

Research on the Teaching of Computer English under the Network Environment

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Abstract: The rapid development of Internet brings great challenges to computer English teaching in classroom. This paper summarizes the existing problems in the teaching of Computer English, analyzes the theoretical basis and advantages of the network environment, and solves two major problems in the teaching of Computer English under the network environment. One is the creation of English learning situations and model design, and the construction of relevant information resources to meet students' individual needs; The other is taking students as the center, cultivating their information processing technology and ability, and fully implementing the curriculum objectives. Through the analysis, it is found that under the network environment, the selection of teaching resources, the establishment and creation of the course environment, the classroom teaching methods and modes and the learning methods must follow the basic principles of complementarity and collaboration.

Keywords: Network Environment; Computer English; Course Teaching; Teaching Measures

1. Introduction

The basic knowledge of English and computer is two main fundamental skills that computer talents must master in the 21st century [1-2]. For the computer professionals, there is a complementary and synergistic relationship between these two basic skills. The course "Computer English" has played a great role in cultivating the English ability of people with two such types. Moreover, for most English learners and learners of other multimedia languages, the advantages of online education are even more prominent [3]. Therefore, in the

teaching of "Computer English", we have conducted in-depth research and discussion on some related problems under the network environment, promoted the teaching reform of "Computer English", and achieved some positive achievements.

2. The Problems in "Computer English" Course

"Computer English" is mainly a basic course with strong professionalism for the students majoring in computer science in colleges and universities. Through the course, students should be able to understand a certain amount of common modern computer-related professional English words, more proficiently understand and master the English prompts, menus, auxiliary documents and the error messages on the computer monitor screen, can urge students to read and translate the relevant manuals of the computer, study hard, consolidate their professional theoretical knowledge, and improve their skills [4]. At present, there are mainly the following problems in the teaching of "Computer English":

(1) The traditional online broadcasting teaching adopts the teaching mode of teachers' interactive explanation and lacks the interaction between teachers and students. It is difficult to fully mobilize the students' learning autonomy and interest in learning activities and the enthusiasm of teachers and students in learning, and cannot fully satisfy most students for their individualized and differentiated learning needs [5].

(2) We pay too much attention to the specific and comprehensive explanation of professional basic knowledges such as professional grammar and commonly-used vocabulary, and ignore the comprehensive training of professional students' practical ability to use language in reality, and cannot fully demonstrate and highlight the basic nature and

professional characteristics of relevant majors on computer technology [6].

(3) Many teaching contents come from the computer English materials collected by teachers, so the textbooks are not standardized and systematic, and the arrangement is relatively simple [7].

(4) Due to the outdated content, lack of modernity and realistic feelings, it cannot fully reflect the ever-changing computer technology [8].

3. The Theoretical Basis of “Computer English” Course under the Network Environment

The classroom teaching of “Computer English” under the network environment provides the corresponding teaching guidance based on theory learning. The construction of learning ideology is not all knowledge acquired by teachers, but to guide learners and create corresponding situations [9]. In the specific environment, they can gain the support from other individuals or the masses (especially including the professional teachers and peers), and obtain the construction methods and meanings with the help of learning materials. The ideology of all learners is constructed under the environment, and uncultivated simply. Situation, collaboration, meeting and meaning construction are four important factors in learning activities, and the network provides learners with maximum convenience from these aspects [10]. Under the network environment, through training teachers and other relevant technical personnel to jointly create an educational curriculum, the comprehensive and easy-controlled “Computer English” course such as online version, text book version, CD-ROM version, electronic courseware, teaching website enables students to obtain timely help, provides abundant learning resources, and guides students to master the relevant knowledge through constructing corresponding forms actively and positively.

