

Professional Development Progress of Rural Aesthetic Education Teachers in China —Visual Analysis Based on CiteSpace

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Abstract. Rural teachers are a crucial driving force behind the development of China's rural education, and their professional development has a direct impact on its progress. However, there exist significant challenges that hinder the development of rural aesthetic education, including a shortage of qualified teachers and low-quality instruction. This paper analyzes the current state of rural aesthetic education teacher professional development in China based on papers published in CNKI database core journals from 2012 to 2022. The results indicate that while research on rural teachers' professional development has shown steady growth in terms of volume, it has yet to develop into a comprehensive research system. Moving forward, future studies should focus on addressing the deep-seated issues facing rural teachers' professional development using innovative technological tools, as well as exploring new methods for conducting research on this topic.

Keywords: rural education; visualization; rural aesthetic education; China; Citespace.

1. Introduction

The significance of rural aesthetic education is rooted in its pivotal role as an integral component of rural education. By facilitating the development of rural youth's cognitive, emotional, and intellectual faculties, aesthetic education can serve to broaden and deepen their spiritual horizons. This form of education not only allows children to imbibe the beauty of nature without conscious effort, but also through the establishment of aesthetic courses, community engagements, and campus culture, it encourages young people to cultivate a positive and accurate outlook on aesthetics and culture. However, the current state of rural aesthetic education in China still has several challenges [1]. Firstly, the teaching level of art education in rural primary and secondary schools remains low. Secondly, students' learning consciousness is not strong enough, resulting in limited interest in pursuing artistic education. Thirdly, the rural economy is still underdeveloped, which makes it difficult to provide adequate resources for art training. Fourthly, there is a significant gap between rural and urban areas in terms of social concept and teacher strength. These factors contribute to the significant contrast between rural and urban education [2-4]. In 2022, the report of the 20th National Congress of the Communist Party of China called for a comprehensive push towards rural revitalization, and set out goals for educational reform and development with a focus on promoting educational equity, accelerating the balanced development of compulsory education and urban-rural integration, and optimizing regional educational resource allocation [5]. In order to achieve educational equity, promoting the equity of aesthetic education in schools is deemed the most urgent and challenging task. A multitude of researchers have conducted in-depth discussions on the construction of rural school teachers from various perspectives, with a particular focus on research related to the professional development of rural teachers. This area of study has garnered significant attention within the academic community due to the dedicated efforts of numerous researchers [6-8]. As a result, China's academic circle has seen the emergence of numerous relevant research findings. It is thus imperative to investigate the current state and hotspots of research related to the professional development of rural teachers in China over the past decade, in order to gain a comprehensive understanding of the present situation, frontiers, and trends of this field of study as a whole.

2. Data acquisition and research methodology

In this study, CiteSpace was used to analyze networks of co-cited references based on citation records retrieved from China National Knowledge Infrastructure (CNKI). Through an advanced search of the CNKI database on 10th July 2023, using "Rural aesthetic education" or "Aesthetic education teachers" as keywords, with a focus on "Rural teachers' professional development" or "Rural teachers' professional development", and checking for journals in the categories of "Core journals", "SCI source journals" and "CSSCI", while limiting the time span to 2012-2022 resulted in 1451 records published. After excluding articles that were deemed irrelevant such as news reports, literary reviews, and government announcements, a total of 969 valid articles were retrieved.

The research primarily employs the bibliometric method, utilizing text analysis of relevant literature pertaining to the professional development of rural teachers in China during the past decade. This includes analyzing article sources and conducting frequency statistics to explore village teacher research in our country and its current state. Additionally, the paper utilizes the visual mapping software CiteSpace [9, 10] to draw intuitive and clear high-frequency keyword clustering maps, time zone distribution maps, and keyword emergence maps. These maps help to unearth hot topics related to rural teachers' professional development in our country, and subsequently discuss the characteristics and trends of this research field.

