

# Play-Based Learning in Qinghe Kindergarten: Reassessing the Learning Quality of Chinese Early Childhood Education

<sup>1</sup>Chen Leye, <sup>2</sup>Cabual, Reynaldo A.

<sup>1</sup>*Qinghe Kindergarten, Jiaxing City, Zhejiang Province, China*

<sup>2</sup>*Nueva Ecija University of Science and Technology, Sumacab, Cabanatuan City 3100, Philippines*  
reycabual@ineust.ph.education

**Abstract.** This study examined the implementation of play-based learning strategies at Qinghe Kindergarten in Jiaxing City, China, to reassess learning quality in early childhood education. A quantitative descriptive-correlational design was used, involving total enumeration of 43 teachers and 3 administrators. Data were collected through a self-constructed survey questionnaire assessing teacher demographics, play-based strategies, classroom environment, and learning quality. Findings showed that most teachers were female, aged 31-40, held bachelor's degrees in education, and had 6-10 years of experience. Play-based strategies were frequently employed, with evident classroom support through physical setup, materials, and time allocation, though enhancements were needed. Learning quality was rated high, reflecting strong child engagement, developmentally appropriate outcomes, and effective instruction. Weak correlations existed between demographics and implementation, except for teaching experience, which positively influenced alignment with learning goals and instructional effectiveness. A modest positive relationship emerged between classroom environment and learning quality. The study concludes that targeted professional development and resource improvements can optimize play-based learning, leading to enhanced early childhood education outcomes. It recommends an implementation plan focused on teacher training, parental involvement, and curriculum alignment to foster sustainable pedagogical advancements.

**Keywords:** Classroom Environment, Early Childhood Education, Instructional Quality, Kindergarten, Learning Outcomes, Play-Based Learning, Teacher Demographics

## 1 Introduction

Play-based learning constitutes a fundamental element of early childhood education, promoting holistic development via experiential and child-centered methodologies. Rooted in the cognitive development theories of Piaget (1951) and the sociocultural framework of Vygotsky (1978), this pedagogical approach fosters cognitive, social, and emotional advancement by enabling young children to engage with both structured and unstructured settings. Internationally, educational frameworks such as Finland's national core curriculum for early childhood education and care prioritize play to enhance optimal developmental outcomes, emphasizing its intrinsic value for well-being, creativity, and lifelong learning.

In contrast, within the Chinese context, national policies—including the Kindergarten Education Guidelines (2001) and subsequent reforms—advocate for child-centered practices, yet kindergarten education frequently emphasizes academic preparation, resulting in teacher-directed instruction limited by inflexible frameworks, insufficient time allocation, and resource constraints. This misalignment underscores a significant research void: Limited empirical investigations exist regarding the integration of play-based methodologies with physical classroom configurations and their effects on instructional efficacy in Chinese public kindergartens.

At Qinghe Kindergarten in Jiaxing City, educators contend with ongoing policy reforms alongside localized obstacles, necessitating a more profound analysis of play integration in routine practices and its implications for educational quality.

The present study examined the following research questions:

1. How may the demographic profile of kindergarten teachers be characterized in terms of sex, age, educational attainment, and years of teaching experience?
2. How may the play-based learning strategies employed by kindergarten teachers be described with regard to frequency of use, type of play activities, and alignment with learning goals?
3. How may the classroom environment supporting play-based learning be evaluated in terms of physical setup, availability of materials, and time allocation for play-based activities?
4. How may the quality of learning be assessed in relation to child engagement, developmentally appropriate learning outcomes, and effectiveness of instructional strategies?

The study addresses this gap by investigating teacher demographics, play-based strategies (frequency, types, and alignment with goals), classroom environment (physical setup, materials, and time allocation), and learning quality (child engagement, outcomes, and instructional effectiveness). It will explore relationships among these variables to inform a context-specific implementation plan. Through this analysis, the research aims to enhance pedagogical quality and provide actionable insights for similar institutions undergoing educational reform.

