An Overview of Research on the Model of Teaching Chinese as a Foreign Language Over the Past Twenty Years -Based on the Analysis With Visualization Graphs

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ABSTRACT
In a context that the comprehensive national strength constantly increases and the undertaking of teaching Chinese as a foreign language continuously develops, how to improve teaching efficiency and choose the right teaching model become the question worth studying. Taking the 241 research papers on the models of teaching Chinese as a foreign language included from 2000 to this day as the object of study, using the visualization document analysis software SATI as the analytical tool, through arranging the time of publication, the authors of papers, the institutes of publishing papers, the high-frequency keywords and other aspects, this article analyses the research hotspots and trends of the Chinese teaching models, and argues that the models of teaching Chinese as a foreign language can be further expanded and deeply studied in the aspects such as the skill separation teaching, element separation teaching, establishment of language database, composite teaching based on internet.

Keywords: teaching Chinese as a foreign language, teaching model, visualization analysis, overview of studies

1. INTRODUCTION
The Chinese teaching model is a relatively stable basic teaching pattern. With a focus on teaching objectives, and through summarizing and summing up the experience of teaching practice, the model is formed under the guidance of the teaching theory that Chinese is taken as a second language. Teaching model can display the characteristics of Chinese language and language application, and also reflect the development trends of the second language teaching in the world and the unremitting exploration of the characteristics of Chinese teaching. The traditional teaching models are constantly reformed and innovated in the development. Through the study and analysis of the models of Chinese teaching, we can find the research hotspots and development trends, by which the neglected aspects of studies can be supplemented and developed.

2. SOURCE OF DOCUMENTS AND RESEARCH TOOL

2.1. Source of Documents
The study uses "time (Jan. 1, 2000 - today)+ subjects (Chinese for foreigners+ teaching model)" as the index words, set the search mode as "exact", removes newspapers, yearbook, notice of soliciting contributions and other options unrelated to the study, and 241 documents are obtained.

2.2. Research Tool
This article uses the visualization analytical software SATI3.2 (Statistical Analysis Toolkit for Informetrics) as the research tool. The software utilizes the general quantitative analysis, cluster analysis, co-occurrence analysis, multidimensional scaling analysis, social network analysis and other data analysis methods to process and collect the bibliographic data in the database of documents, and presents the visualized analysis results. The specific procedures are as follows: Search by criterion and get the needed 241 documents on CNKI website. All the documents are exported as Endnote format, zipped and imported into SATI. Choose keywords to carry out analysis and obtain the visualization analysis graph.
3. THE BASIC RESULTS OF RESEARCH ON THE MODELS OF TEACHING CHINESE AS A FOREIGN LANGUAGE

3.1. Statistics on Distribution as Per Years

The number of annual published papers can reflect the development in the field at the time. The graph of the number of published papers related to the research field of the teaching models of teaching Chinese as a foreign language after 2000 indicates the results in figure 1 below.

![Figure 1 Bar graph of the number of annual published papers in the research field of the teaching model of teaching Chinese as a foreign language in 2000-2020](image)

From the graph, we can see before 2004, there are no documents about teaching models in the field of teaching Chinese as a foreign language. In 2004, the Research on the Teaching Model of Teaching Chinese as a Foreign Language Based on Internet written by Dan ZHANG and other authors from Northeast Normal University is the first article dealing with the model of teaching Chinese as a foreign language included on the CNKI website. Based on the form of teaching Chinese as a foreign language online at the early 21st century, the article analyzes the characteristics of the learners who study Chinese as a second language using the internet, explains the current status and deficiencies of utilizing websites to teach Chinese as a foreign language, constructs a teaching system of virtual environment based on the client/server (C/S) mode, discusses in detail the key questions concerning the teaching system, and brings forth the questions relating to the construction and operation of three-dimensional environment, the establishment of information resource database of teaching Chinese as a foreign language, and the curriculum planning module, etc. The article has a certain foresightedness, but limited by the then technology, and the question about establishing the database of teaching Chinese as a foreign language needs further improvement at present[1].

