



Research on Teaching Reform of College Chinese Based on Data Analysis

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Abstract. The rapid development of vocational education speeds up the pace of education and teaching transformation in higher vocational colleges. However, due to the influence of internal and external environment in the actual operation process, there are some problems in College Chinese curriculum in higher vocational colleges, which need to be solved and improved urgently. Therefore, this paper analyzes the current situation of Chinese teaching in higher vocational colleges, and analyzes the reasons for the problems. Combined with the needs of educational development, this paper puts forward the Countermeasures of College Chinese teaching reform, in order to provide theoretical reference for educators.

Keywords: Higher vocational colleges · College Chinese · Teaching innovation

1 Introduction

With the rapid development of computer network, communication technology and Internet, distance education based on Internet has become a new teaching method, and more and more people pay attention to it. Because online teaching has many characteristics such as timeliness, sharing, interaction and individualization, it has incomparable advantages compared with traditional teaching mode. It creates a new teaching mode, breaks the limitation of traditional teaching mode in time and space, and adopts advanced teaching means and methods, which can greatly improve teaching efficiency and teaching effect, Teaching activities have been promoted to a new level. The booming online education, with its new high-tech teaching means, provides a solution with less investment, quick effect, high quality and high efficiency to solve the contradiction between the serious shortage of resources and the growing demand for teaching advice. Fortunately, it will become an important direction of the development of teaching advice in the future.

College Chinese is a public comparative course of higher vocational education, and it is also the transfer of cultivating students' Humanistic ability. Under the background of deepening the collection of funds from the government and the army, the problems existing in the articles of combatting Tai and contending for life by the Supreme People's court are increasingly realized. In order to solve the existing problems, the teaching method of "Li Yue Bei Si Meng" has been developed rapidly, which meets the requirements of

modern students. It is the focus of College Chinese educators in higher vocational colleges. Based on this, under the condition of understanding the actual teaching situation, this paper puts forward new ideas for the reform of College Chinese curriculum, and provides a reference for College Chinese to get out of the teaching dilemma.

2 Analysis on the Current Situation of College Chinese Teaching in Higher Vocational Colleges

2.1 Fuzzy Orientation of Curriculum

Influenced by the traditional education concept, most higher vocational colleges put more energy into the professional courses in the process of setting up the education system. They think that when the students are mainly studying the basic courses of certificate, they should reduce the time of Chinese teaching as much as possible, or even do not set up the College Chinese course, which makes the College Chinese course mere formality and difficult to achieve the overall education. Influenced by the external education environment, the lack of communication with the outside world in College Chinese teaching research in higher vocational colleges, the blocking of teaching information in various vocational colleges, make teachers unable to timely understand the innovative teaching methods and ideas, teaching mood is increasingly low. The emergence of this situation will increase the randomness of teachers' teaching, or completely copy the teaching ideas of undergraduate colleges, ignoring the thinking of students' learning ability and needs. Or follow the traditional single teaching mode, the classroom learning atmosphere is boring, aggravating students' long-term learning fatigue. As a result, the effect of College English teaching is not good, and the transformation and innovation of teaching mode can not be completed under the background of the comprehensive implementation of education reform.

2.2 Students Do Not Pay Enough Attention to the Curriculum

Compared with the ordinary undergraduate students, the difference of vocational college students is reflected in their own literacy and learning ability, and the scientific and cultural foundation is relatively weak. From the present situation, although vocational college students have learning motivation and good learning attitude, their own communication ability and expression ability are also obvious. Influenced by the traditional teaching concept of our country, students are in a passive learning environment, their creativity and learning enthusiasm are weakened, and their attention to basic education is insufficient. The prejudice against basic education in higher vocational colleges has not completely disappeared, and the students' utilitarian tendency is serious. Many students think that basic subjects such as Chinese are dispensable. They can't concentrate in the classroom, which not only wastes the time and energy of learning, but also reduces the students' humanistic quality. This kind of negative emotion will reduce the enthusiasm of students to actively understand and read literary works, make them unable to accept the influence of literary education, unable to experience the charm of literary works, and realize the improvement of their own humanistic realm.