3. Statistical and visual analysis

3.1 Statistical Analysis on the Professional Development of Rural Aesthetic Education Teachers

According to the statistical distribution of the number of articles published each year, CNKI has published over 100 articles per-year since 2019. What's more, there was a sharp increase in research on the professional development of rural teachers from 2020 to 2021. Through a second literature analysis and review of Rural Teachers' professional development, the author believes that two main reasons contribute to this trend: firstly, the state is fully deploying the implementation of the rural teacher program, with the aim of expanding the scope of poverty alleviation through education through the special post program and the establishment of provincial-level coordination for rural teachers to supplement this new mechanism. Secondly, the support plan for rural teachers (2015-2020) released by the Ministry of Education of the People's Republic of China, clearly calls for the establishment of a mechanism for the exchange of urban and rural teachers within county compulsory education, deepening the management system of "County-level management of school employment" and reforming the system through optimizing the allocation of teachers in rural schools to narrow the gap between urban and rural education. Despite being affected by many factors, China's rural education has always been a weak link in the educational cause. However, without balanced development of urban and rural education, it is difficult to achieve real equity in education. From the overall trend of output, the output of research on rural teachers' professional development has been on the rise in the past decade, indicating that this area of study is becoming increasingly popular (as in Figure 1).

Moreover, a statistical analysis was conducted to examine the number of articles published by different institutions. The results, as shown in Figure 2, indicate that Southwest University has published the highest number of articles, followed by Beijing Normal University and Hunan Normal University.

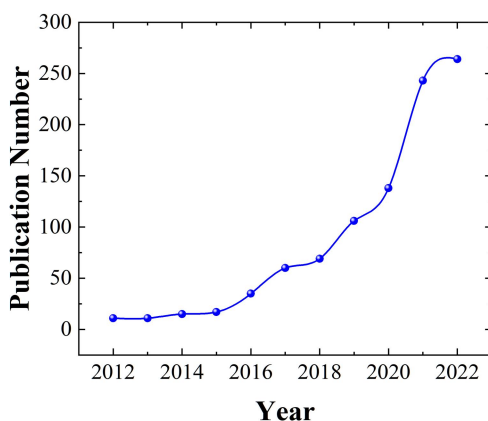


Figure 1. Publication number of rural aesthetic education in China from 2012 to 2022.

Since February 2012, when the Ministry of Education and the Ministry of Science and Technology issued the "On the Development of New Rural Areas in Institutions of Higher Learning and the Construction of Research Institutes" (Teaching and Technology (2012) No. 1), universities and colleges have responded positively to the government's call to explore the construction of new rural development research institutions in institutions of higher learning. This initiative aims to effectively improve the quality and level of university services for regional new rural construction. Prior to the implementation of this policy, Beijing Normal University had already established research institutes related to rural education development, with a focus on balanced urban-rural education and educational equity. From the nature of these research institutes, it is evident that our education sector places great importance on the professional development of rural teachers.

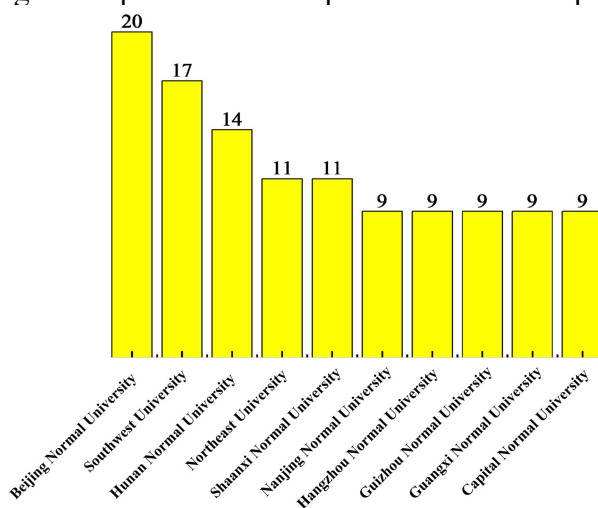


Figure 2. Highest number of publications in CNKI by various Chinese organizations from 2012 to 2022.