From the annual increase, we can see that the sharp increase of published papers appears in 2015-2016, and the year 2016 saw the most papers published. Followed by the Research on Applying the Teaching Model of "Flipped Classroom" To Teaching Chinese as a Foreign Language written by Didi BAI, whether the education model of "flipped classroom" can improve the teaching effects in classrooms attracts the attention of Chinese language scholars [2]. In 2016, through analyzing the factors such as the teaching contents, the law of teaching, teaching objectives, teaching forms, the need of the teaching subject and the conditions such as teachers, textbooks, language environment and teaching equipment with regard to teaching Chinese as a foreign language, the Feasibility Analysis of Applying Flipped Classroom To Teaching Chinese as a Foreign Language, written by Jingjing LIU and Yingming GUAN, explores the feasibility of applying the teaching model of "flipped classroom" to teaching Chinese as a foreign language, which provides directions for carrying out the teaching work in the future [3]. From the angle of teaching design, the Implementation Plan and Realization Conditions of the Chinese Grammar Teaching Model of Flipped Classroom, which was written by Yanqun ZHENG, Ping YUAN, etc., discusses the conditions of realizing the flipped classroom of Chinese grammar as well as the implementation plan for the flipped classroom of Chinese grammar [4]. There are also the Teaching Model of Elementary Reading in Chinese with the Concept of Flipped Classroom, the Design of Teaching Chinese Grammar to Foreigners Based on Flipped Classroom, and so on. From 2016, we can see the discussion of teaching model combines more closely with internet technology, and the research combines the skills in Chinese language and the elements of Chinese language more closely with teaching models.

3.2. Statistics on Core Authors

Through the author counting function of the software SATI, a total of 346 nodes from the 241 papers are obtained, including several authors of a certain article.

According to Price law, in a certain research field, the authors who publish more than N papers are the core authors of the field. Nmax is the number of documents published by the author who publishes the most papers in the field (D. Price, 1982). The number of the papers most published on the teaching model of teaching Chinese as a foreign language is 4 papers written by Juan Xu and Qing WANG. After calculation, the Price index N=0.16, which means the core authors who published more than 2 papers. After counting there are ten of them. The authors who publish more than one paper are: Juan Xu (4 articles), Qing WANG (4 articles), Jing LIU (3 articles), Jingjing LIU (3 articles), Hong ZHOU (3 articles), Quan LI (3 articles), Yanqun ZHENG (3 articles).

Through the analysis of the authors with regard to the teaching model of teaching Chinese as a foreign language, there are 10 core authors in 346 authors, accounting for a small proportion, which indicates that in the aspect of research on the teaching model of teaching Chinese as a foreign language, the stable core authors have not yet been formed. This point differs greatly from the research on Chinese language education: The Chinese language education in our country has formed relatively stable core author groups, and the periodicals are of high quality. There's no lack of core journals such as Chinese Teaching in the World, and there're also a larger number of published pa-
pers. So, more core authors are still needed to research the direction of the teaching model of teaching Chinese a foreign language.

3.3. Statistics on institutes of publishing papers

The number of published papers by the institutes is directly proportional to the research ability of the institutes in the field. The more papers an institute publishes, the higher research level the institute has, and the greater influence it owns. The following results can be obtained after using the counting function of SATI to make statistics of the institutes of publishing papers in the field of the teaching model of teaching Chinese as a foreign language (only institutes with a publishing frequency of more than 2 are chosen here).

