

Current Situation and Development Trend of Full-time Master of Education Practice Teaching in China on the Analysis of CNKI

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Abstract: In this study, the visualization tool “Citespace” was used to analyze 100 kinds of literature about the practical teaching of the Master of Education in the CNKI database from 2017 to 2024. The study finds that the research on practical teaching of Master of Education mainly focuses on training mode and practical teaching ability and shows a rapid growth trend from 2019 to 2021. The research focus has shifted from "practical teaching ability" and "training quality" to "school-enterprise cooperation" and "embodied learning curriculum," which reflects the development trend of practical teaching towards diversification, innovation, and socialization. These findings directly affect the design and implementation of practical teaching in Master of Education programs. In the future, the research on practical teaching of Master of Education should strengthen the cooperation between schools and enterprises, explore a new mode to enhance postgraduates' innovative, practical teaching ability, and construct a results-oriented practical teaching evaluation system.

Keywords: Full-Time Master of Education; Practice Teaching; Visual Analysis of Citespace

1. Research Background

A high-quality graduate education system is an important support for a powerful country in education, and it is essential to achieve the goal of a powerful country in education proposed in China's Education Modernization 2035. In November 2023, the Ministry of Education promulgated the Opinions on Further Promoting the Classified Development of Academic Degree and Professional Degree Postgraduate Education, which emphasizes that the key is classified development, the core goal is to improve the quality of postgraduate

education, deepen the reform of postgraduate training mode, and improve the degree and postgraduate education system with Chinese style.[1]

The education of Master of Education, which is different from the traditional academic master's education, shoulders the mission of the times. It attaches importance to combining theory and practice and aims to train high-quality full-time teachers and administrators in basic education and secondary vocational schools.[2] In August 2023, the National Steering Committee for Master of Education Postgraduates issued the first Basic Requirements for Full-time Master of Education Postgraduates' Practical Teaching (in the future referred to as the Basic Requirements), and the practical teaching of Master of Education began to move towards standardization and institutionalization.

In August 2023, the National Education Professional Degree Postgraduate Education Steering Committee updated the Guiding Training Program for Full-time Master of Education Professional Degree Postgraduates and the Basic Requirements for Practical Teaching of Full-time Master of Education Professional Degree Postgraduates, thus establishing new practical teaching standards and training objectives. This is the first update since the publication of the 2017 edition of the Guiding Training Program for Full-time Master of Education Professional Degree Postgraduates, and it is particularly necessary to use visual analysis tools to objectively review the research status of full-time Master of Education practical teaching in China in the past seven years. In addition, by analyzing the new trends in this field and profoundly understanding the training objectives of the 2023 edition of the guiding training program, we can further promote the reform of the quality and system construction of the practical teaching of the Master of Education.

2. Research Results

2.1 Source of Data

Based on the full-text database of China National Knowledge Infrastructure (CNKI) as the literature retrieval platform, the advanced retrieval method was selected, and the subject retrieval was carried out by inputting "(subject: practical teaching of master of education) OR (subject: practical teaching of master of education) OR (subject: practical teaching of master of education) OR (subject: 'three learning and one training of master of education') in the retrieval box. The CNKI database has the selected period from January 1, 2017, to June 1, 2024. In order to ensure the accuracy of the data source and the validity of the literature, the literature obtained from the search is screened, excluding dissertations, conference reviews, book reviews, and duplicate literature. Finally, 100 valid pieces of literature were screened out and exported in Refworks format.

2.2 Research Results

348 Chinese documents were retrieved, including 205 academic journals and 117 dissertations, and the data were downloaded on June 28, 2024. According to the content and requirements of the analysis objectives, two researchers independently screened the literature. According to the inclusion and exclusion criteria of the literature, the controversial literature was decided by the third researcher, and 100 Chinese pieces of literature were selected. Citespace6.2r7 software version was used as a visual analysis tool, the time range of literature analysis was selected as 2017-2024, the time slice was 1

year, the cutting method was the Pathfinder method, and other methods were defaulted by the system. The author, research institution, and keywords are selected by node type to visualize the literature. Microsoft Excel was used to analyze the annual number of published papers.

