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Multidimensional Analysis on Building the Quality Assurance System of "Three Levels and Five Categories" Kindergarten for Collaborative Quality Improvement

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Abstract: The realization of high-quality development of preschool education and the construction of a scientific and reasonable kindergarten education quality assurance system are not only inevitable measures under the development trend of "demographic dividend" to "talent dividend" under the background of "ageing and fewer children" of the current population .This paper analyzes the multidimensional complexity of the kindergarten education quality assurance system from five aspects: the main body of the education process, the standard setting of the quality of education, the way of monitoring and Evaluation, the way and method of information collection, and the way of incentive and Evaluation.

Keywords: Quality Assurance; Preschool Education; Ensure the Quality of Education.

1. Introduction

1.1. Background and Motivation

In October 2020, the 14th Five-Year Plan for National Economic and Social Development and the Proposals for the 2035th Long-term Goals proposed " improving the guarantee mechanism of inclusive preschool education". In the 2020 "Overall Plan for Deepening the Reform of Education Evaluation in the New Era", it is pointed out that the focus of the Evaluation is on "scientific education", "standardized park management", "team construction", and so on. In February 2022, the Ministry of Education issued the Guidelines for the Quality Assessment of Kindergarten Conservation Education (from now on referred to as the "Assessment Guidelines") based on the specific indicators and inspection points for the quality assessment of kindergarten education, pointing out that "building a scientific education system", in order to effectively improve the quality of kindergarten education and the level of kindergarten management, and improve the quality assurance system of kindergarten education. Professional assessment institutions and relevant social organizations are encouraged to evaluate the quality of kindergarten disciplines, majors, and courses to establish a scientific and standardized evaluation system for the quality of education.

1.2. Literature Review

Quality assurance is critical in various fields, including chemical measurements, software development, analytical chemistry, higher education, and corporate sustainability. Taylor (Taylor, 1987) discusses the importance of quality assurance in chemical measurements, while Buckley et al. (Buckley & Poston, 1984) focus on software quality assurance. Funk and Prichard et al. (Funk et al., 2007)delve into quality assurance in analytical chemistry, highlighting its significance in ensuring accurate results. In higher education, Coates (Coates, 2005) emphasizes the relevance of student engagement to quality assurance, suggesting that involving students in the process can enhance the overall quality of education. Stensaker (Stensaker, 2008) further explores quality assurance outcomes, discussing the need for a more realistic understanding of how organizational change occurs due to quality assurance processes. Seyfried et al. (Seyfried & Pohlenz, 2018) provide insights into the effectiveness of quality assurance in higher education institutions, focusing on the role of quality managers in promoting quality assurance.

Additionally, García-Sánchez et al. (García-Sánchez et al., 2019) examine the impact of corporate social responsibility (CSR) disclosure quantity, quality, and external validation on access to finance, highlighting the importance of assurance in strengthening the relationship between disclosure and financial access. Overall, the literature on quality assurance underscores its significance in ensuring accuracy, reliability, and effectiveness across various sectors, from scientific research to education and corporate sustainability. Organizations can enhance their credibility, efficiency, and overall performance by implementing robust quality assurance practices.

Kindergarten settings' quality of care and education is essential in early childhood development. Burchinal et al. (Burchinal et al., 2010) conducted a threshold analysis on the association between child care quality and child outcomes for low-income children in pre-kindergarten programs, highlighting the significance of quality care in influencing child development. Ying et al. (Ying et al., 2011) emphasized the role of public spending in promoting the development of early childhood care and education, underscoring the importance of attention to vulnerable groups. Lehrl et al. (Lehrl et al., n.d.) investigated social disparities in access to high-quality early childhood education and care settings, raising concerns about equal opportunities for all children. Park et al. (Park & Park, 2015) discussed issues related to the certification, education, and training of the early childhood education and care workforce in Korea, pointing out hidden issues such as marginalization and traditional child-caring discourse.

