Using Multiple Linear Regression SPSS Method to Analyze the Promotion Effect of Information Education on College Chinese

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Abstract. This paper uses multiple linear regression SPSS analysis method to analyze and demonstrate the promotion effect of information education on college Chinese teaching. Informatization refers to the historical process of cultivating and developing the new productive forces represented by intelligent tools and making them benefit the society. The application of informationization in education and teaching is to use modern intelligent tools and information technology to develop educational resources and optimize the educational process. Under the guidance of modern educational ideas and theories, a new way of education and teaching is launched. With the rapid development of modern science and technology and society, traditional subjects such as college Chinese need to explore information education, develop educational resources, optimize the education process and launch new education and teaching methods. Grasp learning dynamics and adjust teaching strategies; Active classroom atmosphere, improve the teaching effect.

Keywords: Multiple linear regression · SPSS analysis · Information education · College Chinese · Promoting effect

1 Introduction

In the 1960s, Tadao Meizhao, a Japanese scholar, put forward the concept of informatization, which was translated into English and spread to the West. In the late 1970s, the concepts of "information society" and "informatization" were widely used in western society. In 1997, China held the first National Conference on Informatization, which defined informatization and social informatization in China. In 2008, the Ministry of Industry and Information Technology, PRC was established, demonstrating China's commitment to it application. On May 31, 2022, At the closing ceremony of the United Nations World Information Summit (WSIS), Dr. Liu Chuang, researcher of Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, and member of the China Association for Science and Technology United Nations Advisory Information and Communication Technology Special Committee, delivered a video presentation entitled "Integrating ICT and Intellectual Property on Geographical Indications Supporting SDGs in Local Places".

From the 1990s to today, Although China started its informatization development later than Japan and Europe and the United States, it has struggled to catch up and not lag behind. As a big country, the development of information technology in the world cannot be separated from China's strength. Reform and innovation is the precious quality of Chinese people. The construction of modern universities and modern course teaching should also reform and innovation and develop information education. For traditional subjects like college Chinese, it is more necessary to explore information education, develop educational resources, optimize the educational process and develop new educational teaching methods. Next, will discuss the meaning of college Chinese information and college Chinese information specific process.

2   Relevant Theoretical Foundations

2.1   The Importance of Education

Education is the foundation of a nation and the hope of the future development of society. Education is the first priority of every country and nation in the past, present and future. Moreover, education has never been static. Take China as an example, from private schools to official schools, from disciples to teachers to modern schools, all change with time, keep pace with The Times, constantly reform and development. College Chinese is the basic course of China's higher education and a compulsory course for all majors. As an advanced mother tongue course, it plays an important role in Chinese universities. In the eyes of most people, such courses are the most traditional teaching subjects, but tradition is not a synonym for rigid, on the contrary, tradition can also be fashionable. Moreover, if such traditional courses can be informationized, is not the best bellwether of educational informationization? Therefore, the informatization of college Chinese teaching is of great significance.

2.2   Education and Teaching Need Informatization

The first National Conference on Informatization held in 1997 defined informatization as follows: Informatization refers to the historical process of cultivating and developing the new productive forces represented by intelligent tools and making them benefit the society. Thus, information technology is applicable to all walks of life, all aspects. The application of informationization in education and teaching is to use modern intelligent tools and information technology to develop educational resources, optimize the educational process, and develop new educational and teaching methods under the guidance of modern educational ideas and theories. MOOC (massive Open online Courses) is a major achievement of education and teaching informatization, which is a new education and teaching method created by the application of informatization in education and teaching.

The Chinese often say, "The environment determines the horizon." Therefore, all people want to expand their knowledge in more developed cities, and all students want to enter more excellent universities to receive better education. However, on the one hand, the capacity of developed cities and excellent universities is limited, and on the other

hand, not all people have such time and economic conditions. Education and teaching informatization has effectively helped everyone to break the regional restrictions and solve the time and economic difficulties. No matter you are in cities or villages, China or other countries, through the MOOC platform built by education informatization, you can listen to the explanation of famous experts from world-famous universities anytime and anywhere, and enjoy the best education and teaching resources. Nowadays, countries around the world are vigorously developing MOOC platforms, and there are many famous MOOC platforms in various countries.

