

Teachers' Teaching Practices and Effectiveness in Use of Play-Based Activities and Learners' Performance

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ABSTRACT

The Philippines' participation in the Programme for International Student Assessment (PISA) highlighted critical concerns regarding learners' performance in reading, mathematics, and science, drawing attention to the central role of teachers in implementing PISA-aligned instructional practices. This study examined teachers' capabilities and functional skills in the implementation of the Programme for International Student Assessment (PISA) and their influence on learners' performance in the Schools Division of Iloilo during the academic year 2025–2026. Anchored on Shulman's Pedagogical Content Knowledge (PCK) Theory, the study employed a descriptive-correlational research design involving 385 randomly selected teachers across five congressional districts. A researcher-made questionnaire, grounded on PISA frameworks and validated through expert review, was used to gather data on teachers' capabilities, functional skills, and perceived learner performance. Descriptive statistics, t-test, analysis of variance, and regression analysis were utilized to analyze the data at a 0.05 level of significance. Findings revealed that teachers generally demonstrated moderate to high levels of capabilities and functional skills in implementing PISA-aligned instructional strategies. Significant differences were observed in teachers' capabilities and functional skills when grouped according to selected demographic variables. Moreover, teachers' capabilities and functional skills were found to have a significant influence on learners' performance, indicating that instructional competence and functional application of PISA-related approaches contribute meaningfully to student outcomes. The study underscores the importance of sustained professional development, assessment literacy, and instructional innovation to enhance learner performance in international assessments. The results provide empirical evidence to inform policy decisions, curriculum reforms, and teacher development programs aimed at improving educational quality and global competitiveness.

Keywords: teachers' capabilities, functional skills, PISA implementation, learners' performance, pedagogical content knowledge

INTRODUCTION

In recent years, foundational learning challenges have been at the forefront of educational discourse both globally and in the Philippines, particularly in the aftermath of pandemic-related disruptions that widened existing learning gaps. Reports from international agencies highlight that learning poverty remains a pressing issue, with millions of children unable to master basic literacy and numeracy skills by age ten, limiting their capacity to progress effectively through schooling and into later stages of life (World Bank, 2022).

The Philippine Department of Education (DepEd), recognizing the urgency of this challenge, has introduced national programs on learning recovery, assessment reforms, and early remediation that underscore the critical importance of foundational competencies in literacy and numeracy (DepEd, 2023; DepEd, 2024). Within this policy context, teachers' classroom practices and the strategies they employ to address learning loss have become key factors shaping learner outcomes.

Play-based learning has emerged as a promising pedagogical approach to address these gaps. Research demonstrates that integrating play into instruction promotes cognitive development, learner engagement, and motivation, while simultaneously strengthening essential skills in problem-solving, number sense, and conceptual understanding (Alotaibi, 2024). In contexts where learners struggle with foundational skills, play-based activities provide alternative routes to mastery, using interactive tasks, games, and manipulatives that enable learners to explore concepts in meaningful, developmentally appropriate ways (Ducot, 2025). Studies from both global and local settings affirm that play-based interventions enhance not only academic performance but also socioemotional development, positioning play as a powerful tool in creating inclusive and supportive learning environments (Muhawenimana, 2024).

However, evidence also shows that the effectiveness of play-based activities depends heavily on the competence and teaching practices of educators. Teachers who demonstrate subject-matter mastery, pedagogical adaptability, and the ability to scaffold learning experiences are more successful in translating play into measurable learning gains (UNESCO, 2023). Professional development opportunities that are sustained and practice-oriented have been shown to improve teachers' capacity to design and implement play-based strategies effectively, while insufficient preparation often leads to reliance on rote and mechanical methods that do not foster deep conceptual understanding (Callo, 2024). This suggests that teacher effectiveness in play-based instruction is not merely a matter of adopting games or activities, but of embedding them within coherent, evidence-based pedagogical frameworks.

