

# Research on Teaching Innovation Practice of College English Expansion Series in Science and Engineering Colleges from the Perspective of Language and Education Integration

Bingjie Shen\*

School of Humanities, Beijing University of Civil Engineering and Architecture, Beijing 102616, China

## Abstract

In order to implement the fundamental task of Building Morality and cultivating people and effectively promote the ideological and political reform of the curriculum, College English, as a curriculum with a wide coverage in Colleges and universities, shoulders the great mission of curriculum education. In order to meet the requirements of economic and social development, colleges of science and engineering must reform college English teaching. According to the characteristics of both instrumental and humanistic college English courses, teachers should fully integrate "teaching and educating people" into college English classroom teaching. On the basis of integrating, integrating and deepening the existing teaching reform achievements, scientifically formulate the design and implementation plan of education and teaching reform, and discuss the construction of the goal system of college English innovative talents training in engineering colleges under the background of innovative talents training. Establish a "school-based, dynamic, open, scientific and reasonable" college English curriculum system to realize the instrumental and humanistic characteristics of college English teaching. Choose textbooks with the concept of cultivating critical thinking ability, and integrate the cultivation of critical thinking ability into college English curriculum system. The expansion of College English courses in science and engineering colleges should start from the construction of students' meaningful English language knowledge structure, expand English related cultural courses, and further expand the breadth and depth of English course learning under the guidance of demand theory. To achieve the organic integration of language knowledge, ability training and educational objectives in a silent way, so as to improve the quality and efficiency of College English teaching.

## Keywords

The Fusion Vision of Language and Education; Universities of Science and Engineering; College English.

## 1. Introduction

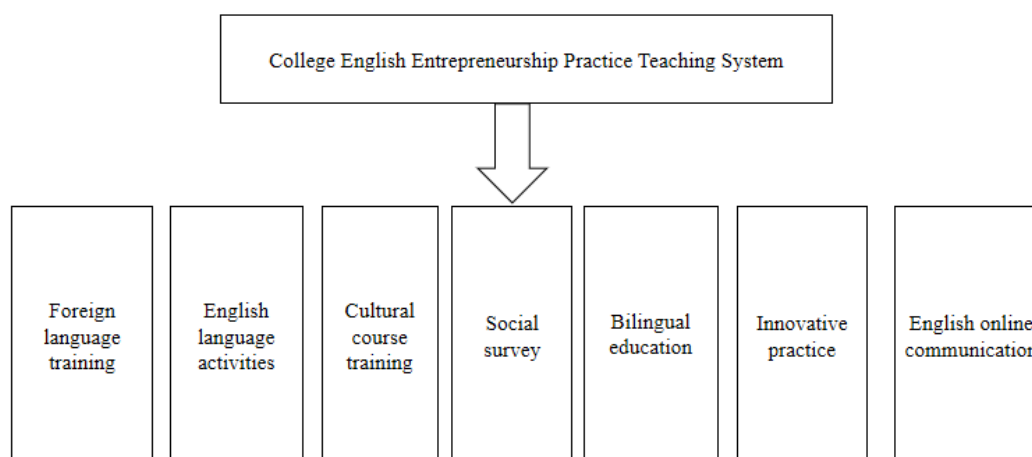
College English course is not only a basic language course, but also a quality education course to broaden knowledge and understand world culture, which is instrumental and humanistic [1]. English is a language that is widely used in practice. How to improve the comprehensive ability of college students to use English, strengthen the learning of college students' English knowledge, and promote the integration of college students with international standards are the problems that college English teachers pay attention to in the teaching process. Integrating and strengthening the concept of "teaching and educating people" in daily teaching is the best way to carry out "educational teaching" at the university stage [2]. Colleges and universities are required to cultivate engineering talents with innovative and entrepreneurial abilities and cross-border integration abilities, so as to promote the construction and development of new

engineering courses. In order to cultivate high-quality innovative talents, we must cultivate their speculative ability, because speculative ability is the premise of innovative ability. Without speculative ability, there can be no innovative ability [3]. Combined with the characteristics of the current rapid development of technology and the demand for social talents, this paper makes an exploration and Reflection on the construction of practical education platform, the construction of experimental teaching team, the construction of practical teaching system, the reform of practical teaching methods, the enrichment of practical teaching contents, and the optimization and integration of practical teaching resources [4]. Build a "school-based, dynamic, open, scientific and reasonable" college English curriculum system. The purpose of this study is to explore a new path for how to innovate and practice education in engineering colleges and universities. It is hoped that this research will provide a valuable reference for practice education in general engineering colleges in my country.

