

The Research Status and Hot Topics of Critical Discourse Analysis: A Visualization Analysis based on Citespace

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Abstract: Using the visual analysis software CiteSpace 5.8.R1 and bibliometric method, this paper takes the relevant papers on critical discourse analysis in the core journals of China CNKI from 2000 to 2020 as the data source for statistical analysis. It comprehensively combs and investigates the publishing years of these papers, publishing journals, publishing institutions, core authors and research hotspots formed by keyword clustering to present a visualization analysis for the outcome of this research. This helps to clarify the current knowledge structure and development context of critical discourse analysis in China, and provide a reference for the in-depth and advancement of research in this field in the future.

1 INTRODUCTION

The introduction of Critical Discourse Analysis (CDA) emerged at the end of the 1980s, and has made great progress in the research both at home and abroad. Wodak & Meyer (2001) mentioned CDA aims to critically study the social inequality that is expressed, referred to, constructed and legitimized by language. As a hot topic in the field of language research in China for many years, CDA's interdisciplinary nature has become increasingly prominent. These years, the research connotation and extension are expanding, covering research topics such as language and power, ideology, identity and so on. Besides, the study of discipline attributes involves different disciplines such as discourse analysis, sociolinguistics, and linguistic sociology. Thus the relationship among discourse, power and ideology has gradually been the focus of CDA. As a linguistic paradigm, text analysis methods of systemic functional linguistics, cognitive linguistics and Corpus linguistics are widely used in critical discourse studies (Zhao, 2021). All this contribute to many new topics to the academic field with the construction and application of critical discourse analysis (CDA). It can be acknowledged that the study of CDA not only provides more data analysis for researchers to explore the linguistic phenomena of different discourses, it has also greatly enhanced people's deep understanding of different discourses and the

ideology behind the language.

Over the past 20 years, the related research and academic achievements of CDA have been increasing in China (Ji, 2001). Therefore, it is necessary to deeply explore the current research situation and hot spots in this field. In order to objectively understand and grasp the real situation of critical discourse analysis (CDA) research, this paper combs the related papers on CDA research from 2000 to 2020, and makes statistical analysis by using the visual analysis software CiteSpace 5.8.R1 and bibliometric methods. By means of quantitative and qualitative research, this paper makes a comprehensive study of the publication time, publication carrier, research institutions, core authors and the research hotspots of keyword clustering in China's critical discourse analysis research. The purpose is to better grasp the knowledge structure and development of CDA research in China, and to provide a reference for the further study of CDA.

2 LITERATURE SOURCES AND RESEARCH TOOLS

2.1 Literature Sources

In order to ensure the integrity of the research object, this paper searches the core journals of CNKI

by "time (unlimited --2020) + subject (critical discourse analysis)". A total of 322 papers are retrieved, and 280 effective papers are obtained by eliminating conference reviews, book reviews and content discrepancies and so on.

2.2 Research Tools

Compared with the previous advanced research whose research tool mostly adopts the traditional literature analysis method for the qualitative induction, this paper uses the visual analysis software CiteSpace 5.8.R1 developed by Professor Chen Chaomei of Drexel University. In order to explore the frontiers' knowledge more effectively and objectively, with the methods of scientometrics, data and information visualization, this software focuses on analyzing the potential information contained in scientific knowledge, and reveals the co-occurrence relationship in the knowledge units of the papers related, such as the occurrence frequency of authors, institutions and keywords (Li & Chen, 2016). One of the features of this software is that it can draw a knowledge map to present a visualization analysis for the outcome of a research. Currently, CiteSpace has been applied in many fields such as second language writing research, cross-cultural education research and language translation research (Du, 2021; Qu, 2021; Zhang, 2021) to explore the

knowledge structure and research hotspots in various research fields and track their academic trends. According to this software's operating principle, the study here is based on papers collected in the core journals of CNKI related to CDA. The time span of these papers is 20 years, from 2000 to 2020. And the single time division is 1 year with a total of 20 single time division. Due to the limited number of documents in this research, no restriction conditions such as node thresholds are set, and no network pruning algorithms are used to maintain the integrity of the knowledge graph.

3 RESEARCH RESULTS AND ANALYSIS

3.1 Chronological Distribution Statistics

To a certain extent, the chronological distribution of literature reflects the academic research level and development speed of a certain field (Cai & Fu, 2016). Using the econometric visual analysis of CNKI, this paper draws the chronological distribution map of papers related to critical discourse analysis research in China (Fig. 1).

