
The Application of Multimedia Technology in Business English Teaching in Higher Vocational Schools

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Abstract: This paper presents development the multimedia courseware suitable for the teaching of business English in higher vocational colleges. The multimedia courseware helps to enhance the combination of information technology, science, art, and modern methods in classroom teaching. The paper analyzes the design of multimedia technology to achieve interactive teaching based on the principles of multimedia courseware and teaching characteristics of business English. The whole design process of courseware is centered on how to make, organize and display the interface on the courseware. All teaching links need to be completed in each interface jump. The research results show the interactivity of multimedia courseware that can improve students' ability to improve self-study skills and interaction between the students and instructors. The research focuses on the overall structure, interactive design, and presentation mode of each part of the courseware in detail. Finally, the courseware is comprehensively evaluated by teaching applications and questionnaire surveys. As for the courseware itself, it mainly focuses on the basics of business English, with a few multimedia courses on visualization, listening, and training. Through the research on the use and effect of the multimedia courseware of business English in the classroom, the experimental data is obtained, and results are analyzed to test the effect of the multimedia courseware in the interactive teaching of business English in higher vocational colleges.

Keywords: Multimedia Technology, Business English, Interactive Teaching, Teaching Resources

1. Introduction

Although the English language is a compulsory course in higher vocational schools all over the world. There is a big gap between business English and basic English. Business English ought to be a course that comes post basic English in the curriculum of the concerned majors. This structure allows for the cultivation of advanced skilled talent in the front line with sectors like technology, production, management, and service. There is one reason for the lack of quality English teaching in higher vocational schools. The reason is that, although the English level of instructors is high, a material used in courses is mostly based on paper, and the leftover audio-visual materials are either divorced from reality or too old to be of any value to the course [1].

In China, the Ministry of Education puts forward a plan for strengthening the training of talents in Higher Vocational Education: "actively promote modern information technologies such as computer-aided teaching, multimedia teaching technology, and virtual technology, expand the amount of information in classroom teaching and improve classroom efficiency" [2]. Not only does this summarizes the current system, but the need for reform in this sector.

The application of multimedia technology is not only the main form of CAI (computer-aided instruction) but also a comprehensive and creative application of traditional teaching forms [3]. Meanwhile, multimedia courseware can help to enhance the combination of integrity, science, art, and technology in classroom teaching.

The research is focused on the solution using multimedia technology to design and make courseware with the

characteristics of business English based on practical knowledge, teaching objectives, and tasks of business. To achieve the effect of interactive teaching, a virtual business environment with sound, text, pictures, and images is created through various multimedia. In particular, the application of the research can give students a simulated virtual environment to realize the authenticity and practicability of business English to the greatest extent, to achieve the goal of "advanced skilled talents in the front line with technology, production, management and service" in Higher Vocational Education [4].

1.1. On Analysis of Multimedia Technology in Teaching

Multimedia is produced and matured with the continuous development of computer software and hardware technologies [5]. It refers to the synthesis of various information transmission forms such as graphic, audio-visual, and so on, which can be generally understood as the collection, processing, and reproduction of information carriers, including graphics, images, audio, video, and text, on the computer platform. Thus, the information expression is more comprehensive and expressive.

1.1.1. Features of Multimedia Technology in Teaching

It combines text, graphics, images, animation, sound, and other forms of data. They are combined and comprehensively processed and controlled by computers. They can support information technology to complete a series of interactive operations. It is the means used in the process of education and teaching activities. In the process of the development of modern education, multimedia technology is first introduced in projections, slides, recordings, videos, and other technologies, resulting in audio-visual education. Then, with the rapid development of computer communication technology in recent years, modern education also applies computers to computer-aided instruction, that is, CAI teaching [3, 6]. It can be said that modern education is a process of constantly applying modern scientific and technological achievements to educational practice. The advantage of audio-visual education lies in its audio-visual nature. The deficiency is the unidirectionality of information dissemination. On the contrary, CAI can transmit teaching information interactively, but the audio-visual teaching function is insufficient. Therefore, in the 1980s, the mode of combining CAI and VTR audition teaching appeared, that is, the prototype of interactive video teaching, which is the multimedia teaching mentioned in this paper [7].

1.1.2. Characteristics of Multimedia Technology in Teaching

Multimedia technology, through the diversification of words, text, voice, music, graphics, images, animation, and other media information, integrate them into a certain interactive interface, so that the computer can interactively display different media forms, and complete some teaching tasks that are difficult or impossible to achieve by traditional

teaching methods. Especially in image teaching and simulated display provides electronic teaching plans, image teaching, simulating interactive process, network multimedia teaching, and simulation process [8-10].

