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# An Analysis of Innovative Development Based on Computer Assisted in Promoting the International Transmission of Chinese Culture under the Background of Big Data

Chunwang Liu

School of Humanities and Education, Xijing University, Xi'an, Shaanxi, China

## ABSTRACT

The study of Chinese culture by foreign scholars is becoming increasingly prevalent, and as a result, there is a growing need to find new and innovative ways to promote the transmission of Chinese culture. To this end, this study proposes using computer-aided technology and big data analysis to analyze existing cultural communication methods and optimize communication programs. The use of big data analysis can provide valuable insights into the preferences and needs of different audiences, which can be used to tailor communication strategies to be more effective. Additionally, computer-aided technology can be used to create engaging and interactive experiences for audiences, further enhancing the effectiveness of cultural communication efforts. One of the key objectives of this study is to develop a series processing mode that optimizes the program of communication for scientific guidance. To achieve this, the researchers will conduct adaptability analysis from the perspective of computer technology in the context of big data. By applying computer-aided technology, the research team will analyze existing methods of cultural communication and optimize them for maximum effectiveness. To ensure that the optimized programs are effective and respectful of the promoted culture, the researchers will work closely with experts and members of the cultural community. This will help to ensure that communication efforts are appropriate and culturally sensitive. The results of this study will be the development of an analysis of big data sets that can be used to guide the promotion of Chinese culture to a wider audience. To test the feasibility of the optimized programs, the researchers will conduct a series of innovative program tests. Ultimately, this study aims to create more effective and engaging programs that can help share the richness and diversity of Chinese culture with a wider audience.

## ARTICLE HISTORY

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## Introduction

Chinese culture, as a distinctive culture of our country, has a thousand-year historical base and cultural accumulation. There is an inefficient Chinese teaching mode in the process of applying Chinese communication in the

**CONTACT** Chunwang Liu  20120088@xijing.edu.cn  School of Humanities and Education, Xijing University, School of Foreign Language, Xijing University, Xi'an 710123, Shaanxi

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currently widely used cultural transmission planning, which not only misleads international Chinese hobby groups to some extent but also affects the development of cultural communication planning Promotion (Chen et al. 2015). As a result, this study will enhance the cultural transmission strategy in computer aid, beginning with the identification of inefficient variables in the Chinese teaching mode (Wang et al. 2015). Furthermore, for the entrance point of Chinese programs, a computer-aided model is developed, and a computer-aided model is utilized to systematically recreate the low-efficiency model (Zhang et al. 2015).

Nowadays, online learning has become an important way for people to acquire knowledge. Learners can obtain learning resources through the Internet and mobile devices regardless of time and place restrictions. The traditional offline education model has been greatly challenged (Fang and Ailin), and the gradual popularization of online education will prompt education to meet the new changes. In the post-epidemic period, various colleges and universities have introduced measures to popularize online teaching. Online teaching will become a normal educational activity. Clarifying the evaluation criteria of online teaching is of great value to explore the rules of online teaching. Computer Aided Design (CAD) online course is a basic course for language majors and an important skill to express creative ideas of the course (Ibrahim 2017).

Foreign language learning is a process which combines cognitive behaviors and new psychomotor skills. Gradually the learners will acquire another system of communication (Zhang et al. 2015). They will come to realize that the new language is not only a set of codes by which they can express their own ideas, but an important part of a culture different from their own. In fact, they will find that some distinctions they make in their mother tongue cannot be made in the new language and that other ways of thinking and experiencing are essential if they are to communicate in the language. The foreign language learning carried out in this research is actually English learning (Chen).

Scholars in the area of intercultural communication conceptualize ICC differently. The concept of intercultural communicative competence can be said to be an extension of the communicative competence proposed by Dell Hymes (1972). Fantini and Tirmizi (2006) define ICC as “a complex of abilities needed to perform effectively and appropriately when interacting with others who are linguistically and culturally different from oneself.” In English as foreign language classrooms, the goal of ICC is to prepare learners for communicating with people from other regions or countries who have different cultural backgrounds (Hao 2022). The quality of teaching effect directly affects the training quality of the professional talents. Therefore, the evaluation of its online teaching effect is very important to enrich the teaching form and improve the teaching system of this kind of course (Gao, Isaeva, and Rocha 2020).

The application of computer aided technology plays an important role in design. The first is the parametric design in computer aided design, widely used in industrial design modeling, architectural design modeling, plane three-dimensional pattern design, input parameters, computer aided adjustment and transformation of various modeling. Secondly, in computer-aided design, the technology of automatic design software and automatic drawing is becoming more and more mature. Computer aided technology has the advantages of high efficiency, imitativeness and foresight (Hao, Luo, and Pan 2021).