3.2 Visual Analysis of the Professional Development of Rural Aesthetic Education Teachers

The high-frequency keywords extracted from the article provide a concise summary of its main theme, reflecting the hot topics within the research field. The co-occurrence knowledge map of these keywords offers a direct representation of the focus of research in this area. The closer to the center of the map, the higher the frequency of keywords and the more connections between nodes. To accurately depict the distribution of high-frequency and high-frequency keywords, CiteSpace 6.2.2 (64. bit) software was utilized to create a co-occurrence knowledge map, as shown in Figure 3. The larger the circle, the higher the frequency of nodes and connections between them, indicating

greater centrality for keywords. According to Figure 3, the top high-frequency keywords related to rural teachers' professional development include "Aesthetic Education (Meiyu in Chinese)" (180 times), "Rural teachers (Xiangcunjiaoshi in Chinese)" (84 times), "Professional Development (Zhuanyefazhan in Chinese)" (49 times), "College Aesthetic Education (Gaoxiaomeiyu in Chinese)" (37 times), "Aesthetic Education (Meiyujiaoyu in Chinese)" (34 times), "Rural revitalization (Xiangcunzhenxing in Chinese)" (30 times), and "Aesthetic Education Course (Meiyukecheng in Chinese)" (23 times). These results suggest that more attention is being given to studying rural teachers' training within the field of rural teachers' professional development and rural aesthetic education.