It integrates pictures and texts, sound and color, riches in teaching and music, and intuitive in content. It can not only integrate teaching, counseling, self-test, consolidation, review, and assessment but also plays a great role in cultivating students' self-study ability, mobilizing students' learning enthusiasm, improving the learning effect, and teaching students according to their aptitude. Multimedia technology-assisted instruction can let students see the interactive integrated information with pictures, texts, and audio-visual integration [11, 12]. They can not only read the teaching content in the multimedia courseware but also obtain the sound or video information associated with classroom teaching. This new form of obtaining information has greatly changed the boring and single teaching method under the traditional mode so that learners can obtain and understand information more intuitively and vividly, enjoy learning, obtain information actively and timely, stimulate the desire to express, and naturally form the interaction between teachers and students.

1.1.3. The Significance of Multimedia Technology in Interactive Teaching

In view of the development of multimedia technology, the characteristics of business English courses and the meaning of interactive teaching, it is imperative to apply multimedia technology to business English interactive teaching [13]. It can be summarized as follows:

First, students need to have the initiative to learn. The interactive teaching mode encourages students to participate. Students can actively find problems, ask questions, and even actively think of and find solutions to problems, which greatly stimulates students' enthusiasm for learning.

Second, students become real subjects. The interactivity of multimedia courseware and the interactive teaching mode adopts teaching means such as group speech, role play, and classroom discussion. This eliminated the absolute control of the classroom by teachers, which was a major disadvantage in the traditional teaching mode. This affords students the ability to choose activities, course topics, and freedom.

Third, it's convenient for multi-directional and timely communication. The application of multimedia technology in the interactive teaching of business English not only reflects the two-way interaction between teachers and students but also realizes human-computer interaction, which is more conducive to timely and accurate information feedback.

Fourth, it can realize the application of theory to practice. Under the traditional teaching method, teachers often give several specific examples to illustrate how to use the English language in various business activities. With the use of multimedia technology and interactive teaching, students can find the practicality of the course material through activities like role-playing, group discussions and etc.

1.2. Analysis of the Current Situation of Business English Teaching in Vocational Colleges

Business English is a functional variant of English, a kind of special usage. With the development of economic globalization and China's acceleration of internationalization, business English majors appear one after another in colleges and universities. As an independent major, including foreign trade and economic English, international business, financial English, marketing English, has been carefully divided and opened respectively, realizing the goal of teaching business knowledge in English.

The fundamental purpose of the course is to enable students to combine English language skills with business practice, and effectively combine their knowledge with their careers to meet the actual needs of different jobs in the future.

Presently, the traditional teaching method is mostly used in the teaching of business English in higher vocational schools in China, and the limitations of this teaching method are increasingly exposed. The lack of contextual factors, outdated teaching concepts and means, and students' low initiative are the biggest obstacles to business English learning [10]. The traditional teaching method of "textbook + blackboard + tape recorder" has caused students to rely too much on teachers. The negative subjective initiative of students and the lack of autonomy and consciousness in learning have a series of negative effects.

As mentioned above, at present, all higher vocational colleges attach great importance to the establishment of business English courses, but the course contents are uneven. Some colleges directly select undergraduate business English teaching materials and then select suitable contents to teach in higher vocational business English courses. Some colleges and universities choose from the few business English textbooks compiled for higher vocational colleges in the market. The bottleneck problem is inevitable, that the textbooks lag behind reality due to the rapid changes in the business environment and objective reasons. The teaching materials either do not have supporting courseware or CD-ROM, or they are just some simple text courseware. The classroom teaching application can only be used for reference and cannot be used directly.

2. Design of the Interactive Teaching

As a course integrating English knowledge and business activities, the teaching should not only cover basic knowledge such as vocabulary and sentence patterns but also enable students to understand the background of finance, economics, e-commerce, domestic and international trade, British and American culture and other disciplines.

2.1. Design of Interactive Teaching Model of Business English

The most important thing is to enable students to master professional terms and understand the overall situation and grasp the business activity process and pay attention to polite

language and etiquette language, so as to reflect the characteristics of the combination of professionalism and practicality, that is, to apply the learned knowledge to practice. This requires teachers to use multimedia technology to create a multimedia environment when teaching. Through various teaching interactions, students can acquire language knowledge, cultivate cooperative communication ability and positive emotional attitude, and lay a good foundation for them to become high-quality skilled talents with both professional skills and English language applicational ability.

Business English is mainly offered to sophomores in the economics and management department in our school. At the same time, it is also a public elective course for all students. As the main teaching object, sophomores in the economics and management department in our school have a relatively medium level of English foundation because, in the freshmen year of college, English focuses on grammar and the expansion of vocabulary. They do not focus on professional English [14-15]. Moreover, most higher vocational students' learning ability is not very strong. Their learning objectives are not clear enough, they lack motivation and interest in learning.

Although we fully realize that multimedia technology can assist business English teaching and achieve student interaction, the complete teaching resources are very limited. There are many versions of teaching materials, but the design is similar. The greater disadvantage is that the teaching resources supporting teaching materials can not keep up with the pace of development. It is basically the mode of textbook + CD. Teachers themselves need to collect teaching resources and make courseware to assist in teaching. However, due to the large number of textbook versions, teaching plans, and syllabuses in various colleges and universities, it is difficult to find similar courseware that can be exchanged and referred to on the Internet. Even if there are certain resources, they are all word documents or PPT courseware.