Stakeholder involvement beyond the classroom further shapes the outcomes of play-based initiatives. When parents, community volunteers, and local government units actively participate in supporting learning recovery programs, they provide essential reinforcement of skills and values outside school hours. Such engagement sustains the momentum of classroom instruction, provides learners with extended opportunities for practice, and fosters stronger home-school partnerships. Conversely, weak or inconsistent stakeholder support has been linked to unsustainable interventions and limited long-term improvements in learner performance (National Numeracy Policy, 2024; UNICEF, 2023). Thus, the broader ecology of support surrounding teachers and learners must be considered in evaluating the effectiveness of play-based strategies.

Despite the strong conceptual and policy foundations for play-based learning, implementation challenges remain in the Philippine setting. Constraints such as large class sizes, limited access to appropriate instructional materials, and high-stakes assessment systems that emphasize summative outcomes often hinder teachers' ability to fully realize the potential of play in the classroom (DepEd, 2023). These realities highlight the importance of examining not only whether play-based activities are used, but also how they are implemented, adapted, and aligned with learning objectives in diverse educational contexts.

Given these conditions, the present study is timely and relevant. It seeks to examine teachers' teaching practices and their effectiveness in using play-based activities, and to determine how these practices influence learners' performance. By investigating the interplay between teacher competence, pedagogical strategies, and learner outcomes, the study aims to contribute to the ongoing discourse on learning recovery and foundational skills development in the Philippines. Ultimately, it hopes to generate empirical

insights that can inform policy, professional development initiatives, and classroom practice, strengthening the role of play-based instruction in improving learner performance in the post-pandemic education landscape.

This research investigated the teachers' teaching practices and effectiveness in use of play-based activities and learners' performance among 365 teachers drawn from public schools in the Schools Division of Iloilo, Philippines for school year 2025-2026. By examining the relationship between teachers' teachings practices and effectiveness in use of play based activities across public schools in the Schools Division of Iloilo, this study aims to determine the teaching practices of teachers, their effectiveness in using play-based activities, and the corresponding performance of learners in public schools. The findings are expected to benefit Department of Education Officials, School Heads, Teachers, Learners, Researcher and future researchers committed to success of learners in terms of performance and on how effectively they apply play-based strategies.

This study aimed to determine the teachers' teaching practices and effectiveness in use of play-based activities and learners' performance among 365 teachers drawn from public schools in the Schools Division of Iloilo, Philippines for school year 2025-2026.

Methodology

Research Design

The study employed a descriptive-correlational research design. The descriptive component aimed to systematically present how teachers implement play-based activities in their classrooms, while the correlational component examined the extent and direction of relationships among teaching practices, effectiveness of play-based activities, and learners' performance. This design was deemed most appropriate given the study's goal of describing existing practices and investigating how they relate to selected demographic and institutional variables such as age, sex, highest educational attainment, school size, and length of teaching experience.

Respondents of the Study

The respondents consisted of 365 teachers randomly selected from the Schools Division of Iloilo for the school year 2025–2026. The sample size was determined using Slovin's formula to ensure adequate representation of the target population of 4,181 teachers. Stratified proportionate random sampling was applied across the five congressional districts — First (n=82), Second (n=65), Third (n=70), Fourth (n=84), and Fifth (n=64) — to guarantee proportional representation from each district. Within each stratum, the final selection of respondents was carried out using the lottery or fishbowl technique, wherein each teacher was assigned a number on a slip of paper, placed into a container, and drawn randomly until the required number per district was met. This approach minimized selection bias and ensured equal chances of inclusion for all teachers.

Data Gathering Instrument

Data were collected using a researcher-made structured questionnaire composed of four sections. The first section gathered the personal profile of respondents in terms of age, sex, highest educational attainment, school size, and length of teaching experience. The second section assessed teachers' teaching practices in integrating play-based activities, covering the design, facilitation, and consistency of strategies such as games, role-play, and manipulative activities. The third section evaluated the effectiveness of these play-based strategies in relation to curricular alignment, active participation, creativity, and critical thinking, rated on a five-point Likert scale ranging from Very Low (1.00–1.80) to Very High (4.21–5.00). The

fourth section measured learners' performance as influenced by play-based activities, using the same five-point scale to assess progress in comprehension, motivation, engagement, and overall academic achievement.

