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## RESEARCH ARTICLE

### Play-Based Learning and Early Childhood Development in Kindergarten Classrooms at Dadap Elementary School

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#### Abstract

Play-based learning is widely recognized as a cornerstone of effective early childhood education, supporting children's cognitive, socio-emotional, and physical development. In public kindergarten classrooms, particularly in developing contexts, the implementation of play-based approaches is shaped by curricular expectations, classroom realities, and teacher practices. This study examined the extent of play-based learning and its influence on early childhood development in kindergarten classrooms at Dadap Elementary School. Using a convergent mixed-methods design, data were collected through classroom observations, early childhood development surveys, and semi-structured teacher interviews. Quantitative findings indicated that play-based learning activities were moderately to highly implemented and were strongly associated with learners' socio-emotional and behavioral development, with moderate effects on cognitive development. Qualitative findings revealed that structured play, teacher scaffolding, and interactive activities supported holistic development, while constraints such as class size and time limitations influenced instructional choices. The study highlights the importance of sustaining developmentally appropriate, play-based pedagogy in public kindergarten classrooms to enhance early childhood development.

**Keywords:** play-based learning, early childhood development, kindergarten, developmentally appropriate practice

## Introduction

Early childhood is a critical period for children's holistic development, encompassing cognitive, socio-emotional, physical, and language growth. Kindergarten classrooms provide a foundational environment where young learners develop essential skills that influence later academic achievement and lifelong learning outcomes. Among various pedagogical approaches, play-based learning has been consistently identified as an effective strategy for supporting early childhood development by fostering active engagement, exploration, and meaningful learning experiences (Copple & Bredekamp, 2009).

Play-based learning emphasizes children's natural curiosity and active participation in the learning process. Through play, children explore ideas, practice social roles, develop language, and construct understanding of their environment. Research shows that play-based classrooms promote self-regulation, problem-solving skills, creativity, and positive social interaction (Hirsh-Pasek et al., 2009; Weisberg et al., 2016). In contrast to purely teacher-directed instruction, play-based learning allows children to take initiative while being supported through guided interaction and scaffolding.

In the Philippine education system, kindergarten is a compulsory component of the K to 12 Basic Education Curriculum and is guided by principles of child-centeredness, play-based learning, and holistic development. Despite strong policy support, the enactment of play-based learning in public kindergarten classrooms varies due to contextual factors such as class size, limited instructional time, and diverse learner readiness. These challenges are particularly evident in public elementary schools where teachers must balance curriculum coverage with developmentally appropriate practices.

Existing studies on early childhood education have largely focused on preschool settings or system-level indicators, with fewer school-based investigations documenting how play-based learning is implemented in actual kindergarten classrooms and how it relates to early childhood development outcomes. There is a need for localized, context-sensitive research that examines play-based pedagogy within public elementary schools.

This study addresses this gap by examining play-based learning and early childhood development in kindergarten classrooms at Dadap Elementary School. By integrating quantitative and qualitative data, the study aims to provide empirical evidence on how play-based instructional practices support young learners' development in a public school context.

## Objectives of the study

This study aimed to examine the extent of play-based learning implemented in kindergarten classrooms at Dadap Elementary School and to determine the level of early childhood development of kindergarten learners in terms of cognitive, socio-emotional, and behavioral domains. It further sought to analyze the relationship between play-based learning practices and early childhood development, and to explore teachers' perspectives on the benefits and challenges of implementing play-based learning in public kindergarten classrooms.

## Methods

### Research Design

The study employed a convergent mixed-methods design, integrating quantitative and qualitative approaches to obtain a comprehensive understanding of play-based learning and early childhood development. Quantitative and qualitative data were collected concurrently and analyzed separately before being integrated during interpretation.

## Research Locale

The study was conducted at Dadap Elementary School, a public elementary school offering kindergarten under the K to 12 Basic Education Curriculum. The school serves learners from diverse socio-economic backgrounds and reflects typical instructional conditions in public kindergarten classrooms, including varied learner readiness and limited instructional resources.

