



# International Review of Pedagogical Innovation and Learning Sciences

Volume 1, Issue 1, 2026 | <https://www.azalpub.com/index.php/IRPILS>

## RESEARCH ARTICLE

OPEN ACCESS

### Article Info

*Received: 3/18/2026*

*Accepted: 05/30.2026*

*Published: 06/18/2026*

### Keywords

game-based pedagogy, kindergarten, early childhood education, learner engagement, qualitative study

## GAME-BASED PEDAGOGY IN KINDERGARTEN EDUCATION: A QUALITATIVE EXPLORATION OF TEACHING PRACTICES AND LEARNER ENGAGEMENT IN EARLY CHILDHOOD CLASSROOMS

<sup>1</sup>**Essen Borces Antonio**

Northeastern College, Santiago City, Philippines

<sup>2</sup>**Ulysses B. Daquioag**

Department of Education

### Abstract

Game-based pedagogy has emerged as a transformative approach in early childhood education, fostering learner engagement, motivation, and holistic development. This qualitative multiple-case study explored the teaching practices, experiences, and perceptions of kindergarten teachers in implementing game-based pedagogy, as well as its influence on learner engagement. Six kindergarten teachers from selected public elementary schools in the Philippines were purposively selected. Data were collected through semi-structured interviews, classroom observations, and document analysis, and analyzed using Braun and Clarke's (2006) thematic analysis. Findings revealed four major themes: (1) game-based pedagogy as a catalyst for active engagement, (2) play as a medium for holistic learning, (3) teacher creativity and instructional adaptation, and (4) challenges in implementation. Results indicated that learners demonstrated increased participation, confidence, and collaboration when instruction prioritized play-based interaction over performance-driven activities. However, the sustainability of game-based pedagogy was constrained by limited instructional resources, insufficient teacher training, and time constraints. The study underscores that effective implementation of game-based pedagogy requires not only innovative teaching strategies but also institutional support and professional development. The findings contribute to the growing body of literature on inclusive and learner-centered pedagogies and provide practical implications for early childhood educators, school leaders, and policymakers.

\*Corresponding author: [essen.antonio@deped.gov.ph](mailto:essen.antonio@deped.gov.ph)/[ulysses.daquioag@deped.gov.ph](mailto:ulysses.daquioag@deped.gov.ph)

## **INTRODUCTION**

Early childhood education is foundational in shaping lifelong learning trajectories, particularly in developing cognitive, socio-emotional, and motor skills. In contemporary educational discourse, there is increasing recognition of the need for pedagogical approaches that actively engage learners and respond to their developmental needs. Game-based pedagogy has gained prominence as an approach that integrates structured play into formal instruction, allowing young learners to construct knowledge through meaningful and interactive experiences (Zosh et al., 2018).

Grounded in constructivist and socio-cultural theories, game-based pedagogy reflects the principles of active learning and social interaction. Lev Vygotsky emphasized that learning occurs through social interaction within the Zone of Proximal Development, while Jean Piaget highlighted the importance of play in cognitive development. In kindergarten settings, these theories translate into classroom practices that prioritize exploration, collaboration, and experiential learning.

Empirical studies have demonstrated that game-based learning enhances engagement, intrinsic motivation, and knowledge retention (Plass et al., 2020; Hamari et al., 2016). In addition, play-based learning has been associated with improved executive functioning, problem-solving skills, and emotional regulation (Zosh et al., 2018). Despite these benefits, the integration of game-based pedagogy remains uneven across educational contexts, often influenced by teacher readiness, institutional support, and resource availability.

In the Philippine educational system, the kindergarten curriculum emphasizes developmentally appropriate and play-based learning approaches. However, there remains a gap in qualitative research capturing teachers' lived experiences in implementing game-based pedagogy. This study addresses this gap by providing an in-depth exploration of teaching practices and learner engagement in real classroom settings.

### **Objectives of the Study**

This study aimed to explore the use of game-based pedagogy in kindergarten education. Specifically, it sought to:

1. Examine the teaching practices of kindergarten teachers in implementing game-based pedagogy;
2. Identify the experiences and perceptions of teachers regarding game-based learning;
3. Analyze how game-based pedagogy influences learner engagement in the classroom;
4. Determine the challenges and enabling factors in the implementation of game-based pedagogy.

## **METHODOLOGY**

This study utilized a qualitative multiple-case study design to capture in-depth insights into teachers' practices and experiences. The participants included six kindergarten teachers with at least three years of teaching experience, selected through purposive sampling.