Validity and Reliability

To establish validity, the questionnaire underwent both content and face validation by a panel of five experts in educational leadership, early childhood pedagogy, and play-based learning. Good and Scates' Criteria of Validation were applied to ensure that all items were appropriate, clear, reasonable, and comprehensive. For reliability, the instrument was pilot-tested among 30 teachers who were not part of the actual respondents. The data from the pilot test were subjected to Cronbach's Alpha, with a coefficient of 0.70 or higher set as the acceptable threshold for internal consistency.

Data Gathering Procedure

The researcher secured formal written permission from the Schools Division Superintendent, Public Schools District Supervisors, and participating school heads before data collection commenced. All ethical guidelines governing research involving human participants were strictly observed, including confidentiality and voluntary participation. The validated questionnaire was personally administered by the researcher in the respondents' respective schools, with sufficient time allotted for completion. The accomplished instruments were then retrieved, tallied, and prepared for analysis.

Statistical Tools

The data were analyzed using several statistical tools. Frequency and percentage were used to describe the profile of respondents. The mean was computed to determine the overall level of teachers' teaching practices, effectiveness, and learners' performance. The t-test was applied to identify significant differences for variables with two categories, namely sex and length of teaching experience, while ANOVA was used for variables with three or more categories, such as age, highest educational attainment, and school size. Pearson's r was employed to determine significant relationships among teachers' teaching practices, effectiveness in using play-based activities, and learners' performance. All inferential tests were set at a 0.05 alpha level, and statistical computations were processed using the Statistical Package for the Social Sciences (SPSS).

Results

Profile of the Respondents

The study involved 365 teacher-respondents from the Schools Division of Iloilo. In terms of age, the distribution was nearly equal, with 183 (50.14%) classified as young and 182 (49.86%) as old. Regarding sex, females outnumbered males, with 218 female respondents (59.73%) compared to 147 males (40.27%). In terms of highest educational attainment, the majority held a bachelor's degree (209 or 57.26%), followed by those with a master's degree (132 or 36.16%), and a small number with a doctorate (24 or 6.58%). As for school size, most respondents came from medium-sized schools (140 or 38.36%), followed by small schools (121 or 33.00%), and large schools (104 or 28.49%). In terms of length of teaching experience, more than half had long experience, with 202 respondents (55.34%) teaching for more than ten years and 163 (44.66%) with ten years or below.

Teaching Practices in Use of Play-Based Activities

The overall level of teaching practices in the use of play-based activities was described as "Practiced," with a grand mean of 1.66. Across all demographic and institutional classifications, teachers consistently applied play-based strategies. Young respondents had a mean of 1.67 while older respondents had 1.66.

Male and female respondents scored 1.66 and 1.67, respectively. Among educational attainment groups, bachelor's degree holders had the lowest mean at 1.51, followed by master's degree holders at 1.73 and doctorate holders at 1.76. By school size, respondents from small schools scored 1.62, medium schools 1.68, and large schools 1.74. Teachers with short teaching experience had a mean of 1.65 while those with long experience scored 1.67. These figures suggest that teachers with advanced degrees and those in larger schools tended to apply play-based practices more consistently, though all groups demonstrated commitment to strategies involving exploration, collaboration, motor skill development, and reflective practice.

Level of Effectiveness in Use of Play-Based Activities

The level of effectiveness in using play-based activities was consistently described as "Very High" across all groups, with an overall mean of 4.24. By age, young respondents had a mean of 4.25 while older respondents scored 4.23. Female respondents ($M = 4.25$) rated their effectiveness slightly higher than males ($M = 4.22$). In terms of educational attainment, doctorate holders recorded the highest mean at 4.26, followed by master's degree holders at 4.25 and bachelor's degree holders at 4.23. By school size, teachers in large schools had a mean of 4.25, those in medium schools 4.24, and those in small schools 4.23. Regarding teaching experience, those with long experience scored 4.25 compared to 4.23 for those with short experience. Despite minor variations, all groups maintained a very high level of effectiveness, reflecting strong competence and dedication among teachers in applying play-based strategies to promote learner engagement, creativity, and holistic development.