## Participants

Participants included kindergarten teachers and kindergarten learners enrolled during the school year of the study. Teachers were selected through purposive sampling, while learners were selected through cluster sampling by class section.

## Instruments and Data Collection

Data were gathered using three primary instruments. A classroom observation protocol assessed the extent of play-based learning practices, including free play, guided play, learning centers, interactive games, and teacher scaffolding during play. An early childhood development survey, using a Likert-scale format appropriate for young learners, measured cognitive, socio-emotional, and behavioral development indicators. Lastly, semi-structured teacher interviews explored teachers' experiences, instructional strategies, and challenges in implementing play-based learning.

## Data Analysis

Quantitative data were analyzed using descriptive statistics and correlation analysis to examine relationships between play-based learning and early childhood development domains. Qualitative data were analyzed using thematic analysis, involving coding, categorization, and theme development. Findings were integrated through triangulation.

## Ethical Considerations

Approval was obtained from school authorities. Informed consent from teachers and parents and assent from learners were secured. Confidentiality, anonymity and voluntary participation were ensured.

## Results and Findings

### Extent of Play-Based Learning in Kindergarten Classrooms

The extent of play-based learning in kindergarten classrooms at Dadap Elementary School was analyzed using descriptive statistics based on classroom observation ratings. Five domains of play-based learning practices were examined.

**Table 1. Extent of Play-Based Learning Practices in Kindergarten Classrooms (n = 10 teachers)**

Play-Based Learning Domain	Mean (M)	Standard Deviation (SD)	Interpretation
Structured Play Activities	3.92	0.44	High
Guided Play	3.88	0.46	High
Learning Centers	3.71	0.52	Moderate to High
Interactive Games and Activities	3.76	0.49	Moderate to High

Play-Based Learning Domain	Mean (M)	Standard Deviation (SD)	Interpretation
Child-Initiated Free Play	3.18	0.67	Moderate
<b>Overall Play-Based Learning</b>	<b>3.69</b>	<b>0.48</b>	<b>Moderate to High</b>

The results indicate that play-based learning was implemented at a moderate to high level, with teachers consistently using structured play, guided play, and learning centers to support instructional goals. High mean scores for structured and guided play suggest that teachers intentionally aligned play activities with learning objectives. However, child-initiated free play obtained the lowest mean score and the highest variability, indicating uneven implementation across classrooms. This pattern suggests that instructional decisions often favored guided play to manage time constraints and large class sizes.

### Level of Early Childhood Development

Early childhood development was analyzed across three domains: socio-emotional development, behavioral development, and cognitive development. Descriptive statistics reveal differences in developmental outcomes among kindergarten learners.

**Table 2. Level of Early Childhood Development of Kindergarten Learners (n = 305 learners)**

Development Domain	Mean (M)	Standard Deviation (SD)	Interpretation
Socio-Emotional Development	4.06	0.43	High
Behavioral Development	3.98	0.47	High
Cognitive Development	3.39	0.61	Moderate
<b>Overall Early Childhood Development</b>	<b>3.81</b>	<b>0.45</b>	<b>High</b>

Kindergarten learners demonstrated high levels of socio-emotional and behavioral development, as evidenced by cooperation with peers, participation in classroom activities, and positive classroom behavior. In contrast, cognitive development was rated at a moderate level, indicating variability in learners’ ability to demonstrate sustained thinking and problem-solving skills. Higher cognitive performance was observed during hands-on and play-based activities, suggesting that active engagement supported early cognitive development more effectively than teacher-directed instruction.

### Relationship Between Play-Based Learning and Early Childhood Development

Pearson product-moment correlation analysis was conducted to examine the relationship between play-based learning practices and early childhood development domains.

