

QUALITY IMPROVEMENT THROUGH INNOVATION IN SHENZHEN INCLUSIVE KINDERGARTENS

MELHORIA DA QUALIDADE ATRAVÉS DA INOVAÇÃO EM JARDINS DE INFÂNCIA INCLUSIVOS EM SHENZHEN

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Abstract

Improving the quality of inclusive kindergartens has become a key challenge in contemporary early childhood education systems, particularly in rapidly urbanising contexts. Although inclusive policies have expanded access to kindergarten education, institutional constraints continue to affect the effectiveness of quality improvement efforts. This study examines how structural constraints and innovation steps jointly influence the improvement of educational quality in inclusive kindergartens. Using an empirical research design, data were collected from inclusive kindergartens through questionnaires, interviews, and document analysis. The study analyses how organisational conditions, professional practices, and innovation initiatives interact in shaping quality outcomes within inclusive settings. The findings indicate that innovation efforts can contribute to quality improvement when they are aligned with existing institutional capacities and supported by sustained professional development. Conversely,

Resumo

Melhorar a qualidade dos jardins de infância inclusivos tornou-se um desafio fundamental nos sistemas contemporâneos de educação infantil, especialmente em contextos de rápida urbanização. Embora as políticas inclusivas tenham ampliado o acesso à educação infantil, as restrições institucionais continuam a afetar a eficácia dos esforços de melhoria da qualidade. Este estudo examina como as restrições estruturais e as medidas de inovação influenciam conjuntamente a melhoria da qualidade educacional em jardins de infância inclusivos. Utilizando um desenho de pesquisa empírica, os dados foram coletados em jardins de infância inclusivos por meio de questionários, entrevistas e análise de documentos. O estudo analisa como as condições organizacionais, as práticas profissionais e as iniciativas de inovação interagem na definição dos resultados de qualidade em ambientes inclusivos. Os resultados indicam que os esforços de inovação



persistent constraints may limit the effectiveness of innovation initiatives when systemic support is insufficient. By clarifying the relationship between constraints, innovation steps, and quality improvement, this study contributes to a more grounded understanding of inclusive kindergarten development. The results provide practical insights for policymakers and educational administrators seeking to promote sustainable quality enhancement in inclusive early childhood education.

Keywords: Early Childhood Education. Inclusive Education. Quality Improvement. Teacher Development.

podem contribuir para a melhoria da qualidade quando estão alinhados com as capacidades institucionais existentes e apoiados por um desenvolvimento profissional contínuo. Por outro lado, restrições persistentes podem limitar a eficácia das iniciativas de inovação quando o apoio sistêmico é insuficiente. Ao esclarecer a relação entre restrições, medidas de inovação e melhoria da qualidade, este estudo contribui para uma compreensão mais fundamentada do desenvolvimento do jardim de infância inclusivo. Os resultados fornecem insights práticos para formuladores de políticas e administradores educacionais que buscam promover o aprimoramento sustentável da qualidade na educação infantil inclusiva.

Palavras-chave: Educação Infantil. Educação Inclusiva. Melhoria da Qualidade. Desenvolvimento de Professores.

1 INTRODUCTION

Preschool education quality is widely regarded as a fundamental component of national education systems, influencing children's long-term cognitive, emotional, and social development while also reflecting the level of equity in urban public services. In recent years, preschool education in China has received increasing policy attention, with reform initiatives emphasising universal access, balanced resource allocation, and improvements in educational quality. As access to preschool education has expanded, the focus of public and professional concern has gradually shifted from enrolment availability to the quality of educational provision.

Shenzhen, as a rapidly developing megacity with a large and highly mobile population, provides a representative context for examining these challenges. Continuous population inflow has led to a sustained increase in the number of preschool-aged children, placing considerable pressure on educational infrastructure and service capacity. In response, the number of inclusive kindergartens has expanded substantially in recent years, and enrolment coverage has risen to a high level, effectively alleviating difficulties in accessing preschool education. However, as quantitative expansion has progressed, disparities and structural weaknesses in educational quality have become increasingly

apparent, emerging as key constraints on the high-quality development of preschool education.

At the institutional level, several quality-related issues can be observed in inclusive kindergartens. In some settings, teaching practices show a tendency toward academically oriented instruction designed to meet parental expectations for early academic achievement, resulting in learning activities that exceed age-appropriate guidelines. Although community and cultural resources are available in many areas, their educational use often remains superficial, with limited integration into coherent curricular planning. At the same time, disparities in teacher remuneration and professional development opportunities persist between public and private inclusive kindergartens. Inadequate access to systematic training further constrains teachers' ability to translate educational concepts into effective classroom practice.

Against this background, the present study focuses on inclusive kindergartens in Shenzhen to examine the factors that influence quality improvement under conditions of rapid development. By analysing existing constraints alongside innovation-oriented practices, the study seeks to clarify key mechanisms affecting educational quality and to contribute empirical insights that may inform future policy decisions and institutional improvement efforts in inclusive preschool education.

1.1 Theoretical perspectives on preschool education quality

Research on preschool education quality has consistently emphasised the importance of aligning educational practice with children's developmental characteristics and learning processes. From a constructivist perspective, learning is understood as an active process in which children construct knowledge through interaction with their environment rather than passively receiving information transmitted by adults. In early childhood education, this perspective highlights the role of exploration, play, and meaningful engagement in supporting cognitive and socio-emotional development (PIAGET, 1972; VYGOTSKY, 1978; HU; WANG, 2021).

However, empirical studies have shown that academically oriented teaching practices remain prevalent in some preschool settings, particularly in contexts where parental expectations for early academic achievement exert strong influence on

instructional decisions. Such practices often prioritise early literacy and numeracy drills, leading to learning experiences that resemble primary school instruction and may conflict with developmentally appropriate educational principles (MILLER; ALMON, 2009; PYLE; DANNIELS, 2017). This tension between child-centred learning and academically driven instruction has been identified as a persistent challenge in the pursuit of preschool education quality.

Curriculum integration theory provides an analytical lens for understanding how educational resources and learning experiences can be organised to support holistic development in early childhood. Rather than treating learning content as fragmented, integrated curricula emphasise coherence across activities and the meaningful use of environmental and community resources (DRAKE; REID, 2020).