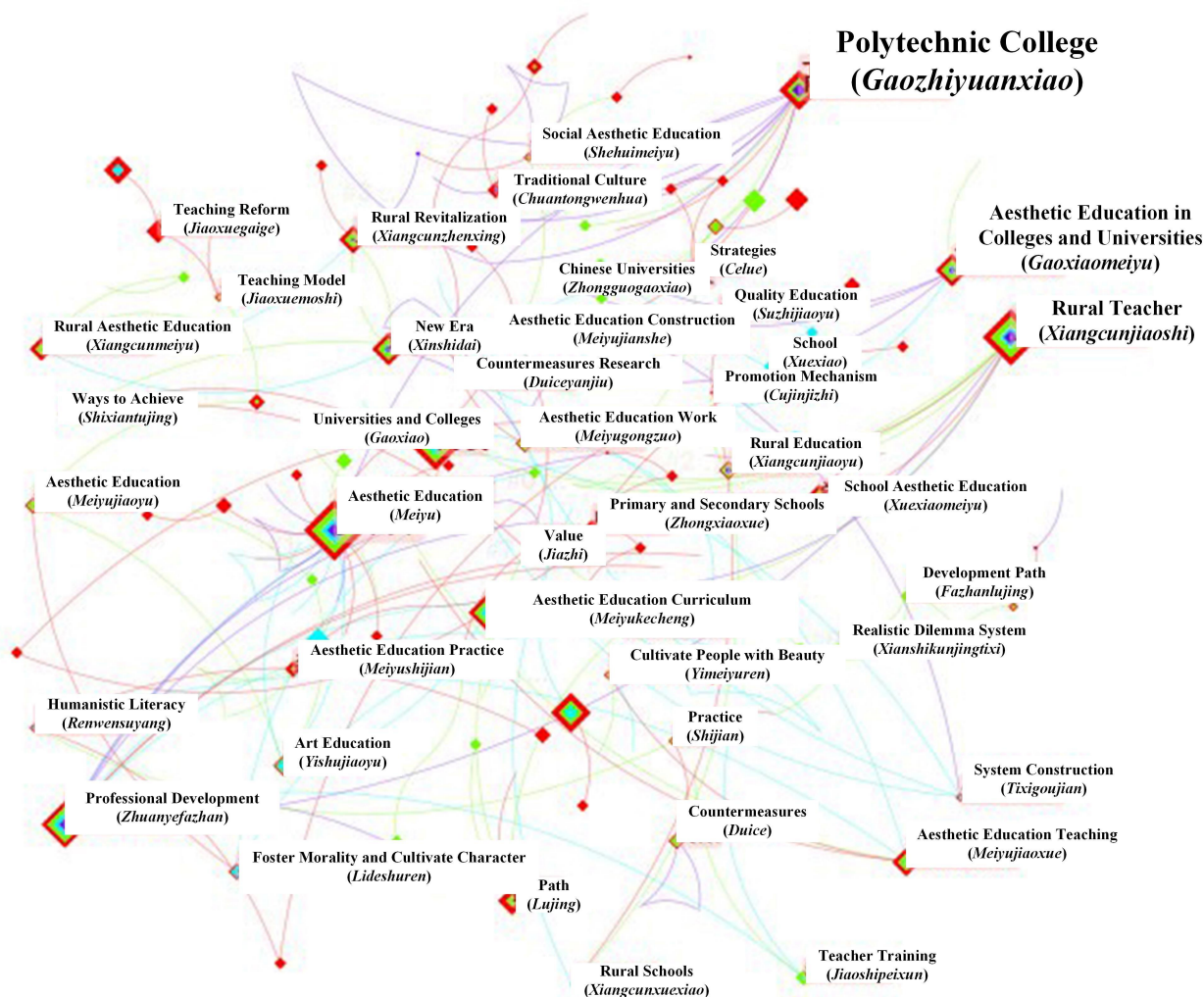


Figure 3. Co-occurrence Knowledge Graph of Keywords in Rural Teacher Studies from 2012 to 2022.

The evolution of development trends in research fields can reveal the most significant opportunities and representative research topics. In this paper, a time-zone distribution map was employed to depict the historical span of clustered literature and the relationships among them. To gain a comprehensive understanding of the evolution of rural teachers' professional development, this study mapped the time-zone distribution of rural teachers' professional development from 2012 to 2022 (as in Figure 4). From this figure, we can not only identify the focus of this research but also observe the evolution of each category of keywords. This study categorizes the research focus of rural teacher professional development into three stages: the initial stage of research, the stage of pluralistic development, and the stage of research focus.

As illustrated in Figure 4, the research focus of 2019 primarily centered on aesthetic education. Over time, the scope of research on aesthetic education expanded gradually in 2020, and the study of rural aesthetic education's research and educational reforms increased in 2022. Consequently, it

can be inferred that during the ten-year period from 2012 to 2022, the evolution of teachers' professional development has undergone three distinct stages: an initial stage, a pluralistic development stage, and a research focus stage.