2.2. Multimedia Courseware Design of Theoretical Basis

Constructivist learning theory, founded and developed by Swiss scholar Piaget, is one of the most influential learning theories and a branch of cognitive learning theory. Constructivism, also translated as structuralism, is a branch of cognitive psychology. Its basic idea is that learning is a process in which learners actively construct an internal psychological structure. It includes not only structural knowledge but also a large number of non-structural experience backgrounds. It emphasizes the significance of students' active construction of knowledge in the learning process and tries to construct new knowledge based on personal original experience, psychological structure, and belief, to give new knowledge the meaning of personal understanding [16-17]. A theory generally provides a clear direction for teachers in classroom teaching design: first, we should stick to "student-centered". This is of great guiding significance for instructional design, because two completely different design results will be obtained from "student-

centered" or "teacher-centered". When learning a new knowledge unit, learners do not acquire knowledge through teaching, but through the individual's experience and interpretation of the knowledge unit, to turn the knowledge into their own internal expression.

3. On Courseware Development Process

Business English is a course that needs an interactive teaching model. According to the teaching requirements, in order to display the teaching content to learners in a multi-dimensional way through the screen, the development process with pedagogy and psychology in multimedia courseware is the core content.

3.1. On Principles of Pedagogy in Courseware Creation

Pedagogy stipulates that in the teaching process, teachers should prepare teaching plans and design classes according to the syllabus and teaching objectives. The creation of multimedia courseware should first follow this principle, which is to determine the content and form of courseware according to the syllabus to achieve the teaching goal.

The goal of the multimedia courseware of business English in higher vocational colleges is to fully consider the actual situation of English teaching in higher vocational colleges, focus on cultivating students' listening and speaking communicative ability, take cultivating English compound talents as the starting point, change the traditional and single teaching mode of focusing on listening to build a multi-dimensional interactive teaching mode combining audio and video.

3.1.1. On Principles of Psychology in Courseware Creation

According to the research of educational psychology, learners lack interest in too simple and mediocre content and are easily bored. For too complex things, it will also result in mental escape. The content that can stimulate learning interest and attract strong attention is the content that is slightly higher than learners' cognitive level and knowledge level [18]. Following this principle, when selecting the content of multimedia courseware, the key and difficult contents and supplemented a large number of topics and contents are summarized, so that the final courseware has strong pertinence, wide application range, and strong availability. According to the Audio-visual Theory and Schema Theory of Psychology [18], a large number of sounds, animations, videos, texts, graphics, images, buttons, and menus are used in the courseware to stimulate the information processing system with vision, touch, and hearing.

3.1.2. On Principles of Chromatics and Aesthetic in Courseware Creation

The theory of chromatics tells us that color not only produces visual feelings but also causes the negative psychological impact of fatigue [18]. Generally speaking, yellow-green, blue-green, and light cyan with green

components make people feel more comfortable, so the courseware selects blue as the background. Aesthetics believes that the display style should generally follow the principle of aesthetic coherence. Therefore, when designing the courseware, a consistent display style is adopted. After entering each subordinate interface from the main interface menu, the consistent display style reduces the trouble of searching, gives learners a stable visual feeling, and ensures learners concentrate on learning. In addition, in the selection of background music, pictures and text font colors are considered.

3.2. On Functional Design of Courseware

The main function of multimedia courseware is to provide teaching information. The design goal is to reflect the advanced educational theory and content and give full play to the function of computer-aided teaching. Because the courseware is designed to help and realize teaching, it is also a man-machine conversation system. The operation of the whole courseware will be jointly controlled by people and computers, so there are certain special requirements for the design of courseware.

3.2.1. Selection of Teaching Content

Based on the analysis of the teaching objectives mentioned above [19]. It can be summarized that business English must meet three basic requirements in the selection of teaching content:

The first is to be practical. When learning, learners will feel that what they have learned will be needed or likely to be used in employment.

Secondly, the difficulty of the content has to be moderate. Too difficult teaching content is hard for vocational college students with weak learning abilities. Even if they realize that the content they are learning now may be used, it's easier to find another way out if it is too difficult to learn by themselves.

Finally, motivation is the biggest problem in the current and proposed teaching methods. The students who lack motivation and self-control often find it difficult to listen carefully for 90 minutes to boring and huge content that needs to be remembered and understood. The figure 1 presents main structure of the courseware contents.

Therefore, when making this courseware, the selection of teaching content and the writing of the script can be described as painstaking. Our work refers to the authoritative business English teaching materials available in the market and used by colleges and universities.

The content belongs to the introduction of practical communicative English in the workplace. For higher vocational graduates of university, especially students majoring in the economics and management departments, most of the graduates mainly flow to the administrative, secretarial, marketing, human resources, or assistant positions at all levels of enterprises and institutions when they are employed. The content series helps in the work process from shallow to deep, so it is very practical and

systematic for students.