2.2.1 Research status

The fluctuation in the number of published articles reflects the progress and trend of the research field. Figure 1 shows the publications in this field in the past seven years. From 2017 to 2024, a total of 100 relevant papers were published, showing a fluctuating upward trend as a whole. In 2017, the guiding training program for the national master's degree in education was revised, and the number of articles published in that year was relatively low, not more than 6. This phenomenon may be related to the early stage of implementing the new revised scheme, when high-quality academic literature has not yet fully emerged, and the training units may still be adapting and exploring the new scheme. Since 2018, the number of published articles has fluctuated, which is the fluctuating development period of the research, reaching a peak of 21 articles in 2019, indicating that the researchers have promoted the development of the research field by accumulating experience, summarizing, and reflecting in practice. Since 2020, the number of articles published has been declining yearly, possibly related to the current social background. With the rise of generative artificial intelligence, educational circles have begun to think about how to cultivate the innovative and practical teaching ability of Master of Education postgraduates.

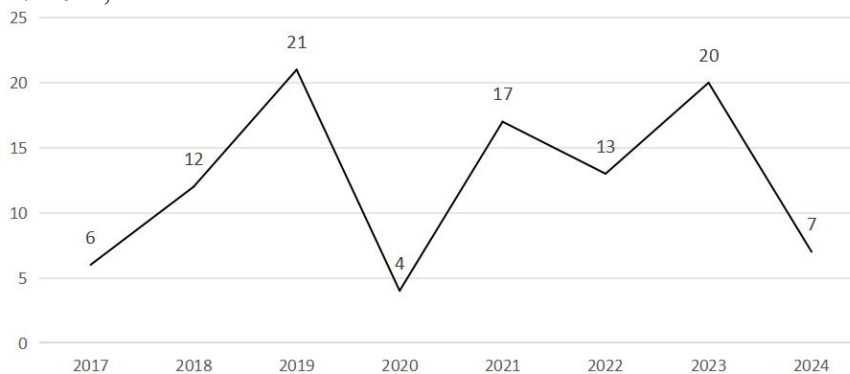


Figure 1. Line Chart of the Number of Annually Published Journal Papers

2.2.2 The degree of author collaboration

To some extent, the number of articles published in the journal represents the

academic status of the author in the field, and the degree of author collaboration can reflect the core author group and its collaboration

relationship.[2] In this study, CiteSpace software was used for visual data analysis and processing to obtain data on the number of articles published and the frequency of cooperation of the top ten high-yield authors, as shown in Table 1. Analyzing the number of articles published by authors in the research field and the links between authors, high-yield authors, and high-impact authors can be found. When analyzing the number of articles published by authors from Table 1, it can be observed that the average number of articles published by unit authors is relatively low. Among them, the top three authors, Tang Fanggui, Guan Erqun, and Zheng Xiangli, only published two articles, while the total number of authors who published this number is only eight. Further analysis of the frequency of cooperation between authors shows that the frequency of cooperation between the primary

authors is relatively high. Figure 1 shows a significant correlation between high-yielding authors and collaboration density, and the leading collaboration network is relatively concentrated.

Table 1. Top Ten High-Yielding Authors

Rank	Author	Year	The number of articles sent	Cooperation Frequency
1	Tang Fanggui	2021	2	5
2	Guan Erqun	2021	2	2
3	Zheng Xiangli	2019	2	1
4	Hu Xiaohua	2021	2	1
5	Tang Weimin	2022	2	1
6	Li Hua	2022	2	1
7	Ru Zongzhi	2023	2	1
8	Qian Jiaqing	2017	2	0
9	Liu Zhiwei	2021	1	4
10	Liu Yanli	2019	1	4

