, the quality of education depends not only on the modernity of the teaching content, but also on the mode of teaching-learning interaction, the application and innovation of knowledge, as well as the personalisation and dynamic adaptability of the learning process. However, existing pedagogical practices fail to make full use of the potential of information technology, such as online collaboration tools, digital learning resources and interactive learning platforms, to stimulate students' interest and engagement in learning.

### **3. Effective Strategies for English Classroom Teaching in Colleges and Universities under the Perspective of Information Ecology**

#### **3.1 Promoting deeper integration of technology and teaching**

In the information ecology perspective, promoting the deep integration of technology and teaching is a necessary condition for building the teaching ecology of modern college English classrooms. This concept is based on the understanding that educational technology is an integral part of the teaching and learning process. It requires teachers to rethink the role of technology in instructional design, how to enhance the attractiveness and interactivity of teaching content through technology, and how to use technology to promote students' active learning and deep thinking. Achieving this goal requires teachers to have the ability to seamlessly integrate technology with the content and methods of teaching and learning, as well as the provision of appropriate technological resources and support in schools.

As an example, a successful case of deeper integration of technology and teaching is the use of virtual reality to create immersive learning environments. Students can enter a virtual English-speaking country through a VR headset and interact with virtual characters to complete tasks such as finding information, shopping, and participating in social activities. Such interactions not only stimulate students' interest in learning, but also provide rich language input and opportunities for actual language use, greatly improving the usefulness and efficiency of learning.

Through innovative technology applications, problems in traditional teaching and learning can be solved, new teaching and learning paths can be opened up, and students can be provided with a richer, more interactive and personalized learning experience. This kind of integration does not happen overnight, but rather requires close collaboration between teachers, schools and technology providers in a process of continuous exploration and optimization.

#### **3.2 Construction of personalized learning paths**

Currently, there are significant differences in students' language learning abilities, interests, learning styles and needs, and the construction of personalized learning paths emphasizes the provision of a customized learning experience to maximize the learning outcomes for each student. Personalized learning pathways can enhance students' motivation, deep learning and critical thinking skills. To achieve this, teachers need to use flexible teaching methods and diverse teaching resources, as well as advanced technological tools to track and analyse students' performance, in order to design content and activities that best suit their individual learning needs.

For example, an English course at a tertiary level achieves the construction of personalized learning paths through the use of an adaptive learning platform. On this platform, students first complete a detailed proficiency assessment, and based on the assessment results, the system automatically recommends learning materials and activities that are appropriate for the student's current level and interests. Students can choose to learn specific topics or skills, such as business English, academic writing or oral communication, under the guidance of the teacher, while the platform adjusts the content and

difficulty of learning according to the students' learning progress and performance. In addition, teachers can make use of the data analytic provided by the platform to monitor students' learning status in real time and provide personalized feedback and counselling in a timely manner.

The construction of personalized learning paths accurately diagnoses students' learning needs, designs learning plans that meet individual characteristics, and effectively improves the efficiency and quality of learning, through which English education in colleges and universities can better adapt to the diverse learning needs of students, and cultivate talents who have both solid English skills and the ability to learn independently.

### **3.3 Updating teaching content and methods**

Updating the content and methods of English classroom teaching in colleges and universities is the key to achieving educational goals and improving the quality of learning, a concept that stresses student-centered, and by introducing modern teaching concepts and making use of the latest technology, the teaching content can be made more relevant to the actual needs of the students and the development trend of modern society. The timely updating of textbook content can reflect the latest developments in globalization and cross-cultural communication, stimulate students' interest in learning, and promote the development of their critical thinking and innovation [3]. This means that teachers need to continuously explore and practice new teaching methods, such as flipped classroom, project-based learning, and collaborative learning, while integrating digital resources and social media tools to provide students with an interactive and challenging learning environment.

As an example of project-based learning, an English course at a tertiary institution designed an intercultural communication project in which students were required to work together in small groups to research the culture of a specific country and prepare a presentation and seminar in English. In the process, students not only had to conduct research using online resources, but also had to video communicate with students in that country in order to gain a deeper understanding of its culture. This project requires students to use critical thinking to analyse information, apply creativity in designing the content of the presentation and discussion, and apply English communication skills in real-life exchanges. In this way, students are able to use English in real-life contexts while increasing their understanding of and respect for other cultures.

The application of modern teaching concepts and technologies to English language teaching can improve students' language skills, develop their intercultural communicative competence and lifelong learning abilities, and help them successfully meet future challenges in a globalized world.

## **4. Conclusion**

As education is by nature a dynamic process of change and interaction, we must continually explore, practice and optimize teaching and learning strategies to ensure that teaching and learning activities are adapted to changing circumstances and needs. Through this continuous effort, we can provide students with a richer and more meaningful learning experience, and train them to become talents who can communicate effectively and innovate in a globalized world. English classroom teaching in colleges and universities under the perspective of information ecology is not only a renewal of teaching methods and contents, but also a profound reflection and reconstruction of educational concepts and teaching ecology. We expect that under the guidance of this perspective, English teaching in colleges and universities can constantly adapt to the development of the times and achieve self-renewal and outstanding achievements.

### **Conflicts of interest**

The author declares no conflicts of interest regarding the publication of this paper.

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**Author:** Qi Liu (1996.11—), female, Han nationality, Heze city, Shandong province, professional title: assistant instructor, educational background: master degree, research direction: education innovation

Yijin Wang (1995.03—), female , Han nationality, Weihai city, Shandong province, professional title: assistant instructor, educational background: Master degree, research direction: English/ English educational reform