



Computer Aided English Curriculum Design in Higher Vocational Colleges

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Abstract. The research on computer-aided English curriculum design in higher vocational colleges is a research on the current situation and future trend of computer-aided language learning in higher vocational colleges. The research on computer-aided English curriculum design in higher vocational colleges is a research on the current situation, problems and needs of students' English learning. The study was carried out by two researchers from the University of Dhaka with the help of ten teachers from different colleges and universities. The purpose of this study is to provide information about the status of call research in India for those who are interested in call, especially teachers and managers. The main findings are that no important research work has been carried out on call at present; However, some progress has been made in developing a national framework for call for development.

Keywords: Vocational English · computer-aided · curriculum design

1 Introduction

In the era of increasingly frequent international exchanges, it is required to improve students' linguistic ability, especially their listening and speaking ability. However, there are many problems in senior high school English Teaching in China, which need to be solved urgently. With the development of computer technology and artificial intelligence, computer-assisted English teaching is both a normal and a trend. Computer assisted language teaching is changing the concepts of teaching and learning and their respective roles of teachers and students. Computer assisted language teaching can closely integrate teachers' teaching process and students' learning process through the overall coherent teaching process and interactive and personalized training methods, promote teachers' teaching innovation, fundamentally change this English teaching process, promote students to change the traditional passive learning method, and form a new combination of teachers, students, textbooks and teaching methods [1]. Computer assisted language teaching should not only assist "teaching", but also, more importantly, assist "learning". It is changing teachers' teaching concepts and their respective roles.

Deepening the reform of education evaluation, realizing the deep integration and effective linkage between teaching evaluation and subject education, and constructing

a teaching evaluation index system that promotes the physical and mental health and comprehensive development of students are increasingly highly favored by scholars and front-line teachers in China. In 2014, the Opinions of the Ministry of Education on Comprehensively Deepening Curriculum Reform and Implementing the Fundamental Task of Building Morality and Cultivating People pointed out that “research and develop the core literacy system and academic quality standards for student development”, and “improve the educational function of discipline teaching.” In 2016, the framework of the “Core Literacy for the Development of Chinese Students” with comprehensive development as the core was released, and cultivating the necessary qualities and key abilities required by students for lifelong learning has become the main content of China’s teaching evaluation. In 2020, the “Overall Plan for Deepening the Reform of Educational Evaluation in the New Era.” It is pointed out that deepening curriculum reform, implementing the fundamental task of cultivating morality and cultivating people, and cultivating students’ core literacy are placed in the prominent position of educational evaluation reform. The 2020 General English Curriculum Standard (2017 Edition and 2020 Revision) proposes to highlight the dominant position of students, highlight the dominant position of core literacy in teaching evaluation, and focus on evaluating the development and growth of students. However, high-quality teaching evaluation cannot be separated from the construction of a scientific and effective teaching evaluation index system. The construction of an English teaching evaluation index system that targets the cultivation of core literacy not only refers to promoting teaching evaluation reform. The demand for improving the effectiveness of discipline education is also the essential requirement for implementing the fundamental task of establishing morality and cultivating people in the new era.

Computer assisted language teaching has its unique advantages. English teachers began to use the Internet as a resource platform to choose teaching resources, which enriched the teaching content and forms. The Internet can provide e-mail delivery, browse and search information, read and participate in newsgroup thematic discussions, subscribe to the discussion content of various forums, and talk with peers. All these provide conditions for improving teachers’ English language level and teaching theory level. The Internet provides a real English language environment. With the popularization of online teaching, students can feel vivid and lifelike communication situations when sitting in front of computers. The rich resources on the Internet also facilitate students to solve difficult problems in learning. In this context, the research on computer-assisted English curriculum and teaching is meaningful [2]. The introduction of this study mainly expounds the proposal, purpose, significance, innovation, research design and related concepts of the research problem.