**Table 3. Correlation Between Play-Based Learning Practices and Early Childhood Development**

Play-Based Learning Practice	Socio-Emotional Development	Behavioral Development	Cognitive Development
Structured Play Activities	.59**	.55**	.42**
Guided Play	.63**	.58**	.54**
Learning Centers	.52**	.49**	.57**
Interactive Games	.56**	.51**	.61**

Play-Based Practice	Learning	Socio-Emotional Development	Behavioral Development	Cognitive Development
Child-Initiated Play	Free	.47**	.44**	.65**
Overall Learning	Play-Based	.68**	.62**	.58**

\*p < .05, \*\*p < .01

Results reveal statistically significant positive relationships between play-based learning practices and early childhood development outcomes. Socio-emotional development showed the strongest association with overall play-based learning (r = .68, p < .01), highlighting the role of play in fostering cooperation, emotional expression, and social interaction. Behavioral development was also strongly associated with structured and guided play, indicating that predictable and purposeful play activities supported positive classroom behavior.

Notably, cognitive development demonstrated stronger correlations with interactive games and child-initiated free play than with structured or teacher-directed activities. This finding suggests that opportunities for exploration and learner autonomy during play were particularly effective in promoting early thinking and problem-solving skills. Guided play also showed a moderate to strong relationship with cognitive development, reinforcing the value of teacher scaffolding within playful contexts.

### Summary of Statistical Findings

Overall, the statistical analyses demonstrate that play-based learning at Dadap Elementary School was implemented at a moderate to high level and was significantly associated with early childhood development outcomes. Structured and guided play strongly supported socio-emotional and behavioral development, while interactive and child-initiated play activities were more closely linked to cognitive development. These findings underscore the importance of balancing teacher-guided and child-initiated play to support holistic early childhood development in public kindergarten classrooms.

### Qualitative Themes on Play-Based Learning

Qualitative data from classroom observations and semi-structured interviews with kindergarten teachers at Dadap Elementary School were analyzed using thematic analysis. Four major themes emerged that explain how play-based learning was implemented in kindergarten classrooms and how it shaped young learners' early learning and development.

#### Theme 1: Play-Based Activities Promoted Joyful and Meaningful Learning

Teachers consistently described play-based activities as creating a joyful classroom atmosphere that encouraged learners to participate actively in lessons. Play allowed children to engage with learning tasks in ways that felt natural and enjoyable, reducing anxiety and increasing motivation.

#### Participant Responses

"*Mas masaya ang mga bata kapag may laro, kaya mas mabilis din silang matuto.*"  
 ("Children are happier when there is play, and they also learn faster.")

"*Kapag masaya sila, mas bukas sila sa lesson.*"  
 ("When they are enjoying, they are more open to the lesson.")

These responses suggest that play-based learning enhanced learners' emotional engagement and willingness to participate. Joyful learning environments appeared to support sustained attention and positive attitudes toward school, which are foundational to early learning success. This finding aligns with Hirsh-Pasek et al. (2009), who emphasized that playful learning environments foster motivation and deeper engagement. Copple and Bredekamp (2009) similarly argued that meaningful play supports children's holistic development by aligning learning with their natural interests and curiosity.

## Theme 2: Teacher Scaffolding During Play Supported Skill Development

Teachers emphasized that play was most effective when accompanied by intentional guidance. During play activities, teachers modeled behaviors, asked guiding questions, and provided prompts to support the development of early literacy, numeracy, and motor skills.

### Participant Responses

*"Hindi lang basta laro, kailangan may guide para matuto sila."*  
("It's not just play; there must be guidance for learning to happen.")

*"Kapag may tanong kami habang naglalaro sila, mas naiintindihan nila ang ginagawa nila."*  
("When we ask questions while they play, they understand what they are doing better.")

These findings indicate that guided play, rather than free play alone, was central to skill development. Teacher scaffolding helped learners connect play experiences to learning goals, enabling them to acquire specific skills while remaining engaged. This theme is supported by Weisberg et al. (2016), who demonstrated that guided play produces stronger learning outcomes than either free play or direct instruction alone. It also reflects Vygotsky's (1978) concept of learning through guided interaction within the zone of proximal development.