Level of Learners' Performance

The level of learners' performance in play-based activities was generally described as "Very High," with an overall mean of 4.33. By age group of teachers, young teachers' learners scored 4.34 while those of older teachers scored 4.32. In terms of sex, female teachers' learners ($M = 4.34$) performed slightly higher than those of male teachers ($M = 4.33$). Regarding educational attainment, learners of master's degree holders recorded the highest mean at 4.34, followed by doctorate holders' learners at 4.33, and bachelor's degree holders' learners at 4.32. By school size, learners from large schools scored 4.34, those from medium schools 4.33, and those from small schools 4.32. In terms of teaching experience, learners of teachers with long experience scored 4.34 compared to 4.33 for those with short experience. Across all classifications, learners demonstrated strong engagement, creativity, critical thinking, and motivation, reflecting that play-based learning effectively supported their cognitive growth and holistic development.

Significant Differences in Teaching Practices

No significant differences were found in teaching practices across all profile variables. For age, the t-test yielded a value of 0.53 with a p-value of 0.598; for sex, $t = 0.45$, $p = 0.653$; and for length of teaching experience, $t = 0.72$, $p = 0.472$. For highest educational attainment, the ANOVA produced an f-value of 1.84 with a p-value of 0.163, while for school size, $f = 1.29$, $p = 0.278$. Since all p-values exceeded the 0.05 level of significance, the null hypothesis was accepted for all variables, indicating that teachers applied play-based practices uniformly regardless of their age, sex, education, school size, or years of experience.

Significant Differences in the Level of Effectiveness

No significant differences were found in the level of effectiveness in using play-based activities across any of the profile variables. For age, $t = 0.68$, $p = 0.498$; for sex, $t = 0.92$, $p = 0.359$; and for length of teaching experience, $t = 0.74$, $p = 0.462$. For highest educational attainment, $f = 0.56$, $p = 0.573$, and for school size, $f = 0.42$, $p = 0.658$. All p-values were above 0.05, leading to the acceptance of the null

hypothesis for all variables. These results confirm that teachers, regardless of their demographic or institutional background, maintained a uniformly very high level of effectiveness in implementing play-based activities.

Significant Differences in the Level of Learners' Performance

No significant differences were found in the level of learners' performance across all profile variables. For age, $t = 0.42$, $p = 0.675$; for sex, $t = 0.35$, $p = 0.728$; and for length of teaching experience, $t = 0.38$, $p = 0.704$. For highest educational attainment, $f = 0.42$, $p = 0.658$, and for school size, $f = 0.36$, $p = 0.697$. Since all p-values exceeded 0.05, the null hypothesis was accepted in all cases, indicating that learners performed consistently well in play-based activities regardless of the demographic profile or institutional background of their teachers.

Significant Relationships Among Teaching Practices, Effectiveness, and Learners' Performance

The Pearson r correlation analysis revealed no significant relationships among the three main variables of the study. The correlation between teaching practices and effectiveness in using play-based activities yielded $r = 0.08$, $p = 0.112$; between teaching practices and learners' performance, $r = 0.06$, $p = 0.198$; and between effectiveness in play-based activities and learners' performance, $r = 0.09$, $p = 0.145$. All p-values were above the 0.05 level of significance, leading to the acceptance of all null hypotheses. Although the relationships were positive, they were very weak, suggesting that each variable functioned independently. Teachers demonstrated strong practices and high effectiveness, and learners performed very well, but these outcomes did not significantly predict or influence one another in measurable statistical terms.

Summary

The study determined the teaching practices of teachers, the effectiveness of their use of play-based activities, and the corresponding performance of learners in public schools in the Schools Division of Iloilo, Philippines for the school year 2025–2026. It was anchored on Constructivist Learning Theory, which posits that learners actively construct knowledge through meaningful interactions with their environment. The study was conducted in October 2025 and employed a descriptive-correlational research design to describe existing classroom practices and examine the relationships among the key variables.