## 2 Methodology

A quantitative descriptive-correlational design was adopted to provide a structured analysis of play-based learning strategies at Qinghe Kindergarten. This design combines descriptive elements—such as profiling teacher demographics and perceptions through surveys—with correlational techniques to examine relationships between variables (e.g., teaching experience and strategy effectiveness). It is particularly suitable for educational research in dynamic settings like Chinese kindergartens, where policies emphasize holistic development; similar designs have been effectively used in studies on early childhood education reforms (e.g., Li & Chen, 2022). Data were collected via validated questionnaires rated on Likert scales, analyzed using descriptive statistics (means, frequencies) and inferential tools (e.g., Pearson correlations) to ensure objective, replicable insights.

### 2.1. Sampling Procedure

Total enumeration sampling was employed, including the entire population of 43 teachers and 3 administrators at Qinghe Kindergarten. This non-probability method ensures exhaustive coverage, eliminating sampling errors and providing a complete representation of the small, defined group.

### 2.2. Respondents

The respondents comprised 43 teachers and 3 administrators, selected to capture multifaceted perspectives on play-based learning implementation. Teachers, as frontline practitioners, offer insights into daily pedagogical applications, while administrators provide oversight on policy alignment and resource allocation.

#### 2.2.1 Research Site

Qinghe Kindergarten, located in Jiaxing City, Zhejiang Province, China, was chosen as the research locale for its exemplification of urban public kindergartens navigating national educational reforms. Established in a region known for progressive early childhood initiatives (e.g., proximity to

Anji Play models), the site represents typical challenges like balancing academic pressures with play-based approaches amid declining enrolments. Selection criteria included accessibility, reform implementation status, and demographic alignment with urban averages, making it a relevant microcosm for studying policy impacts. Data collection occurred during the 2024-2025 academic year, ensuring contextual relevance to ongoing shifts toward child-centered education.

### 3 Results

#### 3.1 Demographic Profile of the Respondents

The demographic profile of 43 kindergarten teachers at Qinghe Kindergarten in China reveals a predominantly female (76.7%) and young workforce (76.8% aged 20-35), with high educational attainment (51.2% holding master's degrees) but limited experience (74.4% with 6 years or less).

**Table 1** Demographic Profile of the Respondents

Sex	Frequency	Percent
Male	10	23.30
Female	33	76.70
<b>Total</b>	<b>43</b>	<b>100.00</b>
Age	Frequency	Percent
20-25	10	23.30
26-30	11	25.60
31-35	12	27.90
36-40	6	14.00
41 and above	4	9.30
<b>Total</b>	<b>43</b>	<b>100.00</b>
Educational Attainment	Frequency	Percent
Bachelor's Degree in Preschool Education	16	37.20
Bachelor's Degree in Other Fields	2	4.70
Master's Degree	22	51.20
Doctoral Degree	3	7.00
<b>Total</b>	<b>43</b>	<b>100.00</b>
Years of Teaching Experience	Frequency	Percent
Less than 1 year	5	11.60
1-3 years	13	30.20
4-6 years	14	32.60

7–10 years	9	20.90
More than 10 years	2	4.70
<b>Total</b>	<b>43</b>	<b>100.00</b>

This profile indicates a capable yet inexperienced group that may excel in theoretical pedagogy but face challenges in sustained play-based implementation due to high turnover, aligning with national trends where over 95% of preschool educators are female and average experience is 5-10 years, with high attrition among novices (Wang et al., 2020). Compared to urban Chinese studies showing 70-80% with at least bachelor's degrees enhancing play interactions (Li & Chen, 2022), the present findings position this research as highlighting retention needs amid declining enrolments (down 25.5% since 2020), recommending mentorship to strengthen curriculum alignment and outcomes.

### 3.2 Play-Based learning Strategies Employed by Kindergarten Teachers

Both teachers and administrators at Qinghe Kindergarten perceive play-based learning strategies as employed "frequently" overall (grand means of 3.18 for teachers and 3.09 for administrators), with consistent ratings across frequency of use, type of activities, and alignment with learning goals, indicating regular integration but room for improvement to reach optimal "very frequent" levels for enhanced child development.

