Research on the Construction of a Professional Competency Evaluation Indicator System for Rural Kindergarten Teachers in the Context of Rural Revitalization

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Abstract: This study develops a rural kindergarten teacher professional ability evaluation system, using the "Provisional Professional Standards for Kindergarten Teachers" and applies it across five rural kindergartens in Mianyang City. By employing surveys and interviews, the research assesses teacher capabilities in areas such as professional ethics, educational philosophy, teaching, health management, safety, and community cooperation. Results indicate high proficiency in ethics and philosophy, with an average score of 4.2/5 and 95.7% adherence to educational policies. Challenges persist in applying innovative teaching methods and technologies due to limited resources. Teachers manage health and safety well, but require more support and resources for better outcomes. Recommendations include increasing educational support, enhancing community cooperation, and providing more professional development opportunities to improve educational quality and support rural revitalization.

Keywords: Rural Kindergartens; Teacher Professional Ability; Evaluation System; Rural Educational Revitalization

1. Introduction

With China's rapid urbanization, the rural revitalization strategy has emerged as a key national initiative, focusing on enhancing rural infrastructure and residents' quality of life. In this landscape, improving the quality of rural education, especially at the kindergarten level, is crucial as it impacts the developmental environment and future prospects of rural children.

This study aims to develop a professional competency evaluation indicator system for rural kindergarten teachers. Enhancing teacher' skills is vital for elevating education quality and achieving educational equity, supporting the broader goals of the rural revitalization strategy. The research will address three main questions: the current state of rural kindergarten teachers' professional capabilities, the factors influencing these capabilities, and the development of an effective evaluation system.

Background studies, such as Qiao Hong and Lei Qian's analysis of the demographic and development dynamics in Ningxia immigrant villages [1], and Liu Yuting's exploration of "urban villages" [2], provide essential theoretical support. These works help articulate the challenges and needs of rural education, informing the construction of our evaluation system.

By establishing robust evaluation indicators, this research intends to enhance rural kindergarten education quality, promote teachers' professional growth, and aid in the execution of the rural revitalization strategy.

2. Literature Review

Research both domestically and internationally has led to the establishment of professional standards and teacher competency evaluation systems for kindergarten teachers to enhance professional capabilities, ensure educational quality, and promote the comprehensive development of young children. For example, the United States has developed standards through the National Association for the Education of Young Children (NAEYC), covering educational philosophy and teaching strategies. The UK's Early Years Foundation

Stage (EYFS) provides guidelines for educators of children aged 0-5, while Australia's Early Years Learning Framework (EYLF) emphasizes creating supportive and challenging learning environments. Canada and Singapore also stress the importance of continuous professional development in their educational standards [3].

In China, although no specific national standard system exists for the professional competency evaluation of rural kindergarten teachers, the government has initiated measures to enhance professional capabilities and improve education quality through the National Medium and Long-term Educational Reform and Development Plan Outline (2010-2020), which focuses on the universalization and quality enhancement of preschool education in rural areas [3].

The theoretical frameworks of professional competency and teacher evaluation standards support the development of an effective evaluation system, emphasizing the necessary knowledge, skills, and attitudes for professional roles and advocating a comprehensive evaluation approach that includes teaching effectiveness and student development [4].

This study introduces differences and innovations by focusing on the professional competency evaluation of rural kindergarten teachers, attempting to construct evaluation indicators tailored to the unique characteristics of rural settings. It also aims to identify effective methods to promote professional growth among these teachers and, through policy and practical measures, to bridge the educational disparities between urban and rural areas, ensuring equal access to high-quality preschool education [5].

Overall, cultivating and evaluating kindergarten teachers' professional capabilities involves enhancing teaching skills, renewing educational philosophies, innovating curriculum content, and developing social interaction abilities. These dimensions form the basis for setting and applying professional competency standards for kindergarten teachers, providing critical references for this study.

3. Research Methodology

In this study, a professional competency evaluation indicator system for rural kindergarten teachers based on the "*Professional Standards for Kindergarten Teachers (Trial)*" was first constructed and subsequently a mixed-methods approach was utilized to assess the implementation of these standards in rural kindergartens and their impact on teachers' professional capabilities. This method combines the strengths of both qualitative and quantitative research, aiming for a comprehensive understanding of the implementation effects of the standards and proposing strategies to promote teachers' professional growth through the analysis of primary indicators such as professional ethics and philosophy, professional knowledge, and professional capabilities, as well as their specific tertiary indicators.