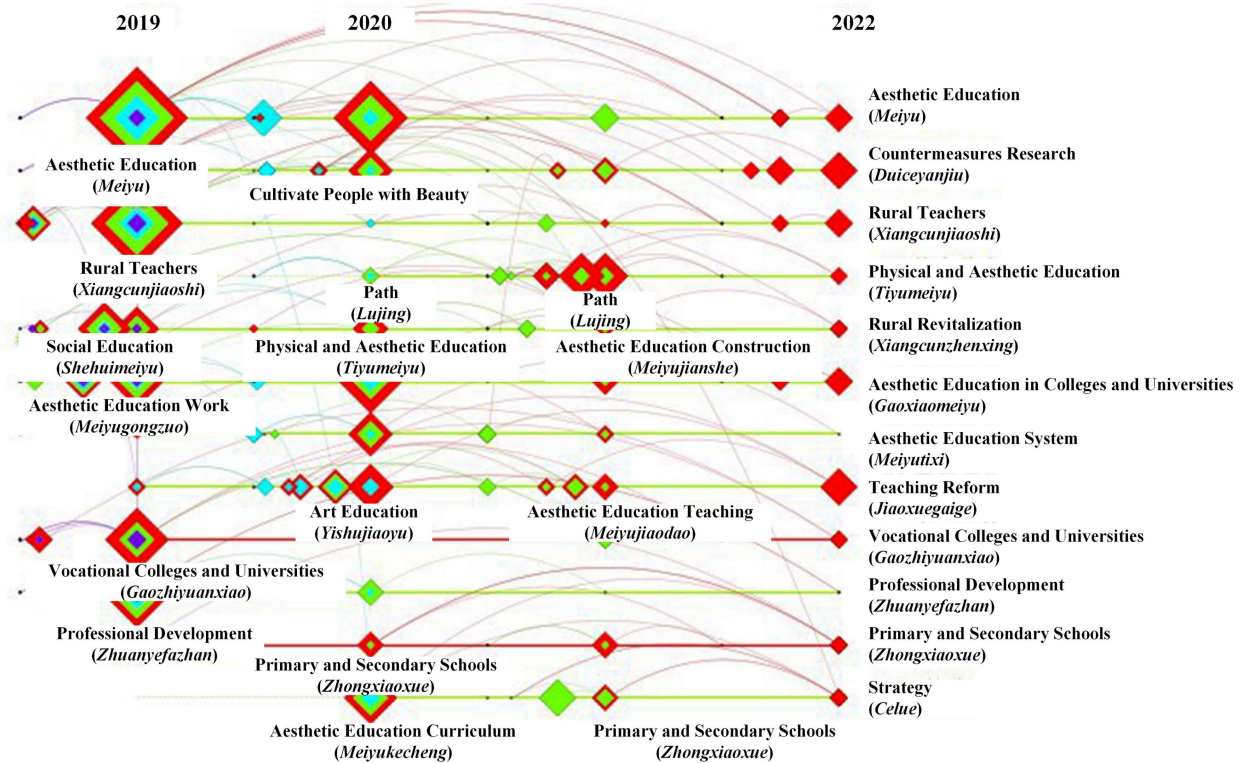


Figure 4. Time Zone Distribution Map of Professional Development Research on Rural Teachers from

4. The characteristics and prospects of the development of rural aesthetic education

This paper summarizes the following characteristics of the topic of professional development of rural aesthetic education teachers from 2012 to 2022 based on a statistical analysis and visual analysis of the literature

In terms of research quantity, the study found that the research on the professional development of rural teachers in our country is significant and shows a continuous trend of growth. Although the research interest was low from 2012 to 2015, it gradually increased from 2015 onwards. This increase was mainly due to national policies emphasizing rural education and rural aesthetic education, as well as major universities actively investing in the establishment of new higher education institutions, such as the Rural Development Research Institute. Additionally, academic circles began to pay more attention to the living conditions of rural teachers in extremely poor areas. While these policies did not have an immediate impact on the research on the professional development of rural teachers, they provided an opportunity for the academic community to focus on this issue and laid a solid foundation for its research and development capacity in 2015.

For the size and organization of the research team, the research system on rural teachers' professional development and the related fields have yet to establish a core collection of authors and a more mature research system. Additionally, there is a need to strengthen cooperation among various institutions in this field. While there are many authors contributing to research on rural teachers' professional development, there are relatively few researchers actively working in this area. As a result, research findings tend to be scattered and not well-coordinated. Currently, Southwest University, Beijing Normal University, Hunan Normal University, and myself are leading positions for studying the professional development of rural aesthetic education teachers. Other key institutions include the Institute for Rural Education Development, the Institute of Educational

Sciences, and the Research Center for Aesthetic Education. In order to further explore rural education and the role of rural teachers in professional development, it is recommended that a specialized teaching and research team focusing on rural education be established. This team can provide valuable insights into existing problems in the development of our country's rural education and offer suggestions for improvement.

Based on a thorough analysis of the text and knowledge map of this study, along with the summary of the research characteristics in this field, the author believes that there is still significant room for improvement and development in the field of rural teacher professional development. Therefore, the following recommendations are suggested:

First and foremost, the Administrative Department of Education, as well as departments and affiliated departments of teaching and research, should conduct specialized training in rural aesthetic education. This includes designing training courses and implementation plans for rural and rural aesthetic education teachers. Instead of only allowing rural areas and village teachers to audit urban schools for aesthetic education training, rural aesthetic education and teacher training should be treated as an independent project within national and provincial training programs.

Secondly, colleges and universities should leverage their own resource advantages and vigorously carry out aesthetic education teacher infiltration actions in rural areas. Currently, many colleges and universities are participating in aesthetic education infiltration and infiltration action plans, but most focus on assisting only two or three rural schools. Although this can directly benefit a small number of rural students, it is still difficult to fundamentally solve the problem. In the next step, there is an urgent need to prioritize infiltration actions, focusing on the training of rural teachers of aesthetic education, and greatly expanding the number of rural students involved in the project.

Thirdly, we should encourage social forces to participate in rural aesthetic education teacher training, especially social welfare organizations. By integrating all available resources, administrations, universities, and society, we can give full play to their respective advantages and form a joint force to promote the development of rural aesthetics education.

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