**Table 2.** Play-Based Learning Strategies Employed by Kindergarten Teachers

Indicators	Teachers		Administrators	
	Mean	Verbal Description	Mean	Verbal Description
1. Frequency Of Use	3.23	Frequently	3.07	Frequently
2. Type of Play Activities	3.07	Frequently	3.00	Frequently
3. Alignment with Learning Goals	3.22	Frequently	3.20	Frequently
<b>Grand Mean</b>	<b>3.18</b>	<b>Frequently</b>	<b>3.09</b>	<b>Frequently</b>

*Legend: 3.25 – 4.00 – Very Frequently, 2.50 – 3.24 – Frequently, 1.75 – 2.49 – Occasionally, 1.00 – 1.74 – Rarely*

These findings highlight moderate adoption of play-based strategies that support holistic growth in creativity, problem-solving, and social skills, yet the "frequent" rather than "very frequent" ratings suggest implementation gaps due to academic pressures and fatigue, potentially limiting maximum developmental impacts as per the thesis. This positions the research amid national trends in China, where play pedagogy is endorsed by policies but constrained by cultural emphasis on academics, as shown in studies like those on Anji Play models (e.g., Li & Chen, 2022) that link varied, aligned activities to greater autonomy and outcomes when applied consistently; in comparison, the present scores (e.g., 3.07-3.23) are slightly lower than Zhejiang Province averages (around 3.5), underscoring needs for targeted training to bridge these disparities and reduce burnout, aligning with research indicating frequent play enhances teacher satisfaction and ethics of care (Wang et al., 2020).

### 3.3 Classroom Environment Supporting Play-Based Learning

The classroom environment supporting play-based learning is presented in Table 3.

**Table 3.** Classroom Environment Supporting Play-based Learning

Indicators	Teachers		Administrators	
	Mean	Verbal Description	Mean	Verbal Description
1. Physical Setup	3.17	Evident	2.47	Evident
2. Availability of Materials	3.13	Evident	3.27	Evident
3. Time Allocation for Play-Based Activities	3.09	Evident	3.13	Evident
<b>Grand Mean</b>	<b>3.13</b>	<b>Evident</b>	<b>2.96</b>	<b>Evident</b>

*Legend: 3.25 – 4.00 – Strongly Evident, 2.50 – 3.24 – Evident, 1.75 – 2.49 – Slightly Evident, 1.00 – 1.74 – Not Evident*

Classrooms are generally supportive but not “strongly evident.” Administrators’ notably lower rating of physical setup (2.47) hints at resource or space constraints that teachers may overlook day-to-day. Comparable Chinese research shows centres that redesign spaces and loosen schedules push scores above 3.3 and report higher child engagement. Qinghe therefore sits in the mid-range, reinforcing the thesis recommendation to improve layouts, diversify materials, and protect playtime.

Across staffing, practice, and environment, Qinghe Kindergarten demonstrates solid foundations yet consistent “middle-tier” scores. High qualifications and positive attitudes have translated into regular—but not intensive—play-based pedagogy inside classrooms that are supportive—but not optimal. Compared with leading Chinese exemplars that reach “very frequent/strongly evident” levels, Qinghe’s results highlight:

Retention and mentorship are essential to convert youthful energy into seasoned expertise.

Targeted professional development can lift play frequency and curricular alignment above the 3.25 threshold linked to stronger child outcomes.

Facility upgrades and scheduling safeguards are needed so administrators and teachers share a stronger perception of physical readiness for play.

### 3.4 Quality of Learning in Kindergarten

The quality of learning in kindergarten is assessed based on the child engagement, developmentally appropriate learning outcomes, and effectiveness of instructional strategies is presented in Table 4.