During the building phase, the design and analysis are initially carried out depending on the findings of the automated assessment (Chen 2022). The design flaws are categorized into frames, and the HMM model is utilized to classify the entire structure and summarize the Chinese characters with a low degree of recognition (Zhao 2017). The computer-aided model was then introduced, and the algorithm was stage-by-stage input into the computer-aided processing algorithm to officially input and receive the outcome of the aforesaid method (Minguillo, Tijssen, and Thelwall 2015). Following the aforementioned stages of screening, it will essentially compensate for the inefficient design of the automation model in the past, hence improving the system's design capabilities. Following the above layers of screening, it will fundamentally compensate for the inefficient design of the automation model in the past, enhancing the system's design capabilities, solving the root cause of inefficient design, and optimizing the overall performance of the system (Hassan Seifeddin, Zakareya Ahmed, and E 2015).

It is an innovative proposal for teaching content and teaching media to combine cross-cultural communication learning and case teaching. From the perspective of cross-cultural communication, without the knowledge of cross-cultural communication, any international exchange cannot be carried out. Only under the condition of conforming to the cross-cultural theory, grasping code switching and using the code switching theory can avoid the possible ambiguity in the negotiation process (Alhaj 2020; Yang et al. 2021). Therefore, in the process of computer-aided practice, it is very important to pay attention to the phenomenon of cross-cultural communication. Specifically, the novelty of this paper lies in its application of computer-aided technology and big data analysis to the promotion of Chinese culture. While there have been previous studies on the promotion of culture using technology, this study takes a unique approach by combining big data analysis with computer-aided technology to optimize existing communication methods. Additionally, this study proposes a series processing mode that optimizes the program of communication for scientific guidance, which is a new and innovative way of approaching cultural communication. By using these new methods, the researchers hope to create more effective and engaging programs that can help to promote the richness and diversity of Chinese culture to a wider audience.

The motivation for this paper is to find new and innovative ways to promote the transmission of Chinese culture to a wider audience, especially foreign scholars who are increasingly interested in studying Chinese culture. While there are many existing methods for cultural communication, this study proposes the use of computer-aided technology and big data analysis to optimize these methods and make them more effective.

## State of the Art

With the in-depth research in the field of computer technology, the deep learning technology of computer is increasingly associated with various industries, helping to promote the progress in many fields. The organic integration of computer systems and coding algorithms is the major focus in the field of integration and statistics of Chinese teaching reform projects (Lu et al. 2015). It is very advanced in the algorithm for generating inefficient factors of the Chinese teaching mode, and its algorithm is very accurate (Lancioni et al. 2015). One paper combines theory and computer aid and applies it to the reform of the Chinese teaching mode (Li et al. 2015).

Improving the adaptability of teaching design algorithms and objectives can be achieved through computer-aided development (Chen, Wang, and Wei 2015). The theoretical basis of CAI is the soil for the reform of Chinese teaching mode. When it is applied in the teaching process, we need to explore the mathematical formula behind it. This paper is based on computer aided integration, which has excellent performance and adapts to the existing soil, making the optimization algorithm of Chinese teaching mode designed more practical and accurate.

In view of the evaluation system research of online courses, many scholars have put forward various suggestions and views (Fang et al. 2022). For example, using results-oriented theory to construct evaluation indicators; Improving the sense of experience in learning was taken as the standard of course quality inspection (Hao, Luo, and Pan 2021; Li, Li, and Tang 2020; Shuja et al. 2021; Ye, Zhou, and Wu 2020) With the goal of modularization and operability of evaluation indexes, an open network course system is constructed. Text mining method is used to obtain the evaluation index with objective data. The above views of online course quality evaluation construction have certain guiding significance in the effect evaluation of ordinary online courses, but there are limitations in the evaluation of computer-aided design online courses (Huang, Wang, and Zhang 2021; Li et al. 2019; Ma et al. 2022).

All in all, at present, the application of computer assisted language teaching in teaching Chinese as a foreign language faces many challenges and opportunities. Chinese teachers should face the challenges, actively seek for coping strategies, seize the opportunities, improve the quality of teaching Chinese as

a foreign language, and promote the development of teaching Chinese as a foreign language. At the same time, teachers of Chinese as a foreign language should deeply understand the application and characteristics of computer-assisted language teaching in the process of grammar teaching, oral teaching, vocabulary teaching and writing teaching, create a good learning atmosphere, stimulate students' interest in learning, meet students' learning needs, and then improve students' pragmatic ability and oral communication ability. Finally, the comprehensive language ability of students can be improved (Hao, Luo, and Pan 2022; Ratnesh et al. 2021).