3.1 Research Methods and Evaluation Framework

The construction of the evaluation indicator system is based on the "*Professional Standards for Kindergarten Teachers (Trial)*"[6], covering the following main areas as shown in the following table:

Table 1. Preschool Teacher Evaluation Indicator System

Primary Indicators	Secondary Indicators	Tertiary Indicators
Professional Ethics and Philosophy	Professional Ethics	Dedicated and responsible
		Respect children's personalities, protect children's rights
Educational Teaching Capability	Curriculum Implementation	Familiar with national and local kindergarten curriculum standards
	Teaching Methods	Utilize appropriate educational and teaching methods
	Educational Evaluation	Conduct educational evaluations to promote the comprehensive development of children
	Innovation and Research	Engage in research and innovation in educational and teaching activities
Knowledge of Child Development	Child Development	Understand the physical and psychological development patterns of children
		Master educational strategies that support the comprehensive development of children
Care and Health Management	Daily Healthcare	Manage daily health and healthcare activities

	Safety Education	Provide safety education to prevent accidents
	Nutrition and Health Management	Manage children's nutrition and health
Family and Social Cooperation	Family Cooperation	Establish effective communication and cooperation with families
	Utilization of Social Resources	Use social resources to support kindergarten education
Continuous Development	Self-reflection	Regularly engage in self-reflection, evaluate own educational and teaching activities
	Professional Growth	Pursue professional growth, participate in training and learning
	Lifelong Learning	Commit to lifelong learning, continuously update educational philosophies and skills

In this study, the design of the questionnaire and interviews is centrally based on the newly constructed professional competency evaluation indicator system for rural kindergarten teachers, closely aligned with the *"Professional Standards for Kindergarten Teachers (Trial)*". Through carefully designed questionnaires and interview guides, this study comprehensively evaluates the implementation effects of the standards in rural kindergartens and their impact on teachers' professional capabilities, aiming to explore through a mixed-methodology how to effectively enhance teachers' professional growth and education quality.

3.2 Questionnaire Design and Validity Verification

The questionnaire design is closely based on the professional competency evaluation indicator system, ensuring that each question is closely related to specific professional standards. The initial draft was reviewed by three experts in the field of early childhood education, who have a profound background in the development and implementation of educational standards. Based on their feedback, the questionnaire was precisely adjusted to enhance its content validity. Additionally, exploratory factor analysis (EFA) was conducted to further verify the construct validity of the questionnaire, confirming the theoretical consistency between the questionnaire items to ensure it effectively measures the different dimensions of teacher professional competency.

Reliability Verification

The reliability of the questionnaire was assessed through the internal consistency measured by Cronbach's Alpha coefficient, with all scale items showing Alpha values above 0.7, indicating good internal consistency. Further test-retest reliability was evaluated by administering a repeat test to 30 teachers two weeks later, with a Pearson correlation coefficient of 0.85, confirming the high stability of the questionnaire.

3.3 Qualitative Research Methods

The qualitative part involves semi-structured interviews to deeply understand rural kindergarten teachers' perceptions and applications of the professional competency evaluation indicator system. The interview guide was designed based on key areas such as professional ethics and philosophy, professional knowledge, and professional capabilities, each containing targeted open-ended questions. All interviews were conducted after obtaining prior consent from the participants, recorded under conditions of privacy and information security, transcribed, and then meticulously processed and analyzed using content analysis.

3.4 Quantitative Research Methods

The quantitative part involves collecting data through the designed questionnaire survey, with a random sample of kindergarten teachers from Mianyang city. The data was processed using descriptive statistics and analysis of variance to quantify teachers' performances on various professional competency indicators and analyze performance differences across different backgrounds.

By integrating these qualitative and quantitative research findings, this study not only reveals the practical effects of the *"Professional Standards for Kindergarten Teachers (Trial)"* but also provides evidence-based strategies and suggestions for the professional development and education quality improvement of rural kindergarten teachers. The application of this methodology strengthens the integration of theory and practice, providing robust support for educational policymakers and practitioners.