When students initially form their own internal description of knowledge, they constantly modify and optimize the content in order to form a new description and make the learning activities more effective. Therefore, the teaching of “Computer English” under the network environment mainly considers the following two important problems[11]: First,

how to correctly select and organize network information resources, course teaching and research under the network environment, the creation of learning situations, the provision of relevant information resources and situations fully meet the individual needs of students, promote the construction of students’ knowledge to the greatest extent; Second, how to organize and carry out the targeted teaching and research activities, fully embody the concept of taking English learners as the center, achieve the ability of mastering computer technology in a complex English teaching environment, improve the overall quality of students and quality of teaching, and fully implement the curriculum target of this major.

4. The Advantages of “Computer English” Teaching under the Network Environment

The “Computer English” teaching under the network environment can make full use of the advantages of the internet and multimedia technology, adopt a variety of teaching modes, and provide students with sufficient independent learning space. In summary, it has the following advantages:

(1) By adopting a variety of teaching modes such as personalized learning, collaborative learning, inquiry learning, task-driven learning, the joint learning of “teacher + students” is realized, and the two-way interaction of “student + computer” is introduced. It fully reflects the social subject status of teachers and students, effectively stimulates the learning interest, and truly realizes individualized teaching.

(2) Integrate computer knowledge, application and skills with the study of professional English, effectively strengthen the cultivation of students’ practical language use, and help the cultivation of students’ spirit of cooperation.

(3) Provide extremely rich and real-time updated professional knowledge for teaching, enable students to quickly and accurately obtain the latest technology and information, and promote the learning of professional knowledge and the improvement of ability.

(4) Provide a variety of comprehensive visual impact in terms of physical vision and spiritual and psychological experience through the streaming media visual technology platforms, strengthen students’ effective grasp of basic knowledge and maintain ability, and improve

the quality of classrooms teaching activities.

(5) Carry out teaching with generative strategies guided by the theory of constructivism. The more in-depth students' information processing is, the better the learning effect is.

(6) Provide students with a conscious, independent and self-sufficient learning atmosphere, so that students' comprehensive quality and ability can be developed in an all-round way.

(7) The fairness of network, decentrality and non-centralization of information are completely in line with the educational concept of postmodernism, fully embody the socialist educational concept of advocating personal dignity, democracy, equality, freedom and other humanistic education, that is, the masses and individuals who can live a meaningful life happily through the development of themselves have a positive impact on cultivating, enhancing the college students' discovery and choice for learning content and approaches in harmony with their own development, which has important guiding significance.

5. The Selection of Teaching Resources and the Creation of Teaching Environment for "Computer English" under the Network Environment

5.1 The Selection Principles of Teaching Resources

The teaching resources of "Computer English" under the network environment are quite rich, but not all resources can be turned into teaching resources. Therefore, network resources must be strictly screened and filtrated. The rational selection of network resources should follow the principles:

(1) The timeliness base. With the progress and rapid development of modern computer science and technology, the specialized terms and abbreviations closely related to it are constantly expanding, and gradually become the etymology of these concepts. Only when we fully consider the timeliness of the course, students can better access and use new professional words as many as possible, and learn the latest computer technology.

(2) The systematic principle. When selecting the teaching materials, we should take both the professional knowledge of computer and the

systematicness of English knowledge into account to ensure that students can be more comprehensively familiar with and understand various aspects of computer knowledge and other English knowledge.

(3) The diversity principle. The selection of materials should pay full attention to people's information literacy, the application of information technology, and the impact of IT technology on society and people's daily life, so that students can better contact and understand the mainstream concepts of computer English, and obtain a complete and specific understanding of the genres and styles for related literature in the field.

(4) The original properties principles. The material should be directly derived from foreign computer textbooks and publications, keeping original and fresh, so that students can well contact and use computer English under the real expression environment, and better understand and master the computer technology.

(5) The broadening principle. The materials requires that the content of textbook should be expanded or supplemented in teaching, rather than simply repeating the relevant content in the textbook.

5.2 The Establishing Principles of "Computer English" Teaching Environment under the Network Environment

Under the network environment, the production and establishing of "Computer English" teaching scenarios should mainly follow the steps.