2 Related Work

2.1 Computer Assisted Language Learning Theory

People generally believe that computer is a powerful media tool. Storing large language databases in computers provides students with a more comprehensive and effective way to access and use these databases, which makes computer have incomparable advantages over any other media. For students, computer is not only a partner who can accompany them in educational games, but also an efficient reference book. It has good privacy, so

that students will not feel the pain of ridicule caused by mistakes in class; It enables students to use their own time to think independently at a suitable speed; It will tirelessly explain the same difficult point for students again and again until students learn it [3].

Most of the early computer-aided language learning applications are too simple and mechanical, lacking activities and personalized teaching links, so the effectiveness of call applications is often questioned. Goodflow has put forward some design schemes for call applications, two of which deserve attention, namely, the clear design of listening content in call applications, and the design should be based on learning theory, especially listening learning theory. Computer assisted language learning is also a good way to encourage students to study independently. For students, it is crucial to slowly master the ability of learning, especially the ability of independent learning. At present, computer-assisted language learning, especially listening learning, appears in front of everyone as a friendly and easy-to-learn interface [4]. This interface not only conforms to the theory of language learning, but also takes into account the user experience of learners. It has become an indispensable auxiliary tool in language teaching, as shown in Fig. 1.

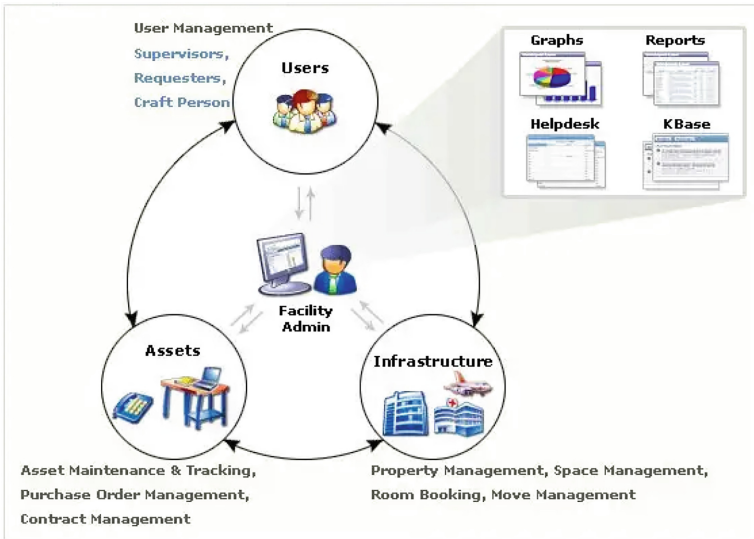


Fig. 1. Computer assisted English teaching mode

In this study, the theory of computer-assisted language learning is mainly to provide the feasibility of computer-assisted function for this study. According to the relevant research of this theory, computer-assisted language learning has certain advantages. It can not only meet the needs of students' Independent English learning, but also solve some problems in listening teaching, and can achieve the effect that conventional English teaching cannot achieve. Especially in the function setting of CAI system, this study draws on the relevant theoretical achievements to carry out the computer-aided English curriculum design [5].

Modern school multimedia teaching facilities are readily available. Students can use multimedia CDs, or read foreign language materials online. They can also communicate with teachers, classmates or native speakers by sending and receiving emails. All these provide opportunities and conditions for computer-assisted English learning. The opportunity of the development of the times has brought us unprecedented and amazing high-speed development. The development of computer-assisted language teaching is also attributed to the innovation of science and technology and the development of educational theory. Compared with other research fields, computer-assisted language teaching has experienced a short but brilliant development history of more than 40 years, and witnessed the emergence and development of a new subject [6]. According to Warschauer and Kern (2000), in the past 40 years, computer-assisted language teaching has experienced three methods: (1) the structural method stage of computer-assisted language teaching; (2) Cognitive approach stage of computer-assisted language teaching; (3) Computer assisted language learning social cognitive approach stage. Computer assisted language teaching is developing in parallel with the transformation of language teaching concepts and methods and scientific and technological innovation.

