Analysis of the Influence of Intelligent Means Based on CAD Technology on College Chinese Teaching

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Abstract. Computer-aided design technology (referred to as CAD technology) is a method and technology for computer software and hardware systems to assist people in designing products or projects. The teaching of CAD in most domestic colleges and universities is obviously far behind the development of CAD technology. With the increasing popularity of multimedia and network technology, the mode of higher education presents a variety of characteristics, and network-based teaching is also becoming the mainstream of teaching. The network-based CAD teaching platform is proposed under this background. In the network-based CAD teaching platform system, students can ask questions and publish online through the student terminal. Articles, online assignments and other operations. In a word, the network-based architectural CAD teaching platform provides students and teachers with free teaching and learning services, interactive exchange of learning, knowledge sharing and other functions. Considering the future expansibility of the system, this system adopts the structure mode one to develop system functions, using Delphi language, SQL Server. The database implements the functional modules, and uses TCP/IP technology or HTTP technology to solve the problem of network communication, so as to design and implement the university Chinese teaching platform.

Keywords: CAD Technology; Intelligence; College Chinese; Teaching.
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1 INTRODUCTION

The vigorous development of network teaching multimedia has profoundly affected people's learning, and network-based teaching is also becoming the mainstream of teaching. From the current development trend, the network-based CAD teaching has become possible, and the network teaching needs to be promoted and improved for the university Chinese teaching itself.

Singh et al. [1] proposed that computer aided design technology (CAD technology for short) is a method and technology that computer software and hardware systems help people design products or projects. Byun and Sohn [2] proposed a new design method and a new technology of multidisciplinary comprehensive application. At present, Pando et al [3] believed that CAD technology has entered a mature and application stage. Enterprises in developed countries have reached a high level in the application of CAD technology. Sola et al. [4] established the product model through the CAD system, realizes the so-called "no drawing" design and processing to a certain extent, and greatly improves the efficiency of product development.

Gao et al. [5] believed that enterprise informatization transformation and technological innovation are the main means to enhance the competitiveness of enterprises. CAD technology is the main technical basis of enterprise informatization and innovative design. Liu et al. [6] believed that CAD technology, as a new design method and technology, has been widely valued by industry and Commerce and engineering education. At present, Gelmez et al [7] believed that most engineering colleges and universities have opened CAD technology courses. Such as mechanical CAD, circuit CAD and architectural CAD. The results of Hong [8] show that due to various reasons, the teaching of CAD technology course is not satisfactory. The curriculum setting system, and propose our teaching reform plan based on some successful foreign experiences [9].

The teaching of CAD in most domestic colleges and universities is obviously far behind the development of CAD technology [10]. There are many reasons for this situation. The macroscopic performance is that the experimental conditions are simple, the software and hardware settings are backward, the capital investment is insufficient, and the human resources are scattered [11]. The specific performance is that the course content is outdated and superficial, even listed as a low-hour elective course, and lacks a reasonable course system [12]. In view of this situation, this paper will study the network-based CAD teaching. Platform design and implementation.

2 RELATED CONCEPTS AND THEORETICAL BASIS

To study the network-based teaching platform, it is necessary to first sort out the relevant important concepts of the network teaching platform and the related technologies needed to realize the system. This chapter will first introduce the relevant concepts, principles and principles of the network teaching platform, and then introduce the the technologies needed to realize the system process: Delphi, SQL Server database, network communication protocol, C/S mode and B/S mode.

2.1 General Education

General education originated from Aristotle's idea of liberal education, which was first associated with university education by American scholars in the early nineteenth century.

General education is an education method that cultivates students in all aspects. During education, it will increase the depth and breadth of the content taught, so as to broaden students' knowledge, broaden their horizons, enable them to have the ability to integrate different knowledge together, and pay attention to cultivating students' independent thinking ability, so that students' Humanistic literacy and scientific literacy have been improved, so that they become talents with higher comprehensive quality.