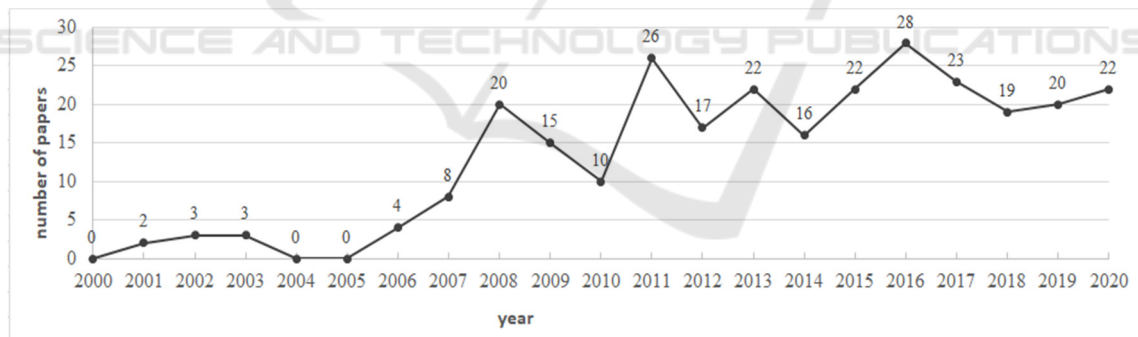


Figure 1. Chronological distribution of papers related to CDA in China (2000-2020)

From the perspective of time series, in 2000, there were no papers published in the core journal database of CNKI. The related research of CDA was first written by Ji Yuhua in 2001. His paper "Critical Discourse Analysis: Theory and Method" introduces the history of critical discourse analysis and its basic theoretical origins and so on. Besides, the number of papers published in the field of critical discourse analysis in China was relatively small from 2000 to 2006. But from 2007 it grew gradually to 26 papers in 2008. Although it fell in 2009 and 2010, the

number was still higher than that before 2006. Papers published during this period include: (1) emerging social groups with their discourse in contemporary China; (2) government and institutional discourse; (3) the construction of discourse and social identity; (4) China in the eyes of Western media and the West in the eyes of Chinese media; (5) discourse, thought, power relations and social change and so on. For example, Wang Jinling (2009) uses the basic theory of CDA to analyze the changes of Russian media function after

the collapse of the Soviet Union. He also explains the ways and means of the influence and manipulation of Russian political news discourse on mass ideology; Jiang Yue and Li Lu (2010) study vague language in TV interview programs in the way of CDA. They verify that the use of vague language can achieve self-protection, thus expressing politeness or making speech more objectively and representatively. Surprisingly, in 2011 the number of papers published sharply. But it fluctuated significantly in 2012 and 2014. While since 2015, it has maintained a relatively good publishing trend, especially 28 papers in 2016. As can be seen from figure 1, CDA has created a dynamic space for interdisciplinary discourse analysis involving social and political background, and its theoretical and applied fields have been expanding continuously.

3.2 Journal Distribution Statistics

Published in different journals, these 280 papers are ranked in descending order according to the number of papers published respectively. The top 5 journals with 67 papers published are shown in table 1, which are Foreign Language Studies, Foreign Language and Foreign Language Teaching, Foreign Language Journal, Foreign Language Teaching and Journal of Foreign Languages. These papers, as important sources of CDA related research making up 33.5% of all, have roughly formed the core group of CDA in China.

Table 1. Papers and periodicals related to CDA in China (2000-2020)

Number	Journal Title	Paper (pieces)	Proportion
1	Foreign Language Studies	20	10%
2	Foreign Language and Foreign Language Teaching	17	8.5%
3	Foreign Language Journal	12	6%
4	Foreign Language Teaching	10	5%
5	Journal of Foreign Languages	8	4%

3.3 Core Author Statistics

This paper carries out a statistical analysis of all the authors of these 280 papers using CiteSpace, resulting in a total of 285 nodes, that is, a total of 285 authors of these papers. According to CiteSpace, the top ranked item is *Tian Hailong* in Cluster #11.5 with citation counts of 14. The second one is *Xin Bin* in Cluster #4.5 with citation counts of 8. The third is *Liu Min* in Cluster #6.5 with citation counts of 6. The 4th is *Liu Wenyu* in Cluster #0.5 with citation counts of 6. The 5th is *Zhang Hui* in Cluster #3.5 with citation counts of 5. The 6th is *Ding Jianxin* in Cluster #11.5 with citation counts of 4. The 7th is *Miao Xingwei* in Cluster #0.5 with citation counts of 4. The 8th is *Ji Yuhua* in Cluster #5.5 with citation counts of 4. The 9th is *Zhang Tianwei* in Cluster #3.5 with citation counts of 4. While the 10th is *Zhu Guisheng* in Cluster #1.5 with citation counts of 4.