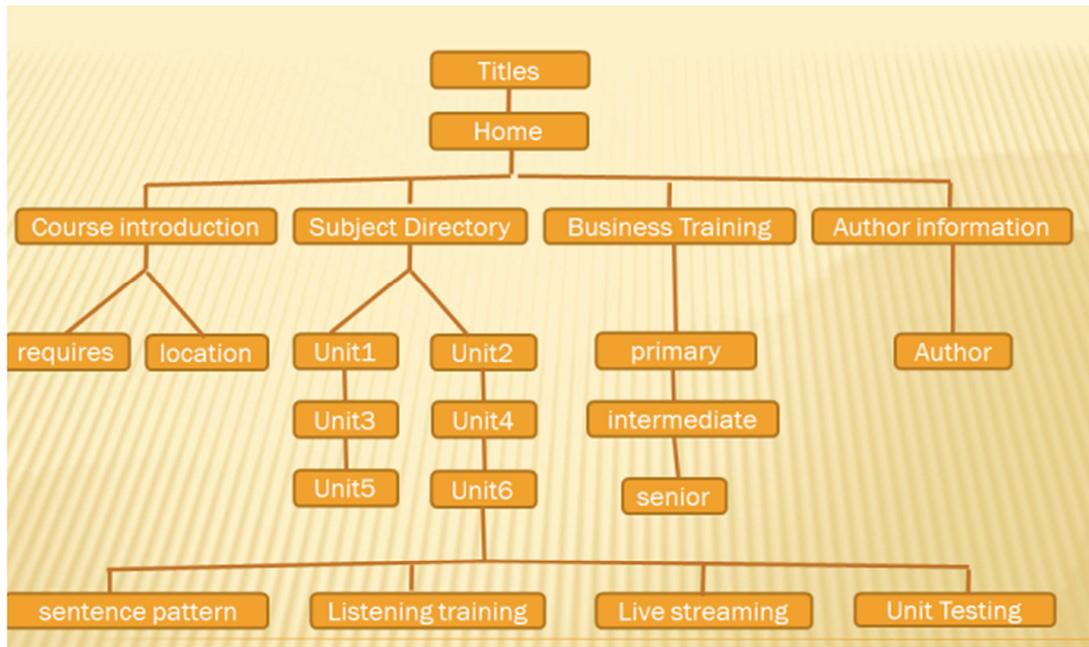


Figure 1. Main framework.

3.2.2. Teaching Script Design

Just like the traditional blackboard writing teaching mode, before class, teachers must write a complete and detailed teaching plan when preparing lessons. For teaching courseware, the primary task before making must be to write the script of the courseware link. The script is the core content and main basis of courseware-making. Its quality directly affects the making quality and use of courseware in the following manners.

First, from the perspective of integrity, the courseware is set up with four modules: "course introduction - unit catalog - business training - author information", of which the "unit directory" and "business training" modules are the key parts of the courseware.

Second, in order to reflect the principle of highlighting key points, simple and clear text materials are simply designed in the "course introduction" and "author information" to make a brief and clear statement. The "course introduction" part enables students to understand the relevant information of the course before class, including the purpose and position of the course and the relevant requirements of the course. Students can learn with clear objectives. After class, they can learn the relevant information of the teacher on the "author information" page to communicate with teachers. The "unit catalog" covers the contents of the six units contained in the first volume of business English.

Third, following the principle of applying theory to practice, "business training" is also the key part of this courseware design. The training part is divided into three levels: junior, middle and senior, which is convenient for students at different levels to practice. The three levels are listening and speaking exercises of basic vocabulary

sentences at the primary level, situational dialogue imitation at the intermediate level, and situational performance creation at the advanced level. The business training links of the three levels go from simple to deep and step by step. In the performance evaluation, different scores can be given according to the training level selected by students, to stimulate students' interest in learning and increase the motivation to study hard.

3.2.3. Courseware Framework and Function Module Design

After selecting the teaching content and arranging the teaching link design, the courseware framework, and functional module division should also be completed. In the design of this teaching courseware, each module is independent of the other. The functions of each module and the jumps between each module are realized through the menu, button, and hot zone. As a framework of creation design, a large number of videos, audio, pictures, and text materials are used to show students the relevant knowledge of the corresponding topics. Each unit is divided into a topic guess, background information, vocabulary & sentence structure, listening practice, and video practice. The six aspects include both brainstorming and vocabulary and sentences that need to be memorized. The most important thing is to achieve an immersive feeling through listening and video, which is convenient for the scene creation of practical training.

3.2.4. Selection of Courseware-Making Tools

Among the existing multimedia courseware development methods and tools, the first type adopts high-level programming language for programming, such as C++, java

+, etc. These kinds of tools are suitable for professionals to design and develop high-level courseware, which is extremely rare for non-computer professional teachers in colleges and universities.

The second is to use special multimedia production tools, such as PowerPoint, Authorware Flash, Director, and 3DMAX, which have their own characteristics.