## Methodology

### *Computer-Aided Model Building*

The analysis of the inefficiencies of traditional communication programs is a prerequisite for the research of computer-aided techniques (Gao and Lin 2022). In the process of teaching reform, the traditional teaching model has been unable to meet people's requirements for improving teaching quality (Geng et al. 2021), and the relevant teaching models and auxiliary teaching tools have been gradually replaced, making the computer aided teaching platform the main support for teaching activities. At present, most colleges and universities have introduced the auxiliary teaching platform to improve the overall teaching quality and efficiency. Although they have achieved good results in the early stage, the long-term application has gradually exposed some problems, such as the rigid auxiliary teaching mode, unreasonable application mechanism, and unclear application scope, resulting in the inability to obtain positive feedback from students in the classroom. Therefore, this paper develops the design and verification of CAI platform based on process management. Considering the stability and particularity of the test results, combined with the current teaching needs, the teaching platform takes process management as the guiding goal to build a more flexible and changeable teaching management and control platform. The above Figure 1 states that Teaching and tests are related; student performance is assessed while teaching (Geng, D, and V).

First, the daily teaching content is imported into the database according to the plan, and a new database is formed by directional integration of resources. Build a data encryption program within the scope of calibration, set the registration serial number, connection key, associated program and transmission data in the database for the application of resources, and create a stable operating platform environment.

Based on this automated Chinese program coding, for automated processing to fit together, we will use a branch of the Chinese program coefficient, then  $n$  That is, the number of genetic coefficients,  $\phi_B$  Number

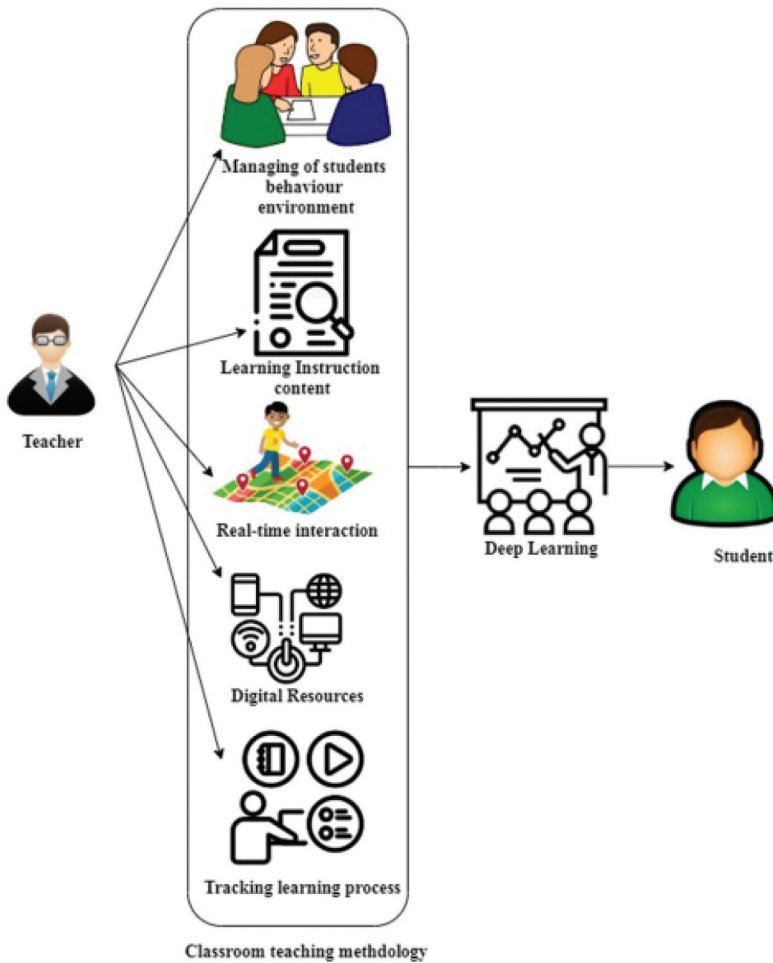


Figure 1. Structure of classroom teaching methodology.

of categories for the Chinese program number,  $a$  On behalf of international Chinese hobby group Chinese optimization program optimization coefficient.