On the side of centrality, the top ranked item is *Tian Hailong* in Cluster #11.5 with centrality of 6. The second one is *Zhang Hui* in Cluster #3.5 with centrality of 5. The third is *Liu Wenyu* in Cluster #0.5 with centrality of 4. The 4th is *Ding Jianxin* in Cluster #11.5 with centrality of 4. The 5th is *Lie Min* in Cluster #6.5 with centrality of 3. The 6th is *Miao Xinwei* in Cluster #0.5 with centrality of 3. The 7th is *Ji Yuhua* in Cluster #5.5 with centrality of 3. The 8th is *Zhi Yongbi* in Cluster #8.5 with centrality of 3. The 9th is *Xiang Minyou* in Cluster #-0.5 with centrality of 3. And the 10th is *Hu Jin* in Cluster #-0.5 with centrality of 3.

It is worth noting that these authors have not only published a large number of papers, but also published papers with high frequency. For instance, Ding Jianxin's paper "A Review of Critical Discourse Analysis" published in 2001 has been cited 481 times. And Xin Bin's paper "Critical Discourse Analysis: Objectives, Methods and Developments" published in 2013 has been cited 317 times. In this research, CiteSpace helps show to a certain extent the core authors of China's critical discourse analysis research and their cooperative relationship. As can be cited by CiteSpace, Ding Jianxin and Liao Yiqing, Xin Bin and Gao Xiaoli, Ji Weining and Xin Bin, Xin Zhiying and Huang Guowen, Qian Yufang and Tian Hailong all have cooperative relations and have formed an academic community with 128 pairs of cooperative relationships among all authors. It is believed that this outcome is on one hand concerned with the relatively new research field of critical discourse analysis in China, and on the other hand with the

higher technique and method requirements of the research itself.

3.4 Statistics of Issuing Organizations

The amount of papers issued by an institution can reflect the research strength and influence of related fields to a certain extent. As of December 31, 2020, among the publishing organizations of critical discourse analysis research in the CNKI core journal database, the top 3 ones are *Nanjing Normal University*, *Beijing Foreign Studies University*, and *Xiamen University*. We then draw a summary table of more than 4 papers on CDA from 2000 to 2020 (table 2).

Table 2. Summary of institution with more than 4 papers on CDA in China (2000-2020)

Publishing Organizations	Paper	Publishing Organizations	Paper
Nanjing Normal University	20	Tianjin Foreign Studies University	6
Beijing Foreign Studies University	10	Shanghai International Studies University	6
Xiamen University	8	Communication University of China	5
Tianjin University of Commerce	6	Zhong Shan University	4

These ten universities have published 71 papers, accounting for about 40% of all papers. Most of the core authors who have published more than 4 papers come from the above-mentioned universities. They have contributed many papers to the above-mentioned universities in China's critical discourse analysis research.

3.5 Research Hotspot Analysis

As keywords can highly summarize the main ideas and research topics of papers, we can grasp the research content, research direction and research hotspots of a certain field through keywords. With CiteSpace5.8.R1, this paper searches for key nodes (research hotspots) and the centrality of computing nodes based on the frequency of keywords. The frequency of keyword appearance is directly proportional to a research popularity, and the higher the keyword appearance frequency, the stronger the

research popularity (2014). Besides, the higher the centrality of the keyword, the more central the keyword will be in the network, showing more influence and dominance in the network. Therefore, we use keywords as nodes and a time zone of 1 year to draw a hotspot knowledge map of Chinese critical discourse analysis research with outcome as follows.

The network is divided into 21 co-citation clusters labeled by index terms from their own citers. The largest 7 clusters are summarized in table 3.