With the passage of time, the use of computers has shifted from the unit classroom to the computer classroom, and the research interest in this area is gradually fading. This just proves the rationality of the existence of computers [7]. The continued existence of computers in teaching further proves the effective role of computers in language teaching. Therefore, research interest has shifted to the purpose of using computers and how to use computers. However, the challenge faced by many computer-assisted language teaching research is the lack of empirical research. So someone proposed behavior research to meet this need.

2.2 Exploration of Online and Offline Hybrid Mode

Through systematic teaching design, the Foreign Language Department of Beijing United University has explored and constructed a hybrid online and offline college English teaching model of “effective input, human-computer interaction, flipped classroom, and process assessment”, relying mainly on self-built online resources, listening and speaking teaching materials supporting resources, supplemented by online English learning resources, and relying on technical platforms such as ICclass Moke platform, iSmart platform, and U-campus.

From the perspective of language acquisition, “effective input” is the primary condition for language acquisition. From the perspective of computer-assisted instruction, “human-computer interaction” is to give full play to the role of computer-assisted instruction under the conditions of the Internet, such as students learning foreign languages “anytime, anywhere.” “Flipped classroom” focuses on learners, realizing the role transformation between teachers and students, and students’ active learning. Teachers’ teaching philosophy tends to be social constructivism, emphasizing the examination of the learning process. At the same time, students can choose their own learning content, methods, and progress based on their own interests and needs, so as to achieve the most appropriate and full freedom of development. “Human computer interaction” gives full play to the role of computer-assisted instruction, and “management” runs through the entire learning process and every link. Process evaluation and summative evaluation are

combined to achieve comprehensive and scientific evaluation. The design of the English course system is shown in Fig. 2 below.

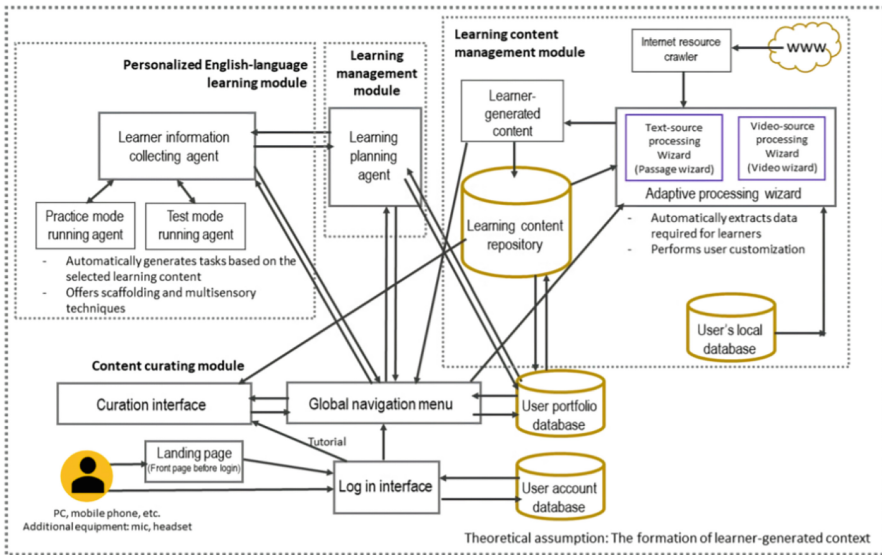


Fig. 2. English course system design

“Online and offline” first refers to resource construction, that is, curriculum resource construction, which is also referred to as “effective input” in linguistics; The second is “human-computer interaction”, that is, to give full play to the role of computer-assisted instruction, which means that the traditional teacher role is jointly completed by teachers and computer-assisted instruction; The third is flipped classroom, which is referred to as language “output” in linguistics. Of course, in the process of flipping a classroom, students can be both the output of language and the recipient of language input, both of which are closely related; Finally, there is process management, which involves the process management of teaching and learning with the joint participation of teachers, students, and human machines. In the “online and offline” mixed mode, these four links are closely related, mutually reinforcing, and inseparable, which together constitute a complete online and offline mixed teaching mode.