3 The Causes of Problems in College Chinese Teaching

3.1 The Teaching Content of College Chinese is Too Old

As the key to attract students, teaching content is the basis of realizing the teaching goal of College Chinese and has direct connection with students. At the same time, the choice of teaching content also determines the final effect of teaching, especially for the college language of humanities, it is particularly important to choose the teaching response which is in line with the students' learning ability. Only students' curiosity about the content of the curriculum can they cooperate with teachers to complete the exploration and research of the curriculum content, and then successfully copy the relevant knowledge and skills. However, from the current situation, the College Chinese teaching materials can not meet the requirements of education development, carry out the innovation of teaching content, but also exist that the content of the teaching materials is too old and the content of the white text textbooks is composed of literary works, many works flow far away, with a deeper connotation. It is not suitable for the modern social situation that they reflect the social problems which have been applied to the society with strong era atmosphere. At the same time, it is not suitable for the aesthetic standards of the young students. Students are easy to understand the situation in the process of reading, which leads to the loss of the original educational value of Chinese teaching content.

3.2 Insufficient Investment in Curriculum Construction

First, the construction of Chinese teachers in higher vocational colleges is insufficient. With the rapid development of vocational education, many vocational colleges pay more attention to the expansion of mechanics and ignore the construction of teachers. The contradiction between the number of students and the level of teachers is becoming increasingly prominent. As a result, most of the teachers of College Chinese course are employed or part-time, and most of the education funds they receive are special funds for professional courses, It will affect the quality and efficiency of curriculum construction. Third, the lack of teaching infrastructure. As a part of vocational education, higher vocational colleges focus on training high skilled talents. Therefore, the investment in professional courses is more, and the cost of human and material resources is larger. For the humanities of Chinese characters, many higher vocational colleges think that the content of teaching materials has a certain richness, and there is no need to invest too much resources in discipline construction, which leads to the lack of Chinese mathematics infrastructure, and the overall effect of carrying out Chinese mathematics activities in the central environment will be affected.

4 Description of Intelligent Group Paper Model

4.1 Interpretation of Test Paper

Test paper generation is a typical multi-objective optimization problem. Test paper evaluation criteria include total score, cursory distribution, question type distribution, difficulty of test paper, test time and discrimination of test paper, Set the evaluation function $y =$ “(total score, cursive distribution, question type distribution, difficulty of the test

paper, and the best degree of closeness between the generated test paper and the target, so as to judge the relative quality of the test paper. Suppose there are m questions in the test paper, and each question has n parameters, including score (A1), chapter (A2), question type (A3), difficulty (A4), time (as), and discrimination (A6). The total score of the test paper is s . Figure 1 shows the spectrum of disturbance voltage at the end of intelligent components. The distribution of chapters is C ($= 1.2$ The total number of chapters (P), the distribution of questions ($R2$) The total test time is t , the total discrimination of the test paper is Q , and the test paper model is the objective matrix X of $m \times n$, which should be close to the following constraints.

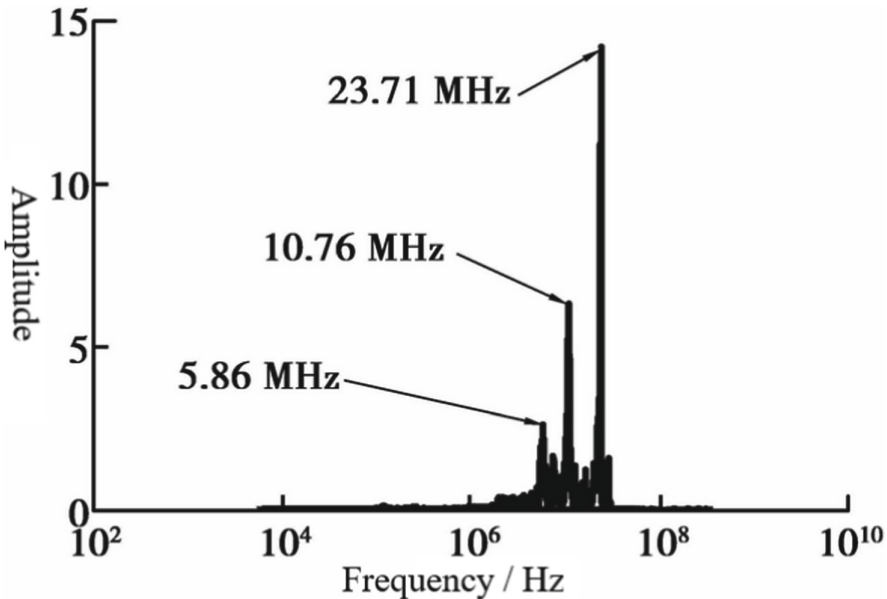


Fig. 1. Spectrum of disturbance voltage at the end of intelligent components

4.2 Algorithm Explanation

It takes a long time to generate a test paper, and it has a large complexity. At the same time, it doesn't always return effective test questions, which is inefficient. Generally, it is suitable for the examination system with less constraints. Backtracking heuristics is to return to the last recorded state type when the search fails, change the new state according to certain rules, and continuously backtrack to test paper generation or return to the starting point. This algorithm has a high success rate. Generally, it is suitable for the examination system with a small number of questions. When the number of questions is large, the complexity of empty questions is large, the program structure is extremely complex, and the time required for generating papers is long, The efficiency of genetic algorithm is low, and genetic algorithm is a probability search algorithm. It