The idea of general education also has a long history in the West. As early as Aristotle's time, this idea began to emerge. Teachers educate students by using dialogues, walks and discussions. This way enables students to avoid students being limited to theoretical knowledge, and achieve the purpose of comprehensive training by combining with practice. After the Industrial Revolution, the education of students in the West has developed in the direction of erudition and elegance. While cultivating students' various knowledge, they also pay attention to their ideological and moral education. The characteristic of general education is that it can allow students to receive diversified education, and cultivate diverse talents according to the different characteristics of students. It is a new education model that is different from traditional education methods. When

carrying out general education, the emphasis should be shifted from "teaching" to "education", focusing on humanistic education for students, and excavating each student's own potential, so that students can develop freely and comprehensively. This kind of education is different from the previous assembly-line education. The students cultivated have their own independent thinking, and each person has distinct characteristics, making them truly talents rather than products.

2.2 Realistic Basis

As another discipline in colleges and universities, students must have the ideological concept of respecting teachers and morality, and educating people first and then educating people figure 1. Only by establishing correct ideological and moral concepts can students serve the society in their future work. Higher vocational colleges should always implement the educational concept of people-oriented in the process of running schools. In practice, we should insist that education should be people-oriented and students should be the main body.

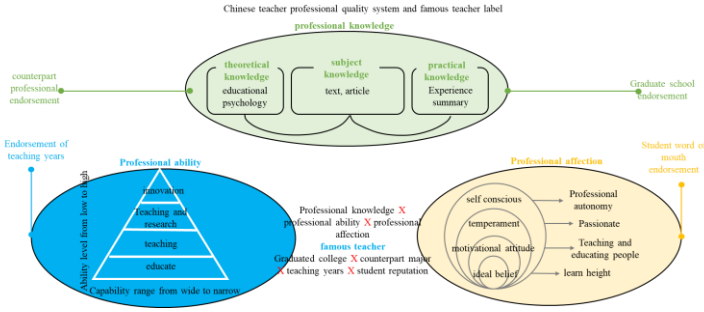

Figure 1: The professional quality system of Chinese teachers in university education.

In the new era, under the premise of putting people first, we should pay attention to the reform and innovation of the training model, and adjust the teaching orientation, school-running philosophy, teaching methods, etc., so that higher vocational colleges can cultivate talents that the times, and make the school itself produces a distinctive and vital campus culture.

College Chinese, as a refiner of the comprehensive elements of language and culture in the vast classic works, conveys the humanistic tradition and the accumulation of accumulated resources, and the humanistic elements contained in it nourish and moisten the minds of students.

Traditional education focuses on cultivating students' knowledge and skills. However, the current society needs talents with high comprehensive quality, so college Chinese must make corresponding adjustments. When carrying out the teaching reform of college Chinese. In the specific reform:

(1) Better interpretation of educational concepts such as "quality education" and "people-oriented"

In the past, the understanding of quality education was often limited to the level of professional skills and quality, but the current requirements for quality education should be raised to the level of comprehensive quality. When talking about quality education, it is necessary to mention the idea of people-oriented, but there is still a lot of controversy on the understanding of people-oriented. Quality education is an educational concept relative to exam-oriented education. This concept advocates that the focus of training should be shifted from answering skills, exam-taking ability, etc. to the training of comprehensive quality. When inspecting students, conduct a comprehensive inspection. The score is no longer the only criterion for evaluating students, so it can fully tap the potential of students, make them get the most suitable education, and cultivate talents with unique characteristics and all-round development. The proposal of this educational

concept can help our country's education more adapt to the needs of the times, and has long-term significance.

(2) Better understand the true meaning of happiness and happiness in life

Learning is often a boring thing, but Chinese has the characteristics of making learners feel happy. In the process of language learning, readers can communicate with the author spiritually. In this process, readers will gradually understand the philosophy of life, find the meaning of life, and feel the spiritual Purify. This process of Chinese learning coincides with the intention quality education. Both hope that the educated can have noble sentiments and high moral quality, and focus on cultivating people into talents from the spiritual level. It's not about training people to be a certain kind of person. Traditional higher vocational education often vocational skills, and simply trains students into technicians. This flow-type training method makes students a tool without independent thinking and their own characteristics, and quality education changes. In view of this situation, we should pay attention to the education of students' spiritual level, so that they can have their own way of thinking and become more competitive in the complex social environment. , personality, realm, in today's society, maintain their own characteristics.