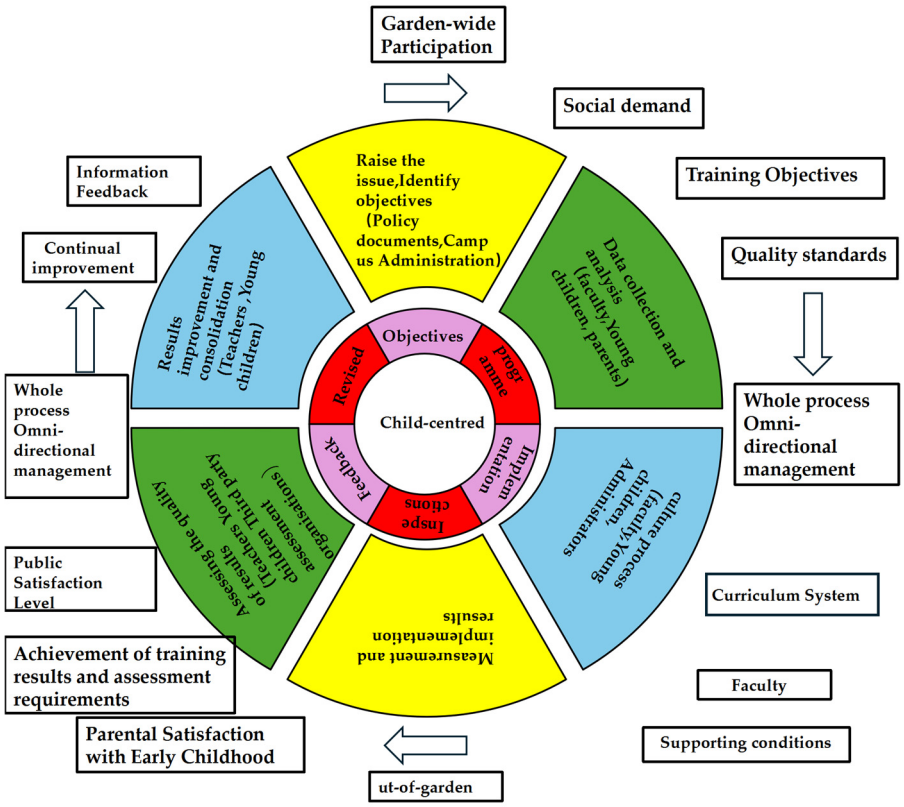


Figure 1. Construction diagram of kindergarten education quality assurance system

2. Connotation: Multidimensional Analysis of the "Three Levels and Five Categories" Kindergarten Education Quality Assurance System

The quality assurance system of kindergarten education is a collection of relevant policies and systems to guarantee the quality of kindergarten education and a quality management operation mode combining internal and external systems to guide and standardize improving kindergarten education quality. The internal guarantee system of the quality of kindergarten education includes the concept and culture of the kindergarten, objectives and standards, monitoring and Evaluation, platform and tools, namely, the target decision system of the quality of education, the implementation system of the resources of the quality of education, the input guarantee system of the quality of education, the institutional guarantee system of the quality of education, the monitoring and improvement system of the quality of education, and the information feedback system of the quality of education. Based on factors such as the positioning goal, foundation and characteristics of kindergarten operation, the kindergarten construction quality of activities, courses, teaching materials and practices should be improved. A quality management organism with precise tasks, clear responsibilities, mutual coordination and mutual promotion, should be formed, and a six-in-one kindergarten education quality assurance system with internal and external integration should be initially established. It mainly includes six links connected, a closed cycle, and continuous improvement, such as a quality objective system, quality standard system, quality support system, quality monitoring and evaluation system, quality information feedback system, and quality control system.

2.1. Responsible Subjects: The Kindergarten Nursing Teachers are the Implementation System of the Guarantee System

From the perspective of total quality management theory, stakeholders of kindergarten education quality management involve children, kindergarten principals, functional departments and administrative personnel, preschool teachers, parents, experts or researchers in the field of preschool education, and graduates of preschool education, as stakeholders responsible for kindergarten education quality. We should participate in the whole process of quality assurance production and operation and form a community of interests to guarantee the quality of education and promote the construction of a quality assurance system. The responsibility for the quality of education is a cooperative relationship, not a simple accountability relationship; each subject should realize shared rights and interests, shared responsibilities, cooperation and mutual benefit. As a direct stakeholder in the quality of kindergarten education, preschool teachers are also the main implementers of the process of kindergarten education. Promoting the professional growth of preschool teachers should be the scope of ensuring the quality of kindergarten education. Preschool teachers are not only the producers of kindergarten education quality but also the direct beneficiaries of the whole quality system. It is not only the primary evaluation subject of conservation and education activities but also the evaluator in the process of education quality evaluation. It is not only the direct participant in formulating the quality standards of education but also the direct user of the quality standards of education. As the

