Instructional Mode of Chinese Language and Literature Based on System Theory in the Network Environment

Xiaoyu Lin

Zhaoqing Medical College, Zhaoqing, 523165, Guangdong, China

Keywords: Network environment; System theory; CLL; Model of instruction

Abstract: The purpose of this article is to explore the influence of system theory on the instructional mode of Chinese language and literature (CLL), and analyze the characteristics and challenges of CLL teaching under the network environment. Firstly, this article summarizes the present situation of CLL teaching under the network environment, and reveals the opportunities and challenges it faces. Then, based on the system theory, an innovative network instructional model is designed, which covers the systematic design of teaching objectives and contents, the network innovation of teaching methods and means, and the establishment of instructional assessment and feedback mechanism. Through empirical research and effect assessment, it is found that this model has remarkable effect in improving students' learning interest, autonomous learning ability and comprehensive quality, and is widely welcomed by teachers and students. The research results show that the online instructional mode of CLL based on system theory can effectively meet the teaching challenges under the network environment and improve the instructional quality.

1. Introduction

With the rapid development of information technology, the network environment provides unprecedented convenience and challenges for the teaching of CLL [1]. It is of great significance to understand the current situation of CLL teaching under the network environment and how to integrate the viewpoint of system theory into the instructional mode. In today's digital era, the teaching environment of CLL is undergoing profound changes [2]. The traditional instructional mode is being combined with network technology and multimedia teaching, forming an online and offline integrated teaching method [3]. The network provides learners with a large number of learning resources, but at the same time it also brings information overload, authenticity and other problems [4]. Therefore, how to select valuable teaching content from the vast network resources has become a major challenge for CLL teaching [5].

System theory emphasizes the principles of integrity, relevance, dynamics and optimization, which are of great value to guide the innovation of CLL instructional mode [6]. Through the method of system theory, we can regard each link in CLL teaching as an interrelated whole, so as to optimize the teaching content, methods and assessment system and maximize the teaching effect. The purpose of this study is to deeply explore the application of system theory in the instructional mode of CLL, and analyze the characteristics and challenges of CLL teaching under the network environment.

2. System theory and the theoretical basis of CLL teaching

As an important methodology, system theory provides new theoretical support and practical guidance for CLL teaching [7]. This section will deeply discuss the basic concept of system theory and its application in the field of education, analyze the traditional mode and present situation of CLL teaching, and explore the combination of system theory and CLL teaching.

2.1. The basic concept of system theory and its application in the field of education

System theory is an area of knowledge dedicated to exploring the general patterns, structures, and laws inherent in systems. This field investigates the shared traits among diverse systems,

quantitatively defines their functionalities through mathematical techniques, and strives to identify and establish universal principles, axioms, and mathematical models applicable across all systems. Essentially, it represents a novel science that is characterized by its logical and mathematical attributes. In the field of education, system theory provides a brand-new perspective and methodological guidance for teaching design, curriculum development and instructional assessment [8]. By using the principles and methods of system theory, we can design and organize teaching activities more scientifically and improve teaching effect and quality.

2.2. Analysis of the traditional mode and present situation of CLL teaching

The traditional instructional mode of CLL is usually teacher-centered, focusing on imparting and instilling knowledge. However, with the renewal of educational ideas and the progress of technology, this traditional model has been difficult to meet the needs of modern education [9]. At present, CLL teaching is facing many challenges, such as Table 1:

Table 1 Challenges faced by CLL teaching

Challenge	Challenge content
Students are not interested in learning	Students' lack of interest in learning CLL leads to low learning enthusiasm and affects teaching effect.
Single teaching method	The traditional instructional mode is teacher-centered, focusing on imparting and instilling knowledge, and lacking diversified and innovative teaching methods.
The assessment system is not perfect	The existing assessment system pays too much attention to knowledge memory and test-taking ability, but ignores the cultivation of students' comprehensive quality and practical application ability.
Lack of practical opportunities	Students lack practical opportunities in the learning process, and it is difficult to combine theoretical knowledge with practical application.
Teachers' professional quality is insufficient	Some teachers are short of professional accomplishment and educational concept renewal, which makes it difficult to meet the needs of modern education and affects the instructional quality.
The teaching materials are outdated	Some textbooks are outdated, which fail to keep up with the development of CLL in time, and lack the times and novelty.
Insufficient application of technology	The application of modern technology in the teaching of CLL is insufficient, and its advantages in improving teaching effect have not been fully exerted.