2.3   College Chinese Teaching Needs Informatization

In the concept of the public, education and teaching informatization seems to be more suitable for the application of computer, artificial intelligence, physics, chemistry, biology, mathematics and other disciplines in the teaching activities, such as Chinese traditional subjects seem to be incompatible with information. It's not. To put it simply, computer, artificial intelligence, physics, chemistry, biology, mathematics and other disciplines can achieve three-dimensional teaching through experiments and verification even if they do not use information means. College Chinese information can better develop educational resources, optimize the educational process, make college Chinese education and teaching alive, become a curriculum of flesh and blood. To put it simply, in terms of attracting students, the recitation of classical poetry by the lecturers may not be as interesting and refreshing as the recitation of classical poetry by robots [2].

As an advanced course for Chinese college students to receive mother tongue education, College Chinese is a very important public basic course in Chinese universities. The task is daunting. However, because it is a public class, college Chinese class is often compressed, and is often a large class mode. Class hours are few, students are many, the task is heavy, in the limited class hours, to carry out teaching activities, but also to test the teaching effect, it is quite difficult. Education and teaching informatization is the Gospel of college Chinese teaching. With the vigorous development of information technology and the full use of new technology, college Chinese teaching can also have the following specific improvements: first, it can better realize three-dimensional teaching and longitudinal deepening teaching, to create a wonderful classroom; Second, teachers can quickly understand and master the teaching situation, timely adjust the teaching strategy, so that the classroom flexible and vivid; Third, the teaching content can be timely feedback and communication, timely verification of the teaching effect.

3   Model and Data

3.1   Famous MOOC Platform

In today's information-based development, countries in the world, whether international or domestic, there are still uneven development of educational resources, under such circumstances, the use of information technology to build a large network teaching platform can better help achieve the comprehensive coverage of educational resources. Of course, there are still some countries in the world where the network is not sound and

Table 1. Main information-based teaching platforms at home and abroad

Set up institutions	Platform
Stanford University	coursera
MIT and Harvard	edX
Japan	Gacco
UK	Futurelearn
France	FUN MOOC
Tsinghua University	xuetangx
Higher Education Press	wmooc.icourses

the development of information technology lags behind. It is impossible for the large network teaching platform to cover any scope of the world. However, in the limited scope as far as possible coverage, also played a very important role. In addition, the construction and use of large-scale network teaching platform is conducive to the exchange of different cultures. Through the network teaching platform, the traditional culture of all countries in the world can be effectively spread. Therefore, nowadays, the more advanced countries in the world have invested a lot of manpower, material resources and financial resources to build large online teaching platforms [3].

Nowadays, all countries in the world are vigorously developing MOOC platforms. There are many famous MOOC platforms in China, the United States, Japan and other countries. The main excerpt is as shown in Table 1.

3.2 Master Learning Dynamics

There is no investigation, there is no right to speak, and all experiments should be built on the situation of mastering actual data. In order to adjust the teaching content and teaching strategy according to the actual situation of students, it is necessary to master the learning dynamics of students.

To master the learning dynamics of students, it is very important to know whether students take the initiative to learn after class. Through information technology, we can analyze the access data of the course (Fig. 1).

From the chart, it can be seen that the data of students' visits fluctuates. After careful analysis, it can be seen that there will be a peak of visits after each course, but the overall visits of students are relatively low. In view of this situation, the teacher made a decision to assign points for visiting, effectively promoting students' learning visit. Without the support of information technology and the information development of College Chinese teaching, it is impossible to understand students' curriculum learning dynamics so clearly, and it is impossible to adjust strategies so timely and put forward effective countermeasures.
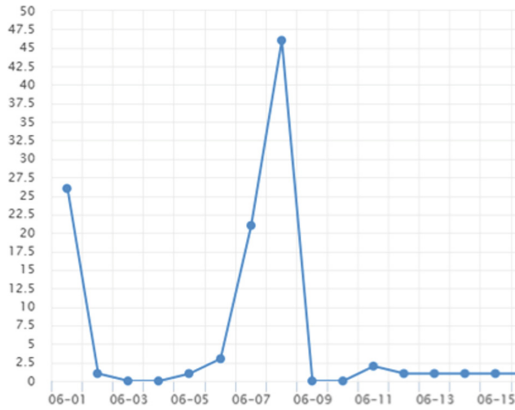
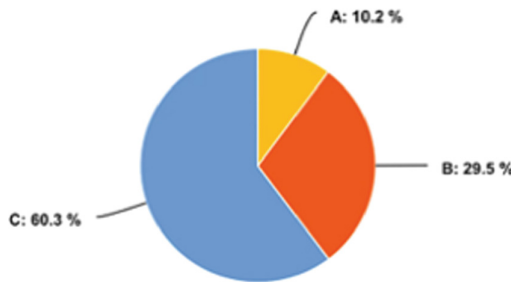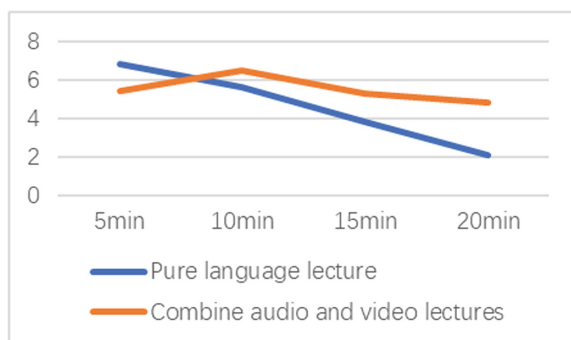**Fig. 1.** Students of a class visited statistics.