$$N = 1.2a_G + 1.35\varphi_B a_Q$$

Among them  $T$  represents the numbering of the independent algorithms in the operational optimization of this promotion system, which, can effectively aggregate the vast reform exchange. In addition,  $A$ ,  $A$  Represented international Chinese hobby groups to promote system promotion coefficient. Through the promotion of the coefficient of support, can be calculated in the process, get the promotion and development of the current overlapping position, the following formula:



$$\sum \frac{n_i}{\sum n_i} \times \frac{\sum n_i}{N_i} = Z$$

Obtaining the best node coefficient represents the final solution of the optimization of Chinese teaching operation. In the following formula  $T$  that node coefficient,  $u_0$  On behalf of the main factor, each of the two main factors represents the two actual factors, respectively, through the performance of the main factor used to protect the final test. Factors to a certain extent determines the operation of the algorithm, the main factor for the operation of the teaching of Chinese characters also has a strong weighted index, therefore, in the process of calculating the main factors must be strictly controlled, the function of expression can be expressed as:

$$Z = \frac{u_i}{2} + u_i^2 + \frac{o_i}{o^{0.8}} - \frac{2o_i}{u_i}$$

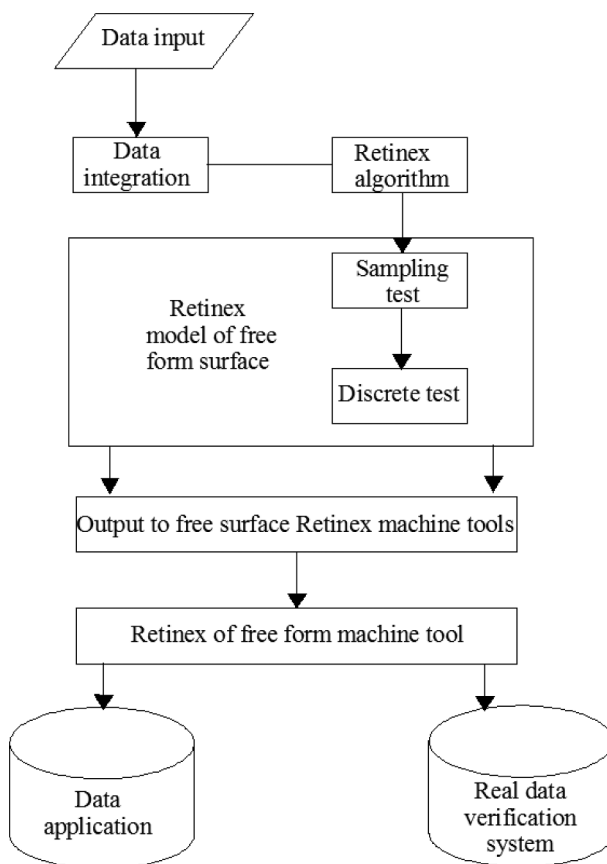
After the entire optimization was finalized, we aimed at our hypothesized algorithm  $Z$  And optimize the output of the hybrid algorithm between the accuracy of the guarantee can be further based on the optimal value of the above formula, as the main factor for the overall substitution, to determine the reform of the convection factor, we must ensure that the system volatility and other factors for Optimization function cannot be affected. Due to the fact that the influencing factors cannot be technically eradicated, it must be further processed by identifying and applying the method. The use of flow chart model for the expression and the specific process are shown in [Figure 2](#).

### **Chinese International Propagation Program**

In order to solve the problems of huge teaching data, data confusion and cumbersome process, this paper designs a dynamic process aided teaching module with process management as the guiding goal of system software construction. Taking the auxiliary teaching course as the goal, combined with the teaching attributes and professional characteristics of the discipline, the auxiliary teaching sub module is designed and constructed. The teaching content, teaching plan and executive outline of the course are introduced into the platform. The instruction preparation system is used to prepare the corresponding teaching instructions according to the above basic implementation data. At the same time, according to the teaching progress, relevant teaching cases need to be introduced into the platform to further improve the teaching procedures. In addition, program management and control differentiates auxiliary teaching modules according to discipline characteristics and teaching content, and the built-in control management process is dynamic.

As shown in [Table 1](#), we use the reform of convection processing software factor processing stage  $Z$  To represent the Chinese character





**Figure 2.** Analysis of innovation and development based on computer-aided promotion of international exchange of Chinese culture.