Data for this study were collected using multiple qualitative sources to ensure depth and triangulation. Semi-structured interviews served as the primary data source, allowing participants to share their experiences, perceptions, and instructional practices related to game-based pedagogy in a flexible yet guided manner. These interviews provided rich, detailed narratives that captured the teachers' lived experiences. In addition, non-participant classroom observations were conducted to examine actual teaching practices and learner interactions within the natural classroom setting, enabling the researcher to validate and contextualize the interview data. Furthermore, document analysis of lesson plans and activity sheets was undertaken to review how game-based strategies were formally integrated into instructional design. Collectively, these data sources strengthened the credibility and comprehensiveness of the study through methodological triangulation.

Data were analyzed using thematic analysis following the framework of Braun and Clarke (2006). The process began with familiarization, where the researcher immersed in the data by repeatedly reading the interview transcripts, observation notes, and documents to gain a comprehensive understanding of the content. This was followed by initial coding, wherein significant statements and meaningful units were identified and systematically labeled. Subsequently, theme construction was undertaken by grouping related codes into broader patterns that captured key ideas emerging from the data. These themes were then subjected to review and refinement to ensure coherence, consistency, and alignment with the research objectives. Finally, interpretation was carried out to derive meaning from the themes, linking the findings to existing literature and providing deeper insights into the implementation of game-based pedagogy in kindergarten classrooms.

To ensure the trustworthiness of the study, several qualitative rigor strategies were employed. Credibility was established through member checking, wherein participants were given the opportunity to review and validate the accuracy of the transcribed data and interpretations. Dependability was ensured by maintaining an

audit trail, which documented all research processes, decisions, and methodological procedures for transparency and consistency. Confirmability was achieved through peer validation, allowing external reviewers to examine the data and interpretations to minimize researcher bias. Lastly, transferability was addressed through thick description, providing detailed contextual information about the research setting, participants, and processes to enable readers to determine the applicability of the findings to other contexts.

## **RESULTS**

### **Theme 1: Game-Based Pedagogy as a Catalyst for Active Engagement**

Game-based instruction significantly increased learners' attention, participation, and enthusiasm by transforming routine classroom activities into interactive and meaningful experiences. Teachers observed that when lessons were embedded in games, learners demonstrated sustained focus, active involvement, and a willingness to participate even in tasks they would normally find challenging. The playful nature of games reduced anxiety and fear of failure, allowing learners to engage more freely and confidently. Moreover, games provided immediate feedback, clear goals, and a sense of accomplishment, which further motivated learners to stay engaged throughout the activity. This approach also encouraged peer interaction, cooperation, and healthy competition, all of which contributed to a more dynamic and inclusive learning environment.

#### **Responses:**

"Mas excited sila kapag may game, hindi na kailangan pilitin."

("They are more excited when there is a game; no need to force them.")

"Kahit yung tahimik na bata, sumasali kapag may laro."

("Even the quiet learners participate when there is a game.")

"Mas nakikita ko yung participation nila kasi gusto nilang manalo o matapos ang activity."

("I can really see their participation because they want to win or complete the activity.")

"Hindi sila madaling ma-distract kapag game-based ang lesson."

("They are not easily distracted when the lesson is game-based.")

The findings suggest that game-based pedagogy enhances intrinsic motivation by making learning enjoyable, purposeful, and learner-centered. The increased engagement observed among learners supports the argument that motivation in early childhood is strongly influenced by interest, enjoyment, and active participation. Consistent with Hamari et al. (2016), gamification elements such as challenge, reward, and interaction contribute to heightened learner engagement and sustained attention. Furthermore, the responses indicate that game-based instruction promotes inclusivity by encouraging participation from typically passive or shy learners, thereby fostering a supportive and engaging classroom climate. This implies that game-based pedagogy is not only an instructional strategy but also a mechanism for improving learner confidence, social interaction, and overall classroom engagement.

### **Theme 2: Play as a Medium for Holistic Learning**

Games served as integrated learning platforms that simultaneously developed literacy, numeracy, and socio-emotional skills among kindergarten learners. Teachers emphasized that well-designed game-based activities were not isolated or purely recreational, but intentionally embedded with learning objectives such as letter recognition, phonemic awareness, counting, and basic problem-solving. At the same time, these activities naturally required learners to interact with peers, follow rules, take turns, and express emotions appropriately. Through this process, learners were able to acquire academic skills while also developing essential social competencies such as cooperation, empathy, and self-regulation. The integration of multiple domains within a single activity made learning more meaningful, contextualized, and developmentally appropriate for young learners.

#### **Responses:**

"Natututo sila habang naglalaro- reading, counting, at pakikipagkaibigan."

("They learn while playing -reading, counting, and building friendships.")

"Habang naglalaro kami ng matching games, natututo silang magbasa at magbilang."

("While we play matching games, they learn how to read and count.")

"Sa group games, natututo silang maghintay ng turn at makisama sa iba."

("In group games, they learn to wait for their turn and get along with others.")

"Nakikita ko na nade-develop hindi lang academics kundi pati behavior nila."

("I can see that not only their academics develop, but also their behavior.")

