Basic Characteristics and Construction Content of Stereoscopic Teaching Materials for College English in the Era of Wisdom Education

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Abstract: *This article conducts research based on the development concept of smart education to address the issues of insufficient emphasis, vague concepts, fragmented tendencies, systematic deficiencies, and poor sharing in the construction of three-dimensional English textbooks in domestic universities. This article is based on literature analysis to summarize the current research status of three-dimensional college English textbooks in the era of smart education in China, with a focus on the basic characteristics and construction content of three-dimensional college English textbooks in the era of smart education. Among them, the basic characteristics are carried out from the aspects of ideological and political education, targeting, timeliness, interactivity, connectivity, and rich media; The construction content includes paper textbooks, electronic textbooks, teaching resource libraries, micro videos, and online question banks. In the actual construction process, it is necessary to fully leverage the advantages of information technology and combine it with the actual needs of college English teaching to truly develop three-dimensional college English textbooks suitable for the needs of the era of smart education.*

Keywords: *Wisdom Education; College English; Stereoscopic Teaching Materials; Basic Characteristics; Construction Content*

1. Introduction

Textbooks are the main carrier of education, the fundamental support for enhancing the core competitiveness of education, and the key to ensuring teaching effectiveness and learning quality. With the development of new media technology, the hybrid teaching mode combining online and offline will become mainstream. The problems of slow knowledge updating and inconvenient use of traditional textbooks are becoming increasingly prominent. The trend of paper-based textbooks transitioning to electronic textbooks and then to three-dimensional textbooks is becoming more and more obvious. Stereoscopic teaching materials refer to a collection of structured and supporting teaching publications that rely on modern educational technology, with the goal of cultivating abilities, and content consisting of multimedia, multi form, multi-purpose, and multi-level teaching resources and various teaching services. Stereoscopic textbooks emphasize the integration of teaching, learning, practice, and examination based on traditional paper-based printed textbooks, combined with digital technology. It is a new type of teaching plan that gathers abundant teaching resources and is more in line with the educational needs of the new era. The interactivity and multimodality of three-dimensional textbooks have natural advantages for language acquisition.

Smart education utilizes new generation information technologies such as 5G, cloud computing, and artificial intelligence to create a new type of educational environment that is intelligent, perceptual, ubiquitous, and connected to things. It utilizes human-machine collaborative educational intelligence to form a new form and model of education. College English is an English course designed for non-English major students at the undergraduate level. It is generally offered for two years, that is, English learning during the first and second year of college. Although different universities offer different course names, they usually focus on comprehensive English, with a focus on cultivating students' application abilities in five aspects: listening, speaking, reading, writing, and translation. In response to the problems of insufficient emphasis, vague concepts, fragmented tendencies, systematic deficiencies, and poor sharing in the construction of three-dimensional English textbooks for domestic universities, based on the development concept of smart education, adhering to a normal curriculum

and textbook view, a plan for the construction of three-dimensional English textbooks for universities in the era of smart education is proposed. Digitization and new technologies are used to empower the high-quality development of university English textbooks and help cultivate high-quality talents in the new era.

2. Domestic Research Status

The focus of research on the construction of three-dimensional teaching materials in China is on the aspect of "three-dimensional", with different titles such as "integrated teaching materials" and "diversified teaching materials". However, the design purpose is to showcase multiple teaching materials and meet the needs of teachers and students to the greatest extent possible. The "Three dimensional Construction Plan of Teaching Resources" by Higher Education Press has had a profound impact on the construction of three-dimensional teaching materials in China. The plan includes the construction of three-dimensional teaching packages, the construction of key course teaching resource libraries, and the construction of subject websites. The construction of three-dimensional teaching package is to form three-dimensional high-quality courses that meet the teaching needs of colleges and universities through the organic support of excellent paper textbooks, audio-visual products, electronic publications and online courses, combined with the Internet, and provide teachers and students with various teaching services. The construction of a teaching resource library for key courses refers to the hierarchical construction of media materials, knowledge unit materials, and exemplary courses by renowned teachers to meet the requirements of different levels and applications. Subject websites provide services for teaching through the construction of teaching levels, disciplines, specialties, and fields, and provide communication platforms for editors, editors, experts, and readers. Qin Jun scholars have studied the construction of three-dimensional translation textbooks in the intelligent era. The developers and compilers of translation textbooks should break the cognitive barriers of traditional print textbooks, use the three-dimensional thinking and artificial intelligence technology of the Internet, integrate teaching resources, open the interactive mode, and build dynamic and new three-dimensional translation textbooks. Chen Zhenzhen, a scholar from the School of Humanities at Beijing University of Posts and Telecommunications, studied the construction of three-dimensional teaching materials for college English, analyzed the development process of three-dimensional teaching materials for college English, pointed out the problems of insufficient form innovation, lack of teaching and auxiliary resources, and weak after-sales support. He proposed improvement strategies for three-dimensional teaching materials for college English from the aspects of developing mobile platform content services, transforming and innovating teaching material content, establishing teaching and auxiliary resource libraries and sharing platforms, which has high reference value for this research topic.