2.2.3 Closeness of cooperation between educational research institutions

Table 2. Top 10 High-Yield Institutions

Rank	Agency	Year	The number of articles sent	Degree of cooperation
1	School of Education, Baoji University of Arts and Sciences	2020	3	0
2	Hengyang Normal University	2021	2	3
3	College of Education, Guangzhou University	2019	2	3
4	College of Education, Liaoning Normal University	2021	2	2
5	Department of Education, Shandong Normal University	2018	2	2
6	Graduate School of Liaoning Normal University	2021	2	2
7	College of English, Jilin Foreign Studies University	2019	2	1
8	College of Teacher Education, Ludong University	2021	2	1
9	College of Education, Dalian University	2020	2	1
10	College of Education, Central China Normal University	2022	2	1

Through the cooperation network analysis function of CiteSpace software, this study analyzes the network relationship of institutions in the research field, clearly shows the cooperation status between institutions, and provides a reference for evaluating the academic influence of institutions.[3] The top ten institutions in terms of the number of articles published are shown in Table 2. The College of Education of Baoji University of Arts and Sciences, Hengyang Normal University, and the College of Education of Guangzhou University are in the leading position in the number of articles published. Regarding the degree of cooperation, the cooperation density of Hengyang Normal University, Guangzhou University College of Education, and Liaoning Normal University College of Education is relatively prominent. However, the linkages between institutions are sparse when viewed as a whole. This

phenomenon further shows that, to a large extent, the training units for the Master of Education are in a relatively independent state, lacking mutual exchanges and cooperation, and the successful experience has not been effectively circulated among brother universities.

2.2.4 The main research direction of practical teaching

One of the ways of co-word analysis is to extract the keywords, abstracts, and other information from citations and form an intuitive knowledge map after processing. The analysis and research of high-frequency keywords can explain the hot spots in a particular field in a certain period.[4] In this paper, the relevant keywords were extracted according to the set threshold, and 106 high-frequency keywords were found. From the time span of the statistics in the software, the time of Master of Education, practical

teaching, practical ability, and so on was relatively long.

Subsequently, keywords such as practical exploration, influencing factors, educational probation, and educational practice gradually appeared.

Table 3. Keyword Centrality Top Ten (Sorted by Mediation Centrality)

Rank	Keywords	Frequency	Mediated centrality
1	Master of Education	30	0.56
2	Practice teaching	27	0.4
3	Practical ability	15	0.23
4	Primary education	2	0.19
5	Influencing factors	5	0.14
6	Practical course	3	0.12
7	Quality of cultivation	2	0.11
8	Training mode	6	0.1
9	Embodied learning	1	0.1
10	The whole process	2	0.07

The intermediary centrality of keywords is a key indicator of the focus of research and scholars. According to the intermediary centrality indicators shown in Table 3, the communication between keywords such as "Master of Education," "practical teaching," "practical ability," and other hot words is strong, indicating that they frequently appear in the cross-citation network of literature and produce a positive cross-citation effect, which is the core theme and focus in the field of practical teaching research of the Master of Education.

Therefore, the researchers mainly focused on the concept and ability framework of practical teaching at the beginning and began to design the training mode and curriculum with the deepening of the research. However, they have not yet constructed a mature system.

2.2.5 The main research contents of practical

teaching

Research hot topics show the core issues that scholars in the academic field are concerned about in a specific period. Keywords are an important part of academic papers, concisely summarizing the main idea of the paper. They are often used to analyze hot issues in the field. Five core clusters (Table 4) were obtained through the tool: "training mode," "practice teaching," "practice curriculum," "influencing factors," and "graduate students."