The findings highlight that game-based pedagogy promotes holistic learning by integrating cognitive,

social, and emotional domains within a single instructional approach. This supports the assertion of Zosh et al. (2018) that play is a powerful vehicle for whole-child development, enabling learners to construct knowledge while engaging in meaningful social interactions. The responses further suggest that learning through games enhances not only academic competencies but also interpersonal skills and behavioral development, which are critical in early childhood education. This implies that game-based pedagogy aligns with developmentally appropriate practices by addressing the multifaceted needs of learners, thereby fostering balanced and comprehensive growth.

### **Theme 3: Teacher Creativity and Instructional Adaptation**

Teachers demonstrated flexibility and responsiveness by adapting game-based activities to accommodate diverse learner needs, abilities, and learning paces. This included modifying rules, simplifying instructions, adjusting the level of difficulty, and providing additional support or scaffolding for learners who required it. Some teachers grouped learners strategically, paired stronger and struggling learners, or used visual and tactile materials to make the games more accessible. These adaptations ensured that all learners could participate meaningfully rather than be excluded due to skill gaps or learning challenges. Through such differentiated approaches, teachers were able to create inclusive learning environments where every child had the opportunity to succeed and feel valued.

#### **Responses:**

"I simplify rules for struggling learners."

"Kapag nahihirapan sila, binabawasan ko yung steps ng game."

("When they are having difficulty, I reduce the steps of the game.")

"Pinapartner ko sila para matulungan ng mas marunong."

("I pair them so that more capable learners can help them.")

"Iniiba ko yung mechanics depende sa level ng mga bata."

("I change the mechanics depending on the level of the learners.")

"May ibang bata na kailangan ng visual aids kaya dinadagdagan ko ng pictures ang game."

("Some learners need visual aids, so I add pictures to the game.")

The findings indicate that differentiation is a critical component of effective game-based pedagogy, particularly in diverse kindergarten classrooms. Consistent with Florian and Black-Hawkins (2011), inclusive pedagogy emphasizes the need to extend learning opportunities to all learners by adapting instruction rather than expecting learners to conform to a fixed standard. The teachers' practices reflect a shift toward responsive teaching, where instruction is tailored to meet individual needs and promote equitable participation. This suggests that game-based pedagogy, when implemented with differentiation, serves as a powerful tool for inclusion by ensuring that all learners regardless of ability can actively engage, learn, and experience success within the classroom.

### **Theme 4: Challenges in Implementation**

Teachers identified several barriers that hindered the effective and consistent implementation of game-based pedagogy, particularly limited instructional materials, insufficient time for preparation and execution, and a lack of formal training. Many teachers expressed that while they recognized the value of game-based learning, they often struggled to design or implement activities due to resource constraints and competing classroom demands. The preparation of game-based materials was described as time-consuming, especially when teachers had to create them from scratch. Additionally, the absence of structured training or professional development opportunities led teachers to rely on trial-and-error approaches, which sometimes resulted in inconsistent or less effective instructional practices. These challenges highlight the gap between pedagogical ideals and classroom realities.

#### **Responses:**

"Kulang ang training kaya trial and error."

("There is a lack of training, so it becomes trial and error.")

"Minsan wala kaming materials kaya hindi ko magawa ang game na plano ko."

("Sometimes we don't have materials, so I cannot implement the game I planned.")

"Kulang ang oras sa preparation kasi marami pang ibang tasks."

("There is not enough time for preparation because of many other tasks.")

"Gusto ko sana mag-game palagi pero hindi practical kung kulang sa gamit."

("I want to use games regularly, but it's not practical when materials are lacking.")

“Hindi kami nabigyan ng sapat na training para sa ganitong strategy.”  
 (“We were not given enough training for this kind of strategy.”)

The findings underscore that teacher preparedness is a critical factor in the successful implementation of game-based pedagogy. Consistent with Antala et al. (2022), teachers’ attitudes, confidence, and competence in inclusive and innovative teaching approaches are strongly influenced by their training and professional development experiences. The reliance on trial-and-error methods suggests a lack of systematic support, which may affect the quality and sustainability of implementation. Furthermore, the presence of structural constraints such as limited resources and time indicates that effective pedagogy is not solely dependent on teacher effort but also on institutional support. These results imply that for game-based pedagogy to be effectively sustained, there must be a coordinated effort to provide adequate training, sufficient instructional materials, and manageable workloads, thereby enabling teachers to implement innovative practices with confidence and consistency.