3. Basic Characteristics of Three-Dimensional Teaching Materials for College English in the Era of Smart Education

The three-dimensional teaching materials have flexible content, diverse forms of expression, and focus on the development of students' personalities, which is a trend in the development and reform of teaching materials. It is a major breakthrough in the reform of traditional teaching materials in universities and presents new characteristics compared to traditional teaching materials. The specific content is shown in Fig. 1.

3.1 Ideology

Adhere to making moral education the central link, integrate ideological and political work throughout the entire process of education and teaching, achieve comprehensive and all-round education, and strive to create a new situation for the development of higher education[1]. The curriculum of ideological and political education relies on the curriculum as a carrier, and combines the principles, requirements, and content of ideological and political education with curriculum design, textbook development, teaching implementation, and teaching evaluation in an implicit way. Integrating excellent traditional Chinese culture into three-dimensional textbooks and promoting its integration into the teaching process is an important measure to deeply explore ideological and political education resources and practice the ideological and political concepts of the curriculum.

3.2 Pertinence

The main user of textbooks is students, and developing textbooks based on the characteristics and needs of student users is the key to ensuring the value of textbook use. The pertinence of three-dimensional college English textbooks refers to the intelligent design of textbooks based on the characteristics of student user groups, practicing the teaching philosophy of "student-centered", and emphasizing the subjective initiative of students in the learning process. In response to the current situation of college students adapting to digital media and preferring fingertip learning, it is necessary to develop corresponding apps or course bullet screens, and create visual and graphic elements for the supporting online English courses, so that students can develop a sense of familiarity with the textbooks.
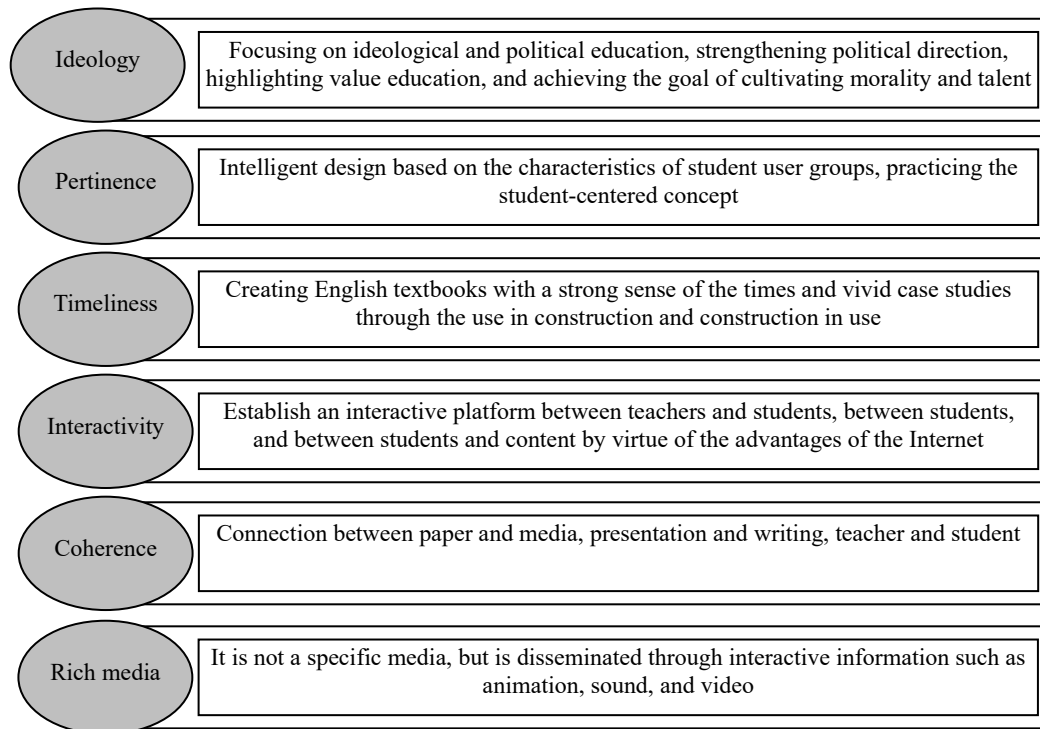
Ideology	Focusing on ideological and political education, strengthening political direction, highlighting value education, and achieving the goal of cultivating morality and talent
Pertinence	Intelligent design based on the characteristics of student user groups, practicing the student-centered concept
Timeliness	Creating English textbooks with a strong sense of the times and vivid case studies through the use in construction and construction in use
Interactivity	Establish an interactive platform between teachers and students, between students, and between students and content by virtue of the advantages of the Internet
Coherence	Connection between paper and media, presentation and writing, teacher and student
Rich media	It is not a specific media, but is disseminated through interactive information such as animation, sound, and video