The training mode includes keywords such as "training mode," "practical ability," "training quality," "full-time," and "practical teaching," which indicates that researchers are concerned about how to construct an effective training mode to improve the practical ability and training quality of Master of Education. Practical teaching includes such keywords as "practical teaching," "practical ability," "ideological and political education," "Master of Chinese International Education," and "innovative ability," which reflects the researcher's concern about the connotation of practical teaching, the integration of ideological and political education and the cultivation of practical and innovative ability. The practical curriculum includes such keywords as "practical curriculum," "master of education," "practical teaching mode," and "practicality," which shows that researchers are concerned about how to design and implement the practical curriculum. The influencing factors include keywords such as "influencing factors," "personal teaching efficacy," and "teaching practice," which indicates that researchers pay attention to the factors affecting the quality of practical teaching of Master of Education and how to formulate effective improvement strategies.

Table 4. Main Keywords for Clustering

Rank	Cluster name	Keywords	Average year	Number of keywords
1	Training mode	Training mode (12.1, 0.001); practical ability (7.81, 0.01); training quality (5.94, 0.05); full-time (4.98, 0.05); practical teaching (4.96, 0.05)	2019	23
2	Practice teaching	Practical teaching (13.62, 0.001); practical ability (3.67, 0.1); ideological and political education (3.01, 0.1); Master of Chinese International Education (3.01, 0.1); innovation ability (3.01, 0.1)	2020	20
3	Practical course	Practical courses (8.02, 0.005); Master of Education (5.75, 0.05); Practical teaching mode (5.3, 0.05); Mental health (2.63, 0.5); Practicality (2.63, 0.5)	2020	12
4	Influencing factors	Influencing factors (13.95, 0.001); personal teaching efficacy (4.5, 0.0); full-time education (4.5, 0.05); educational practice (4.5, 0.05); strategies (4.5, 0.05)	2021	8

5	Graduate students	Graduate (6.71, 0.01); Primary Education (6.71, 0.01); Strategies (6.71, 0.01); Problems (6.71, 0.01); Master of Education (1, 0.5)	2019	5
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2.2.6 Research heat analysis

The leading-edge trend analysis further delineates the changes and nature of the research field by citing a fixed set of documents for clustering, mainly based on co-citation and citation analysis. The cluster of

"training mode" is the earliest result, and the "training mode" is gradually extended to "full-time" and "training quality" with time, which also reflects that researchers continue to deepen and expand the research on the training mode of Master of Education.

Table 5. Keyword Prominence

Keywords	Year	Strength	Begin	End
Educational practice	2021	1.38	2023	2024
The whole process	2017	1.26	2017	2017
Full-time	2018	1.20	2018	2018
Professional Degree	2018	1.20	2018	2018
Influencing factors	2020	1.15	2022	2024
Master of Education	2017	1.10	2018	2018
Cultivate	2017	0.95	2017	2018
Primary education	2020	0.90	2020	2019
Practical course	2019	0.78	2023	2024
Practical ability	2017	0.68	2020	2020
Strategy	2020	0.65	2020	2020
Innovation ability	2017	0.63	2017	2017
Teaching ability	2017	0.63	2017	2017
Teaching mode	2017	0.63	2017	2017
Training path	2020	0.60	2020	2020
Case teaching	2022	0.57	2022	2022
Constituent factors	2022	0.57	2022	2022
Path exploration	2022	0.57	2022	2022
Evaluation	2022	0.57	2022	2022
The coaching dilemma	2022	0.57	2022	2022
Trainee teacher	2022	0.57	2022	2022
Practice tutor	2022	0.57	2022	2022
Plan to strengthen teachers	2022	0.57	2022	2022
Dilemma countermeasure	2022	0.57	2022	2022

Table 5 shows salient words in the research field in the past seven years. The starting year in the table is the corresponding keyword frequency. The beginning of the surge year and the end of the year are the times when the frequency of keywords tends to be stable, and the intensity of prominence represents the degree of a sudden increase in the frequency of the keywords in the time of prominence, which is usually accompanied by the heat of research. From the perspective of time series analysis, the topics of "cultivation," "innovation ability," and "teaching ability" started earlier and were the focus of the early research field. In terms of the duration of research topics, "influencing factors," "practical courses," and "educational practice" have been the focus of research for a long time, indicating that these fields have been the focus of research for a long time. This reflects the researchers' concern about the

educational practice, the whole process of practical teaching, and the cultivation of a full-time Master of Education.