## 2. Unity of College English Curriculum and "Teaching and Educating"

### 2.1. Current Situation of College English Teaching

From the reform and opening up to the present, my country's English teaching has made some progress, but there are still some problems. The teaching content, methods and effects cannot meet the training goals of applied talents, and there is still a big gap with the needs of the society, resulting in many students. Cannot communicate effectively in English and cannot meet business requirements. College English teaching aims at cultivating students' English application ability, enhancing cross-cultural communication awareness and communication ability, and at the same time developing autonomous learning ability and improving comprehensive cultural literacy, so that they can effectively use English in their study, life, social interaction and future work, and meet the needs of the country, society, schools and individuals [5]. English is a communicative language. Only through continuous use and communication can it develop and progress continuously. Courses should be offered in the form of compulsory courses. Various types of courses can not only meet the needs of students' employment, but also stimulate their learning motivation and lay the foundation for the future development of the major. At present, although various science and engineering colleges and universities have made different degrees of progress in the development of science and engineering English courses, the research on the development of college English school-based courses has quietly emerged in various colleges and universities. The school-based curriculum research of college English provides reference. Figure 1 shows the practical teaching system of college English courses.



**Figure 1.** Practical teaching system of college English course

The effective implementation of the school-based characteristic training program of College English courses in Colleges of science and technology and the complete presentation of the course content are inseparable from the reasonable arrangement of the curriculum. The course structure of College English is somewhat different among various science and engineering colleges. In order to meet the needs of the society for diverse talents in English, the English courses of science and technology colleges need to cultivate talents with excellent practical ability and innovation ability. In this regard, it is necessary to further refine the training objectives of college English courses in polytechnic colleges and universities to reflect the characteristics of polytechnics.

## **2.2. The Feasibility of the Integration of Language and Education**

College English course is "an integral part of higher education. It is not only a course of basic language knowledge, but also a quality education course to broaden knowledge and understand world culture". As a basic course in college, College English is taught to freshmen and sophomores. This period is the transitional stage of students' personal growth, the initial stage of their university life, and the opening stage of their independent life [6]. The particularity of this period gave college English courses a good opportunity to "educate people". Through the study and processing of various language materials, students are exposed to and understand the history, culture, customs, and customs of English-speaking countries. The standards of first-class courses are high-level, innovative and challenging, among which innovation requires the courses to be cutting-edge and contemporary, while ideological and political education in college English course is closely related to current political news and advanced culture. In language teaching, we should examine the ideological and political education of college English courses from the perspective of psychology, focusing on the cultivation of critical thinking ability in teaching. As a language course, College English has the advantages that many other courses do not have. It has both instrumental and humanistic nature. The core is the cultivation of language ability, cross-cultural communication ability and humanistic quality. College English teaching should follow the principle of integrating language and education, especially in the selection and mining of education materials. The elements of educating people must be excavated and selected according to the theme and content of the textbook in order to achieve the educational and teaching goal of cultivating people with morality. Integrating theory with real life, realizing the unity of knowledge and action. Moreover, time-sensitive materials can enhance students' sense of reality and authenticity, and stimulate students' inner resonance.