Figure 1: Basic characteristics of stereoscopic teaching materials for college English in the era of wisdom education

3.3 Timeliness

In the era of rapid development of information technology, it is easy for textbooks to fall behind the pace of development and become disconnected from the times. Therefore, the replacement time of textbooks needs to be shortened. The situation of using a textbook for 20 years in the past is gone forever[2]. The maximum usage time of textbooks is about five years. Once it exceeds five years, many contents will become disconnected from the times, especially some chapters related to information technology. If they are not updated in a timely manner, it is easy for students to feel a sense of distance and disconnection. Therefore, the content of three-dimensional textbooks must keep up with the times and keep up with industry trends.

3.4 Interactivity

Interactivity is an important teaching philosophy. In interactive teaching, teachers and students can learn from each other and develop together, achieving efficient teaching through active interaction. Based on three-dimensional textbooks, English teachers construct efficient interactive teaching classrooms by creating interactive environments, guiding interactive thinking, and cultivating interactive understanding, achieving the formation of students' English interactive communication

habits and strengthening their abilities[3]. Teachers need to give full play to the advantages of the Internet and multimedia, combine the topics and content in the textbook, create students' interest, and explain to students through pictures or videos.

3.5 Coherence

Stereoscopic English textbooks systematically integrate static and dynamic teaching resources, forming a new form of teaching material that is interconnected, complementary, embedded, and interactive. The relevance and interactivity of textbooks depend on coherence [4]. First, paper teaching materials are connected with rich media resources, and Internet technology is used to promote the combination of traditional reading, print reading and online reading, so as to realize the integration and sharing of paper media resources and digital media resources. The second is to connect the textbook presentation end with the textbook writing end, and the three-dimensional textbooks rely on cloud storage network platforms to transmit teaching resources through different media, achieving personalized resource acquisition and dynamic updating of teaching resources. The third is to connect the teacher end with the student end, achieve effective interaction between teachers and students, and promote intelligent teaching by teachers and intelligent learning by students.

3.6 Rich Media

Breaking through the limitation of paper-based textbooks that only have text and images, and the proportion of text is much higher than that of images, a combination of text, images, sound, and video is adopted to convey information to students from visual, auditory, and tactile perspectives, either dynamically or statically[5]. Compared to textual descriptions, the presentation of images is more vivid, vivid, and easy to understand. It attracts students' attention from multiple perspectives and can better stimulate their thirst for knowledge and interest in learning. Novel reading methods are also conducive to developing students' imagination and innovative abilities.

4. Content of Three Dimensional Textbook Construction for College English in the Era of Smart Education

The construction of three-dimensional teaching materials for college English in the era of smart education includes audio and video teaching materials, electronic teaching materials, online teaching materials, test question databases, "airborne classrooms" or "virtual classrooms" based on the BB platform, "virtual training rooms" that can meet students' autonomous learning and training, "electronic homework platforms" that can use electronic databases for autonomous learning and training, as well as teaching and training software that are matched with "virtual training rooms", "virtual classrooms", and "electronic homework platforms". The three-dimensional teaching materials for college English in the era of smart education include all the above content, which can be integrated or diversified together with traditional paper-based teaching materials. Some content can also be independently formed into three-dimensional teaching materials according to teaching needs.