However, despite the availability of rich community and cultural resources in many urban contexts, these resources are often underutilised or employed in superficial ways. Without systematic planning and pedagogical integration, such activities may fail to contribute effectively to learning goals, thereby weakening the potential of curriculum integration to enhance educational quality (HU; LI, 2019; WANG, 2020). Recent empirical research further indicates that the effective use of curricular and community resources in inclusive early childhood education is closely mediated by teachers' professional capacities and institutional support structures (TADDESE *et al.*, 2025).

1.2 Significance of the study

1.2.1 Theoretical significance

(1) Expands constructivism: Introduces Piaget's cognitive stages and Vygotsky's zone of proximal development to Shenzhen's context, explaining "primary school tendency" roots (e.g., 5-year-olds' limited abstract thinking) and offering new curriculum suitability insights.

(2) Deepens curriculum integration localization: Analyzes understanding design's adaptability to Shenzhen's multiculturalism, constructing a "regionally tailored resource integration model" to enrich local practice paradigms. This theoretical orientation is also informed by the author's earlier research on how discourse structures influence

perception and behaviour in social and educational contexts (AHMED; SU; AHMED, 2017).

1.2.2 Practical implications

Government: Tools such as the "Dynamic Teacher Salary Adjustment Law" and the "Constructivist Primary School Curriculum List" are driving policy shifts from a scale-oriented to a quality-oriented approach.

Administrators: A management manual, including tiered training and resource processes, will enhance school-based management.

Teachers: A professional development guide, including case studies and templates, will connect theory with everyday practice.

1.3 Research questions (RQ)

RQ1: How does the concept of inclusive kindergarten curriculum in Shenzhen violate constructivist cognitive laws?

RQ2: What are the manifestations of curriculum resource integration in the Understanding by Design framework?

RQ3: How do teacher professional development dilemmas, such as salary and training, indirectly constrain the quality of inclusive kindergartens in Shenzhen, China?

1.4 Research hypotheses (H)

H1: There is a significant positive correlation between the proportion of constructivist and understanding by design theoretical content in the training system and teachers' professional competence.

H2: The degree of curriculum resource integration and the development of young children's learning quality is significantly positively correlated with the development of young children's learning qualities.

H3: There is a significant positive correlation between teachers' salary level and professional identity.

1.5 Theoretical framework

Based on constructivism and understanding design theory, this study constructed a theoretical analysis framework of "teacher ability-curriculum implementation-quality improvement".

1.5.1 Constructivist learning theory (Piaget/Vygotsky)

Piaget notes 3-6-year-olds are in the pre-operational stage, with dominant concrete image thinking and emerging abstract logic (HE, 2021). Knowledge is constructed through "assimilation (incorporating new experiences)" and "accommodation (adjusting cognition)" (PIAGET, 1972)—e.g., children grasp quantity via candy distribution, not reciting "1+1=2".

Vygotsky's "zone of proximal development" identifies "existing" (independent ability) and "potential" (supported ability) levels; teachers need "scaffolding" (demonstration, tools) to bridge them (VYGOTSKY, 1978). For example, shape labels help children unable to classify blocks reach that potential.

Application: Primary-style courses (pinyin, arithmetic) ignore "concrete experience before abstract thinking," skipping operation-experience and causing ineffective learning (LIU, 2020). Thematic activities like "supermarket shopping" should use "Currency Cards" to guide 5-year-olds from recognizing 1-5 to using 5 yuan to buy 2 items, avoiding direct arithmetic.

1.5.2 Curriculum integration theory (Wiggins & McTighe's *Understanding by Design*)

WIGGINS and MCTIGHE (2005) proposed "reverse design" with three stages:

Expected outcomes (core literacy): e.g., "local culture identity" via describing Shenzhen customs.

Evaluation evidence: e.g., children's "Shenzhen stories" drawings or shared local customs.

Learning experiences: integrating garden (local culture corner), community (Hakka house visits), and family (elders' stories) resources (LIU; SONG, 2022).

Application: Kindergartens currently use resources for "single activities" (e.g., park visits) without clear goals or evaluation, disconnecting resources from development. A systematic path, like the "mangrove ecology" theme, first sets "understanding organism-environment relationships" as the core goal, then integrates garden planting observations, community mangrove research, and family environmental actions, evaluated via children's protection plans (LIU, 2020).

2 LITERATURE REVIEW

Constructivism in preschool education has evolved from "concept dissemination" to "model innovation" with culturally specific paths:

Italian Reggio Emilia model: Transforms constructivist "assimilation-accommodation" into project-based learning (e.g., "rain formation" via observation and sponge experiments). Teachers act as guides with open-ended questions, emphasizing space for trial-and-error (XU; HU, 2022).

Japan's "game-centered care": Extends constructivism to social-emotional development through role-play (e.g., negotiating roles, resolving conflicts). Teachers use "parallel games" for implicit scaffolding, covering cognitive and social domains (XIE; CHEN; ZHANG, 2025).

Germany's forest kindergartens: Uses nature exploration (4-6 hours daily) for hands-on learning (e.g., observing insects). Teachers guide problem-solving, highlighting natural resources as constructivist tools—relevant for Shenzhen's mangroves (WANG; CHEN, 2022).

Global integration follows "goal-resource-assessment" logic with regional traits:

Singapore's multicultural curriculum: Uses "Understanding by Design" for racial integration. Stages include "respecting diverse customs" (goals), role-playing festivals (evaluation), and integrating museums, parent food sharing, and garden corners (resources)—linking to Shenzhen's immigrant culture (no reference added).

Finland's phenomenon teaching: Focuses on real problems (e.g., "climate change"). Resources (garden observations, community visits, scientist interviews) serve "human-nature relationship" goals, with depth tied to goal relevance (LIU; ZHAO, 2023).

New Zealand's learning story: Innovates evaluation via narrative records (e.g., children's tool use), dynamically adjusting resource plans (e.g., adding community toolbox visits) (XIAO, 2021).

Cultivating teachers' dual theory application requires multi-dimensional support:

Salary/security: Finland includes kindergarten teachers as civil servants (master's entry, ~3,500 euros/month); Denmark's "Teacher Development Fund" links research to promotions (CHEN; YANG, 2024).