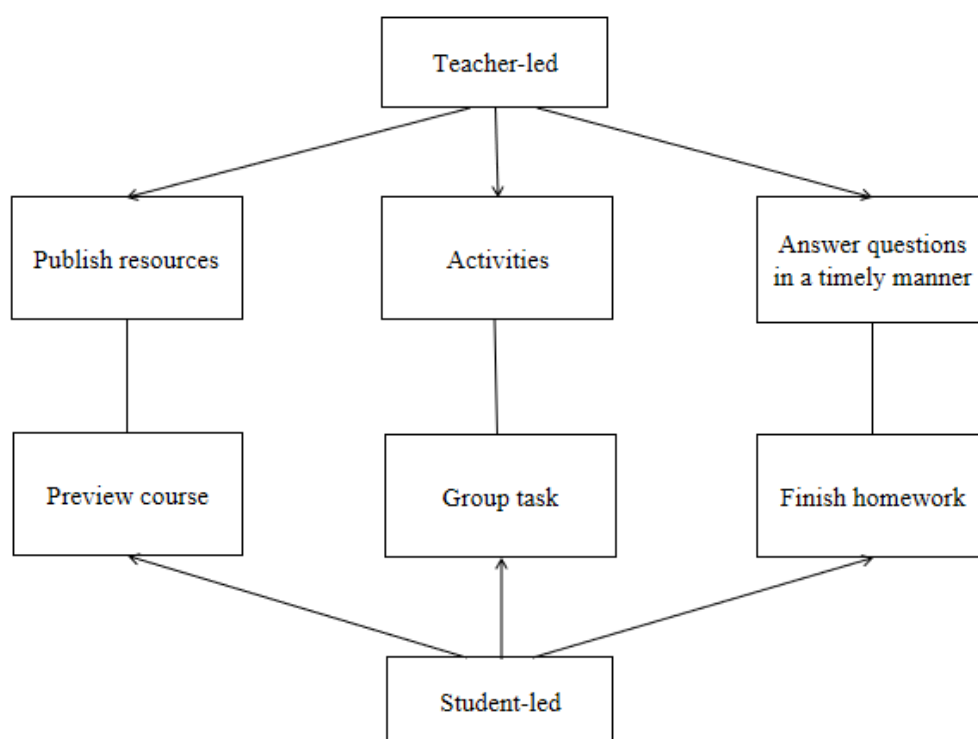
## **3. Thoughts on the Expansion of College English Curriculum in Science and Engineering Colleges**

### **3.1. A Correct Understanding of College English's Extracurricular Expansion Study**

College English teaching is carried out under the background of quality education. This kind of teaching starts from the students themselves, not just from the subject. College English teaching evaluation system is a scientific evaluation system that focuses on the learning process, faces the future and aims at students' development. It emphasizes the evaluation of students' learning interest, learning strategies and learning ability, focusing on building students' learning self-confidence [7]. Figure 2 shows the flow chart of College English teaching design.

Students' extracurricular study aims at consolidating what they have learned in class, drawing inferences from others, and applying what they have learned. It aims to broaden students' learning horizons and expand the channels of using English. The teaching mode of college English course "should embody the principle of combining practicality, knowledge and interest in English teaching, which is conducive to arousing the enthusiasm of both teachers and

students, especially reflecting students' dominant position and teachers' leading role in the teaching process". College English embodies the unity with the requirements of "teaching and educating people" from the aspects of curriculum time, teaching content and teaching mode. It provides students with more free space for extracurricular creation [8]. Time expansion is realized by extending in class experiments to extracurricular experiments. In order to achieve the purpose of enriching the experimental content, expanding students' horizons, showing students' specialties, and stimulating students' creative interest. Resource expansion is to achieve from the central experimental platform, the joint practice teaching platform in the school, to the enterprise practice education platform, and provide students with more abundant experimental resources. College English classroom can educate people by teaching knowledge and guiding values. Teachers make use of network resources to supplement the truth contained in extra-curricular materials to teaching, and help students to increase their knowledge and broaden their horizons, from passive learning to active learning.



**Figure 2.** Flow chart of college English teaching design

### 3.2. Reform and Development of College English Teaching from the Perspective of Linguistics

The new talent training plan puts forward new requirements for the reform of college English teaching. Among them, the contradiction between the high requirements of educating people, the heavy teaching tasks and the reduction of teaching hours is particularly prominent. Whether this contradiction is resolved or not has become the starting point for the reform of college English teaching. For science and engineering college students, personal needs and social needs are their direct English application orientation. First of all, let students strengthen their awareness of college English, change the misunderstanding that it is regarded as a pure "tool", and realize the rich connotation of this course. They should not only master the basic language skills, but also receive ideological edification. English teaching plays an important role in making students have an international vision, laying a good foundation for future employment, postgraduate entrance examination or going abroad, and cultivating talents in line with international standards. It is suggested to add courses such as English speech, debate,