**Table 1.** Innovations and developments to promote the international exchanges of Chinese culture based on computer aided analysis.

| Information integration phase      |               |                     | Automatic design data of free form surface |                |                    |
|------------------------------------|---------------|---------------------|--|----------------|--------------------|
| Factor                             | Accuracy rate | Resonant adjustment | efficiency                                 | Overall effect | Remarks            |
| Finite element method of automatic | automatic1    | commonly            | commonly                                   | excellent      |                    |
|                                    | automatic2    | secondary           | excellent                                  | commonly       |                    |
|                                    | automatic3    | secondary           | excellent                                  | excellent      |                    |
| Traditional inverse algorithm      | automatic4    | excellent           | secondary                                  | excellent      | Consider stability |

recognition algorithm, useXYThe standard data representing the operation model of Chinese characters teaching and learning, through the comparison of the standard data and the fluctuation data, finally obtains the deviation factor and the range between the two. And then through the cultural transmission planning for this part of the problems arising from the deal with the computer processing can greatly improve efficiency. This section of the design first passeddBuild a corresponding probability

calculation, after entering the corresponding training algorithm, get an optimal result  $Z$ . The formula is used as follows:

$$Z(i) = \frac{Y^4 - \sqrt{d^2 - 1}}{X^2 - \sqrt{d - 1}}$$

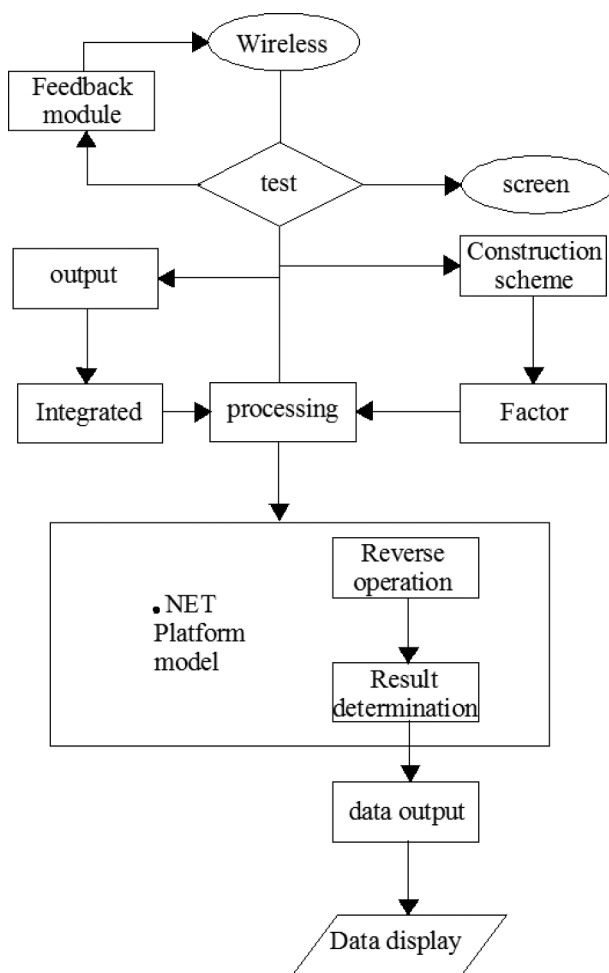
Using this formula, one can derive the most optimal solution of the computer-aided model over cultural transmission planning and take the resulting fit value for further calculations, using  $Z$  on behalf of the optimal coefficient,  $x$  represents the standard coefficient. Supplemented by cultural transmission planning, both the minimum probability of error can be measured, but also the error index to a minimum. Use the formula to do the corresponding optimization function, among them  $P(i)$  represents the collection of optimization numbers,  $L$  said the optimal coefficient,  $n$  said vertical coefficient, the use of these data to establish the corresponding functional relationship, the corresponding differential sequence. If you encounter the corresponding classification problem, we can take an aggregate function, assuming  $d$  the value in the area  $(-1, 1)$ , the optimal function as follows:

$$Z(x) = x_i^2 + x\sqrt{x_i^{i-1}}$$

$$Z(i) = \sqrt{d^n - d^{0.4n}} \sum_{i=2}^{-n} L - \frac{\sqrt{d^2 - d^{0.4}} \sum_{i=2}^n}{5d}$$

After determining the optimal value, we will supplement the cultural communication planning according to the overlapping point of our hypothetical algorithm and the reform of the convection processing software, and apply it to the model according to all the detected optimal value combinations to achieve the optimization of path selection, so that we can find the smallest expected risk. Because of the unknown factors that affect the optimization of Chinese character teaching operations, it is very difficult to directly calculate the minimum value. However, using the culture communication planning based on the known training sample set, the calculation of the accuracy of the score can consider calculating the average value of the average value. The algorithm flow is shown in [Figure 3](#) below.