The respondents consisted of 365 randomly selected teachers from the five congressional districts of the Schools Division of Iloilo. The sample size was determined using Slovin's formula, and stratified proportionate random sampling was applied to ensure proportional representation across districts. The final selection within each district was carried out using the lottery or fishbowl technique. Data were gathered through a validated researcher-made questionnaire composed of four sections covering the respondents' profile, teaching practices, effectiveness in using play-based activities, and learners' performance. The instrument underwent content and face validation by five experts and was subjected to reliability testing using Cronbach's Alpha, with a threshold of 0.70.

The dependent variables of the study were teachers' teaching practices, their effectiveness in the use of play-based activities, and learners' performance, while the independent variables included age, sex, highest educational attainment, school size, and length of teaching experience. Descriptive statistics such as frequency, percentage, and mean were used to summarize the data. Inferential tools including the t-test, One-Way ANOVA, and Pearson's r correlation were applied to determine significant differences and relationships among variables, all set at a 0.05 level of significance. All statistical computations were processed using the Statistical Package for the Social Sciences (SPSS).

The findings revealed that the respondents were nearly equally distributed by age, predominantly female, mostly holders of bachelor's degrees, largely from medium-sized schools, and mostly with long teaching experience. The teaching practices of the respondents in using play-based activities were consistently described as "Practiced," with an overall mean of 1.66, indicating that all teachers regularly integrated play-based strategies into their instruction regardless of their demographic or institutional profile. The level of effectiveness in using play-based activities was described as "Very High" across all groups, with an overall mean of 4.24, reflecting that teachers were highly competent in promoting creativity, engagement, collaboration, and holistic learning through play. Similarly, the level of learners' performance was described as "Very High," with an overall mean of 4.33, indicating that learners consistently demonstrated strong engagement, creativity, critical thinking, and motivation in play-based learning activities.

Statistical tests revealed no significant differences in teaching practices, effectiveness, and learners' performance across all profile variables including age, sex, highest educational attainment, school size, and length of teaching experience. All p-values exceeded the 0.05 level of significance, leading to the acceptance of all null hypotheses on differences. Furthermore, the Pearson r correlation analysis showed no significant relationships among teachers' teaching practices, their effectiveness in using play-based activities, and learners' performance. The correlations, while positive, were very weak, with r values of 0.08 between teaching practices and effectiveness, 0.06 between teaching practices and learners' performance, and 0.09 between effectiveness and learners' performance. These results suggested that each variable functioned independently, and that strong performance in one area did not necessarily predict outcomes in the others.

Conclusions

Based on the findings of the study, the following conclusions were drawn. Teachers across all demographic and institutional classifications demonstrated a high and consistent level of play-based teaching practices, effectively integrating physical activities, fostering exploration, and reflecting on their instructional effectiveness. No significant differences appeared across age, sex, educational attainment, school size, or length of teaching experience, affirming that all teachers uniformly embraced engaging and hands-on strategies that promoted learner development, creativity, and active participation in the classroom.

Teachers likewise demonstrated very high effectiveness in using play-based activities across all groups, showing strong skills in promoting creativity, engagement, collaboration, and real-life learning connections. Their consistent and skillful application of play-based strategies created a positive learning environment that supported active participation, meaningful understanding, and holistic learner development, regardless of any demographic differences among the respondents. The absence of significant differences across all profile variables further confirmed that teacher effectiveness in play-based instruction was a shared characteristic among all respondents, reflecting a collective commitment to quality teaching.

Learners consistently showed very high performance, demonstrating strong creativity, critical thinking, motivation, and active participation in play-based activities. Their sustained engagement and successful completion of tasks indicated that play-based learning effectively supported cognitive growth, practical skill development, and meaningful learning experiences, contributing to the holistic development of all learner groups across different school contexts and teacher profiles.