**Table 4.** Quality of Learning in Kindergarten

Indicators	Teachers		Administrators	
	Mean	Verbal Description	Mean	Verbal Description
1. Child Engagement	3.27	Very High	3.13	High
2. Developmentally Appropriate Learning Outcomes	3.17	High	3.27	Very High
3. Effectiveness of Instructional Strategies	3.37	Very High	3.00	High
<b>Grand Mean</b>	<b>3.27</b>	<b>Very High</b>	<b>3.13</b>	<b>High</b>

*Legend: 3.25 – 4.00 – Very High, 2.50 – 3.24 – High, 1.75 – 2.49 – Moderate, 1.00 – 1.74 – Low*

Teachers perceive overall learning quality as "very high" (grand mean 3.27), while administrators rate it "high" (grand mean 3.13), with strongest teacher ratings for instructional strategies (3.37) and administrators for developmentally appropriate outcomes (3.27), indicating effective play-based approaches but perceptual differences possibly due to teachers' direct classroom involvement versus administrators' systemic views.

These strong ratings reflect successful integration of play-based methods in fostering engagement, tailored outcomes, and pedagogy that support cognitive and social development, aligning with China's national guidelines for holistic early education; however, the gap from uniform "very high" scores suggests opportunities to address constraints like resource limitations for sustained excellence. Compared to similar studies, such as those evaluating Anji Play programs (Li & Chen, 2022) with averages above 3.5 linked to superior long-term child success, Qinghe's scores position it as progressing but mid-tier among urban Chinese kindergartens, emphasizing the thesis's recommendation for enhanced training to bridge perceptual divides and elevate effectiveness, as research shows high engagement correlates with reduced burnout and improved ethics of care (Wang et al., 2020).

## 4 Discussion

Teachers were predominantly female (76.7%), aged 31-35 (27.9%), held master's degrees (51.2%), and had 4-6 years of experience (32.6%). Play-based strategies were employed frequently (grand mean 3.18 for teachers, 3.09 for administrators), with high ratings for variety (3.26, 3.33) but moderate for role-play (2.77, 2.67).

Results indicate that while play-based strategies were frequently implemented at Qinghe Kindergarten, alignment with learning goals varied, particularly influenced by teaching experience. Experienced teachers demonstrated stronger integration of play with curriculum objectives, consistent with prior studies showing that tenure enhances pedagogical adaptability. For instance, veteran educators often refined activities to balance enjoyment and educational purpose, as echoed in research emphasizing accumulated skills in lesson design.

The classroom environment supported play evidently (grand mean 3.13 for teachers, 2.96 for administrators), particularly in physical setup (3.17, 2.47) and materials availability (3.13, 3.27), though time allocation scored lower (3.09, 2.67). Learning quality was rated very high by teachers (grand mean 3.27) and high by administrators (3.13), with strong child engagement (3.27, 3.13) and instructional effectiveness (3.37, 3.00).

The evident classroom environment supported play, yet gaps in safety features and material rotation suggest areas for improvement. This aligns with literature highlighting how accessible

resources foster engagement, though institutional constraints like limited budgets may hinder optimal setup. The high learning quality, marked by strong child engagement and effective instruction, reflects the benefits of play-based approaches, but the weak correlation with environment underscores that other factors, such as teacher responsiveness, also contribute.

Compared to global models, these findings reveal progress in China's shift toward child-centered education, yet persistent academic pressures limit full play integration. Limitations include the single-site focus and reliance on self-reports, potentially introducing bias. Nonetheless, the study contributes by identifying targeted interventions. Implications include policy support for professional development; recommendations encompass workshops, resource upgrades, and monitoring to sustain play-based learning.

Correlations between demographics and play-based implementation were mostly weak and insignificant, except for teaching experience with alignment to goals ( $r = 0.333$ ,  $p = 0.029$ ). No significant relationships emerged between demographics and classroom environment or learning quality, except teaching experience with instructional effectiveness ( $r = 0.364$ ,  $p = 0.016$ ). A weak positive correlation existed between classroom environment and learning quality ( $r = 0.18$ ,  $p = 0.043$ ).

## 5 Conclusions

The study at Qinghe Kindergarten reveals that play-based learning strategies are frequently implemented by a predominantly female teaching workforce, with a modal age group of 31-35 years, high educational attainment holding master's degrees, and moderate experience levels with 4-6 years).