Secondly, through the calculation and integration of information data, the design process will focus on path selection and automation model lap. In data computation and collection, taking the reform of the convection processing software framework set up above as the basis, we classify and encode the content from the path selection into three major aspects: path selection, path optimization Picking and optimization of technical data. Through the optimization of the system optimization program, we can come to a large consolidation direction, as a small data disassembly and reorganization, and then



**Figure 3.** Based on computer-aided analysis to promote innovation and development of Chinese culture international exchange.

carry out efficient performance planning, and its convergence with the reform of the convection processing software model, draw the volatility optimization program Range. As the convergence of the reforming convection software framework, its design accuracy requirements must also meet the principle of algorithm construction, and its advantages must be determined. Finally, we finish the work of this session; collect all the options of path selection, number the optimal solution by computer technology, and then finish the construction of this model.

### **Results Analysis and Discussion**

The charm of Chinese culture lies in its ever-changing intrinsic meaning and hidden meaning. After the completion of the above-mentioned promotion

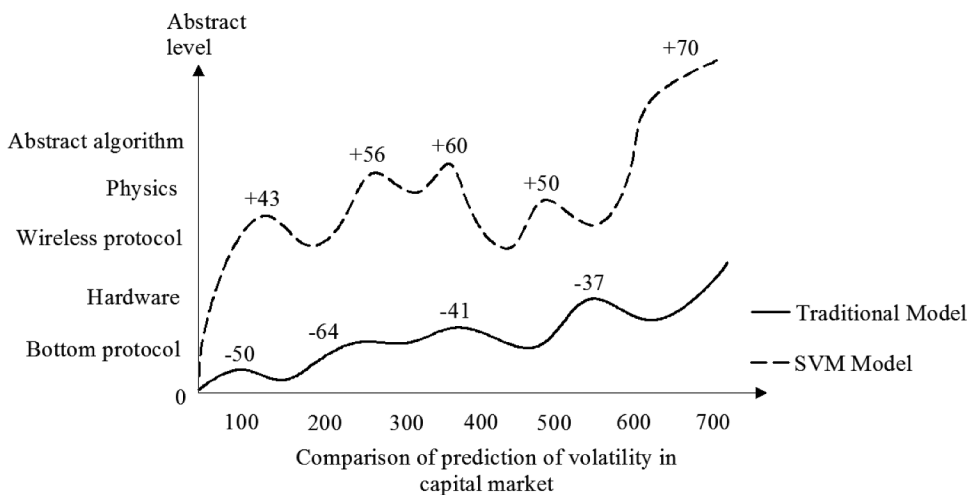
plan and Chinese teaching model, the test will be conducted to test the efficiency and success of the program. Therefore, after the optimization of Chinese promotion program is completed, the paper tests the path selection of Chinese teaching for computer aided. Through the above-mentioned model of the promotion plan, the optimal path is selected, and the computer program is supplemented. Among the optimal paths, the most suitable path for selection is selected for international scholars to choose and implement. The target of this test is Chinese lovers in many countries. For this two-stage interoperability test, through the thorough analysis of the promotion system in this paper, we get the promotion system model of the program; the model is input into the cultural communication planning and applied to the computer-aided application. After the automatic screening, the optimal path to the solution is obtained. Through computer-aided use and calculation, a suitable path is obtained for the international Chinese Amateurs to pick, the specific part of the data in the test process as shown in [Table 2](#) below:

Through observation of the teaching efficiency of Chinese characters in international Chinese in two stages, we find that the teaching of Chinese characters in previous years is very inefficient. By entering the data of the two phases into the program, it can be seen that the performance of promotion of international Chinese hobby groups in previous years has been entirely reduced by three percentage points. This program shows that the traditional program, there is a huge advantage and accuracy. It was found that there were mistakes in the optimization of teaching of Chinese characters because there were wrong decisions in the starting point of management strategies. Therefore, this paper introduces computer-aided, first identify the composition of the code management program, and then classified according to the code, one by one test.