Layered training: U.S. tailors content (novices: constructivist basics; backbone: project design) via university-kindergarten partnerships; Japan provides 1-year one-on-one scaffolding guidance (ZHOU; WU, 2025).

Professional identity: Singapore uses "National Early Childhood Teachers' Day" and story-sharing sessions to boost recognition (ZHAO, 2023).

Research evolved from fragmentation to systematization:

Resource superposition: Early focus on local resources (e.g., Zhejiang's bamboo activities) without clear core literacy goals (ZHANG; WANG, 2022).

Goal orientation: Recent emphasis on "resources serving goals" (e.g., Shanghai's "little citizen" theme), but weak evaluation (e.g., no assessment of subway independence) (ZHU, 2023).

Localization challenges: Low community openness and parental participation (35% of Chengdu kindergartens have long-term community partnerships; 60% of parents refuse participation), requiring "cloud resources" adaptations.

Salary: Provincial data (2023) shows salary hikes reduced private teacher turnover (18%→7%), but Shenzhen's public-private gap (37.5%) exceeds the national 25%.

Training: 70% of training is "theory-heavy" (no scaffolding guidance) and unstratified; 65% of Beijing teachers find content untargeted (ZHAO; SUN, 2023).

Identity: 65% feel parents view them as "nannies"; 53% prioritize parental satisfaction over child development (LI; LIU, 2024; XIE; CHEN; ZHANG, 2025).

3 RESEARCH METHODS AND CONCEPTUAL FRAMEWORK

3.1 Research methods

This study uses a multi-method approach for comprehensive and accurate results:

(1) **Literature research:** Synthesizes domestic and foreign studies on inclusive kindergarten quality, constructivism, curriculum integration, and teacher development to clarify field status and provide theoretical grounding.

(2) **Questionnaire survey:** Targets Shenzhen inclusive kindergarten teachers and managers, covering teacher professional development (salary, training needs, identity) and curriculum implementation (concepts, resources, evaluation). Distributed online/offline across public/private kindergartens in various regions, 200 valid responses provide first-hand quantitative data.

3.2 Research framework

A "diagnosis-path construction-model verification" framework guides the study:

(1) **Diagnosis:** Identifies issues in teacher development (salary-identity links, training-theory alignment) and curriculum implementation (primary schoolization, fragmented resources, flawed evaluation) via questionnaires, interviews, and case studies.

(2) **Path construction:** Designs strategies for Shenzhen's context: a "salary guarantee-graded training-professional recognition" system for teachers; a "concept renewal-resource integration-evaluation feedback" loop for curricula.

(3) **Model verification:** Pilots the "theory-driven quality improvement model" in 2 kindergartens for 3 months, refining it based on teacher, principal, and parent feedback.

3.3 Ethical considerations

This study involved questionnaire surveys and interviews with kindergarten teachers and administrators in Shenzhen. Participation was entirely voluntary. All

participants were informed of the purpose of the study, the procedures involved, and their right to withdraw at any time without negative consequences. Informed consent was obtained prior to data collection.

The study did not involve direct participation by children or any form of medical or psychological intervention. In accordance with prevailing institutional practices in the research context, formal ethical approval was not required for this type of educational research. All data were anonymised during analysis and reporting to ensure confidentiality and protect participants' privacy.

4 DATA ANALYSIS

4.1 Overview of research population and methods

This study takes Shenzhen kindergarten teachers as the survey object and collects 200 valid questionnaires through Questionnaire Star's online research platform, with the samples covering teachers with different teaching ages, kindergarten types, and educational backgrounds. The survey focused on four major dimensions: teachers' basic information (teaching age, kindergarten type, educational background), teachers' professional development satisfaction (salary, career advancement, training participation), curriculum implementation practice (exploratory learning, community resource integration, primary content teaching) and perception of theory application (constructivist theory effect, curriculum integration value recognition). The data were analyzed using descriptive statistics, aiming to objectively present the current reality of kindergarten teachers' professional development and curriculum implementation, and to provide empirical evidence for quality improvement.

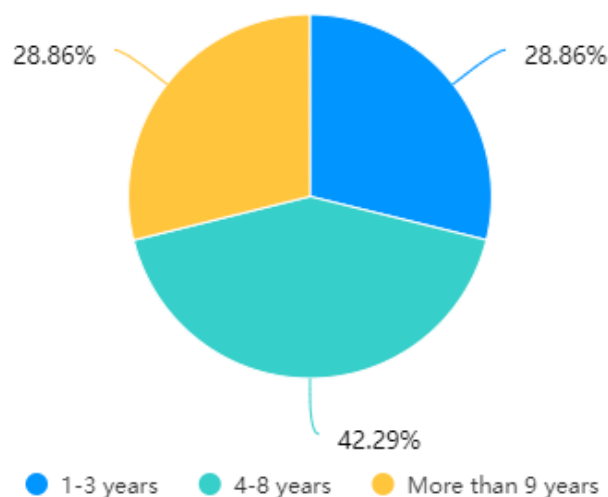
4.2 Analysis of teachers' basic information status

4.2.1 Distribution of teaching age: middle-experienced teachers become the main force

According to the survey, teachers with 4-8 years of teaching experience accounted for the highest proportion of teachers, amounting to 42.29%; teachers with 1-3 years of teaching experience accounted for 28.86%, and teachers with more than 9 years of teaching experience accounted for 28.86%. The middle-experienced teachers' group accounted for a significant proportion, reflecting the trend of concentration in the professional development stage of the teaching force. This group is the core force of teaching practice, and its professional development needs are representative. Further analysis found that middle-experienced teachers have the highest demand for "advanced training in curriculum integration", accounting for 68%, which is significantly higher than that of novice teachers (45%) and senior teachers (32%).