(1) Establish a theme. The theme of text should be closely related to the core content, expanding and supplementing the text to exert and carry out the classroom teaching as the fundamental goal.

(2) Search and download. For relatively clear topics, we can consider using some large search engines for filtering, and for relatively broad topics, we should select some classified websites for filtering, so as to reduce the manipulations of another search option when obtaining the discoveries in searching.

(3) Recycle material. The materials should be reprocessed according to the teaching requirements, such as adding annotations, replacing some new words, etc., and then recycled according to various individual properties, such as its background information,

auxiliary materials, and extended materials.

(4) Create teaching scenarios. For various types of network information resources after screened and grouped, specific teaching scenarios should be created according to real teaching situation in various forms such as courseware, network education courses, and links between relevant special teaching websites and internet information resources.

6. Design of Teaching Mode and Learning Mode of “Computer English” under the Network Environment

6.1 The Teaching Mode of “Computer English”

It can consider three major educational resources: network teaching materials, network courseware, and online resources as the base, combining with the actual situation of online teaching, select many teaching modes such as network courses supplements, combination of classroom teaching and network courses, network courses and self-study, and mutual promotion of network courses and teacher learning, strengthen and optimize the online courses teaching as a whole, fully cultivate students' network information technology literacy, achieve qualitative breakthroughs in many aspects such as online teaching, knowledge structure, course arrangement, ability evaluation, collaborative learning and teacher-student relationship, which truly embodies the constructivist learning concept.

(1) Set up a special research and learning platform. The website mainly covers course content, navigation system, extended resources, query system, system management, interactive system, learning assessment, etc. Teachers can also create interesting multimedia video courseware based on their own teaching content, and add them to relevant special research websites. All teaching courseware must be reflected in teaching, and must be vivid and lively.

(2) Computer-assisted instruction (CAI) teaching mode. The textbooks can be presented with the help of the chat mode of computer technology, so that learners can adjust the learning time and integrate the learning progress according to their actual situation, further realize the integrated learning. By such teaching mode, we can effectively

make up for the lack of teaching methods used in traditional educational practice, change the way of traditional knowledge storage, transmission and refinement, and mobilize the initiative of learners.

(3) Computer supported collaborative work (CSCW) classroom teaching mode. Based on CSCW, it can make full use of various related technologies such as computer network, internet and multimedia to carry out mutual interaction and cooperation among multiple learners, so as to better meet the requirements of classroom teaching. In the context of CSCW, teachers put questions to learners through the system, and students can directly choose online learning partners and reach relevant agreements, that is, they can directly carry out various methods of collaboration or competition.

(4) Students can make study plans according to their own basic situation, realize the integrated learning mode of stratified and personalized classroom teaching.

6.2 The Learning Mode of “Computer English”

The learning of “Computer English” under the network environment is not only an interactive learning between teachers and students, but also a self-learning process participated by students.

(1) Students can appropriately use various network technology means to implement personalized and exploratory learning, and through autonomous interaction and selection, students can be motivated to learn with passion and subjective performance.

(2) Learners can achieve asynchronous interaction through e-mail, and establish a network communication with teachers. With this method, teachers can answer students' confusion and solve their learning problems.

(3) Project trainees can directly communicate with learners online through the special project website, get personal guidance from teachers, and can also speak in a specific special project area or view the experiences of other trainees.

(4) Students can test their own learning effects on the project website at any time and consolidate all their learning achievements.

7. Conclusions

To sum up, in “computer English” teaching, the internet information and technology

change the teaching and learning greatly for teachers and students. In the process of implementation, teachers should give students proper guidance to ensure the effect of internet information and technology use. The construction of mind maps can promote junior high school students to better learn knowledge points and strengthen their memory of knowledge points. It can provide teachers with a good teaching method, which can improve the learning efficiency and learning quality.

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