Based on the above challenges, it is urgent to explore a new instructional model to meet these challenges.

2.3. The combination of system theory and CLL teaching

The combination of system theory and CLL teaching is mainly reflected in the following aspects: (1) System theory emphasizes holistic thinking, which helps us to comprehensively examine all aspects of CLL teaching, so as to find potential problems and room for improvement. (2) The system theory pays attention to relevance thinking, which can help us to deeply understand the relationship between various elements in the teaching of CLL, so as to optimize the teaching content and methods. (3) The system theory pursues the principle of optimization, which provides us with a scientific assessment standard and methodological guidance to maximize the teaching effect. By integrating the viewpoint and method of system theory into the teaching of CLL, we can build a more scientific, efficient and flexible instructional model.

3. The construction of CLL instructional mode under the network environment

3.1. The application and development of network technology in teaching

In CLL instruction, network technology offers a seamless avenue for procuring teaching resources, enhancing teaching interactions, and obtaining feedback on teaching effectiveness. For instance, educators can disseminate course materials and homework assignments via online platforms, enabling learners to turn in assignments digitally and engage in classroom discussions.

Additionally, the incorporation of multimedia technology infuses CLL lessons with vitality and intrigue, thereby boosting students' engagement and interest in learning.

As technologies like 5G and AI continue to evolve rapidly, the future of educational technology integration holds even more promise. Virtual reality has the potential to immerse students in ancient literary scenes, offering them a profound cultural experience. Furthermore, big data analytics can empower teachers with precise insights into students' progress, facilitating tailored teaching approaches.

3.2. Design of network instructional model of CLL based on system theory

Guided by system theory, this section outlines a CLL instructional model tailored for the network environment. This model encompasses a structured approach to teaching objectives and content, incorporates innovative network-based teaching practices, and establishes a robust assessment and feedback framework.

(1) Structured approach to teaching objectives and content:

Initially, we clarify the overarching aim of CLL instruction: to foster students' CLL literacy and comprehensive proficiency. Aligned with this goal, we segment the curriculum into interconnected sub-goals, encompassing appreciation of ancient literature and proficiency in modern Chinese. Beneath each sub-goal, we've crafted specific lessons, creating a coherent and logical educational framework.

(2) Innovative network-based teaching practices:

Leveraging the strengths of network technology, we've revolutionized our teaching methodologies. For instance, we employ a blended learning approach that integrates face-to-face classroom sessions with online autonomous learning and interactive exchanges. Furthermore, we utilize multimedia elements like audio and video to enrich the curriculum, thereby enhancing students' engagement.

(3) Robust assessment and feedback framework:

Our assessment system seamlessly blends formative and summative evaluations. We gather student data via the network platform, enabling real-time monitoring and evaluation of their progress. Additionally, we periodically conduct online and offline assessments, such as tests and exams, to comprehensively gauge students' performance. To ensure timely adjustments to our teaching strategies, we've also established a rapid feedback loop involving students, teachers, and parents.

3.3. Analysis of key factors in the implementation of instructional mode

In the process of instructional mode implementation, the key factors include teachers' information literacy, students' self-discipline, effective use of network resources, and the stability and ease of use of teaching platform. Teachers need to have high information literacy and be able to skillfully use network technology for teaching design and implementation; Students need to have a certain degree of self-discipline in learning and be able to study independently in the network environment; At the same time, the effective use of network resources and the stability of teaching platform are also important factors to ensure the smooth implementation of instructional mode.

4. Empirical research and effect assessment

In order to verify the effectiveness of the online instructional mode of CLL based on system theory, this section makes an empirical study and evaluates the teaching effect. The empirical research adopts questionnaire survey, interview and test to collect data. The questionnaire survey is mainly aimed at students and teachers, aiming at understanding their acceptance and satisfaction with the new instructional model; Interviews are used to deeply understand the experiences and feelings of students and teachers in the implementation of instructional mode; Tests are used to evaluate students' learning effects. Data sources include students' online learning data, test scores, questionnaires and interview results.

Through the statistics and analysis of the collected data, this article finds that the online

instructional mode of CLL based on system theory has achieved remarkable results in improving students' learning interest, autonomous learning ability and comprehensive quality. At the same time, students and teachers have higher acceptance and satisfaction with the new instructional mode.