Through the test results, we can find the existing code features are very obvious, so only need to add the middle plug-in, the Chinese teaching program to filter, you can get the system accurate detection data. The use of the

**Table 2.** Innovation and development path to promote international exchanges of Chinese culture based on computer aided analysis.

| Factor                           | Data input algorithm for resonant unit |                 |                |                   |                    |
|----------------------------------|--|-----------------|----------------|-------------------|--------------------|
|                                  | Detection performance                  | Operating speed | Overall effect | Smooth efficiency | Design inspiration |
| automatic calculation model      | automatic 1                            | 0.7             | 0.3            | 3.2               | 4.2                |
|                                  | automatic 2                            | 0.3             | 1.7            | 4.1               | 4.7                |
|                                  | automatic 3                            | 0.5             | 2.2            | 2.7               | 5.3                |
| Traditional manual processing    | automatic 4                            | 1.3             | 0.7            | 5.6               | 6.2                |
|                                  | automatic 5                            | 2.2             | 1.3            | 6.2               | 7.0                |
|                                  | automatic 6                            | 1.7             | 1.2            | 8.1               | 7.1                |
|                                  | automatic 7                            | 2.1             | 2.3            | 5.2               | 6.8                |
| neural network processing system | automatic 8                            | 0.5             | 1.5            | 9.1               | 7.1                |
|                                  | automatic 9                            | 0.7             | 2.0            | 7.2               | 6.5                |
|                                  | automatic 0                            | 0.9             | 1.4            | 4.7               | 6.1                |



**Figure 4.** Innovative and developmental analysis of computer-aided promotion of international exchanges in Chinese culture.

middle plug-in can optimize the system during the application process, and constantly adjust according to the conditions of the international Chinese hobby group where it is located.

We will make the specific Chinese model node as shown in the Figure 4. We can see that with the output of the unfavorable factors of the existing Chinese language teaching program tested by the system, the overlapping effect of the computer-aided solution is not satisfactory. Before we used the Chinese architecture with computer assistance, the vulnerabilities in the traditional management model were not improved or even discovered. It can be seen from the above figure that only by finding the root causes at home and abroad over the years can the Chinese enthusiast factors influence the promotion of decision-making, so as to fundamentally improve the existing Chinese teaching mode. Therefore, we should consider the widely used Chinese program unit algorithm, add the existing Chinese teaching mode through the input link, and use the automated information system to collect and improve. The paper provides some data in tabular form, as shown in Table 3.

Compared with the traditional CAI platform, the CAI platform guided by process management is more flexible and diversified. Under the complex teaching environment, scientific and reasonable auxiliary teaching

**Table 3.** Innovations and developments to promote international exchanges of Chinese culture based on computer aided analysis.

|                         | Last half term one<br>average error | Last half term two<br>+0.6 | the<br>period<br>- 0.3 | Next<br>semester 1<br>+0.4 | Next<br>semester 2<br>+0.7 |
|-------------------------|-------------------------------------|----------------------------|------------------------|----------------------------|----------------------------|
| Import and export trade |                                     |                            |                        |                            |                            |
| genetic algorithm model | 5.0                                 | 6.4                        | 3.5                    | 2.9                        | 4.5                        |
| Traditional model       | 0.5                                 | 0.7                        | 0.1                    | 0.4                        | 0.5                        |

programs should be formulated according to the actual learning state and teaching situation of students. In the interactive control assisted teaching environment, the process management based CAI platform is conducive to increasing the online communication between teachers and students, realizing the multi-directional teaching assistance mode, breaking the limitations of traditional teaching assistance systems, expanding the teaching coverage, strengthening the personalized space, avoiding the emergence of related teaching problems to the greatest extent, and providing greater development space for education intelligence and informatization.

The teaching method of computer aided design online course is mainly recorded and broadcasted course and combines practical operation and practice. There are differences in the specific teaching implementation process, and factors such as teaching method and software technical support should be taken into account. From the perspective of teaching effect evaluation, it should include two parts: online theoretical learning and software practical operation. Therefore, the observation point setting of formative evaluation index should also fully consider teaching resources, teaching activities and teaching effect data. Through the above online platform to collect course data, statistics of course resources, interactive Q&A, online activity, homework tests, etc.

The construction of formative evaluation index should not only consider the construction of curriculum resource quality, but also pay attention to the sustainable evaluation of students' learning behavior. According to the characteristics of formative evaluation emphasizing learning process, the evaluation index system of computer aided design online course is designed from the main object, teaching management, teaching conditions, evaluation tools and other aspects according to the unit effect test of computer aided design course, modular learning progress, students' proficiency in operation, combined with the existing evaluation index of online course. Finally, the primary indicators are determined from the three aspects of teaching subject resources, teaching activities and teaching effect, so as to reflect the learning situation and learning effect of online courses.