When choosing the production tools for making the multimedia courseware of business English, our application uses all possible functions of the selected tools and skills to create high-quality courseware as needed. Through the above analysis and comparison among tools selection, the most important thing is that this software is easy to understand, so we used Macromedia Director MX2004 as the main courseware making tool.

3.3. On Making and Realization of Courseware

According to the design of courseware content and module (Figure 2), the courseware needs five kinds of materials: picture, text, audio, video, and flash animation.

3.3.1. Material Sorting and Processing

The sorting and processing of various elements are as follows: Picture part: the pictures in this courseware are mainly used as the background and are concise and generous.

The graphics and images are mainly taken by digital camera and drawn by Adobe Illustrator. In order to get the ideal effect, Photoshop is used to cut and splice the input images. Finally, pictures in * AI and * PSD format are processed as the background picture of each interface.

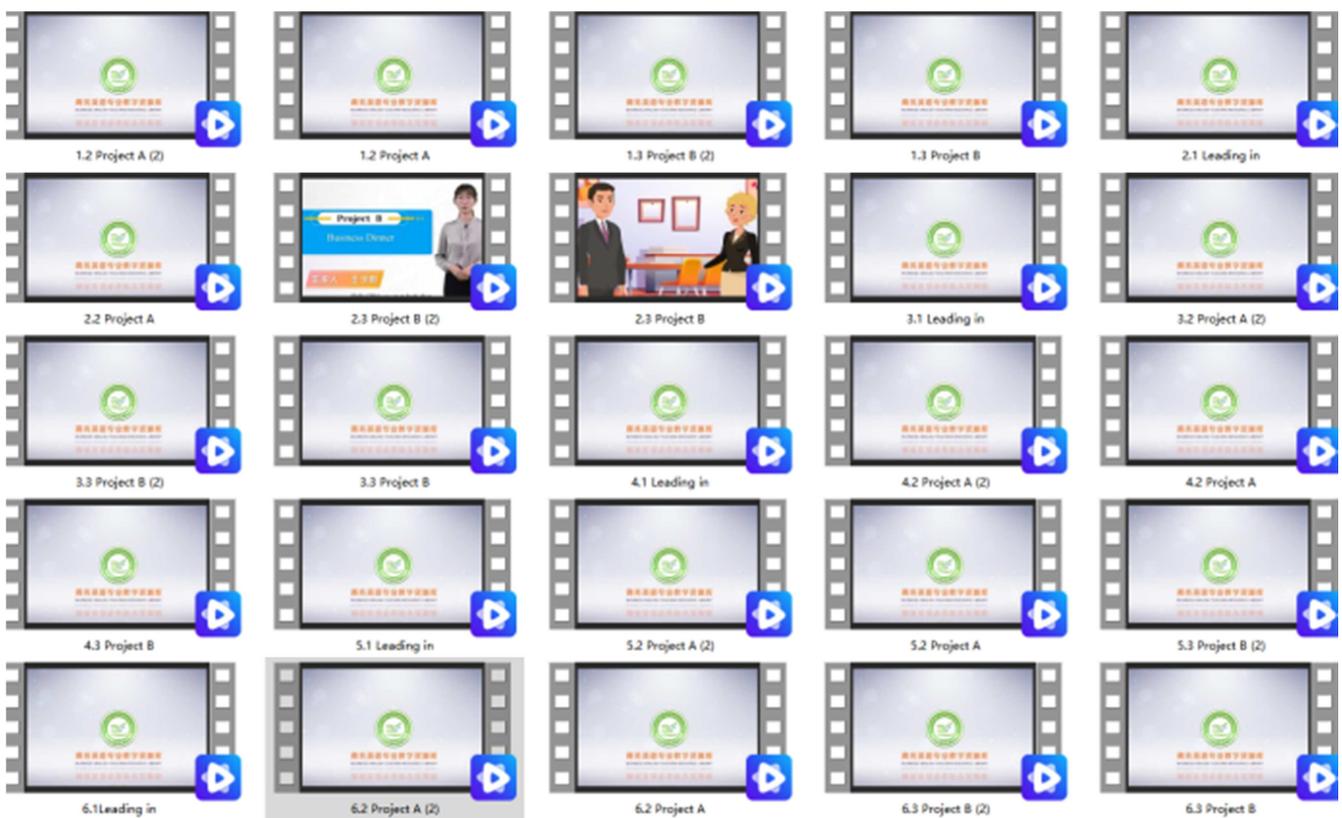


Figure 2. Content design.

In the text part, although the means of carrying teaching information in Multimedia CAI have increased, text is still a good medium. In terms of text arrangement, the courseware uses some words in parts such as course introduction and vocabulary sentence pattern. In order to enable students to grasp the content to be emphasized at once, in the arrangement of text content, some text materials with more content are provided in the interactive form of hot words and hot areas, which will disappear after reading. In addition, appropriate font, font size, and reasonable color matching of text and background are carefully designed and sorted.