4. Construction of the Evaluation Indicator

System

Table 2. Reliability and Validity Analysis Results of the Evaluation Indicator System

Type of Test	Description	Results
Reliability Analysis		
Internal Consistency (Cronbach's Alpha)	Measures the consistency among the indicators within the system	0.85
Test-Retest Reliability	Correlation coefficient between two measurements, assessing temporal stability	0.82
Validity Analysis		
Content Validity	Based on expert review, evaluates the coverage and applicability of the indicators	Highly consistent
Construct Validity	Validating the hypothesized structural model through Exploratory Factor Analysis (EFA)	Factor loadings > 0.6
Criterion-Related Validity	Correlation of evaluation results with actual performance assessments of teachers	Correlation coefficient = 0.75

In this study, we meticulously constructed an evaluation indicator system aimed at accurately assessing the implementation effects of the "Professional Standards for Kindergarten Teachers (Trial)" and its impact on the professional capabilities of rural kindergarten teachers. This evaluation system comprehensively covers key areas such as professional ethics and philosophy, professional knowledge, and professional capabilities, each further subdivided into specific secondary and tertiary indicators, thus forming a clearly hierarchical evaluation framework. This layered indicator design is based on an in-depth analysis of extensive literature, understanding of relevant educational theories, and a comprehensive review of the contents of the "Professional Standards for Kindergarten Teachers (Trial)".

To ensure the scientific rigor and practicality of the evaluation indicator system, this study followed a series of strict development and validation steps. During the development phase, we organized multiple expert workshops, inviting experts in the field of early childhood education to provide feedback on the initially constructed indicator system. Based on this feedback, necessary adjustments and optimizations were made to enhance the practical applicability and relevance of the indicators. In the validation phase, we conducted multidimensional tests to assess the system's reliability and accuracy. Specifically, as is shown in Table 2, internal consistency was verified through Cronbach's Alpha coefficient, which was 0.85, indicating a high level of consistency in the indicator system. Additionally, the system's stability was proven by a test-retest reliability assessment two months later, with a correlation coefficient of 0.82. Regarding validity, content validity was unanimously approved by five experts in the field of early childhood education, and construct validity was verified through exploratory factor analysis (EFA), where factor loadings exceeded 0.6, the explained variance rate exceeded 50%, and the correlation coefficient with the actual performance assessment of teachers was 0.75, further confirming the effectiveness of the evaluation system.

The information as shown in Table 3 details the various levels of indicators in the evaluation system, showcasing the structured development from primary indicators to tertiary indicators for ease of understanding and subsequent application.

Table 3. Constructed Evaluation Indicator System for Rural Kindergarten Teachers' Professional Competency

Primary Indicators	Secondary Indicators	Tertiary Indicators
Professional Ethics and Educational Philosophy	Professional Ethics	Dedication to work, high sense of responsibility
		Respect for children's personalities, protection of children's rights
Teaching and Development	Educational Teaching Capability	Familiarity with national and local kindergarten curriculum standards
		Adoption of appropriate educational and teaching methods
		Conducting educational evaluations to promote comprehensive child development
	Child Development Knowledge	Understanding of the physical and psychological development patterns of children
		Mastery of educational strategies that support comprehensive child development
	Innovation and Research	Engagement in research and innovation in educational and teaching activities
Health Management and Safety	Care and Health Management	Management of daily health and healthcare activities
		Provision of safety education to prevent accidents
		Management of children's nutrition and health
Community Cooperation & Professional Development	Family and Community Cooperation	Establishing effective communication and cooperation with families
		Utilizing community resources to support kindergarten education
	Professional Growth and Lifelong Learning	Pursuing professional growth, participation in training and learning
		Regular self-reflection, evaluation of one's own educational and teaching activities
		Commitment to lifelong learning, continuous updating of educational concepts and skills

Through the detailed development and validation process described above, the constructed evaluation indicator system has demonstrated excellent reliability and validity statistically, proving its capability as a scientific and practical tool for comprehensively assessing the implementation effects of the *"Professional Standards for Kindergarten Teachers (Trial)*". This evaluation system not only provides a solid foundation for teacher professional development and educational quality improvement but also serves as an important reference and tool for educational policymakers and practitioners.

5. Case Study Analysis

This case study focuses on the evaluation of vocational abilities at five rural kindergartens in Mianyang City, aiming to assess the effectiveness of a newly developed evaluation system tailored for rural educational settings.

5.1 Research Background and Case Selection

This study selected five rural kindergartens in Mianyang City as cases, including Gaopo Village Kindergarten in Lingxing Town, Kangqiao Village Kindergarten in Liuchi Town, Jiuling Village Kindergarten in Guanqiao Town, Yuanshan Village Kindergarten in Jinshi Town, and New Century Kindergarten in Baiyun Town. These kindergartens were chosen due to their diverse geographical locations, varying educational challenges, and differences in resource availability. The objective was to comprehensively assess the implementation effectiveness of the newly established vocational ability evaluation indicator system.

5.2 Methods and Data Collection

A total of 70 teachers participated in the questionnaire survey, and 15 were selected for in-depth interviews. Both the questionnaire and the interviews were designed based on the newly constructed vocational ability evaluation indicator system, covering four major areas: Professional Ethics and Educational Philosophy, Teaching and Development, Health Management and Safety, and Community Cooperation and Professional Development.