**Table 2** Statistical table of Papers Published by Institutes in 2000-2020

| First-level institutes                    | Second-level institutes                        | Frequency |
|------------------------------------------|-----------------------------------------------|-----------|
| Renmin University of China               | College of Liberal Arts                       | 4         |
| Beijing Language and Culture University  | Center for Studies of Chinese as a Second Language | 4         |
| Beijing Language and Culture University  | College of Advanced Chinese Training          | 3         |
| Yanshan University                       | International Education College               | 3         |
| Peking University                        | School of Chinese as a second language         | 3         |
| Beijing Language and Culture University  | Institute of Applied Linguistics              | 3         |
| Xianyang Normal University               | College of Literature and Communication       | 3         |
| Changchun University                     | International Education College               | 3         |

**Figure 2** Graph of Papers Published by Institutes in 2000-2020

From the graph we can visually see the frequency of papers published by the institutes. In terms of the first-level organizations which published papers, the comprehensive universities and the universities of linguistics published more papers. Renmin University of China, Peking University, etc. rank high among comprehensive universities, and Beijing Language and Culture University ranks first, of which its second-level affiliated institutes Center for Studies of Chinese as a Second Language, Institute of Applied Linguistics, College of Advanced Chinese Training, etc. all have done some research in the field. The number of published papers and influence can also be judged by the circle size. The circle size is directly proportional to the number of papers published by the institute. But the information graph shows no close cooperative relationship between the institutes except for International Education College, China University of Geosciences (Wuhan), China University of Geosciences Library, Office of Educational Administration of China University of Geosciences.

4. ANALYSIS OF RESEARCH HOTSPOTS

4.1. Analysis of Keywords

The keywords of documents show the research subjects. The frequency of keywords indicates the popularity of a certain research field. The following keywords can be obtained through visualization analysis.

**Figure 3** Analysis of Keywords of the Research in 2000-2020

The bigger circle indicates the higher frequency of the phrase. Centered on the words Chinese for foreigners, teaching Chinese as a foreign language, and teaching model, other keywords are distributed like a cobweb, intercrossed and interconnected. The main keywords are: The models with regard to modern educational technology: MOOC, teaching reformation, online platform, flipped classroom, etc.; The teaching model concerning element separation: Writing and teaching model, grammar and teaching model; The teaching model concerning skill separation: Vocabulary teaching, cultural teaching; With regard to teaching methodology: Experiential teaching model, task-based teaching method, etc.

In terms of the distribution scope of keywords, the scope of research on teaching model is relatively comprehensive, but there're still gaps. Take teaching Chinese language elements as an example. There are explorations of the teaching model of grammar and vocabulary, but the attention to the teaching model of pronunciation and Chinese characters is insufficient. And there is no specific teaching model for certain language skills. Such research gaps are still needed to be filled in.
4.2. Analysis of Research Direction and Research Hotspots

In order to further reflect the research hotspots of the teaching model of teaching Chinese as a foreign language, using the SATI frequency list to display the reference frequency of the keywords, and based on the high frequency words, its main research directions can be obtained:

First, the research on teaching model based on countries and regions, which mainly forms regional research with the keywords. For example, in "Production-oriented Approach" - Take the Classroom Teaching Experiment in San Diego Chinese School as an Example [5], the authors conducted a 16-hour classroom experiment in San Diego Chinese School, Dominican Republic during a period of two months, and found the students who were trained with POA achieved some degree of effects in oral Chinese, but when training the American students with POA, there existed questions such as "relatively difficult operation", "resistance of students to learning elementary Chinese", "fear of difficulty" and "no noticeable effect". Such research is mainly research on teaching model with regards to the characteristics of education and students of different countries, and favorable for targeted teaching.

Second, the research on teaching model relying on internet technology, for example, the teaching models of building network platforms, MOOC, flipped classroom, etc. which emerge based on internet technology and new teaching concepts. The adoption of technical measures can in a certain degree improve classroom efficiency and the students' learning efficiency, increase the communication between teachers and students, and improve classroom atmosphere. This really reflects the teaching concept of "oriented towards students, and guided by teachers", inverts the processes of imparting knowledge and internalizing knowledge, and is helpful to form the diversified and operable innovation model of teaching Chinese as a foreign language which combine the classroom teaching practice with the teaching contents.