employer of preschool education professionals in colleges and universities, kindergartens should not only be onlookers of the quality of talent training but should be widely involved in the formulation of preschool education professional talent training standards, the revision of professional training plans, the optimization of curriculum and textbook content, and the feedback of graduates' quality. There is also a mutual transformation of roles and identities among security system stakeholders. For example, the relationship between the management level of kindergartens and preschool teachers in each class should not be a single-role single-role relationship between "manager" and "implementer" but a multi-role relationship. Improve the quality of preschool teachers in the whole process of education: First, from the aspects of teacher ethics, team structure, management system, training mechanism, urban and rural and regional balanced allocation, to achieve the staffing standard of the ratio of the total number of full-time kindergarten teachers to the total number of children in the kindergarten is no less than 1:15, and optimize the gender structure of the kindergarten teacher team. Secondly, to ensure that the labour contract teachers and teachers gradually realize equal pay for equal work, the income guarantee level of labour contract teachers should be taken as a prerequisite for identifying and concealing grade kindergartens. Third, the academic and professional level of full-time kindergarten teachers should be improved, and the enrollment of preschool education and care service and management majors in higher vocational colleges should be increased. Relying on local resources such as vocational secondary schools, higher vocational colleges, application-oriented undergraduate colleges and schools for teacher training, we will strengthen the training of in-service teachers and standby teachers through fiscal subsidies. Comprehensively implement the fundamental task of establishing morality and cultivating people, based on "education support based on the position of children", strengthen "children's awareness", and cultivate a preschool core competitiveness of the education team. The professional quality of preschool teachers is reflected in their duties, cognition of rights, and embodiment of professional quality.

2.2. Quality Standard: The System Guarantee of Kindergarten Education Quality Assurance System

The establishment of quality assurance standards and the basis of Evaluation are the basic and guiding issues for constructing an assurance system. There is a complementary relationship between quality standards and quality objectives. The setting of quality objectives is the primary basis for formulating quality standards, and the ultimate realization of quality objectives needs to be measured according to the completion of quality standards. At present, the kindergarten education quality assurance system lacks adequate legal protection, and the evaluation standards of different types of kindergartens, such as public kindergartens, private kindergartens, urban kindergartens and rural kindergartens, generally show the status quo of "lack of evaluation standards" and only rely on the relevant standards of the government. From the stakeholder theory perspective, children, preschool teachers, parents, kindergarten management departments, and local governments have different interests and demands as direct or indirect stakeholders in the education process. Therefore, referring to the existing foreign quality standards for education, the actual conditions of kindergartens and the needs of stakeholders should be fully considered in formulating quality standards for education.

2.3. Supporting Conditions: To Build a Kindergarten Education Quality Input Guarantee System

We will establish a funding input mechanism with government input as the primary input, reasonable sharing by families, and multi-channel fund-raising, and achieve the financial appropriation standard per student in public kindergartens and kindergartens. Determine the financial subsidies for public funds per student for different types and sizes of kindergartens scientifically and reasonably, and make regular and dynamic adjustments according to the actual situation and the adjustment of education fees, formulate policies for financial subsidies and fees as a whole, gradually realize the equivalent fees for universal kindergartens at the same level in the region, and adjust the standards of education fees for public kindergartens. Curb the phenomenon of arbitrary charges and excessive charges in kindergartens and establish a scientific cost-sharing mechanism for kindergartens. We will increase the supply of degrees in public kindergartens and expand the supply of high-quality and inclusive resources. In 2022, China's fiscal education funding for primary education will reach 3.2 trillion yuan, and the general public budget for education per student in preschool education will increase by 91% respectively over 2015. Because many inclusive kindergartens are subject to the government's price limit requirements, the actual charge and the amount of the government's financial average student bonus are far lower than the actual average student training cost. Considering various factors such as local economic development level, cost of running kindergartens, quality of running kindergartens, government investment and the ability of parents to bear, different types of kindergartens with different actual conditions of running kindergartens should implement different fees and awards and subsidies standards, and build high-quality subsidy standards for preschool education public services, so that government subsidies are close to the actual cost of running kindergartens.

2.4. Evaluation and Monitoring Methods: To Realize the Supervision and Improvement System of the Quality Assurance of Education

The quality control system of kindergarten education refers to a management system that effectively supervises and controls the quality of kindergarten care and education by collecting, analyzing and evaluating relevant information in the process of kindergarten care and education, including the formulation of the objectives of childcare education, the monitoring of preschool teachers' education behaviours, the physical and mental development of children and the assessment of the education environment. The core of the monitoring system is to evaluate the quality of kindergarten care and education by collecting and analyzing information and finding problems and deficiencies to take corresponding improvement measures. First, developing monitoring indicators is the primary premise of implementing the monitoring system. Monitoring indicators should be considered from all aspects of kindergarten education, such as the achievement of the goal of childcare education, the effect