Table 3. Summary of the largest 7 clusters (2000-2020)

Cluster ID	Size	Silhouette	Label (TFIDF)	Mean (Citee Year)
0	141	0.995	Discourse and the social changes in China today	2015
1	80	0.944	Introduction to "Identity Analysis in Discourse"	2013
2	56	0.92	Recontextualization of news discourse	2012
3	44	0.938	Recontextualization of news discourse	2012
4	39	0.913	A Study of Critical Discourse Analysis from the Perspective of Cognitive Metonymy	2013
5	30	0.948	Research on Critical Discourse Based on Evolutionary Psychology	2016
6	21	0.995	The Crisis of Identity and the Reconstruction of the "News Field"--Analysis of Media Criticism Discourse on Paid Interviews	2008
7	17	0.922	The Crisis of Identity and the Reconstruction of the "News Field"--Analysis of Media Criticism Discourse on Paid Interviews	2011

As can be seen from table 3, these clusters all have high silhouette value above 0.9. Silhouette is the degree of silhouette, indicating the closeness or homogeneity between members of a cluster. Generally more than 0.7 indicates a good degree of compactness or similarity within the cluster.

According to CiteSpace5.8. R1, the top ranked item by citation counts is "critical discourse analysis" with citation counts of 169. The second one is "nonjudgmental" with citation counts of 60. The third is "ideology" with citation counts of 39. The 4th is "corpus" with citation counts of 13. The 5th is "discourse analysis" with citation counts of 13. The 6th is "cognitive linguistics" with citation counts of 9. The 7th is "discourse strategy" with citation counts of 8. The 8th is "systemic functional linguistics" with citation counts of 8. The 9th is "news discourse" with citation counts of 7. And the 10th is "positive discourse analysis" with citation counts of 6.

While the top ranked item by centrality is "critical discourse analysis" with centrality of 306. The second one is "nonjudgmental" with centrality of 111. The third is "ideology" with centrality of 64. The 4th is "discourse analysis" with centrality of 28. The 5th is "corpus" with centrality of 21. The 6th is "The New York Times" with centrality of 20. The 7th is "text analysis" with centrality of 19. The 8th is "paid interviews" with centrality of 17. The 9th is "news field" with centrality of 17. And the 10th is "discourse strategy" with centrality of 16.

We can find that among the 280 critical discourse analysis-related papers included in CNKI's core journal full-text database from 2000 to 2020, "critical discourse analysis" is the largest node, with a frequency of 169, followed by "nonjudgmental", "ideology", "corpus", "discourse analysis", "cognitive linguistics" and "discourse strategy" and so on. Besides, centrality can determine the research hotspots in the research field, reflecting the degree of co-words of keywords. While keywords with high centrality can reflect the focus and direction of researchers in a certain period of time, and are likely to become the hotspots and frontiers of research. Sorted by centrality, "critical discourse analysis", "nonjudgmental" and "ideology" are listed in the top three, followed by "corpus", "New York Times", "text analysis", "paid interview" and "news". These words play an important mediating role in the field of critical discourse analysis research.

4 CONCLUSION

The visual analysis software CiteSpace5.8. R1 is used to conduct statistical analysis on critical discourse analysis related research in the full-text database of CNKI's core journals from 2000 to 2020. Integrating the relevant knowledge of literature statistics and the information in the visual

knowledge graph, we can find that since 2008, the application-related research of critical discourse analysis has risen sharply, and the number of papers in 2011 and 2016 has also reached a peak, respectively 26 and 28 papers. But in terms of the number of papers published each year, there were significant fluctuations between 2006 and 2016, indicating that the number of research papers published in this area has not been stable. Nonetheless, the number of papers published has remained relatively stable since 2016, indicating the continuous development of CDA research in recent years.

At the same time, from the perspective of journals, the four journals "Foreign Language Studies", "Foreign Languages and Foreign Language Teaching", "Foreign Languages Journal" and "Foreign Language Teaching" have roughly formed the core journal group of critical discourse analysis research in China. While on the side of the authors, Tian Hailong, Xin Bin, Liu Ming, Liu Wenyu, Zhang Hui, Ding Jianxin, Miao Xingwei, Ji Yuhua, Zhang Tianwei, and Zhu Guisheng all constitute the core group of authors in this field. In addition, from the perspective of research hotspots, critical discourse analysis, nonjudgmental, and ideology are the three hotspots in the development of this field.

In general, the development of critical discourse analysis research has been on the right track, producing core journal groups, core author groups, stable research institutions, and gradually forming research hotspots and directions. However, there are some limitations in the study of CDA, such as the lack of interdisciplinary perspective and the lack of breakthrough in many specific analytical techniques. While with the rapid development of information technology, the advent of the era of big data has brought new development opportunities for critical discourse analysis research. We believe that based on big data and the development of mobile internet, critical discourse analysis will reflect greater value in Chinese language teaching and related research.

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