While strategies show strong frequency and variety, moderate role-play usage and variable alignment with learning goals highlight the influence of teaching tenure, as experienced educators better integrate play with curriculum objectives. This is consistent with research indicating that accumulated pedagogical skills enhance adaptability in child-centered practices, particularly in contexts where academic pressures persist.

The classroom environment supports play through adequate physical setup and materials, yet deficiencies in time allocation, safety features, and material rotation underscore institutional constraints, such as limited budgets. These elements weakly correlate with learning quality and emphasize that teacher responsiveness plays a pivotal role in outcomes, beyond mere resource availability.

Limitations, including the single-site focus and self-report biases, suggest cautious generalization, but the findings contribute to understanding play's role in enhancing educational quality amid China's policy reforms. They reveal progress yet ongoing challenges in resource allocation and professional development, particularly in light of national trends showing high turnover and demographic imbalances.

To improve alignment of play activities with learning goals, may incorporate mentorship from veterans to leverage their demonstrated adaptability.

To address gaps in classroom environment, particularly safety features, material rotation, and time allocation, kindergartens may invest in resource upgrades and policy advocacy for increased budgets, drawing from successful models in Finland where play is integrated with flexible scheduling and abundant materials.

Given the high female dominance and moderate experience levels aligning with national trends, recruitment strategies may focus on retaining female educators through incentives like reduced occupational stress and better rewards, while encouraging male participation to diversify the workforce and mitigate turnover risks.

For enhancing learning quality amid weak environment correlations, may implement monitoring systems that emphasize teacher responsiveness and child engagement metrics, supplemented by interventions such as regular safety audits and cross-institutional collaborations to align with China's child-centered policy reforms.

Finally, future research may expand to multi-site studies using objective measures beyond self-reports to validate these findings and inform broader national guidelines on play integration in kindergartens. Incorporating diverse methodologies, such as observational data and longitudinal tracking, will provide deeper insights into play-based learning's scalability, addressing limitations like single-site biases and contributing to evidence-based policy enhancements.

## References

- Adamson, E., Dean, B., & Findlay, M. (2020). Exploring the secondary school experience of LGBT+ youth: Lessons from England and Ireland. Routledge.
- Aked, J. (2021). Wellbeing and learning in early years education: A systematic review. Early Years Foundation Stage Forum.
- Alam, A., & Mohanty, A. (2023). Cultural beliefs and equity-oriented instructional practices: Challenges for in-service teachers' development. *Journal of Educational Change*, 24(3), 597–622.
- André, G., & Westerveen, L. (2024). Contrasting approaches to educational equality: An intersectional perspective on educational policies in Belgium. *Journal of Education Policy*, 40(4), 587–605.
- Aperstein, Y., Cohen, Y., & Apartsin, A. (2025). Generative AI-based platform for deliberate teaching practice: A review and a suggested framework. *Education Sciences*, 15(4), 405.
- Archana, J. V., & Sreedevi, P. S. (2021). A review on pedagogical methods supporting development of cognitive abilities in preschoolers. In K. A. Thomas, J. V. Kureethara, & S. Bhattacharyya (Eds.), *Neuro-systemic applications in learning* (pp. 1–20). Springer.
- Aresi, G., Chiavegatti, B., & Marta, E. (2025). \*Participants' experience with gamification elements of a school-based health promotion intervention in Italy: A mixed methods study\*. *Journal of Prevention*, 46, 299–316.
- Aslan, S., Agrawal, A., & Alyuz, N. (2022). Exploring kid space in the wild: A preliminary study of multimodal and immersive collaborative play-based learning experiences. *Educational Technology Research and Development*, 70, 205–230.
- Bardach, L., Klassen, R. M., & Perry, N. E. (2022). Teachers' psychological characteristics: Do they matter for teacher effectiveness, teachers' well-being, retention, and interpersonal relations? An integrative review. *Educational Psychology Review*, 34, 259–300.
- Barton, J. L., & Akin, B. A. (2022). Implementation drivers as practical measures of data-driven decision-making: An initial validation study in early childhood programs. *Global Implementation Research and Applications*, 2, 141–152.
- Bauer, R. H., & Gilpin, A. T. (2022). Imaginative children in the classroom: Mixed-methods examining teacher reported behavior, play observations and child assessments. *Early Education and Development*, 34(2), 449–468.
- Benjamin, T. E. (2024). Exploring the perceptions of early childhood educators on infant feeding while learning. *Early Childhood Education Journal*, 52, 1–12.
- Besio, S. (2022). Play and disabilities. In *Robot play for all* (Research for Development, pp. 1–20). Springer.
- Bian, D., Zhang, M., Kong, L., Huang, B., & Hu, D. (2024). Analysis of regional social-economic spatial pattern and evolution along the Beijing-Hangzhou Grand Canal. *Sustainability*, 16(4), Article 1527.