## Theme 3: Play Enhanced Social Interaction and Self-Regulation

Teachers observed that play-based activities encouraged learners to interact with peers, practice cooperation, and regulate their behavior. Through group play and shared tasks, learners developed turn-taking, communication, and emotional control.

### Participant Responses

*"Natuto silang maghintay ng turn at makisama sa iba."*  
("They learned to wait for their turn and cooperate with others.")

*"Sa laro, nakikita kung paano nila kontrolin ang sarili nila."*  
("During play, you can see how they control themselves.")

Play functioned as a social context where learners practiced essential socio-emotional skills. These experiences contributed to the development of self-regulation and positive classroom behavior, which are key components of school readiness. Research consistently shows that play supports social competence and self-regulation in early childhood (Bodrova & Leong, 2007; Pianta et al., 2009). Play-based interactions provide natural opportunities for children to negotiate rules, manage emotions, and develop social understanding.

## Theme 4: Classroom Constraints Influenced the Depth and Frequency of Play-Based Activities

Despite recognizing the benefits of play-based learning, teachers reported constraints that affected how often and how deeply play activities could be implemented. These included large class sizes, limited instructional time, and the need to manage classroom behavior.

### Participant Responses

"*Gusto sana naming mas maraming play, pero kulang ang oras.*"  
("We want more play activities, but time is limited.")

"*Kapag marami ang bata, mas mahirap magpa-free play.*"  
("When there are many children, free play is harder to manage.")

These constraints explain why teachers often relied on structured or guided play rather than extended child-initiated play. Instructional decisions reflected a balance between pedagogical ideals and practical classroom realities in public kindergarten settings. Similar challenges have been documented in public early childhood classrooms, particularly in resource-limited and high-enrollment contexts (OECD, 2019). Pianta et al. (2009) noted that without sufficient support, teachers may struggle to sustain high-quality play-based instruction.

### Summary of Qualitative Findings

The qualitative findings demonstrate that play-based learning at Dadap Elementary School supported joyful learning, skill development, social interaction, and self-regulation among kindergarten learners. Teacher scaffolding played a critical role in maximizing the educational value of play, while classroom constraints shaped the extent and nature of play-based activities. These findings complement the quantitative results and underscore the importance of intentional, well-supported play-based pedagogy in public kindergarten classrooms.

### Discussion

The findings affirm the central role of play-based learning in supporting early childhood development in kindergarten classrooms at Dadap Elementary School. The moderate to high implementation of play-based practices aligns with principles of developmentally appropriate practice, which emphasize active engagement and meaningful learning experiences for young children (Copple & Bredekamp, 2009).

The strong association between play-based learning and socio-emotional development highlights the role of play in fostering cooperation, emotional expression, and self-regulation. Through guided and interactive play, learners practiced social skills and developed positive learning behaviors, consistent with prior research emphasizing play as a context for socio-emotional growth (Hirsh-Pasek et al., 2009).

Although cognitive development was moderate, higher engagement was observed during hands-on and play-based activities, suggesting that play supports early thinking and problem-solving when intentionally guided. This finding supports studies showing that guided play where teachers scaffold learning goals within playful contexts produces stronger cognitive outcomes than either free play or direct instruction alone (Weisberg et al., 2016).

However, qualitative findings indicate that classroom constraints such as large class sizes and limited instructional time influenced instructional decisions, often leading teachers to rely more on structured and guided play rather than extended free exploration. These constraints reflect broader challenges in public kindergarten settings and underscore the need for institutional support to sustain high-quality play-based learning.

### Conclusion

This study examined play-based learning and early childhood development in kindergarten classrooms at Dadap Elementary School. Findings indicate that play-based learning positively supports young learners' socio-emotional, behavioral, and cognitive development, particularly when combined with intentional teacher scaffolding. Despite contextual constraints, play-based pedagogy remains a vital approach for promoting holistic development in public

kindergarten classrooms. Strengthening teacher support and instructional resources may further enhance the effectiveness of play-based learning in early childhood education.

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