Fig. 2. Student choices.

3.3 Know the Reception

If teaching is only the teaching of students, regardless of students' learning, it is impossible to achieve the ideal teaching effect, and also violates the original intention of teaching. Therefore, teachers must know the status of students receiving teaching information at any time in the teaching process.

In the process of teaching, if the teacher wants to know the students' reception of knowledge at any time, he can ask questions in class and let the students answer them immediately, and make statistics through information technology to master the students' reception of knowledge. For example, when learning zheng Banqiao's article, I put forward a question: what is the ideological core of Zheng Banqiao's "rarely confused" view? Give three choices: A) be smart and turn A blind eye; B) tolerance, to be tolerated and tolerated; C self-study, take a step back. With the help of information technology, students use mobile phones to make instant choices in class. The selection result is shown in Fig. 2.

As can be seen from Fig. 2, 10.2% of the students chose A, 29.5% chose B, and 60.3% chose C. It can be seen from the result that most of the students have A good reception and can correctly understand Zheng Banqiao's thoughts. However, some students still have A poor understanding of Zheng Banqiao's thoughts and need supplementary explanation.

Fig. 3. The teaching effect of different teaching methods.

4   Empirical Analysis

SPSS software was used for statistical analysis of the experimental data. Multiple linear regression analysis was used to show that the traditional pure language teaching and the mixed teaching with audio and video means supported by information technology have different attraction and teaching effect on students. The results are as shown in Fig. 3.
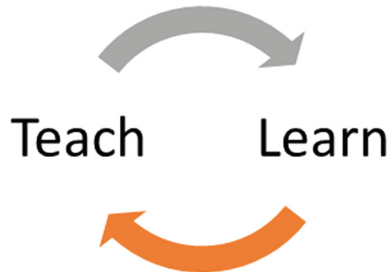
As can be seen from Fig. 3, the teaching effect of pure language teaching will increase rapidly at the beginning of teaching, but will soon decline, and will continue to decline as time goes on. However, combined with audio and video technology teaching will present a continuous improvement of the effect.

4.1   Informatization Enriches Teaching Resources and Lays the Foundation for Learning

First of all, we can use information technology to build a network teaching platform and share teaching resources.

Take Xuetang Online, an online teaching platform in China, for example. 630 universities have participated in the construction of the platform, with 5,861 online courses. The universities participating in the construction include many influential universities in China, such as Tsinghua University, Peking University, Beijing Normal University and Xi 'an Jiaotong University, as well as some famous universities outside China, such as Cornell University in the United States and St. Petersburg University in Russia. Course teaching resources cover computer, economic management, literature, history, philosophy and other disciplines, divided into undergraduate education, graduate education, vocational education and other categories, to meet the needs of different majors and different levels. It can be said that rich teaching resources are widely shared.

Secondly, we can make use of the network teaching platform and make extensive use of rich teaching resources. All support teachers to build their curriculum individually. After class, teachers can upload relevant course resources, such as thinking exercises, background introduction and extended reading, according to the teaching needs, to enrich the teaching resources.

Fig. 4. A diagram of teaching and learning.