The quantitative analysis of teaching effect is shown in Table 2:

Table 2 Quantitative analysis and comparison table of teaching effect

Project	Experimental group	Control group
Average score of CLL knowledge level test	85 (out of 100, standard deviation 5.2)	76 (out of 100, standard deviation 6.8)
Average score of comprehensive application ability test	88 (out of 100, standard deviation 4.9)	79 (out of 100, standard deviation 7.1)
Classroom participation	High (on average, each student speaks 3.5 times per class)	Chinese (on average, each student speaks 1.8 times in each class)
Liveness	High (average classroom active time accounts for 75%)	Medium (average classroom active time accounts for 50%)

Upon comparing the test scores of students belonging to the experimental and control groups, we discovered that the experimental group exhibited notably superior CLL knowledge and comprehensive application skills. Moreover, students in the experimental group demonstrated greater classroom engagement and activity, reflecting a heightened learning zeal and self-assurance.

The acceptance and satisfaction survey of instructional mode is shown in Table 3:

Table 3 Statistical table of survey results of acceptance and satisfaction of instructional mode

Survey content	Students (%)	Teachers (%)
Recognition of the new instructional mode	95% students think that the new model is helpful to improve the learning effect.	90% of teachers believe that the new model has a positive impact on teaching.
Acceptance of new instructional mode	90% of the students expressed their willingness to continue studying under the new model.	85% of teachers expressed their willingness to continue to adopt the new mode of teaching.
Satisfaction degree of instructional mode	92% students are satisfied or very satisfied with the new model.	88% of teachers are satisfied or very satisfied with the new model.

The questionnaire survey reveals that the majority of students and teachers alike have acknowledged and embraced the novel teaching approach. They firmly believe that this method takes full advantage of online resources and cutting-edge technology, thereby enriching teaching materials and methods, and ultimately enhancing the quality of education. Furthermore, students have emphasized that learning within this new framework offers more independence, flexibility, and enjoyment. Educators maintain that this innovative teaching style aids in igniting students' curiosity and creativity, while fostering their ability to learn independently and collaborate.

5. Conclusions

This study has made a series of important achievements by deeply discussing the application of system theory in CLL instructional mode and analyzing the characteristics and challenges of CLL teaching under the network environment. First of all, this article clarifies the changes and opportunities brought by the network environment for CLL teaching, and points out the new trend of combining traditional instructional mode with network technology and multimedia teaching. Secondly, based on the viewpoint of system theory, we have successfully constructed a instructional mode of CLL that adapts to the network environment. This mode pays attention to holistic and relevant thinking and pursues the optimization of teaching effect.

Through empirical research and effect assessment, the effectiveness of this instructional model is verified. The results show that the new model has achieved remarkable results in improving

students' learning interest, autonomous learning ability and comprehensive quality, and has been highly recognized by students and teachers. These achievements not only provide strong support for the teaching reform of CLL, but also provide useful reference for the teaching of other disciplines.

References

[1] Yang Mei. Discussion on Chinese Language and Literature Teaching Strategies in Colleges and Universities under the Internet Environment [J]. China Science and Technology Journal Database Research, 2021(11):0064-0066.

[2] Liu Xinrui, Su Man. Analysis of the spread of Chinese language and literature in the network environment [J]. Public relations world, 2021, 000(022):154-155.

[3] Wu Suqing. Analysis of Chinese Language and Literature Teaching Strategies in Colleges and Universities under the Internet Environment [J]. Public Digest, 2023(28):0052-0054.

[4] Yang Liu. Analysis of Chinese Language and Literature Teaching Strategies in Colleges and Universities under the Internet Environment [J]. Growth, 2023(10):3-5.

[5] Meng Xiangxin. Explore the impact of network environment on Chinese language and literature learning in higher vocational colleges [J]. Boutique Life, 2022(15):0049-0051.

[6] Li Gaiting, Hong Hong, Gong Furong. Study on the instructional mode of "studio" system of Chinese language and literature specialty company-taking Hebei Communication College as an example [J]. Writers' World, 2020, 000(005):P.32-33.

[7] Jiang Chuanhong, Zhou Du. Construction of teaching practice system for Chinese language and literature teachers under the background of teacher-training professional certification [J]. Xueyuan, 2023(29):72-74.

[8] Ma Jun. Analysis of Chinese Language and Literature Teaching Strategies in Colleges and Universities under the Internet Environment [J]. Chinese Character Culture, 2022(11):43-45.

[9] Bai Long. The influence of network environment on the development of Chinese language and literature [J]. Literature Education (below), 2023(9):39-41.