2.3 Analysis of English Course Index Content

Who and how should English majors cultivate? As a language course in higher vocational education, English curriculum should adhere to the value orientation of curriculum education, and be oriented towards cultivating students’ core literacy. It is not only necessary to cultivate students’ language learning ability, but also to shape students’ humanistic feelings. Therefore, English teaching has the characteristics of integrating instrumental and humanistic qualities [8]. Therefore, the main role of evaluation lies in serving teaching, feedback teaching, and promoting teaching. This study adopts the Delphi method to

comprehensively consider the requirements for the development of students' core literacy in English and the practice of vocational English teaching. Relying on the curriculum standards of ordinary vocational English, under the guidance of relevant teaching and evaluation theories, and based on the basis and principles of indicator system construction, it constructs a framework of vocational English teaching evaluation index system that focuses on cultivating core literacy. The content of the framework mainly includes the following aspects. The framework of English reading ability is shown in Fig. 3 below.

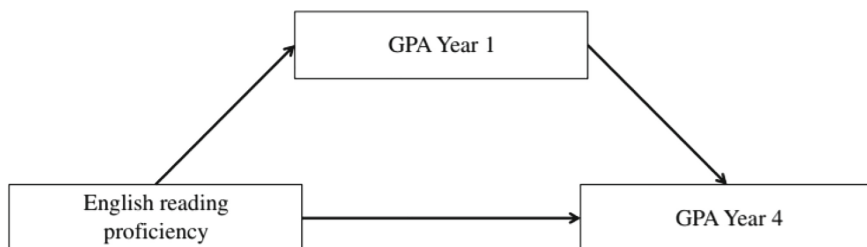


Fig. 3. Framework for English Reading Ability

Teaching Objectives

The goal of English teaching in higher vocational colleges is the centralized embodiment of the people-oriented education concept in the English language discipline, aiming to promote students' comprehensive language application ability, learn autonomous learning, and cultivate a positive emotional attitude by cultivating students' language ability, cultural awareness, thinking quality, and learning ability, thereby making teaching oriented towards core literacy, and shifting the focus from focusing on language teaching to emphasizing the cultivation of people, thereby improving the educational value of vocational English teaching [9].

(1) Language ability

Language ability is a fundamental element of the core literacy of English in higher vocational colleges. It is not only a carrier of cultural heritage, but also a tool for thinking expression and presentation [10]. The indicators of language proficiency mainly include three elements: language perception, language understanding, and language application ability. Language perception puts forward certain requirements for learners' language awareness and English language sense; Language comprehension is a process of language internalization, which requires learners to possess certain oral comprehension skills and the ability to analyze, judge, and understand the implicit meaning of written texts; Language application ability is a process of language output that requires learners to have the ability to communicate and express in both spoken and written languages.

(2) Cultural awareness

Cultural awareness is the value orientation of the core literacy of English in higher vocational colleges. The cultivation of cultural awareness not only embodies students' sense

of national identity and feelings, but also serves as an important guarantee for strengthening national cultural self-confidence and cultivating students to have cross-cultural awareness, international civilization literacy, and a high sense of social responsibility. Cultural awareness indicators cover three aspects: cultural understanding, cultural identity, and cross-cultural awareness [11]. Cultural understanding is the prerequisite for students to develop correct cultural attitudes and establish correct cultural values through the learning of Chinese and foreign cultural knowledge; Cultural identity is an important way for students to establish a sense of a community with a shared future for humanity. Through understanding the spiritual demands of culture, they learn to identify different cultures and make value judgments, consciously identify with excellent cultures, and strengthen cultural self-confidence; Cross cultural awareness refers to students' understanding of cultural phenomena and connotations both at home and abroad, experiencing the diversity and richness of culture, and possessing certain excellent cultural communication abilities.