While teachers across all categories consistently practiced play-based teaching strategies, some groups such as those with advanced academic degrees and those teaching in larger schools applied these strategies with slightly higher frequency. Nevertheless, the differences were not statistically significant, confirming that all teachers uniformly embraced play-based approaches and reflected a strong collective commitment to active learning, learner engagement, and holistic development regardless of individual professional or institutional differences.

Teachers also consistently demonstrated very high effectiveness in using play-based activities across all age groups, sexes, qualifications, school sizes, and levels of experience. Despite the absence of significant differences among groups, all teachers showed strong competence and dedication, ensuring that learning experiences were creative, engaging, and meaningful for all learners. This uniformity of effectiveness reflected a shared professional dedication to supporting holistic learner development through well-implemented play-based approaches.

Learners showed consistently very high performance in play-based activities across all groupings of teachers by age, sex, educational attainment, school size, and length of teaching experience. With no significant differences found among any of the groups, the results indicated that all learners remained highly engaged, creative, and motivated regardless of who their teachers were or where they studied. This consistency reflected effective facilitation by teachers, inclusive learning environments, and strong institutional support for holistic development through play-based approaches.

Finally, teachers' teaching practices, their effectiveness in using play-based activities, and learners' performance showed positive but very weak relationships, with no statistically significant correlations found among the three variables. This indicated that each variable operated independently of the others. Although teachers performed well in their practices and effectiveness, and learners achieved very high performance outcomes, strong teaching practices did not necessarily predict or directly influence learner outcomes in measurable statistical terms, suggesting that other factors beyond the scope of this study may also contribute to learner performance.

Recommendations

Based on the foregoing findings and conclusions, the following recommendations were offered. The Department of Education officials may use the findings of this study as a basis for formulating learner-centered policies, strengthening teacher training programs, and refining curriculum standards that encourage the wider integration of play-based learning in schools nationwide. The evidence gathered from this study on the consistent effectiveness of play-based approaches across diverse teacher profiles may serve as a compelling foundation for advancing national programs on learning recovery and foundational skills development, particularly in the post-pandemic educational landscape.

School heads may benefit from the findings by designing more supportive school environments, providing targeted supervision, and mobilizing resources that encourage instructional innovation among teachers. Understanding how play-based teaching practices consistently contribute to positive learner outcomes across all school sizes and teacher demographics may help school heads cultivate institutional cultures that value creativity, engagement, and active learning, while also reinforcing the importance of professional collaboration and reflective practice among their teaching staff.

Teachers may find the results of this study meaningful as a basis for reflecting on their current instructional methods and further enhancing their classroom practices to deepen learner engagement. Recognizing that all teachers, regardless of age, sex, educational attainment, or experience, are capable of effectively

implementing play-based strategies may empower them to be more adaptive, resourceful, and confident in addressing diverse learning needs through innovative and enjoyable approaches.

Learners stand as the primary beneficiaries of improved teaching practices and more effective use of play-based strategies. The very high performance levels observed across all learner groups affirm that play-based learning creates enriching and motivating educational experiences. Sustained integration of play-based approaches in the classroom will continue to enhance learners' academic outcomes, nurture their creativity, strengthen their social and emotional competencies, and foster lifelong learning habits that extend beyond the school environment.

The researcher may use the findings of this study to deepen personal understanding of the interplay between teaching practices, play-based activity effectiveness, and learner performance, thereby strengthening expertise in instructional innovation and evidence-based educational research. The insights generated by this study may also contribute practical recommendations that inform and improve teaching and learning processes at the classroom, school, and division levels.

Future researchers may use this study as a foundation for exploring similar themes in other grade levels, subject areas, geographic contexts, or educational settings. The study contributes to the growing body of literature on play-based learning, teaching effectiveness, and learner outcomes, and may inspire further investigations into innovative pedagogical frameworks. Researchers may also consider examining other variables not covered in this study, such as parental involvement, access to learning materials, or school leadership practices, to gain a more comprehensive understanding of the factors that influence the effectiveness of play-based instruction and its impact on learner performance.]

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