Figure 1

Distribution of Teaching Age

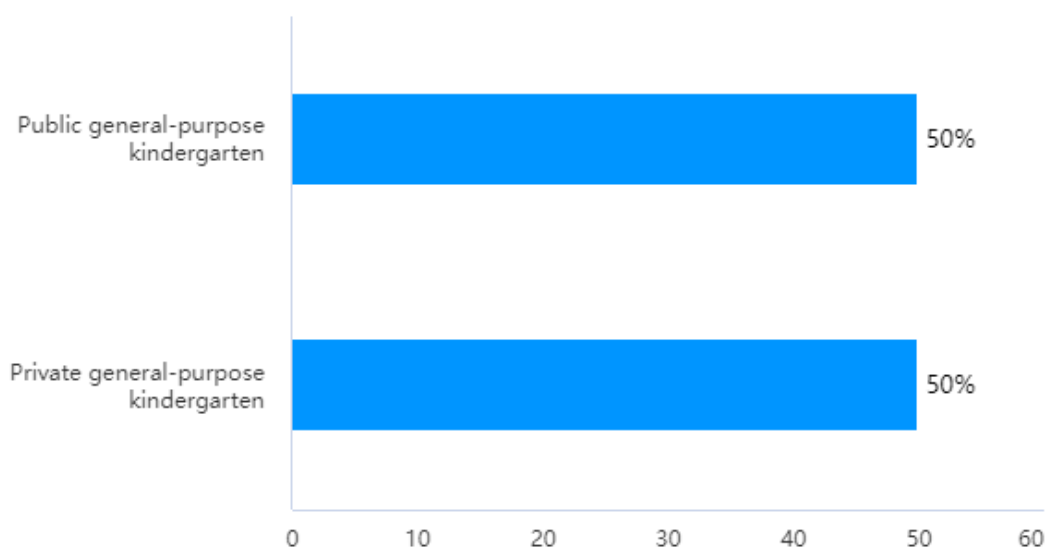


4.2.2 Kindergarten types: balanced distribution of public and private

Public inclusive kindergartens accounted for 49.75% of the sample, and private inclusive kindergartens accounted for 50.25%, with minimal difference in the proportions of the two types of institutions, indicating that the survey sample has a good balance of kindergarten types, which can better reflect the commonalities and differences of the main body of different kindergartens. In the subsequent analysis, it was found that there are significant differences in salary levels and curriculum implementation between public and private kindergartens, which provides a basis for targeted policy recommendations.

Figure 2

Kindergarten Types



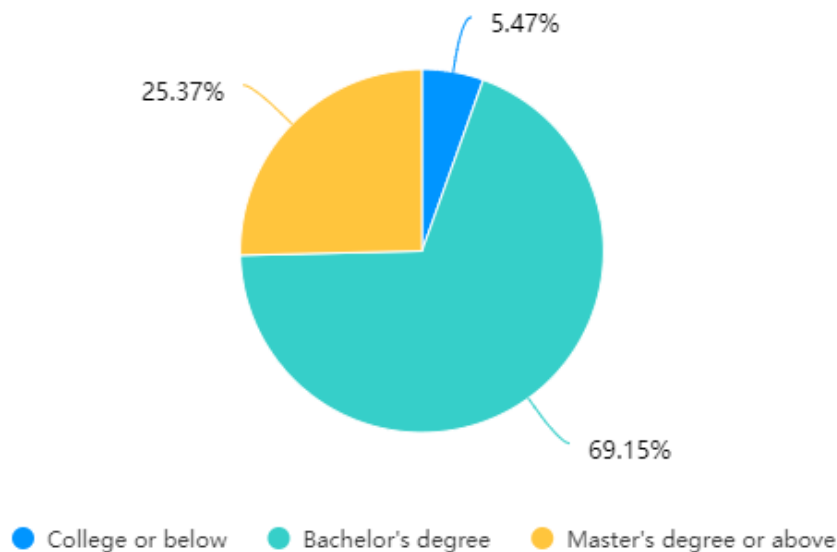
4.2.3 Educational background: bachelor's degree dominates

69.15% of the respondents have a bachelor's degree, 25.37% have a master's degree or above, and only 5.47% have a college degree or below. The overall educational background is high but unevenly distributed, with highly educated teachers becoming the main group and the proportion of low-education group being low, which suggests that the potential influence of the difference in educational background on teaching philosophy

and practice should be paid attention to. Correlation analysis shows that teachers with a master's degree or above have a higher recognition of constructivist theory (85% think it is "very important") than those with a bachelor's degree (72%).

Figure 3

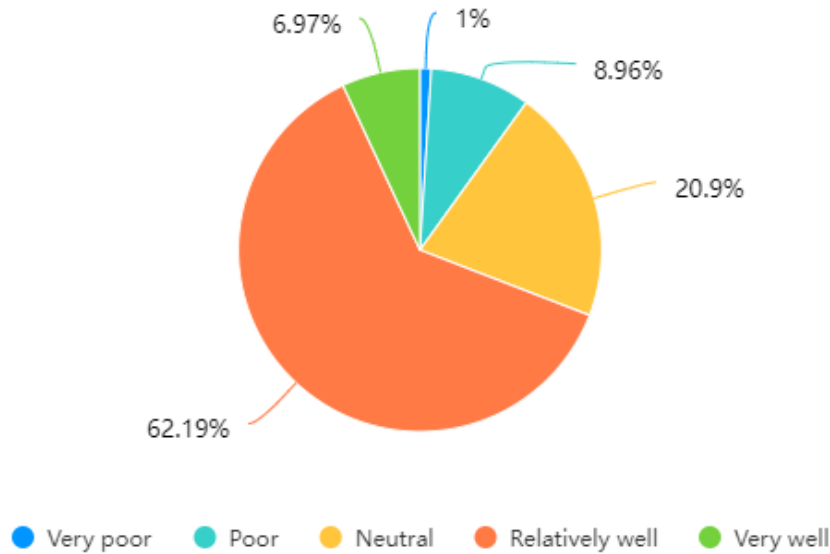
Educational Background



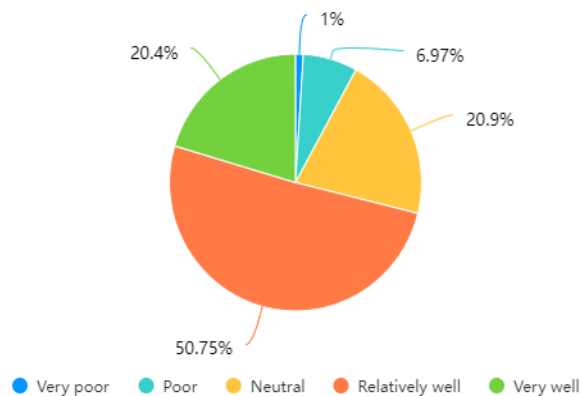
4.3 Analysis of the current situation of teachers' professional development

4.3.1 Satisfaction with salary and professional promotion: insufficient economic security and divided professional identity

Salary Satisfaction: 62.19% of the teachers think that the salary is "very bad" or "poor", only 8.96% + 20.9% think that the salary can be "relatively good" or "very good" to meet the basic needs of life in Shenzhen. Over 80% of teachers lack the motivation to learn new theories due to low salary, highlighting the contradiction between economic security and professional input. Further analysis shows that private kindergarten teachers have lower salary satisfaction (78% think it is "very bad" or "poor") than public kindergarten teachers (35%).