of childcare education, the development of children, and the utilization effect of educational resources. Monitoring indicators should be measurable, objective and comparable for Evaluation and comparison. Secondly, the collection of information is an essential link in the implementation of the monitoring system. Through observation, interviews, questionnaires, and other ways to collect information, information should be as comprehensive, factual, and accurate as possible to reflect the actual situation of kindergarten conservation and education and carry out accurate assessment and analysis. Thirdly, analysis and Evaluation are the core links to monitoring system implementation. Through the analysis and Evaluation of the collected information, we can understand the current situation and existing problems of kindergarten nursing education and evaluate the quality of nursing and education. We should pay attention to objectivity and scientificity to ensure the accuracy and credibility of the analysis results. Finally, based on the analysis and Evaluation, the corresponding improvement measures should be taken, including the revision of the quality objectives of nursing education, the training and guidance of preschool teachers, and the organization and incentive. The quality control system of kindergarten education is a management system established to improve the quality of kindergarten education.

2.5. Evaluation and Incentive Method: Construct the Quality Evaluation System of Nursing Education

Establishing a scientific and reasonable educational evaluation system and criteria requires a scientific evaluation mechanism and technical means, a dynamic mechanism of social organization participation and a practical evaluation method. The concept of quality management of kindergarten management and teachers influences the construction of a kindergarten education quality assurance system. Based on the idea of total quality management (TQM) and quality standard system, a continuous improvement mechanism of process monitoring, information management and feedback is established. The concept and method of quality management under the digital background should be a system of continuous improvement and perfection—the ability to complete and improve oneself. Drawing on the OECD national quality assessment standards for preschool education, the basic principles, contents and methods of Evaluation are clearly defined, and suggestions from experts and front-line workers are widely solicited. Scientific and reasonable "monitoring and evaluation system" of the quality of education, including "internal monitoring" system and "external evaluation" system. Among them, internal monitoring is carried out by the kindergarten management department and preschool teachers, and relevant preschool education evaluation experts mainly undertake external Evaluations.

2.6. Important Link: Construct the Quality Management and Feedback Guarantee System of Education

The education governance system is an integral part of the national governance system, and the quality of the process of conservation and education can be effectively improved through a reasonable education quality governance system, and scientific governance means. The governance system of kindergarten education quality assurance system should be established under the child-oriented value governance framework, realize the joint governance of multiple participants, use relevant information technology means, fully implement the governance concept and education policy, and highlight the livelihood orientation of preschool education public services to achieve the people's pursuit of a better life. Establish a corresponding adjustment and improvement mechanism, build a holistic education quality system based on deepening practice and meeting the needs of children, make reasonable judgment and improvement on quality problems arising in the process of education, apply education quality evaluation tools and implementation techniques, and carry out long-term tracking of the rules of early childhood learning and development. Promote the research of kindergarten education quality monitoring tools under big data technology. As for incentive measures, emphasis rewards should be placed on preschool teachers with high levels of childcare education and good activity organization;

2.7. Information Collection Approach: Build A Technical Guarantee System for the Quality of Education

The effective coordination and integration of information technology and education process can be realized to promote the intellectualization of the specific development process of kindergarten care and education and to improve the quality and efficiency of care and education to realize the goal of building a high-quality care and education system [14]. The technical support system of a high-quality education quality assurance system should be guided by appropriate educational technology theory and eliminate the shackles of single technology applications. Construct the information technology group of education, improve the information literacy of preschool teachers and other preschool education-related workers, Pay attention to the prevention of technical risks in the education process, and build a network security guarantee system for education management. Such as the current use of primary and secondary schools and kindergartens commonly used in the "Shiwo whiteboard" and other technologies. Preschool teachers should be proficient in using practical micro-lesson-making software and master the production and application ability of information technology and software commonly used in kindergarten micro-lessons and digital production to realize the organic integration of digital resources, digital platforms and offline teaching. The application of information technology for preschool teachers will further promote the deep integration of information technology and kindergarten curriculum and explore a new mode of kindergarten collective activities in the information environment. We will combine information education skills with our unique education concepts, fully realize the organic integration of information technology and education and teaching, and use the Shivo whiteboard, Shivo teaching assistant and other teaching tools, such as the application of technology in the middle-class science activity "Animal friends divide cookies game". In addition, childcare teachers can also use information technology in health care, such as setting a scientific drinking time and using a child morning inspection robot. Carry out information teaching, realize multimedia technology to help improve the quality of kindergarten education, and realize the organic combination of multimedia technology and education content.

In short, the construction of kindergarten education quality assurance system should follow the law of physical and mental development of children and the development law of preschool education, build a typical self-assessment system of kindergartens, pay attention to the conformal and high-quality construction of kindergartens, achieve a comprehensive, objective and proper quality measurement of kindergarten education, and strengthen the self-assessment of kindergartens.

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