College Chinese education has played a huge role in this process. In the process of learning Chinese, teachers and students discover those classic literary works in the "forest" composed of reinforced concrete, wash the dusty soul, and in the cold machinery Feel the warmth of life in the society, experience the joy of life in the process, find the meaning of happiness, build your own spiritual world under the guidance of language, and become a "human" in the true sense. This is the significance of language education. Mr. Huang Yanpei, a well-known educator in my country, believes that the purpose of vocational education is to enable the unemployed to have a job, and to make the employed enjoy their jobs.

3 RELATED TECHNOLOGIES

CAD intelligence technology is an emerging technology science for simulating, extending and expanding the human’s mind. Figure 2 shows part of AI.

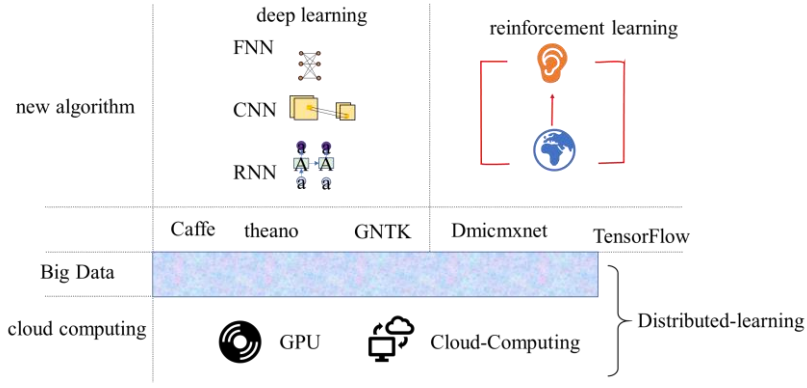

Figure 2: The cornerstone of the great development.

Moreover, with the continuous introduction of various model methods such as these ones. According to different learning modes, learning methods and algorithms, there are different classification methods for machine learning, as shown in Table 1.

Classification	*name*	*definition*	*typical application*
learning mode	Supervised learning	Using a labelled limited training data set, a model is established through a certain learning strategy method to realize the labeling of new data	Natural language processing, information retrieval, handwriting recognition
	unsupervised learning	Using Unlabeled Finite Data to Describe Structures Hidden in Unlabeled Data	Data mining, image processing, etc.
	reinforcement learning	The learning of the intelligent system mapping from the environment to the behavior, and learning based on its own experience	Unmanned driving, Go, etc.
study method	traditional machine learning	Penalize from some training samples, try to discover the laws that cannot be obtained through principle analysis, and realize the prediction of future data behavior or trends	Natural language processing, speech recognition, etc.
	deep learning	Learning Methods for Building Deep Structure Models	computer vision, image recognition
	transfer learning	Refers to using the relationship obtained from data in another domain to learn when enough data cannot be obtained in some areas for model training	Location Based on Sensor Networks
Other common methods	active learning	The most useful unlabeled samples are queried through a certain algorithm, and then marked by experts, and then the classification model is trained with the queried samples to improve the accuracy of the model	

Table 1: Different classification methods.

The further in-depth research of machine learning has also greatly promoted the application in education, such as inductive learning and analytical learning applied to expert systems.

(1) The suitability of machine learning and teaching

Machine learning is the use of algorithms to allow machines to learn patterns from large amounts of data, automatically identify patterns and use them for predictions. Machine learning will be employed in the Table 2.

Teaching stakeholders	*machine learning application goals*
student	The personal learning should be achieved so do the good grades. Based on the learning fun and abilities, the study resources and tasks are offered with the aim to arise the efficiency.
teacher	Through different survey results, explore the actual situation of different students and intervene. The teaching results of the study are analyzed, and the learning situation of some students is summarized.
managers	Summarize, judge and analyze the allocation results of the resource system
courses,	Accurately evaluate the online teaching system

software developers

Table 2: Application goals of machine learning to different teaching stakeholders.