- Bierman, K. L., & Sheridan, S. M. (2022). Family-school partnerships at school entry: Developmental and conceptual frameworks for action. In K. L. Bierman & S. M. Sheridan (Eds.), *Family-school partnerships during the early school years* (pp. 1–20). Springer.
- Bjorklund, D. F. (2022). Children's evolved learning abilities and their implications for education. *Educational Psychology Review*, 34, 2243–2273.
- Bockmann, J. O., & Yu, S. Y. (2023). Using mindfulness-based interventions to support self-regulation in young children: A review of the literature. *Early Childhood Education Journal*, 51, 693–703.
- Burke, L. A., Jindal-Snape, D., & Douglas, A. (2024). Shall we play? Listening to children's voices using a playful approach. *International Journal of Early Years Education*, 32(4), 885–906.
- Cade, J. (2023). Child-centered pedagogy: Guided play-based learning for preschool children with special needs. *Cogent Education*, 10(2), Article 2276476.
- Cano, T., & Hofmeister, H. (2023). The intergenerational transmission of gender: Paternal influences on children's gender attitudes. *Journal of Marriage and Family*, 85(1), 193–214.
- Cao, X., & Kong, K. (2024). Balancing play and collective teaching: Experiences of preschool teachers from two public kindergartens in Southeast China. *International Journal of Play*, 13(4), 379–394.
- Carmen, R.-G., Olga, B.-G., & Beatriz, M. (2022). Socio-emotional competence and self-efficacy of future secondary school teachers. *Education Sciences*, 12(3), Article 161.
- Cavendish, W., Barrenechea, I., & Young, A. F. (2021). Urban teachers' perspectives of strengths and needs: The promise of teacher responsive professional development. *Urban Review*, 53, 318–333.
- Cevikbas, M., & Kaiser, G. (2022). Student engagement in a flipped secondary mathematics classroom. *International Journal of Science and Mathematics Education*, 20, 1455–1480.
- Chawla, L. (2021). Knowing nature in childhood: Learning and well-being through engagement with the natural world. In A. R. Schutte, J. C. Torquati, & J. R. Stevens (Eds.), *Nature and psychology* (Vol. 67, pp. 109–130). Springer.
- Chen, M. Y., Rouse, E., & Morrissey, A. M. (2024). Intentionality and the active decision-making process in play-based learning. *Australian Educational Researcher*, 51, 1373–1388.
- Cheung, A., Keung, C., & Tam, W. (2022). Developing kindergarten teacher capacity for play-based learning curriculum: A mediation analysis. *Teachers and Teaching*, 28(5), 618–632.
- Clanton Harpine, E. (2024). Creating an intrinsically motivating learning environment: Promoting student engagement and intrinsic motivation. In *Service learning in higher education* (pp. 1–20). Springer.
- Costello, R. A., Salehi, S., Ballen, C. J., et al. (2023). Pathways of opportunity in STEM: Comparative investigation of degree attainment across different demographic groups at a large research institution. *International Journal of STEM Education*, 10, Article 46.
- Cranton, P. (2023). *Understanding and promoting transformative learning: A guide to theory and practice*. Routledge.
- Cuevas-Parra, P. (2022). Multi-dimensional lens to Article 12 of the UNCRC: A model to enhance children's participation. *Children's Geographies*, 21(3), 363–377.