is a randomized search and optimization algorithm that simulates the biological natural selection and genetic mutation mechanism to solve complex problems. The algorithm has the characteristics of adaptive optimization, intelligent search technology and good convergence, so it can effectively solve the constrained optimization problem in test paper composition, and improve the speed and success rate of test paper composition.

The sum of the scores of all the questions is the total score:

$$S = \sum_{i=0}^{i=m} a_{ij} \quad (1)$$

According to the proportion of a question score in the total score, the sum of the difficulty is the same as the total difficulty of the test paper:

$$D = \sum_{i=0}^{i=m} (a_{i4}a_{i1}/S) \quad (2)$$

According to the proportion of the score of a question in the total score, the sum of the discrimination is the same as the total discrimination of the test paper:

$$Q = \sum_{i=0}^{i=m} (a_{i6}a_{i1}/S) \quad (3)$$

5 System Function Design

5.1 Making Clear the Overall Teaching Goal and Establishing the Concept of Professional Education Service

College Chinese is an important part of vocational college education system, which is a course with comprehensive education function. College Chinese takes Chinese as the main carrier, and integrates ancient and modern Chinese literature works as the main teaching content. It has distinctive instrumental and humanistic characteristics. Relevant education results show that through the study of College Chinese curriculum, students can constantly enhance their literary literacy, and improve their expression ability and communication ability. Especially for the graduates who are about to enter the job, they have a solid knowledge of mother tongue and can complete the job transition more quickly to adapt to the requirements of the job. Therefore, higher vocational colleges should pay attention to the construction of College Chinese course star, and set the teaching goal to cultivate students' Chinese ability as the core, and to promote students' all-round development as the purpose.

5.2 Pay Attention to the Construction of Teaching Materials and Improve the Sense of the Times of Teaching Content

Under the background of the comprehensive implementation of the reform of teaching sound, the teaching reform of College Chinese in higher vocational colleges should

not stop at the construction of a complete teaching system, but also pay attention to the cultivation of students' intellectual and cultural way of thinking, combined with the needs of contemporary young students, write scientific and reasonable teaching materials, and endow the course with new vitality. In addition to the traditional contents, inspirational books at home and abroad can also be introduced into the teaching materials, such as the works of Mo Yan, Yu Hua, Liu Xuyun and other modern popular writers, so as to better adapt to the way of thinking of contemporary students and reflect the humanistic characteristics of Chinese. Through Li Zhihe's teaching experience, students can establish correct values and learning attitude, so as to help teachers complete the task of Chinese curriculum education.

In a word, with the rapid development and transformation of education and the change of social requirements for talents, high skilled and high-quality talents have become the favorite of the market and posts. Under this background, higher vocational colleges should realize the urgency of education reform and actively adopt innovative teaching mode based on the actual teaching content of College Chinese. And bold attempts to constantly enhance the timeliness of Chinese teaching, so as to better complete the goal of College Chinese teaching reform.

6 Summary and Prospect

The algorithm is applied to the CA system for automatic test paper generation. The algorithm can meet the requirements of automatic test paper generation, and the test paper generation is close to the predetermined constraint conditions. It shows that the algorithm can basically meet the requirements of teachers. At present, it has been applied to the network-based customized CA software in our college, and it provides a good auxiliary role for teachers in the teaching process. It is well received by teachers. With the rapid development of information technology and network technology, computer aided instruction (CA) has become a hot issue in modern teaching and reform. It integrates a variety of teaching auxiliary functions, makes the CA system have good interactive control, plays a very excellent auxiliary role in teaching, and comprehensively improves the teaching effect. The most outstanding is the online examination function of CA system. It can use computer to realize intelligent test paper generation, automatic test paper modification and statistics, which not only reduces the workload of teachers, but also realizes the separation of test and teaching, and makes the examination more standardized. Therefore, intelligent test paper generation is one of the most important tasks of online examination system, and its essence is according to the specific selection constraints. It is a typical multi-objective optimization problem. The efficiency and quality of the problem depends on the design of the algorithm. Therefore, choosing the appropriate algorithm is conducive to improving the success rate of test paper generation and the quality of test paper generation.

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