4.2 Grasp Learning Dynamics and Adjust Teaching Strategies

As teachers, we all know that teaching should never be a one-way output process, not just teachers to students to instill knowledge [1]. In order to achieve good teaching effect and let students gain more knowledge, it must be a cyclic process of interaction between teachers and students. In order to show the relationship between teachers' teaching and students' learning in a more three-dimensional way, a cycle diagram is formulated as in Fig. 4.

In order to make this cycle present a virtuous circle, teachers should not only actively understand students' learning needs, earnestly prepare lessons and give excellent lectures, but also keep abreast of students' reception of knowledge and dynamics of course learning and timely adjust teaching strategies in the teaching process. Only in this way can we ensure that better teaching continues and that students learn better. Therefore, it is particularly important to master the students' reception of knowledge and the dynamics of course learning.

Such as class when put forward some questions, the use of information technology statistics students answer the situation, the first time to understand whether students correctly understand the learning content and other learning status. According to students' learning status, timely adjustment of teaching strategies is conducive to teachers' understanding of students' learning status, timely put forward corresponding requirements and interpretation and guidance.

4.3 Active Classroom Atmosphere, Improve the Teaching Effect

College students thinking active, lively character, thinking jump, boring classroom will make them hate, there is no teaching effect.

In the teaching process, timely raising questions for students to think and answer is an important method to cultivate students' critical thinking ability, as well as an effective way to improve students' participation in class and activate the teaching atmosphere. However, many college students are not willing to answer questions openly in class for fear of making mistakes, making a fool of themselves and being seen as utilitarian. At the same time, there is not enough time for students to answer questions one by one and express their opinions in class due to the small number of class hours and large number of students. So often can only invite individual students to answer, jade is not conducive

to full participation of students. There are network teaching selection, answer, discussion, scoring and other classroom activities, can greatly enrich the classroom teaching methods, active classroom teaching atmosphere. The classroom teaching atmosphere is active, students' enthusiasm for learning is naturally improved, and the teaching effect is also naturally improved.

5 Conclusions

Although education and teaching has a long history, it has a long history, from teaching by mouth and ear before the invention of words, to drawing and writing on the ground with branches before the invention of paper and pen, to using teaching aids to achieve multi-directional, three-dimensional and colorful teaching, and then to today's use of modern science and technology, making education and teaching break geographical restrictions, setting to break the limitations of time and space, and realizing information-based modern education and teaching, which has achieved a leap in education and teaching. The same is true of College Chinese courses [4].

Through modern audio technology, audio teaching can be realized in college Chinese teaching. Through the use of audio technology, let college Chinese speak out, sing out, get rid of the planar, monotonous, rigid traditional image of college Chinese, make college Chinese more vivid, and more three-dimensional. Through the image technology of modern technology, the picture teaching can be realized in the teaching of college Chinese. Literary works, especially classical literary works, involve some things that are special products of ancient times, which are hard to find in today's daily life, causing difficulties for students to understand. Before the wide application of multimedia technology, the teacher or look for the real object, or even compare with the painting, or pure description, so as to do all eighteen martial arts, difficulties but little effect. With the wide application of modern technology, there is a good solution to this problem. We only need to show some corresponding pictures in the teaching courseware to help students understand it simply and effectively. Dynamic teaching can be realized in college Chinese teaching through modern visual technology. Through video, students can not only know more about the historical background knowledge related to the text, but also show the plot more vividly. When reading and explaining the text, students can better understand the historical background by combining relevant videos in TV plays and movies, and better understand the appeal and expressiveness of words and images.

Informatization is the inevitable process of social development and scientific and technological progress, as well as the inevitable trend of modern education and teaching development. The informationization of college Chinese education and teaching is to use modern intelligent tools and information technology to develop college Chinese education resources, optimize the teaching process of college Chinese, and develop a brand new way of education and teaching under the guidance of modern educational ideas and theories. This paper uses multiple linear regression SPSS method analysis can be concluded: college Chinese teaching information is the change of The Times, social development is inevitable. It is beneficial to master learning dynamics and adjust teaching strategies; Conducive to active classroom atmosphere, improve the teaching effect. As for more comprehensive research and more positive effects of college Chinese education

informatization and teaching methods, we look forward to the follow-up research and demonstration.

Appendix

The statement: Minor changes are published as is, and major changes are rejected.

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