(3) Thinking quality

Thinking quality is the mental characteristic of the core literacy of English in higher vocational education, which generally refers to the logical, critical, and innovative nature of thinking. The thinking quality in the indicator system of this study includes three aspects: critical questioning, diligent reflection, and courage to explore. Critical questioning requires students to have the courage to question, to break the limits of thinking, to be adept at distinguishing the logical relationships between language and culture, and not to passively accept the views or perspectives of others; Diligent reflection refers to the ability of students to perceive from multiple perspectives, be good at thinking, draw inferences from one example, bring forth new ideas, and have the innovative ability of multicultural thinking during the learning process [12]; The courage to explore requires that students have a certain degree of practical exploration ability, dare to put their ideas into action, and verify them.

(4) Learning ability

Learning ability is the development condition of the core literacy of English subject in higher vocational education, and is the key to students' autonomous and efficient learning, as well as to cultivate the awareness of active learning and lifelong learning. Learning ability includes initiative and initiative, monitoring and control, selection and acquisition, as well as cooperation and exploration [13]. Positive learning attitudes and learning to choose appropriate learning strategies and methods are important ways to improve English learning ability.

3 Characteristics of Computer-Assisted English Teaching

The application of computer network technology in English teaching is an innovation and challenge to the traditional language teaching. This new teaching mode has caused major changes in teaching ideas, teaching contents, teaching modes, teaching methods and teaching processes, making the whole teaching activity a diversified, interactive and autonomous process. Compared with the traditional English teaching mode, computer-assisted English teaching has its own remarkable characteristics.

(1) Interactive teaching process

The computer-aided English teaching program has the characteristics of convenient human-computer interaction, which can provide correct feedback in time and accurately in the teaching process, and can adjust the teaching progress according to the actual situation. Teachers can fully understand students' learning, test in time, and give targeted guidance to different students according to the test results. The man-machine interactive teaching method and friendly interactive interface can fully mobilize students' learning interest and focus on learning, which is conducive to the learning and mastery of language knowledge, as well as the cultivation and progress of language skills [14]. In addition, good teaching software can greatly promote the process of teaching reform and promote the innovation of teaching methods.

(2) Individualization of teaching process

Call teaching program integrates different versions of teaching materials with teachers' teaching experience and students' learning experience. According to human thinking characteristics, it provides teachers and students with various efficient teaching modes and dynamic learning paths in hypertext and nonlinear ways. This advanced information management technology makes up for the shortcomings of traditional foreign language teaching that is too synchronous and average. Excellent students and underachievers can get what they need. Students at different learning levels can arrange plans, choose learning contents, and adjust learning progress, difficulty and number of exercises according to their different needs. So that every student can actively study independently, and truly realize the student-centered teaching activities [15].

(3) Efficient teaching process

Through human-computer interaction, students can complete the planned teaching content and get timely information feedback, such as mastery degree, wrong question analysis, etc. Computer aided language teaching software gives immediate feedback on students' answers, which is unmatched by traditional teaching. Teachers can also make full use of the storage and coordination functions of the computer to show students their own voice, pictures or image information, so that the teaching explanation is more intuitive and clear, which makes students learn easier and more impressive, and is more conducive to the review, consolidation and mastery of knowledge. Under the guidance of teachers, students can also use the Internet to learn about relevant scientific knowledge or cultural background, which is conducive to students' enrichment of extracurricular knowledge, understanding of cutting-edge knowledge, and broadening students' horizons [16]. It can also be the concretization of abstract content, which can greatly increase the classroom capacity and significantly improve the teaching efficiency.

