

Effectiveness in Integrating Play-Based Learning Within the MATATAG Curriculum to the Kindergarten Learners' Performance

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Abstract — The incorporation of play-based learning in the kindergarten curriculum has been a very effective pedagogical strategy, enhancing the cognitive, social, and emotional growth of young children significantly. Recognizing the crucial role of play in early childhood education, this research aims to study the effect of incorporating play-based learning in the MATATAG curriculum, with the goal of improving the performance of kindergarten pupils at Alpha Christian School in Baybay City Division for School Year 2024-2025. This study adopted a quasi-experimental research design, utilizing both pre-test and post-test measures to ascertain the significant difference in the performance of the learners before and after the integration of play-based learning. The Early Childhood Care and Development (ECCD) assessment tool served as the primary instrument for evaluating student performance. A total of 40 kindergarten learners took part in the study, with learning materials and activities meticulously crafted to incorporate play-based strategies that had been validated prior to implementation. The intervention occurred over a period of four weeks, during which play-based learning activities such as storytelling, rhyming, imaginative play, and interactive games were systematically woven into the lessons. The findings of the study suggest a significant improvement in the performance of the learners following the intervention. Pre-test revealed that most of the learners fell under the Slight Delay category, and few were scoring average marks. However, the post-test findings revealed a significant change in that all the learners moved to a higher level of performance, and a percentage also reached the Slightly Advanced level. The statistically significant mean difference between the post-test and the pre-test score testified to the effectiveness of the intervention in enhancing learners learning and participation. The research findings underscore the importance of play-based learning as an essential pedagogical approach that fosters motivation, critical thinking, and fulfilling learning experiences. Based on the observed positive impacts, the research recommends further incorporation of play-based learning approaches into the MATATAG curriculum to further improve early childhood education performance. The suggested improvement plan also aims to further enhance play-based instructional strategies to ensure that learners always excel in a playful and developmentally suitable learning environment.

Keywords — *Effectiveness, Integrating Play-Based Learning, MATATAG Curriculum, Kindergarten Learners' Performance*

I. INTRODUCTION

Over the years, the shift towards incorporating more play-based learning in the classroom has grown. The need for play-based learning is increasing as recess times are shrinking and more time is allotted for computer-driven test prep. The education system has been taking more and more play away from students and replacing it with structured activities that require no imagination or hands-on work. We have come to a sad time in the world with a growing number of kids who don't know how to play or interact with their peers. The socialization students get from engaging in play-based

activities is crucial to their overall development. Children practice social skills, emotional regulation, language acquisition, cognitive skills, and physical health through play. Play-based learning is a fun way to learn, where you can explore, experiment, and discover new things while having a great time. It's all about using your imagination, curiosity, and creativity to learn naturally and inclusively. Implementing play-based learning creates an environment where students feel motivated, engaged, and excited to participate actively in their education. When students engage in a play-based activity, their minds and bodies learn.

Play-based learning is an academic approach that uses play as a central tool for children's learning and cognitive development. Play-based learning focuses on engaging students in more pleasurable, unconstrained, and intrinsically motivated activities rather than traditional instruction methods. This approach acknowledges the importance of play in fostering cognitive, emotional, social, and physical development. Reviewing literature on the various pedagogical strategies and techniques related to play-based learning can provide educators with insight into how play supports different aspects of students' development. This recognition allows teachers to make informed decisions when drafting curriculum, designing activities, and encouraging a learning environment that supports every student's development. Play-based learning enhances cognitive, social, and emotional development in young children.

Game-based learning enhances active learning and participation by providing students with the opportunity to solve problems in the context of play (Vankúš, 2021). In fact, some games and activities enhance children's learning more than any other book. Because games provide consistent feedback on student performance, they can be used to review knowledge and skills learned by students (Moalemi, 2019).

Teachers can explore the benefits of play-based learning through various pedagogical approaches that strengthen and support the educational outcome of students in the classroom. "Play-based learning is centered around children's play and the teacher's role in enhancing the learning that takes place in play, including both developmental (i.e., literacy, math) skills (OME, 2016) (Danniels & Pyle, 2023)." Play-based learning is not simply letting students run around and do whatever they want. Play-based learning makes learning fun for students, allows students to explore and inquire naturally, and teaches them inclusion when implemented correctly. Through play-based learning, students work collaboratively on something they are interested in. The educational outcome of play-based learning "provides children with joyful experiences associated with their learning, adds motivation, and keeps children's attention (Patton, 2023, p. 2)." Creating a learning environment that fosters inclusive play-based learning approaches caters to various learning styles and abilities, supporting literacy and numeracy development for all students. Play-based activities like storytelling, rhyming, imaginative play, and playing with sounds enhance students' literacy development. Interactive games that involve building or manipulating objects, counting or arranging objects, and incorporating numbers into games improve students' numeracy skills. Researchers found that learning in the classroom can become more intentional through play and that children develop skills and understanding that help to further their academic skills (Patton, 2023)." When students are interested in what they are learning, they are no longer learning because teachers want them to but because they want to. Implementing play-based learning benefits students' educational outcomes by enhancing the learning already taking place in the classroom and creating play-based activities centered around how and what students are interested in.