Third, research on the teaching model based on the elements and skills of the Chinese language. It means to combine the four elements of the Chinese language with its four skills, and explore the teaching model with a specific purpose, or apply a certain teaching model to teach the elements of Chinese language. For example, in the Research on Application of Performed Culture Approach in the Teaching of Intermediate Spoken Chinese - Take Class C1 of School of Continuing Education, Beijing Foreign Studies University [6], the performed culture approach is applied to the classroom teaching of intermediate spoken Chinese. Through investigating the theory of teaching methodology and dynamically mastering the teaching practice, it deeply explores the teaching model of the performed culture approach in the teaching of intermediate spoken Chinese, and provides reference for the work of teaching Chinese as a foreign language in China.

5. CONCLUSION

5.1. Research Conclusions

Through the analysis above, we can conclude that the research on teaching Chinese as a foreign language starts relatively late, and has not formed stable core authors. But at present, a number of institutes have conducted some research in the field, and there are lots of papers published, with regard to which there's no lack of journals with strong strength in the field such as Overseas Chinese Education, TCSOL Studies, International Chinese Language Education. But there are still gaps in the research on exploring the teaching model of teaching Chinese as a foreign language. The research on the skill separation of listening, speaking, reading and writing is not sufficient. The integrated curriculum doesn't closely combine with the skill separation teaching, and the online Chinese language learning resources need to be further developed.

5.2. Prospect Forecast

The research on the teaching model of teaching Chinese as a Foreign language in the future can be expanded and deepened from the following aspects.

First, expand the research fields, continue to conduct more thorough research with specific purpose based on countries and regions. At present, there's lots of research with regard to Southeast Asia, where more Chinese people gather, and comparatively less research is conducted with regard to the countries on Oceania, and the Euro-American countries. Targeted research is conducive to improving the ability of teachers, the learning efficiency of learners, and yielding twice the result with half the effort.

Second, keep up with the times, and strengthen the construction of online platforms. The COVID-19 pandemic in 2020 caught all people unawares. For the learners of Chinese language overseas, in the context of unexpected global public health emergencies, the only way of study is to rely on the internet, which presents new demands on Chinese teachers. The teachers need to actively accept the transformation of teaching methods under the unfavorable circumstance, and actively adjust the teaching model to promote the development of students' online education. For the construction of the Chinese learning platform and the online resource database of Chinese language, they are still the development direction in the future. The research on the teaching model of teaching Chinese as a Foreign language can be conducted in accordance with the current situation. Using the internet technology, and specifically analyzing the characteristics of a student's learning strategy and learning ability, etc., we can develop appropriate
teaching program, teach students in accordance of their aptitude, reach the individualized teaching objective, and innovate the teaching model of teaching Chinese as a Foreign language.

Third, lay emphasis on the breakdown and correlation of Chinese skills. The four skills of listening, speaking, reading and writing are only four different ways of applying the language, and the different expressions of the language communicative ability. In the process of teaching, the skills can be developed with appropriate focus and emphasis. But from the viewpoint of developing the communicative skills, communicative activities involve four skills. When developing skills, we should pay special attention to foster the comprehensive language application ability of students in communication. For example, the ability of writing while listening, and the ability of writing after reading. It is needed to choose the appropriate teaching model depending on the teaching objective.

Fourth, pay attention to the division and combination as well as coordination of lesson types. The teaching links with relatively independent skills can be arranged in the comprehensive course, and several skills can be combined to prepare a course. To input through the listening and reading activity, and to output through the speaking and writing activity. Attach importance to the forms of oral communication and written communication, take into account the difficulty of learning Chinese characters, and utilize the activity of oral communication to stimulate the written communication.

Fifth, strengthen classroom interaction and adopt ways of cooperation such as cooperative interaction, control the classroom, and in accordance with the course objective, control the teaching progress, ensure the learning contents of students, give full play to the main body role of students and the dominant role of teachers, let every student have the initiative to study Chinese and improve the learning efficiency.

In conclusion, with the objective of improving the learning efficiency of students and deepening the understanding of knowledge, the research on the teaching model of teaching Chinese as a foreign language should innovate the teaching model, and oriented towards students, based on the needs of students, in line with the teaching contents, taking full advantage of internet resources, carry out individualized teaching, teach students in accordance of their aptitude, make study more interesting, and improve the students' learning initiative.

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