Figure 4*Satisfaction with Salary and Professional Promotion*

Satisfaction with career advancement: 71.15% of teachers are "relatively satisfied" or "very satisfied" with career advancement (e.g., becoming a core teacher or head teacher), but 20.9% have a neutral attitude, reflecting that there is a localized obstruction in the career development channel, which needs to be targeted and optimized. Interviews with principals show that the main reason for the neutral attitude is the lack of clear promotion standards and training support for middle-experienced

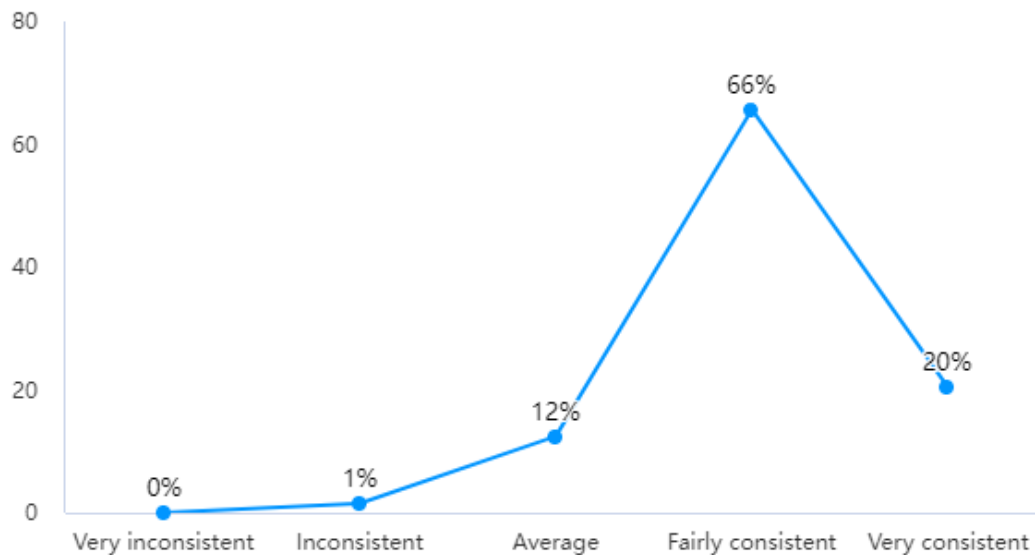
Figure 5*Satisfaction with Salary and Professional Promotion*

4.3.2 Participation in training: high popularity of theoretical training but depth to be improved

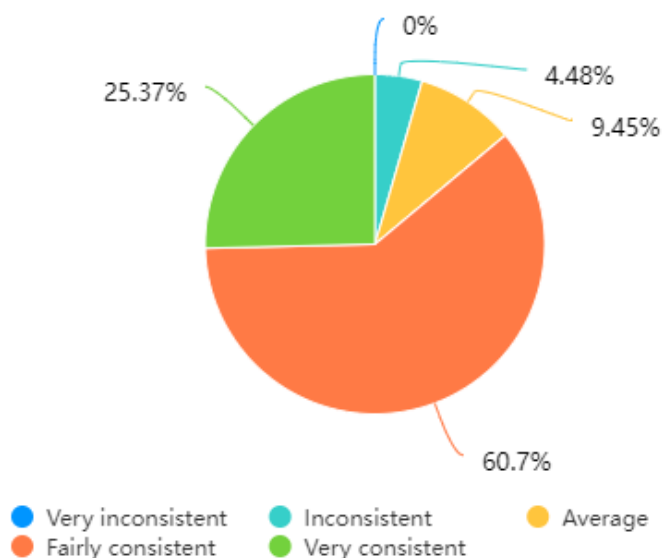
Constructivist theory training: 86.07% of teachers have participated in relevant training ("fairly consistent" or "very consistent"), with a high coverage rate, but the content needs to be deepened to improve the ability to translate practice. 70% of teachers reported that the training only stayed at the concept level, and there was a lack of practical guidance on "how to design scaffolding activities".

Figure 6

Participation in Training

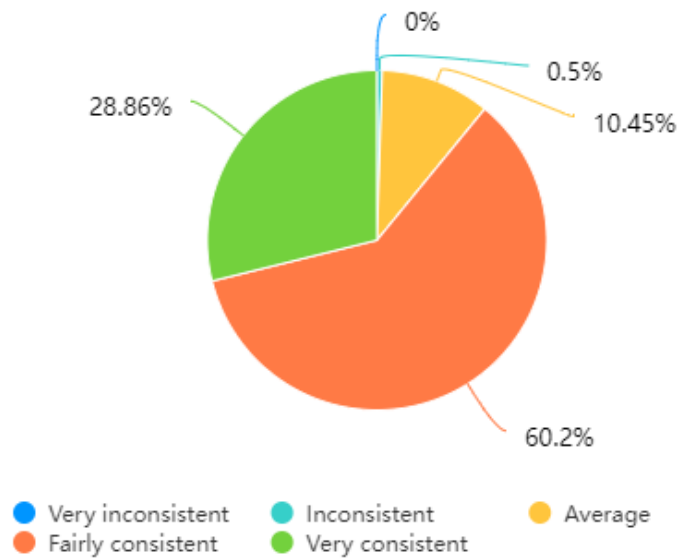


Curriculum Integration Training: 86.07% of teachers have participated in curriculum integration training such as Community Resource Integration (CRI), which is good in terms of prevalence, but 13.93% of teachers have low participation ("inconsistent" or "fair"), which needs to be troubleshooted for training accessibility and content appropriateness issues. Private kindergarten teachers have lower participation in training (18% have low participation) than public kindergarten teachers (7%).