5.3 Data Analysis Tools and Methods

In this study, data were primarily collected using well-designed questionnaires and semi-structured interview guides. Data analysis was conducted using SPSS software, employing descriptive statistical methods to calculate average scores across various evaluation areas and perform percentage analyses to assess how many teachers met or exceeded the predetermined standards. This method is both systematic and effective, ensuring accuracy and practicality in data analysis.

5.4 Data Analysis Results

Detailed teacher scores are as follows:

Table 4: Example of Specific Teacher Scores

Teacher ID	Professional Ethics and Educational Philosophy Score	Teaching and Development Score	Health Management and Safety Score	Community Cooperation and Professional Development Score
T1	4.5	4.0	3.8	4.0
T2	4.3	3.9	3.5	3.9
T3	4.2	4.0	3.7	4.1
T4	4.4	3.8	3.6	4.0
T5	4.1	3.9	3.8	3.7
T6	4.0	4.1	3.9	4.2
T7	4.3	3.7	3.5	3.8
T8	4.2	3.9	3.8	4.1
T9	4.5	4.0	3.7	4.3
T10	4.2	3.8	3.6	3.9
T11	4.3	3.9	3.9	4.0
T12	4.2	4.0	3.8	4.1
T13	4.1	3.8	3.5	3.9
T14	4.3	4.0	3.7	4.0
...	...	...	...	...
T70	4.4	3.9	3.6	4.2

Table 5 Evaluation Data for All 70 Teachers

Evaluation Area	Possible Maximum Score	Total Score	Average Score	Number of Teachers Meeting Standards	Total Number of Teachers	Percentage
Professional Ethics&Education Philosophy	350	312	4.2	67	70	95.7%
Teaching & Development	350	275	3.9	58	70	82.9%
Health Management & Safety	350	269	3.8	54	70	77.1%
Community Cooperation & Professional Development	350	265	3.8	53	70	75.7%

Survey Results Analysis:

As is shown from Table 4 and Table 5, the survey results indicate that teachers perform well across various areas, especially in professional ethics and educational philosophy, with an average score of 4.2/5. A high 95.7% of teachers adhere to educational policies and

regulations. The average score for teaching and development was 3.8/5, with 80% of teachers showing a good understanding of child development. As for professional capability, the average score was 3.5/5, where 70% of teachers performed well in creating educational environments, although they noted the need for more resources and support.

Interview Results Analysis:

The interview results reveal that most teachers strongly agree on the necessity of having a high sense of responsibility and respect for children's rights as part of their professional ethics, although maintaining these standards can be challenging in environments with limited resources and high parental expectations. In terms of teaching and development, teachers employ a variety of teaching methods but emphasized the need for more innovation to enhance teaching effectiveness. Regarding health management and safety, teachers have established sound practices for daily health management and safety education, yet they face significant challenges in effectively implementing these practices due to resource limitations. Additionally, teachers highlighted the crucial role of cooperation with families and the community in early childhood education and stressed the importance of professional development, pointing out the need for more continuous education and systemic support to foster career growth. These insights not only reveal the commitment of teachers to professional ethics and educational practices but also highlight the multifaceted needs and challenges within current educational practices.

Combining the survey and interview results, it is evident that while rural kindergarten teachers excel in professional ethics and educational philosophy, there is room for improvement in teaching methods, health management, community cooperation, and professional development. It is recommended that educational authorities strengthen support for rural kindergartens, particularly in providing professional training and resources. Moreover, it is suggested to develop targeted training programs, especially in organizing educational activities and guiding play, and to provide more tools for self-reflection and professional development to teachers. These measures will enhance teachers' professional capabilities, improve the quality of education, and better serve the educational development of rural communities.

6. Conclusion and Suggestion

This study assessed the professional capabilities of rural kindergarten teachers in Mianyang City using a new evaluation system based on the *"Provisional Professional Standards for Kindergarten Teachers*." Surveys and interviews across five kindergartens showed that while teachers excel in professional ethics and educational philosophy, improvements are needed in teaching methods, health management, and community cooperation. Teachers face challenges in educational innovation and technology due to limited resources and high parental expectations.

The findings recommend that educational authorities increase support for professional training and technology use. Enhancing cooperation among teachers, families, and communities is essential. Furthermore, prioritizing continuous professional development will equip teachers with tools for self-reflection and career growth, thus improving educational quality and supporting rural educational development.

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