(2) Potential and progress of machine learning teaching application

In the process of imprecise reasoning, if there are multiple premises of the knowledge condition, a weighting factor can be introduced to represent the importance of the subconditions. By assigning the different weights in multiple conditions on the conclusion can be reflected, as shown in Figure 3.

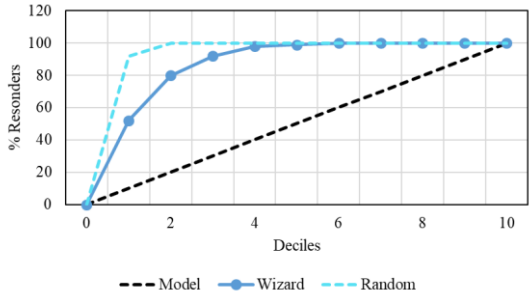

Figure 3: Model Value of Machine Learning.

Generally speaking, if the condition is much stronger and the stress will be better, such weighting factor of one will be better. The symbol considering the weights is here below:

$$CF(A) = \sum_{i=1}^{n} w_i \times CF\left(A_i\right) \tag{1}$$

If the normalization condition is not met, it is calculated by the following formula:

$$CF(A) = \sum_{i=1}^{n} w_i \times CF\left(A_i\right) / \sum_{i=1}^{n} w_i \tag{2}$$

CF(BA) is the credibility of the rule, satisfying (0⩽CF(B, A)⩽1), then the credibility of conclusion B is calculated by formula (3):

$$CF(B) = CF(B, A) \otimes CF(A) \tag{3}$$

The weighting factor of sub-conditions is introduced into the rules, so that the English expert system can express the different degrees of support of multiple conditions for the conclusion and the independent dependence of each condition, which enhances the accuracy of knowledge representation and imprecise reasoning, and also Solved the problem of indeterminate reasoning when conditions are incomplete.

The fuzzy relational formula of the expert system of Chinese assisted teaching is established as follows:

$$\mu_z = \left\{\mu_y \cdot W\right\} \tag{4}$$

Solve equation (5) to get the reasoning mode of this system

$$\mu_y \rightarrow \mu_{CF} \rightarrow \mu_z \tag{5}$$

in:

H, represents the quantized vector (y, Hyz)', py} of the forward inference conclusion y. then formula (6):

$$\mu_P = \sum_{t=1}^{n} w_i \cdot \mu_y \tag{6}$$

It is also a weighted composite logic formula. The truth degree of this conjunction is the weighted cumulative sum of the truth degrees of each sub-item. Therefore, the truth degree of the whole formula increases with the increase of the truth degrees of each sub-form.

Combined with the obtained answer samples of the students, matched and quantify μy:

$$\mu_{y_k} = \frac{x}{n} \tag{7}$$

Knowledge is represented as:

$$\left(x_1, x_2, \cdots, x_n\right)^T = (1, 0, \cdots, 0)^T \tag{8}$$

$$\left(y_1, y_2, \cdots y_m\right)^T = (0, 1, \cdots, 0)^T \tag{9}$$

For the Pth sample, the output error Ep of the network is

$$E_P = \frac{1}{2} \sum_{i=0}^{n-1} \left(t_{Pj} - o_{Pj}^{(l)}\right)^2 \tag{10}$$

According to such empirical formula, the number of hidden layer nodes l can be given:

$$l = \sqrt{m+n} + a \tag{11}$$

Calculate the output of each neuron in the hidden layer and output layer of the network

$$o_{Pj}^{l} = f_j\left(\sum w_{ji}^{l} o_i^{l-1} - \theta_j^{l}\right) \tag{12}$$

$$x(t) = De^{kt} \tag{13}$$

The curve obtained by this function is consistent with the Ebbinghaus forgetting curve. The measured data is plotted, and a straight line can be determined by the least squares method to obtain the specific value, which can be expressed as

$$t_{\frac{1}{2}} = \frac{0.693}{k} \tag{14}$$

$$\begin{cases} \dfrac{dx_1(t)}{dt} = K_{21} x_2(t) - \left(K_{12} + K\right) x_1(t) \\ \dfrac{dx_2(t)}{dt} = K_{12} x_1(t) - K_{21} x_2(t) \end{cases} \tag{15}$$

Equation (15) shows the forgetting speed for the forgetting speed, which is in line with the characteristics for the ones.