## **DISCUSSION**

The study affirms that game-based pedagogy significantly enhances learner engagement and is strongly aligned with learner-centered education frameworks that prioritize active participation, meaningful learning, and responsiveness to learners’ needs. The findings demonstrate that when instructional activities are designed as interactive and play-oriented, learners exhibit increased motivation, sustained attention, and deeper involvement in classroom tasks. This supports the argument of Plass et al. (2020) that game-based learning environments promote deeper cognitive processing by combining challenge, feedback, and interactivity, which are essential elements in fostering intrinsic motivation. Moreover, the observed need for teacher adaptability highlights the principles of inclusive pedagogy, wherein instruction is continuously adjusted to accommodate diverse learner abilities, interests, and learning styles. As emphasized by Florian and Black-Hawkins (2011), inclusive teaching requires extending learning opportunities to all learners rather than limiting participation based on perceived ability, a principle clearly reflected in the differentiated game-based practices reported in this study.

However, despite these pedagogical strengths, the findings also reveal significant structural challenges that hinder the consistent implementation of game-based pedagogy. Limitations in instructional materials, insufficient time for preparation, and inadequate professional training create barriers that constrain teachers’ ability to sustain innovative practices. These challenges point to the necessity of systemic reform within educational institutions. In line with OECD (2019), effective and sustainable implementation of innovative pedagogies requires strong institutional support, including continuous professional development, adequate resource provision, and policies that enable teachers to focus on quality instruction. Without these systemic supports, the potential of game-based pedagogy may remain underutilized. Thus, the study underscores that while game-based pedagogy is pedagogically sound and effective, its long-term success depends on a comprehensive approach that integrates teacher capacity-building, resource allocation, and institutional commitment.

## **CONCLUSION**

Game-based pedagogy transforms kindergarten classrooms into dynamic and interactive learning environments that foster high levels of engagement, inclusivity, and holistic child development. By integrating play into structured instruction, it enables learners to actively participate, collaborate with peers, and develop cognitive, social, and emotional skills in meaningful ways. This approach not only enhances motivation and enjoyment in learning but also supports diverse learners by providing flexible and accessible learning opportunities. However, the effectiveness and sustainability of game-based pedagogy are contingent upon several critical factors. Teacher competence plays a central role, as educators must possess the skills, creativity, and pedagogical knowledge to design and implement appropriate game-based activities. Equally important is institutional support, including leadership encouragement, policy alignment, and provision of professional development opportunities. Furthermore, adequate resource availability such as instructional materials, time for preparation, and classroom support systems is essential to ensure consistent and effective implementation. Without these foundational supports, the full potential of game-based pedagogy may not be fully realized in early childhood education settings.

### **Implications**

The findings of the study offer several key implications across different domains. From a pedagogical perspective, teachers are encouraged to intentionally integrate structured game-based strategies into daily instruction, ensuring that games are not merely recreational but aligned with clear learning objectives that promote engagement and skill development. At the institutional level, schools must provide adequate support by allocating instructional materials, offering relevant training programs, and fostering a collaborative environment that empowers teachers to innovate in their teaching practices. In terms of policy, there is a need to strengthen the implementation of play-based curricula by reinforcing guidelines, monitoring classroom practices, and ensuring alignment with early childhood education standards. Finally, for research, future studies are recommended to expand into mixed-methods or experimental designs to further examine the effectiveness of game-based pedagogy, allowing for deeper analysis and broader generalization of findings across diverse educational contexts

## REFERENCES

- Ainscow, M. (2020). Promoting inclusion and equity in education: Lessons from international experiences. *Nordic Journal of Studies in Educational Policy*, 6(1), 7–16. <https://doi.org/10.1080/20020317.2020.1729587>
- Antala, B., Demirhan, G., & Carraro, A. (2022). Physical education teachers' attitudes toward inclusive education: A systematic review. *European Physical Education Review*, 28(2), 482–499. <https://doi.org/10.1177/1356336X211050132>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Florian, L., & Black-Hawkins, K. (2011). Exploring inclusive pedagogy. *Cambridge Journal of Education*, 41(4), 429–438. <https://doi.org/10.1080/0305764X.2011.625061>
- Hamari, J., Koivisto, J., & Sarsa, H. (2016). Does gamification work? A literature review. *Computers in Human Behavior*, 54, 179–188.
- OECD. (2019). *Educating 21st century children: Emotional well-being in the digital age*. OECD Publishing. <https://doi.org/10.1787/b7f33425-en>
- Plass, J. L., Mayer, R. E., & Homer, B. D. (2020). *Handbook of game-based learning*. MIT Press.
- UNESCO. (2015). *Quality physical education (QPE): Guidelines for policy-makers*. UNESCO Publishing.
- UNESCO. (2021). *Reimagining our futures together: A new social contract for education*. UNESCO Publishing.
- Zosh, J. M., Hopkins, E. J., Jensen, H., Liu, C., Neale, D., Hirsh-Pasek, K., & Whitebread, D. (2018). Learning through play. *Frontiers in Psychology*, 9, 112. <https://doi.org/10.3389/fpsyg.2018.01122>