4 Higher Vocational English Curriculum Design Based on Computer Assistance

4.1 Design of Computer-Aided English Course Objectives

The 2017 edition of the curriculum standard for ordinary high schools proposes that the specific goal of the English curriculum for ordinary high schools is to cultivate and develop students' language ability, cultural awareness, thinking quality, learning ability and other core disciplines after receiving high school English education, among which improving students' learning ability is required. Learning and application ability generally refers to listening, speaking and application ability [17]. The 2003 version of English curriculum standard mentioned that the overall goal of English curriculum is to clarify the purpose of high school English learning, develop the ability of autonomous learning and cooperative learning, form effective learning strategies, and cultivate comprehensive language application ability based on the integrated development of language skills, language knowledge, emotional attitude, learning strategies and cultural awareness. Based on the elaboration of English curriculum objectives in the two English curriculum standards, it can be seen that the improvement of students' English listening and speaking ability is very important in the teaching of high school English. In addition, under the guidance of the curriculum objectives, the direction of the curriculum objectives can be clarified [18]. However, in the real English learning of students, due to the higher demand of personalized learning of high school students and the different learning levels of students, the students' needs for listening learning are inconsistent, which requires that the setting of curriculum objectives should also meet the personality characteristics of different students. The analysis and reading test are shown in Fig. 4 below.

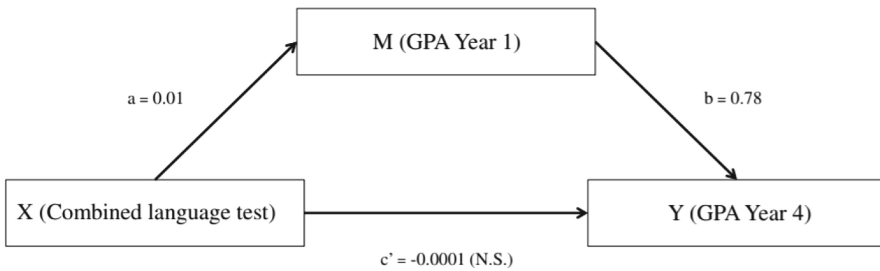


Fig. 4. Analysis combined with reading tests

4.2 Content Selection and Organization of Computer-Assisted English Courses

The selection of listening course content is mainly based on the input hypothesis theory in second language acquisition theory. The core of input hypothesis theory is comprehensible input, especially the input of language materials is comprehensible. The course organization is based on the way of theme selection.

Course content is one of the important parts of the course. The choice of course content is the primary factor that directly affects the smooth implementation of the course. Therefore, the choice of course content is the key link of course design. Compared with national courses and local courses, this course is offered in the form of school-based courses, so the choice of course content is relatively free [19]. However, within a certain limit, we should also abide by the second language acquisition theory, especially the inputable hypothesis in the second language acquisition theory. Specific to the content of this course, i.e. the selection of English listening materials, we should meet the three criteria of relevance, authenticity and difficulty.

Relevance refers to that audio-visual materials (including topics, languages, listening tasks, etc.) are “related to learners’ goals and interests”, and learners can “choose materials and evaluate themselves”. Cognitive research has found that people only pay attention to their own information in the process of cognition. Therefore, in language learning, only language input materials related to learners can activate their mechanisms of perception, acceptance and understanding, so as to promote the acquisition of the language.

Authenticity refers to that audio-visual materials should be real and natural language used in real life, which is reflected in three aspects, namely, the reality of the scene, the purity of language and the diversity of themes. The details are as follows: try to be “true to the user”. First, it should meet the current needs of learners; Secondly, we should reflect the real use of language in the “real world” [20]; Finally, try to be “pure”, that is, have the natural characteristics of language use, including speaking speed, rhythm, intonation, pause, meaning density, etc.; It covers various genres and discourse types that learners may encounter in contact with the target language.

5 Conclusion

A significant element of computer-assisted listening teaching is the assistance of technology. Teachers’ knowledge and understanding of technology directly determines teachers’ understanding of the course, and it is also an important factor for teachers to think whether they are willing to teach from the bottom of their hearts. Course content is the foundation of teachers’ teaching, and the auxiliary function of computer is based on the value of course content itself to provide teachers with teaching convenience. Therefore, the design of computer-aided system is very important. Whether it is convenient for teachers to use, but also conducive to students’ learning, this problem is the key point of computer-aided English teaching. Whether the effect of computer-assisted listening teaching is significant is the ultimate concern of teachers, and this factor directly determines teachers’ attitude and values towards computer-assisted teaching, and the teaching effect can usually be reflected in whether students’ academic performance has improved, whether students are interested, and so on.

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