In the audio part, many audio files are involved in the courseware because of the links of "listening practice" and "video training". Most of them come from the audio data

accumulated in teaching. The all-round video converter and mp3splitter are used to edit, cut, and synthesize the data, and some audio is recorded. Finally, the sound file in * MP3 format and the sound file in * wav format are generated in the creation of contents.

In the video part, the video is a real record of reality, and the amount of information is relatively large, so it has a strong appeal. There are 3 videos in this courseware. One of them intercepted the clips from the popular TV series Go Lala Go, and the other two came from the teaching materials. They were cut, synthesized, and edited by AVIMPEGASF WMVSplitter and Libo all-round video converter, and finally generated the video data in * avi format.

In the flash animation part, in order to enhance the interest

of the classroom and highlight the interactive teaching effect, a moving music file is needed. Therefore, a simple Flash animation 34 is designed and produced using Flashcs3.

3.3.2. Module Fabrication and Assembly

The editing software Macromedia Director MX2004 of multimedia courseware is selected, and the materials are prepared according to the design of each module, now is the most important process of module making and assembling.

In the whole process of making the courseware, the interface design and making, the calling and writing of LINGO language code, the button design that can reflect the interactivity of Director, and the making of Flash animation are the key problems of technical processing.

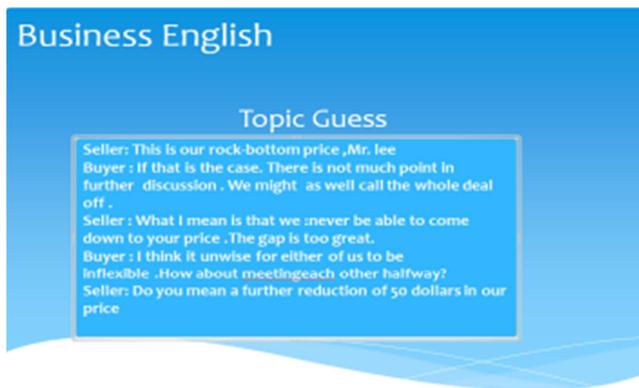


Figure 3. Background design.

Multimedia courseware interface making is the core of multimedia courseware. The whole design process of courseware is centered on how to make, organize and display the interface. All teaching links need to be completed in each interface jump. The main interface of this courseware is designed in line with the characteristics of "simplicity, clarity, color, and hierarchy" and highlighting the contents of the four modules and the hierarchical relationship of the contents needs to reflect the progressive relationship in the main interface. Therefore, the blue representing is selected as a background on the main interface to provide calm environment (Figure 3).

The interactive design and realization of the interactive function of this courseware are mainly reflected in the setting of multiple buttons. Its purpose is to enable teachers to achieve benign interaction with students through the demonstration of Director while giving lectures. For example, the home page can choose to stop playing music by itself. When listening, the students can get the answers after listening. The buttons are controlled by Lingo language, so that all levels can be closely linked.

3.3.3. Debugging of Courseware

The debugging of the courseware is put through the whole production process. From the beginning of the development process, we should often debug the text, bitmap, and other elements imported into the Director movie. Make sure every actor works properly in the film. If you are importing bitmap

elements, you need to first look at the bitmap effect in the drawing window. If you are importing a sound element, you need to play the sound in the sound actor dialog box. If you are importing a digital video file, double-click the actor member in the actor window to preview it in the video window. If the results are not satisfactory, we need to return to the corresponding bitmap, sound, and digital video editing software for modification. If there is dissatisfaction when publishing the courseware, the changes to be made will be quite large. In addition, when importing cast members, you need to write down the imported path and confirm that the cast member path is recorded in the member attribute. If the location of the media element is moved on the hard disk, you need to re-link the import.

The real debugging of courseware happens when it is played as an executable file. It is also very important to debug courseware in the development of software, but it is more important to debug in the user-owned environment. After the courseware is packaged to generate the executable file, play backing and debugging will be able to understand the real ability of the executable file in the final situation.

4. Application Experiment and Effect Analysis

4.1. Experimental Design of Courseware Application in Classroom Teaching

Through the research on the use and effect of the multimedia courseware of business English in the classroom, the experimental data is obtained, and results are analyzed to test the effect of the multimedia courseware in the interactive teaching of business English in higher vocational colleges.

The subjects are two classes of the International Trade Department in 2021 Grade in Huizhou Economics and Polytechnic College. One is the experimental class and the other is the control class. The experimental class uses multimedia courseware to assist teaching, and the control class uses the ordered teaching materials and simple PPT courseware according to the traditional teaching methods. The experimental stage is from March to June 2021, with a total of 16 courses and 32 class hours. Finally, through the final examination results and questionnaire, this paper analyzes the learning effects of students in two classes, so as to verify the advantages of multimedia courseware in the interactive teaching of this course.