3. Summary and Outlook

3.1 Summary of the Study

3.1.1 The research perspective and field are single

The number of articles published in the targeted research is not rich enough, and the number of articles published by the most productive authors is only 2, which indicates that the cooperation intensity and viscosity between the training units of Master of Education or other educational and scientific research institutions are not high.[5] This phenomenon echoes the call for reform and innovation in the practical teaching of the Master of Education. In fact, it is an objective

fact that the specific implementation measures of the practical teaching of Master of Education in various training institutions are different, and the supervision ability is different, which can not guarantee the quality of practical teaching. In addition, the low density of the author collaboration network also reveals the regional and team limitations of the research force. Therefore, in the future, we need to break down regional barriers and promote interdisciplinary, cross-disciplinary, and cross-regional cooperation between teachers and scholars to enhance the research effectiveness in the practical teaching of the Master of Education.

In addition, the sparsity of the network of research institutions further reveals the lack of linkage and cooperation between the training units of Master of Education and scientific research institutions. Despite some high-yield institutions, the overall cooperation network still needs to be more sparse, and most institutions are isolated in terms of practical teaching and research, so it is urgent to establish and improve the cooperation mechanism. After the release of the 2023 edition of the basic requirements, each training unit can plan and strengthen the cooperation between universities and front-line basic education schools, especially cross-regional and cross-type cooperation, according to the requirements and training objectives. Furthermore, the integration of research resources, the promotion of knowledge flow, and the practical innovation ability of the Master of Education are critical and the key paths to promote the in-depth development of the Master of Education's practical teaching.

3.1.2 The practical teaching research of the Master of Education will present the characteristics of diversification, innovation, and socialization

Keyword co-occurrence and cluster analysis reveal the research hotspots and potential research directions in the field of practical teaching of full-time Master of Education to a certain extent and provide researchers with the evolution process and frontier trends of the research hotspots in the field of practical teaching of Master of Education. For example, the high frequency of keywords such as "practical teaching" and "practical ability" reflects that researchers are strongly concerned about the practical ability of a Master of

Education. In his research results published in 2022, Wang Fei proposed to construct the "community model," "immersion model," and "four-stage interactive model" of full-time postgraduate practice teaching in order to solve the common problems of lack of cooperation, lack of depth and lack of connection in the current full-time postgraduate practice teaching.[6] In addition, with the emergence of new keywords, such as "embodied learning curriculum," it is expected that future research may expand the content of practical teaching from point to line to new practical teaching modes, improve the quality and efficiency of practical teaching, and strengthen practical skills and curriculum integration. In the research results published in 2022, Hua Chunyan and others proposed establishing a platform for practical teaching exchange and cooperation and achieving effective linkage between personnel inside and outside the school to effectively improve the quality of full-time Master of Education practical teaching.[7]

3.2 Prospects

Under the background of the seven-year implementation of the Guiding Training Program for Full-time Master of Education Professional Degree Postgraduates (2017 Edition), this study combs and analyzes the current situation of full-time Master of Education practical teaching research in China through the CiteSpace tool. The results show that the research focus has shifted from "whole-process" and "training quality" to "school-enterprise cooperation" and "embodied learning curriculum," and the research field has shifted from "practical teaching ability" and "training mode" to "practical curriculum" and "training quality," which reveals the trend that the practical teaching of Master of Education is closely integrated with social needs. It also shows that the research on practical teaching of full-time Master of Education is developing toward diversification, innovation, and socialization. In the future, the training units of Master of Education should draw lessons from the existing research results of the training mode of full-time Master of Education's practical teaching, combined with the development trend and demand of basic education in China, closely conform to the training objectives and

requirements of Master of Education, design practical teaching courses pertinently, and construct the practice with the goal of results-oriented. In order to cultivate high-quality educational professionals who meet the actual needs of social development, we should strengthen the process evaluation of practical teaching.

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