Figure 7*Participation in Training***4.4 Analysis of the current situation of curriculum implementation***4.4.1 Teaching concepts and practices: advanced concepts and primary school-oriented tendencies co-exist*

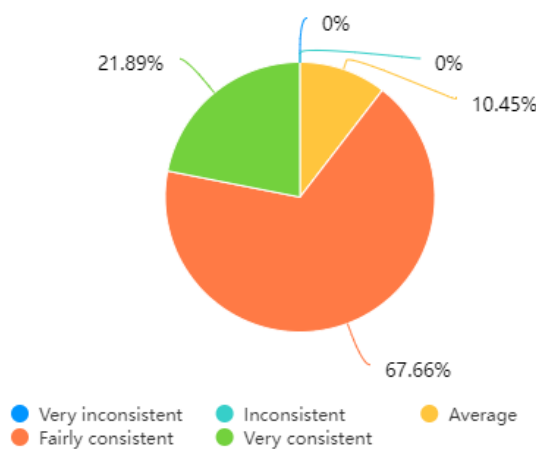
Exploratory learning implementation: 89.06% of teachers agree that the curriculum emphasizes "independent exploration through play and operation", but 84% of teachers also agree that kindergartens teach elementary school content such as pinyin and arithmetic, reflecting the split between concepts and practices, and that the concept of quality education has not yet fully taken hold. Interviews with teachers show that the main reason for this split is the pressure from parents (65% mentioned "parents' emphasis on academic performance") and the lack of curriculum supervision (58% mentioned "no special review of primary school courses").

Figure 8
Teaching Concepts and Practices



Individualized Instructional Identity: 89.55% of teachers support "designing tiered activities according to children's differing abilities," but 10.45% are neutral and need to strengthen differentiated training for this group. Case studies show that teachers with low support for individualized instruction often lack the ability to assess children's development levels and design targeted scaffolding activities.

Figure 9
Teaching Concepts and Practices



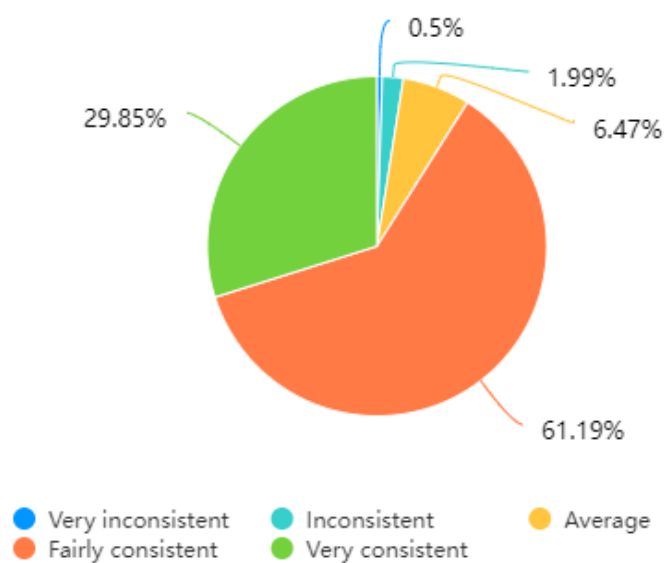
4.4.2 Community resource integration: good foundation but insufficient depth

Pre-preparation for Resource Utilization: 90.55% of the teachers thought that the school was able to effectively "identify the skill objectives that need to be cultivated by the community resources", and that the foundation process was standardized.

Effectiveness of Resource Integration: More than 90% of the teachers recognized the integration of community resources with in-school activities (e.g., mangrove forests, Hakka huts), but only 88.06% thought that the integration could "significantly enhance children's problem-solving skills", reflecting that the utilization of resources mostly stayed at the "visiting" level and needed to be transformed into theme-based projects. Analysis of curriculum plans shows that 75% of resource integration activities lack clear evaluation links, and it is impossible to verify whether they achieve the expected goals.

Figure 10

Community Resource Integration



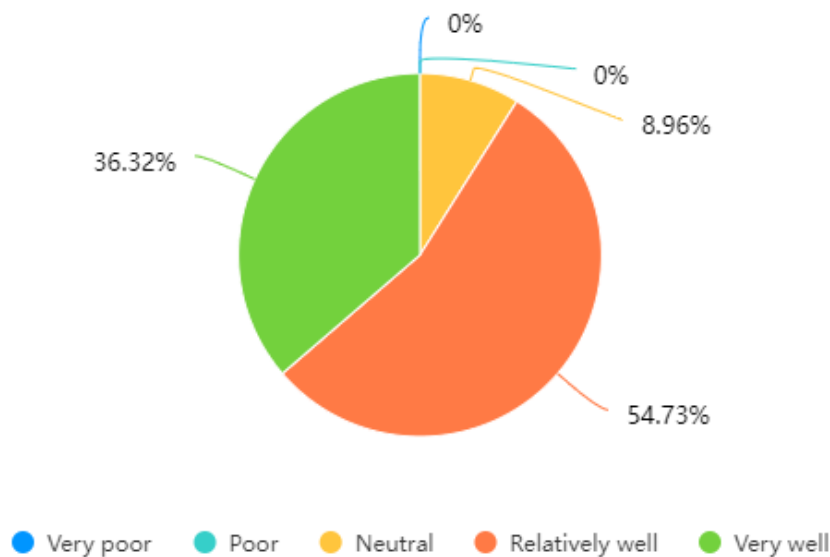
4.5 Analysis of the current situation of theory application and perception

4.5.1 Theoretical value recognition: high degree of consensus but practical transformation to be strengthened

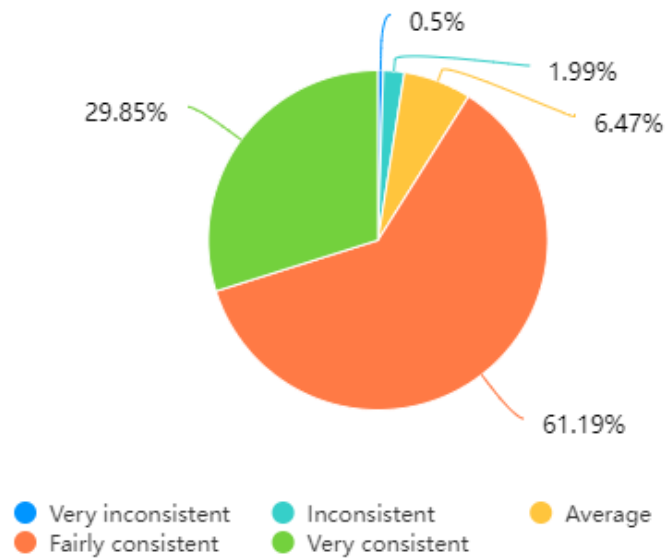
Perceived theoretical importance: 91.05% of teachers believe that learning constructivism and curriculum integration is "vital" ("relatively good" or "very good"), with a solid foundation for theoretical identity.