4.2. Implementation of Courseware Application in Classroom Teaching

The control class adopts the traditional teaching method: that is, it is mainly based on teaching materials and teachers' narration, with simple PPT courseware for demonstration. The experimental group uses the multimedia courseware of business English as an auxiliary teaching means while adopting the traditional teaching method. In class, teachers demonstrate the text, pictures, animation, and video materials

in the multimedia courseware, so that students can learn the teaching content by means of observation, summary, questioning, and imitation. Taking unit 4 Receiving Visitor as an example, the following two main parts describe in detail the case of applying multimedia courseware to assist in the interactive teaching of business English.

4.2.1. Topic Part

Topic part intercepts a video clip of a popular workplace drama Go Lala Go! and plays it to the students in the introduction part. It is a scene that happens to play the leading actor picking up a foreign customer at the airport. Such a fragment can not only cause students' interest and attention, but also arouse students' emotions, and make students feel that the knowledge they have learned is closely connected with real life, and is not complex and difficult to understand, so as to enhance their learning enthusiasm and confidence. After watching, the teacher asks, "Can anyone tell us what topic this movie clip is talking about?" Naturally, the students can reflect that they are telling Du Lala's reception of foreign customers at the airport, and then the teacher can further lead to the theme of this unit "Receiving Visitors" through interactive Q & A. By the way, they can lead the students to learn some relevant vocabulary and review some simple expressions of the first meeting.

After introducing the topic of the unit, students should also learn more about another common scene of receiving visitors, that is, receiving visiting customers in the company as a receptionist.

A simple Flash animation dialogue is presented in this part. Before playing, students are required to understand the participants and the basic equipment in the business center through the observation of the picture and guide students to express relevant content in English.

Next, watch the Flash animation and complete the exercises. Two kinds of exercises are designed in this part: one only displays subtitles and requires students to dub, and the other only plays sound and requires students to write down subtitles quickly, so as to achieve the purpose of attracting students' interest and stratified teaching.

4.2.2. New Lesson Part

In Vocabulary and Structure, after the introduction part, students are helped to understand the basic scene of receiving visitors; they should make necessary preparations for the next listening and speaking training. Therefore, the learning of vocabulary and sentence patterns in this course is an essential link. Lead the students to read aloud together, then invite the students to lead the reading, and ask students to understand and memorize the vocabulary and sentence patterns. Important phrases in this unit will appear in the multimedia courseware, such as appointment, representative, and send sb. up, etc. When playing with the courseware, students can clearly understand the key parts at a glance.

In Listening Practice, the following part is listening to practice. Due to the limited time in class, teachers will lead students to do some typical listening exercises. If they can't complete all the exercises in class, they can leave it to

students to complete after class. The listening exercises are collected and supplemented by teachers themselves, which do not appear in the teaching materials and can be used as an extended exercise in class or as an exercise after class. Interactive buttons are designed for listening, playing, and displaying answers in the courseware, which is convenient for teachers' control in class and students' self-monitoring during practice after class.

In Video Practice, the video exercise part is one of the highlights of this course and the courseware design. There is a lack of video materials in conventional teaching, which makes it difficult for students to understand the business scene. After the author's collection and production, video materials related to the theme are configured for each unit, and corresponding exercises are set after the video materials. Fully based on the constructivism theory, schema theory, and audio-visual theory mentioned above, this paper constructs a multi-dimensional interactive teaching mode of sound and image and arranges the difficulty of exercise according to the principle of step-by-step.

This part mainly plays a video of the reception of business visitors to further guide students from the aspects of participants' voice and intonation, facial movements, etiquette and posture, and corresponding expression, so that students can better master the knowledge under the theme of the unit. After the video, it sets up the training of summarizing the main idea of the dialogue, sorting the important sentences, practicing reading and recitation, and using the given sentences to arrange a dialogue in the group. This part of the exercise follows the constructivist theory and applies the theory of pedagogy to teaching practice.

4.2.3. Assignment Part

Homework is also a necessary part of classroom design. The homework part of this courseware mainly designs a business talk and two difficult translation exercises. The purpose of the business dialogue is to enable students to use the key vocabulary, sentence patterns, and expressions by arranging dialogues and presenting them by reporting and performing, so as to apply theory to practice. The translation exercises give students more space to expand, encourage students to complete difficult tasks by collecting data, group discussion, and other cooperative ways after class, and enhance the fun of learning and cooperation. Under the organization and guidance of teachers, students discuss and communicate together to establish a learning group and become one of them. Through such a collaborative learning environment, the thinking and wisdom of learners, including teachers and each student, can be shared by the whole group, that is, the whole learning group can complete the meaning construction together, rather than one or several students.

4.2.4. Activity Practice Part

The characteristic of business English is that it is a targeted, practical and functional language. It is also very clear that this is the language to be applied in business practice. In other words, the study of this course is to be applied to business activities.

Table 1. Experiment scenario.