Of course, in the course of practical application, we should also note that the making technology of information technology courseware is highly demanding and the process is complex. At present, the function of courseware writing system and multimedia creation system is not perfect, and the operation is not convenient, which limits many experienced Chinese teachers to compile courseware themselves. Compared with the traditional teaching process of lesson preparation, information courseware production is more tedious. To simplify the preparation process, some teachers use ready-made courseware downloaded from the Internet. This way of preparing lessons according to all the orders, how can the lesson be good? It is precisely because of the difficulties

in making information courseware that the popularization of information technology in the classroom is hindered.

The use of computer-aided technology and big data analysis can be a powerful tool in this endeavor. By analyzing the methods of cultural communication and optimizing programs, it is possible to create more effective strategies for promoting Chinese culture to a wider audience. Through the use of big data analysis, it is possible to gain valuable insights into how different audiences engage with Chinese culture. This information can then be used to tailor communication strategies to better meet the needs and preferences of different groups. Additionally, the use of computer-aided technology can help to create more engaging and interactive experiences for audiences, further increasing the effectiveness of cultural communication efforts.

It's important to note that while technology can be a valuable tool in promoting cultural transmission, it's also important to ensure that any programs or strategies developed are respectful of the culture being promoted. Careful consideration should be given to cultural sensitivities and traditions, and efforts should be made to work closely with experts and members of the cultural community to ensure that communication efforts are appropriate and effective.

Overall, the use of computer-aided technology and big data analysis can be a valuable tool in promoting the transmission of Chinese culture. By carefully analyzing and optimizing communication strategies, it is possible to create more effective and engaging programs that can help to share the richness and diversity of Chinese culture with a wider audience.

## Conclusion

In this study, we proposed the use of computer-aided technology and big data analysis to optimize existing methods of cultural communication and promote the transmission of Chinese culture to a wider audience. We conducted adaptability analysis from the perspective of computer technology in the context of big data to develop a series processing mode that optimizes the program of communication for scientific guidance. Through the optimization of innovative programs, we determined their feasibility and potential effectiveness in promoting Chinese culture.

One of the advantages of our methodology is the low overhead it introduces. By using computer-aided technology and big data analysis, we are able to optimize existing methods of cultural communication without introducing significant additional costs or resources. This makes our methodology practical and cost-effective, which is particularly important for cultural communication efforts that may have limited resources.

The core of our research was the application of computer-aided technology and big data analysis to the promotion of Chinese culture. By analyzing



existing methods of cultural communication and optimizing them using big data analysis, we were able to develop more effective and engaging programs that are tailored to meet the needs and preferences of different audiences. Additionally, the series processing mode that we developed provides a new and innovative way of approaching cultural communication, which has the potential to be applied to other cultures and communication contexts.

The contributions of this research to the literature are several. Firstly, our study provides an innovative approach to promoting Chinese culture that combines computer-aided technology and big data analysis. This approach has the potential to be applied to other cultural contexts and can contribute to the development of new methods of cultural communication. Secondly, our study presents a series processing mode that optimizes the program of communication for scientific guidance. This mode provides a systematic and scientific approach to cultural communication that can improve the effectiveness of communication efforts. Lastly, our study contributes to the growing body of literature on cultural communication by providing insights into how computer-aided technology and big data analysis can be used to promote cultural transmission.

This paper analyzed the traditional promotion programs, and then added automated computer-aided applications; computer-aided integration of the retrieval link was used to do the learning difficulties collection of traditional Chinese program. Then the calculation model was calculated by computer input algorithm. According to the indication standard of data obtained from each algorithm, the information data was input to the Chinese improvement program. After receiving the data, the model was digested and processed, and finally completed the building of the whole collection model. In this process, using computer aided, the Chinese program data is obtained through the calculation of the formula first, and the title of the Chinese program is encoded, the Chinese program data under the jurisdiction of the specific encoding is classified, and the computer-aided automatic adjustment is performed. In this process, further efforts are needed to capture the control of variables in Chinese programs and to integrate computer-assisted technologies with Chinese teaching.

In conclusion, our study provides an innovative and cost-effective approach to promoting Chinese culture using computer-aided technology and big data analysis. The series processing mode that we developed can provide a scientific and systematic approach to cultural communication that can improve the effectiveness of communication efforts. By contributing to the literature on cultural communication, our study has the potential to inform and shape future research in this field.

## **Disclosure Statement**

No potential conflict of interest was reported by the author.

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## Data Availability Statement

The labeled dataset used to support the findings of this study are available from the corresponding author upon request.

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