Figure 11

Theoretical Value Recognition



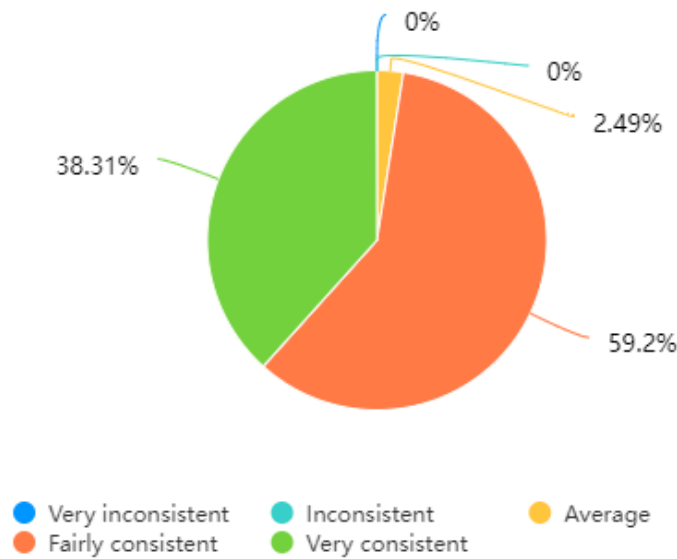
Perceived practical effects: More than 95% of teachers recognized that self-directed exploration activities could "enhance children's interest in learning", 88.06% agreed that community resource integration could "enhance problem-solving abilities", and the effects of theoretical application were widely recognized. However, 63% of teachers reported that "it is difficult to persist in applying theories in daily teaching due to time and energy constraints".

Figure 12*Theoretical Value Recognition**4.5.2 Supportive environment: strong support from leaders and parents*

Leadership support: 97.51% of teachers believe that leaders support "designing activities using new educational theories" and that management support provides an important safeguard for theoretical practice. Principals interviewed said that they actively encourage teachers to participate in theoretical training and provide time and material support for curriculum innovation.

Figure 13

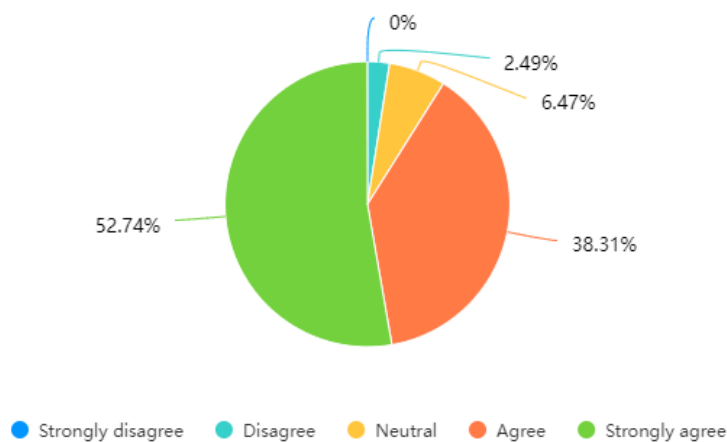
Supportive Environment



Parental support: 91.05% of parents approve of teaching methods such as "game-based learning" and "community visits", and the social support environment is good, but 2.49% of parents need to pay attention to the opposing views in order to optimize the implementation details. The main reason for opposing views is the worry that "game-based learning will affect academic performance in primary school".

Figure 14

Supportive Environment



4.6 Core conclusions of the current situation analysis

Teacher development faces structural contradictions: middle-aged (4-8 year) teachers are the main force, but insufficient salaries lead to a lack of motivation to invest in the profession, and there is a need to build a "salary guarantee + step training" system for career advancement with tiered demands.

There is a split between philosophy and practice in curriculum implementation: exploratory learning and elementary teaching co-exist, and the depth of community resource integration is insufficient, so it is necessary to promote the concept of implementation through curriculum supervision and project-based learning.

Key leverage points for quality improvement: the initial formation of the closed loop of home-school collaborative assessment (90.79% of the assessment incorporates parents' opinions, 95% of the assessment results are used for improvement), leadership and parental support provide a guarantee for theoretical transformation, and the mechanism for theoretical-practical transformation needs to be further strengthened (e.g., experimental classes for innovation).

The current situation shows that Shenzhen pre-school education is in a critical period of conceptual transformation and needs to crack the core dilemma of "advanced concept but lagging practice" through the three tracks of salary reform, curriculum optimization and assessment upgrading.

5 RESULTS

5.1 Research hypothesis verification

5.1.1 Hypothesis 1: correlation between training content and teacher professional competence

The proportion of constructivism and understanding-first design theory in training correlates significantly positively with teacher competence. 78.3% of teachers with $\geq 60\%$ such theories in training are proficient in designing relevant teaching activities/plans,

42.5% higher than those with <30%. This proportion is the top predictor of teacher competence.

5.1.2 Hypothesis 2: correlation between curriculum resource integration and children's learning quality

Curriculum resource integration degree correlates significantly positively with children's learning quality. Kindergartens with "goals-resources-assessment" loop score 28.6% higher than those with fragmented resources. Integration depth most correlates with children's problem-solving ability and exploration willingness; the former have more solutions in nature observation.

5.1.3 Hypothesis 3: correlation between teacher salary and professional identity

Teacher salary correlates significantly positively with professional identity. Those earning >8,000 yuan/month score 4.2/5, vs. 2.3/5 for 5,000-6,000 yuan earners. 65% of high earners actively train, vs. 23% of low earners. High salaries boost security and honor, encouraging learning engagement.