	Phrases & sentences	Scenario simulation	Phrases & sentences	Scenario simulation
Average score	43	45	41	38

Therefore, in the courseware, the business training part is designed independently, which is as important as the new course learning (Table 1). The business training part is an activity aimed at the overall design of the whole book, which is divided into three levels: low level, middle level, and high level. For this unit, a dialogue completion exercise is designed in the low-level part of the business training. A group theme report is designed in the middle level part, and examples of previous students' performances are provided for students' reference. Top students can create, and those with poor grades can imitate, which again reflects the combination of autonomous learning and layered teaching. The third level plans to use the BEC test, encouraging students to take the Cambridge Business English test, and give guidance to such students.

4.3. Analysis of Assessment of Course Learning

The statistical results show that the scores of the experimental class are significantly higher than those of the control class (2). Especially in the scene simulation part, the students in the experimental class can more intuitively feel and learn the relevant scene performances under the interactive teaching mode of combination of sound and image of multimedia courseware. In the whole teaching process, videos are more than pictures, pictures are more than words, and listening is more than teachers' expressions. It virtually creates a very vivid and real scene, and guides and cultivates students' ability to actively build knowledge. Therefore, the use of multimedia courseware teaching has a significant effect on improving students' academic performance.

4.4. Analysis of Questionnaire Results

The essence of a questionnaire is a measurement tool, which is used to measure some characteristics of people (such as personality, attitude, etc.). Therefore, the quality of the questionnaire must be considered first when selecting the questionnaire for investigation and research. Therefore, before issuing the questionnaire, I first design the

questionnaire and test its reliability and validity. During the experiment, students were strictly organized to evaluate the content, structure, and operability of the courseware, and 35 questionnaires were carefully filled in. Make statistics on the evaluation of recovered courseware, and give average scores to each item (see Tables 2 - 4).

Table 2. Test Result for Teaching Contents.

	Teaching Contents	Average score
1	Moderate difficulty	95
2	Practical value	97

It can be seen from Table 2 that the score for the teaching content design of the multimedia courseware is very high. Compared with the teaching materials and reference books with similar contents, and traditional PPT courseware with large text, students are more fond of practical handouts and simple multimedia courseware arranged by teachers according to the actual situation of students and the business development of their region. The setting of hierarchical teaching contents and exercises in the courseware enables all students to gain something. The video clips and listening materials close to and derived from real life enable students to fully recognize the practical value of the multimedia courseware.

Table 3. Test Result for Technology Application.

	Technology application	Average score
1	Easy operation, used independently	95
2	Reliable programs, content can't be missing	98

As can be seen from Table 3 the score of the application technology of the multimedia courseware is also very high. The software produced by the Director has simple operation, strong controllability, and strong interaction, which is very conducive to students' autonomous learning. Moreover, compared with the PPT courseware adopted by most teachers, it is more reliable, it will not be damaged or lost content due to different Office versions and improper copying processes, and has a large amount of information. It is deeply welcomed by students.

Table 4. Test Result for Teaching Quality.

	Teaching quality	Average score
1	Achieve the objectives and interactive effects	94
2	Use harmoniously various materials	92
3	Moderate the speed and order of content presentation	90
4	Present and arrange the content clearly and reasonably	90

From Table 4, for the teaching quality of using the multimedia courseware, the score is lower than those in the first two tables. It shows that students have very high expectations for teachers and business English, and hope to

learn as much practical knowledge as possible from this course under the guidance of teachers. The scores of the two items of "harmonious application proportion of various materials" and "clear content presentation and reasonable

arrangement" are low. It shows that users have a strong demand for multimedia courseware, which is rich in content and not boring. Due to the lack of experience, there are still some deficiencies in the production of this courseware, especially in these two aspects, which need more improvement.

Based on the analysis of the three tables, it can be concluded that the multimedia courseware in business English has been approved by students of the experimental class in terms of teaching content, teaching quality, and technology. But there is still considerable room for improvement, due to the lack of technical skills and experience. We also need to further study and research, and apply the results to practice, so as to benefit both teachers and students.

4.5. Teachers' Feedback on Using Multimedia Courseware

Through vivid, dynamic, and intuitive teaching content and a large amount of information, the multimedia courseware of business English not only improves students' interest in learning, but enables students to actively build business English-related knowledge, but also plays a strong role for teachers, enriching teaching content and reducing teachers' repeated work in the process of lesson preparation, so that teachers have more time and energy to explore the teaching content and teaching mode. Of course, at the same time, it also puts forward higher requirements for teachers' comprehensive ability. As English teachers, we should not only master our own professional knowledge, but also skillfully use multimedia courseware, and make suitable multimedia courseware according to the teaching needs.

5. Conclusion

The study and implementation of the application of multimedia technology in business English teaching in higher vocational schools is applied in the actual interactive teaching practice, and the data are obtained by the experimental method. Using multimedia courseware to assist in interactive business English aids students' interest in learning. The interactivity of multimedia courseware improves students' ability to improve self-study skills and interaction between the students and instructors.

The experimental results obtained through the questionnaire survey show that students like teachers' teaching with multimedia courseware better. Another conclusion would be that by combining audio, video, pictures, and other methods with sound and color for imitation learning, the efficiency and practicality are higher, and the memory effect is better.

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