4 EXPERIMENTAL RESULTS AND ANALYSIS

The main task of the network-based CAD teaching platform is to connect various modules through network communication, so as to provide free teaching services for visitors, promote mutual communication between teachers and students, and share knowledge more conveniently. Simply put, through the web-based CAD teaching platform, teachers can easily upload courseware, teach online, leave homework or correct homework online, and communicate with students; through this platform, students can easily learn CAD drawing online, teach teachers online Ask questions, online assignments, online exams, and more.

4.1 The State of College Chinese Teaching

Therefore, college Chinese teaching practice should be different from that in junior high school. A teacher may teach several students of different majors of college Chinese, but there is no difference in the selection of teaching content, teaching methods and other aspects. At the same time, the author has fully reflected this phenomenon through a questionnaire survey of 200 vocational students' views on Chinese teaching methods.

Secondly, the repetition of teaching content is also a problem for students to learn. The content arrangement of college Chinese and the content of Chinese courses in high school are often repeated, and there are more ancient works and less modern works, which makes students interested in learning. After all, the students in higher vocational colleges have a low level of Chinese and lack the ability to understand ancient Chinese. If the college Chinese is dominated by ancient Chinese, it will make them more distressed when they are studying.

Therefore, the above two reasons cause students not only unable to exert their own subjective initiative in learning, but also feel bored and distressed about learning. To this end, a survey of the attitude of a classmate in college Chinese class found that 60% of the students had a "indifferent attitude" towards college Chinese with "general interest", and 8% of the students had "no interest". See Figure 4 for details.

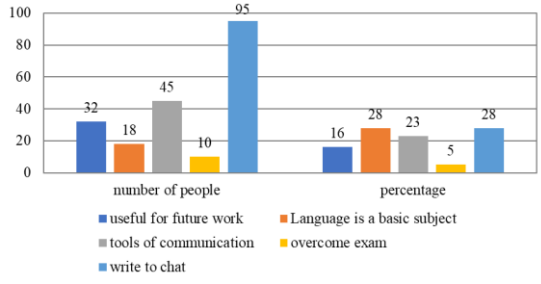

Figure 4: Investigation map of the reasons for students to learn Chinese

It can be seen that the reason for 28% of students to learn Chinese is to write letters and chat. In addition, 23% of the students think that Chinese can be used as a communication tool in communication, 16% of them realize that learning Chinese will be helpful for their future work, and 5% of the students are in order to cope with exams. Only 28% truly recognize that Chinese is the basic subject of each subject.

4.2 Analysis of Teaching Effect

In order to understand the students' attitude towards CAD technology teaching, after the implementation of CAD technology teaching in the experimental period, the author promptly conducted a questionnaire survey on the students' preference for CAD technology. In China, words

such as animation, voice, and micro-video are used instead of CAD technology. The survey results are shown in Figure 5 below:

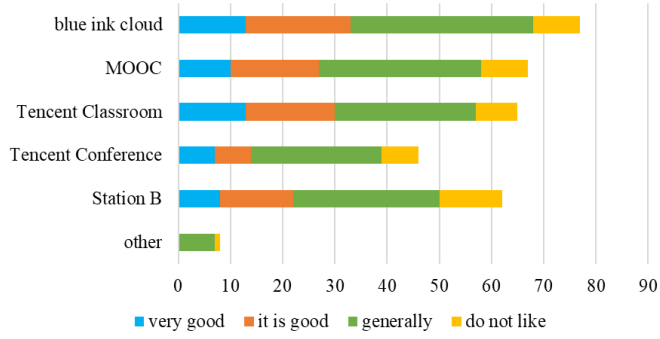

Figure 5: The students' preference for classroom software before and after the experiment.