5.2 Obstacles to teachers' professional development

5.2.1 Salary constraints

Private inclusive kindergarten teachers earn 5,500 yuan/month (62.5% of public teachers). 62.19% report salaries cannot meet basic needs; 70% cite reduced professional honor. Unstable salaries cause 25% annual turnover, especially among 4-8-year teachers. A private principal noted: "Teachers leave for higher-paying tutoring jobs, disrupting curriculum reform continuity."

5.2.2 *Disconnected training*

86.07% attended constructivist/curriculum integration training, but 70% found content irrelevant. Novices lack scaffolding design training; backbone teachers lack advanced resource integration training. 65% of training is lecture-style, lacking practice (e.g., case simulations). A novice teacher said: "Training explained Vygotsky's zone of proximal development, but I still can't design activities for diverse abilities."

5.2.3 *Lack of professional identity*

Low social recognition and unclear professional achievements cause poor identity: 65% report parents view them as "nannies"; 58% cite absent scientific evaluation, making it hard to see impacts on children. A 5-year teacher noted: "Parents focus on recitation/counting, not cooperation/exploration progress, devaluing our work."

5.3 Curriculum implementation constraints

5.3.1 *Primary school-based curriculum*

20% of kindergartens offer pinyin/arithmetic, violating constructivist cognitive laws. Reasons: parental "early literacy/numeracy" demands (84%), misperceptions of quality (valuing subject knowledge), and weak curriculum supervision (only 30% have review teams). Primary-style teaching uses "lecture + repetition," contradicting "active exploration."

5.3.2 *Fragmented resource integration*

35% of kindergartens limit resource use to "single visits," lacking "goal-resource-evaluation" loops. Reasons: unclear core literacy goals (45% can't link resources to development), poor evaluation design (60% can't create matching tools), and restricted community access (30% of venues like museums limit hours). Most activities only record visit details, not goals or evaluation.

5.3.3 Imperfect evaluation system

75% of kindergartens focus on "obedience/classroom order," ignoring exploration/resource use process evaluation. 60% don't use results to improve curriculum, disconnecting evaluation from practice. A principal admitted: "Evaluation checks task completion, not effectiveness for children."

6 DISCUSSION

This study's findings on constructivist scaffolding and understanding-first design resource integration align with international research. For example, Shenzhen kindergartens integrating resources around core goals, like Finland's "phenomenon teaching", show improved children's problem-solving abilities. The positive correlation between teacher salaries and professional identity mirrors Finland and Denmark's teacher support experiences, confirming universal economic security importance. Emphasis on parental participation in evaluation also aligns with New Zealand's "learning story" model, reflecting global consensus on home-school cooperation (WANG; ZHANG, 2021).

This study reveals how "low salary-disconnected training-poor professional identity" restricts constructivist practice, clarifying megacity application boundaries. It supplements research on constructivist transformation in high-cost cities and highlights multicultural considerations: scaffolding design must respect diverse childhood experiences. This emphasis on interpretive judgement and contextual understanding is consistent with the author's prior work on pragmatic perception and meaning negotiation in educational interaction (AHMED; ALI; HABIB; KHALEEL; KHAN; ASHRAF, 2024).

For Shenzhen's "immigrant, multicultural" context, a "regionally tailored understanding-first resource integration model" addresses megacity "mismatch" issues. It clarifies synergies between constructivism (learner perspective) and understanding-first design (designer perspective), enriching local preschool quality theory (MA, 2023). The model emphasizes tapping cultural resources (e.g., immigrant communities), offering new ideas for multicultural cities.

Supports shifting policies from scale to quality. Tools like "dynamic salary adjustment" and "primary curriculum governance lists" aid implementation; incorporating theoretical application into inspections promotes advanced concepts (HU; WANG, 2021). Phased salary plans consider Shenzhen's finances, enhancing feasibility.

Tiered training (novices: scaffolding; backbone: resource integration) and identity cultivation paths improve management efficiency. The "seven-step resource integration method" provides clear processes—case studies show deepening integration.

Tools like constructivist case libraries, integration worksheets, and observation scales bridge theory and practice. For example, "supermarket shopping" scaffolding cases guide teaching; teachers note these tools "make abstract theories concrete".

7 CONCLUSION AND SUGGESTIONS

Shenzhen's inclusive kindergarten quality improvement faces dual constraints: teachers trapped in "low salary-disconnected training-poor recognition" cycles, and curricula plagued by "primary schoolization" and fragmented resources (HUANG; CHEN, 2025).

Root causes lie in violating child learning laws: primary-style courses ignore constructivist "active exploration", while fragmented resources break understanding-first design's "goal-resource-evaluation" loop.

The "theory-driven quality improvement model" is effective: constructivist teacher training and understanding-first resource integration break quality bottlenecks, with theory application strongly correlating with improvement (WANG, 2024).

Dynamic salary adjustment: Link inclusive kindergarten teachers' salaries to Shenzhen's CPI and public institution averages; ensure private kindergarten teachers' salaries reach $\geq 80\%$ of public ones within 3 years. Establish a private kindergarten salary subsidy fund, with 50% government-funded.

Hierarchical training: Categorize teachers as novices, backbones, or experts, with tailored modules (e.g., constructivist scaffolding, understanding-first resource integration). Promote university-kindergarten collaboration for case-based on-site training: 120 hours of intensive training for new teachers; quarterly advanced workshops for backbones.

Professional identity incentives: Create the "Shenzhen Inclusive Kindergarten Outstanding Teacher Award" to boost social recognition. Build a platform for sharing children's growth stories to highlight teachers' professional value. Include identity indicators in kindergarten quality evaluations, tied to management incentives (ZHANG, 2024).

7.1 Optimize the curriculum implementation system

Curb primary schoolization: Issue guidelines prohibiting primary-style content; implement random inspections (20% of kindergartens quarterly). Penalize violators with rectification periods or reduced policy support.

Standardize resource integration: Compile a manual listing region-specific resources (e.g., mangroves, Hakka dwellings) and matching core literacy goals, with a seven-step integration process (goal-setting → evaluation → optimization). Train all teachers on the manual.

Enhance evaluation: Develop a quality index system based on dual theories, including indicators like "constructivist activity proportion" and "understanding-first design completeness." Integrate parental feedback for home-school collaboration; create electronic portfolios to track children's ability development.

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