and comparison of Chinese and western cultural thinking [9]. The cultivation of innovative talents is inseparable from the cultivation of speculative ability. Combining the instrumentality and humanity of College English curriculum, we have formulated a curriculum system that takes into account both general English and academic English. The cultivation of thinking ability in College English education should change the teaching philosophy of English teachers who play an important role in College English teaching. Teachers take various activities such as collective lesson preparation, mutual observation and observation, and teaching seminars to form a dynamic and open atmosphere of teaching seminars. The teaching content of school-based courses has the characteristics of being extensive and non-disciplinary. The content of school-based courses needs to add subject knowledge, but it should not be only one-sided. It is necessary to promote the intersection and integration of disciplines, and to engage in interdisciplinary and interdisciplinary [10]. Based on this realistic requirement, the setting of outward bound courses should not only be scientific and systematic, but also be practical and interesting. Teachers should try to create a good oral communication environment and atmosphere for students, and strengthen students' communication and communication in English. All in all, students should be guided to attach great importance to the study of English knowledge from the perspective of linguistics.

#### 4. Conclusion

Many science and engineering students are interested in learning English. They enrich their English knowledge by participating in various English competitions. Due to the limited class hours of College English courses in science and engineering schools and fewer types of English related elective courses, students rely more on extracurricular time to self-study English cultural knowledge. Strengthening the concept of "teaching and educating people" in college English courses can allow pure knowledge and skill development to develop into a comprehensive education. Design teaching activities rationally, and use the platform of college English classroom teaching to improve students' cognitive level, thinking ability, communication ability, cooperation ability, innovative spirit and other comprehensive qualities, truly achieve the goal of "educational teaching", and help them in the future. Use English effectively in study, life, work and social interaction. For the cultivation of innovative talents in college English, it is required that in the primary stage of English learning, students should focus on the cultivation of basic knowledge and skills of college English, and seek innovation on the basis of accepting learning. Combining the improvement of language ability with educating people, teachers inspire and lead students, promote students to think deeply, and improve their humanistic quality, critical thinking ability and language ability. Integrating the concept of innovative education into College English teaching can improve students' innovative and entrepreneurial ability, adaptability and market competitiveness. Combined with the characteristics and professional needs of science and technology colleges and universities, increase English for special purposes courses, especially academic English courses, strengthen the instrumental function of college English, and better serve the learning needs of science and engineering students; further enrich cultural courses and cultivate their humanities. Feelings and self-cultivation, expand their international vision and improve their ability to participate in international exchanges.

#### References

- [1] Shen Jia-yi, Yang Haiying. Research on Ideological and Political Teaching of College English, which integrates language and education [J]. Journal of Hubei Open Vocational College, 2022, 35(1):3.

- [2] Zhou Ruizhi, Li Yanxia, Wang Weiwei, et al. Exploration of College English Teaching Practice of the Integration of Language Teaching and Education [J]. Journal of Liaoning Economic Vocational and Technical College. Liaoning Economic Management Cadre College, 2021(2):3.
- [3] Liu Jinghui. Research on Innovation and Entrepreneurship Teaching Mode of College English in Science and Engineering Colleges [J]. Heilongjiang Science, 2018, 9(17):2.
- [4] Xiao Zhiyan, Xie Ruiling. Practical research on innovative talents training system of college English in engineering colleges [J]. Academy, 2018(32):2.
- [5] Cui Yan. Research on School-based Reform Curriculum of College English in Science and Engineering Universities [J]. journal of hubei correspondence university, 2020, 033(001):178-180.
- [6] Zhang Junqiang, Liu Qingguo. Research on the Introduction of Chinese Culture in College English Teaching in Science and Engineering Colleges [J]. 2021(2014-8):138-139.
- [7] Cui Yan. Research on School-based Reform Curriculum of College English in Science and Engineering Universities [J]. Journal of Hubei Open Vocational College, 2020(1):3.
- [8] Xie Weijue. Research on College English Teaching Reform under the Background of New Engineering Construction [J]. Education and Teaching Forum, 2019, 415(21):125-127.
- [9] Zhou Shuang. Research on the follow-up curriculum system of college English in local engineering colleges [J]. Intelligence, 2017(1):1.
- [10] Gong Huiwen. Research on the cultivation of college English autonomous learning ability in local engineering colleges under the new engineering background [J]. Campus English, 2020(5):2.