According to the figure above, among the 25 students surveyed, 19 students prefer this way of class before the experiment, and 6 students think that CAD technology teaching is average or does not like CAD technology. After the experiment, a total of 21 students liked this way of teaching, and 4 students thought it was normal or disliked. It can be seen that most students like CAD technology, and the number of people who like CAD technology teaching increases after the experiment, which shows that the teaching method of CAD technology applied to English teaching design has been loved by most students. The love of technology teaching has been improved, which shows that the application of CAD technology to college Chinese classroom teaching has a good teaching effect.

In order to understand students' feelings about CAD technology teaching, we designed the question "Which situation do you think you have a deeper understanding of the text?" The survey results are shown in Figure 6 below:

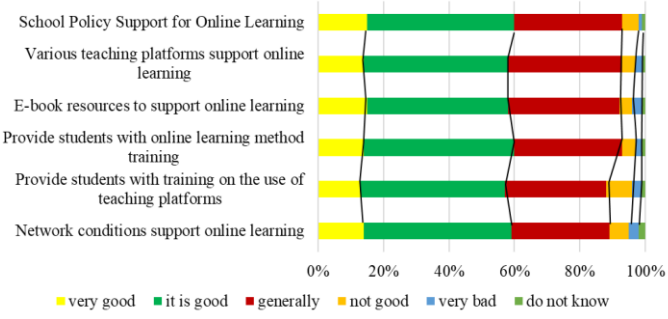

Figure 6: Data graph of survey results.

The questionnaire data showed that 56% of the students believed that the self-study combined with the video had a deeper understanding of the text. This result was proportional to the students' preference for CAD technology, indicating that CAD technology can help students understand, thereby improving the effect of students' English learning.

In order to understand the students' learning situation in class, the author set up a concentration question - how do you think your concentration level in class? The survey results are shown in Figure 7 below:

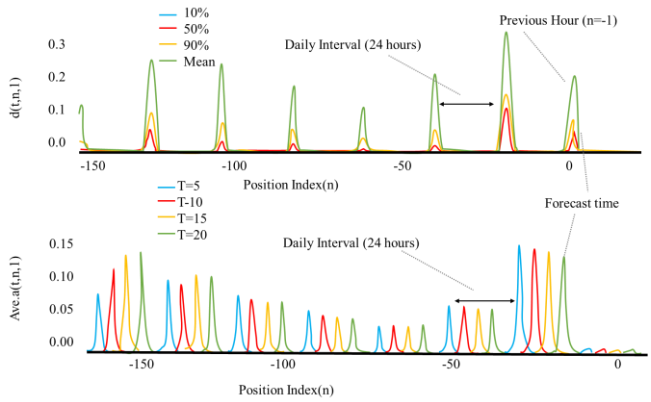

Figure 7: Attention weight pattern over time.

The survey data showed that the concentration time of the was mostly in the range of daily minutes to 10 minutes. The results of the pre-test and post-test of the control group did not change much: the results of the experimental group showed that more people were able to concentrate for 10 minutes and 20 minutes after the experiment than before the experiment. It shows that CAD technology teaching can maintain students' attention and improve their interest in learning.

This shows that CAD technology in promoting the teaching effect to a certain extent, and the application of CAD remonstrance will have great prospects. The teaching will promote the development of teaching and CAD technology. In addition, organizations such as society and schools should also attach importance to the teaching application of CAD technology, provide a good environment for teachers' CAD technology teaching, and promote teachers to actively and actively apply CAD technology for classroom teaching.

5 CONCLUSION

CAD technology is a means of improving the efficiency of product design, and it is also an important way to improve the quality of course teaching. The learning of CAD technology should also be based on solving practical engineering problems. To sum up, our main point of view on the teaching reform of CAD technology courses is to take the comprehensive application of engineering design knowledge as the main line, and organically combine CAD technology with relevant professional technical basic courses. Based on CAD technology and knowledge fusion as a means in teaching, modern and intelligent teaching methods should be used in college Chinese teaching, aiming at cultivating students' autonomous learning ability and comprehensively improving students' Chinese literacy, unifying textbook standards and breaking through The traditional teaching method attaches great importance to Chinese teaching from the ideological point of view, and creates a college Chinese classroom with the characteristics of network information management, independent learning and interaction under the multimedia environment.

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