4.1 Paper Textbooks

Paper textbooks are an important component of three-dimensional teaching materials, integrating paper textbooks with digital resources, teaching resource libraries, and online courses to accurately serve education, teaching, and social training. In the information age, paper textbooks are still the foundation, with clearer text and images for easy annotation and note taking, as well as for reviewing and grasping the logic of the content. If classroom teaching is separated from paper textbooks, not only will many teachers be unable to accept it, but many students will also feel uncomfortable. Paper textbooks are the most effective, basic, and cost-effective tool to ensure educational quality and fairness, and cannot disappear with the development of the digital age. English teaching is a form of cultural education, and paper textbooks are more conducive to students carefully savoring and deeply understanding the cultural connotations, providing a more focused reading environment.

4.2 Electronic Textbooks

Electronic textbooks are special e-books that meet specific content standards and integrate various forms of information such as text, images, sound, and images. The use of electronic textbooks can be

adjusted and updated in a timely manner according to teaching needs, using technology such as online downloading, keeping pace with the times and technological development. Therefore, electronic textbooks have a strong human-computer interaction mechanism, using media such as images, text, sound, and images as media, and are a personalized teaching and learning resource[6]. Electronic textbooks are living materials that can be continuously improved, leaving enough space for individual development of students and better meeting the requirements of teaching reform. Electronic textbooks for college English cover a wide range and have a large audience. High quality electronic textbooks can further promote the reform and development of college English teaching and improve teaching quality.

4.3 Teaching Resource Library

The teaching resource library usually includes multimedia material library, lesson plan library, courseware library, test question library, and subject database, and provides functions such as full-text search, attribute search, resource addition and classification, compression, packaging, and downloading. College English teaching involves many aspects such as intensive reading, extensive reading, listening, speaking, writing, translation, etc. A large-scale and fine-grained digital resource library is conducive to enriching teaching content. Teachers and students can jointly use the courseware, videos, and files in the resource library. Teachers combine mobile learning with offline learning. Before class, they upload the materials used in class to the resource library, allowing students to better understand the content taught by the teacher through online learning. After class, they can also use the resource library to revisit the content taught by the teacher and consolidate their knowledge[7].

4.4 Micro Video

The world has quietly entered the "micro era", with platforms such as Weibo and WeChat bringing about the popularization of the concept of "micro". The concept of "micro" is also profoundly influencing the field of education, with new changes brought about by micro courses, micro courses, micro learning, and micro videos. Traditional classrooms present learning content through paper-based materials such as books and textbooks, which not only have a single form but also make learners prone to fatigue. The highlight of micro video teaching resources lies in the segmentation, concretization, simplification, and precision of knowledge content, which meets the high demand learning methods of modern learners in the online environment[8]. The presentation of English short film materials in micro video teaching resources is refined and processed, presenting the language parts that are closest to life in the English environment, supplemented by relevant European and American cultures, allowing students to not only increase their vocabulary ability and exercise their English listening and speaking abilities, but also enrich a lot of cultural knowledge while watching.

4.5 Online Question Bank

Examinations and tests are important means of testing teaching objectives. In the process of college English teaching, exams and tests are used to make scientific judgments on students' language proficiency, guide teachers to carry out targeted teaching, and help students understand themselves in order to learn more efficiently. The online question bank can generate standard test papers, freeing teachers from the heavy burden of question setting and grading, meeting the needs of various exams and tests, and improving the objectivity and impartiality of exams. The online test question bank is an important support for three-dimensional teaching materials. In response to the characteristics of large class hours, strong comprehensiveness, and wide coverage of college English[9], it needs to include multiple types of test questions, combining subjective and objective questions, unit test questions, and comprehensive test questions to meet the needs of manual and automatic test paper formation.

5. Conclusions

The construction of three-dimensional teaching materials is a complex systematic process, which requires comprehensive consideration of various factors. With the teaching content as the core, the essence of teaching materials should be presented to teachers and students in different ways from all angles. There is not only repetition, emphasis, but also complementation, expansion, and mutual cooperation, so as to form a three-dimensional overall teaching solution and effectively improve the efficiency and effect of teaching. Smart education promotes educational modernization through educational informatization, and changes traditional models with information technology. It requires

both the support of a smart learning environment and the guarantee of a smart learning model, as well as the implementation of smart learning assessments, in order to cultivate intelligent talents with innovative abilities and creative potential. The research results of this article point out the direction for the three-dimensional teaching materials of college English in the era of smart education. In the actual construction process, it is necessary to fully leverage the advantages of information technology and combine with the actual needs of college English teaching to truly develop three-dimensional teaching materials suitable for the needs of the era of smart education.

Acknowledgements

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