As kindergarten teacher, the need to make teaching interactive where play becomes integral strategy to make it more meaningful and enjoyable. As such, this study was formulated to evaluate the effectiveness of integrating play-based learning within the MATATAG curriculum. As mentioned, play-based learning where learners are facilitated to explore and engage with their environment and interact socially with others (Cornelli Sanderson, 2010; Zosh et al., 2018), and cooperative learning which involves the combined efforts of learners working together, children participate in 'real world' tasks which promote the development of deep levels of understanding (Biggs, 2011). Educational games improve interest and concentration, improving the students' learning (Alonso-Fernández et al., 2020). Games also stimulate motivation because of its impact on cognitive development, affective skills, and the emotional and social states of the students (Paravizo et al., 2018). A game-based learning environment can increase the students' interest and motivation. The findings indicate that employing a game-based strategy to create an engaging, dynamic environment can help children have fun while learning. As a result, teaching and learning sessions can boost the students' interest and motivation. Students can be indirectly exposed to the idea that learning is not solely dependent on the teacher's presentation in the classroom but that it can also take place in a more engaging and effective way when they are on their own (Jasni et al., 2019). Thus, it is in the rationale that the researcher who is currently a kindergarten teacher in the

mentioned local, would like to delve worthy research undertaking that will benefit herself, the school she is currently teaching and that of her Graduate Program she is enrolled at.

This study evaluates the effectiveness of integrating play-based learning within the MATATAG curriculum to the kindergarten learners' performance in Alpha Christian School, Babybay City Division, School Year 2024-2025. The findings of the study were the basis for the proposed improvement plan.

Specifically, this study sought to answer the following questions:

1. What is the performance of the kindergarten learners in Early Childhood Care and Development (ECCD) before the integration of play-based learning?
2. What is the performance of the kindergarten learners in Early Childhood Care and Development (ECCD) after the integration of play-based learning?
3. Is there a significant difference in the performance of the kindergarten learners in Early Childhood Care and Development (ECCD) before and after the integration of play-based learning?
4. What improvement plan can be proposed based on the findings of this study?

II. METHODOLOGY

Design. This study employed quasi-experimental research design utilizing the pre-test and post-test to evaluate the effectiveness of integrating play-based learning within the MATATAG curriculum to the kindergarten learners' performance. The pre-test and post-test were conducted before and after the integration of play-based learning in teaching kindergarten learners. Alpha Christian School, Baybay City Division is the main locale of the study. The school is situated in the heart of the barangay, 11 kilometers distance from Baybay City proper and accessible to all types of land transportation. It is in Barangay Guadalupe Baybay City, Leyte. The school is run by a school administrator, school chaplain, and principal, and it is composed with one Nursery, one Preschool, and one Kindergarten Teacher, and six Elementary Grade Teacher, nine (9) in all. The pupil population is two Hundred during the current school year. The kindergarten classroom are all equipped with play-based area wherein all the pupils will enjoy and learn meaningfully. The forty (40) kindergarten learners enrolled in the said locale for School Year 2024-2025 are the main respondents of the study. The study utilized the Early Childhood Care and Development (ECCD) assessment tool for kindergarten. This tool will help identify the readiness of the kindergarten learners on the activities in line with the MATATAG curriculum. Further, the researcher will formulate learning materials and activities with the integration of play-based learning in developing the lessons for the kindergarten learners. The learning materials, activities and the lesson plans will be submitted to the District Math Coordinator and School Head for validation before it will be administered to the learners. A matrix of activities will be provided by the researcher to keep track of the progress of the intervention provided. This research focused on evaluating the effectiveness of integrating play-based learning within the MATATAG curriculum to the kindergarten learners' performance through the pre-test and post-test and its significant difference. A Proposed Improvement Plan based on the findings of the study is the output.

Sampling. There are 40 kindergarten learners involved in this study. They are enrolled in the above-mentioned locale for School Year 2024-2025. Complete enumeration in choosing the respondents of the study was employed.

Research Procedure. After the research had been approved, data gathering followed. Letter requests to conduct the study were submitted to the proper authorities for approval. First, a letter request was submitted to the School Director for authorization to gather data among the identified respondents. After the approval of the School Director, permission letter was also secured from the School Principal of the school. After approval, the researcher proceeded to data gathering. The researcher conducted an orientation for the respondents with their parents. A permit was asked for, stipulating their consent to include their children in the study. The pre-test was administered face-to-face during the vacant period of the

learners. After the pre-test was given, intervention was provided within 4 weeks. The intervention focused on the integrating play-based learning technique in teaching the kindergarten learners. The researcher crafted lesson plans where play-based learning is one of the strategies in developing the lesson. She formulated learning materials and activities with the integration of play-based learning in developing the lessons for the kindergarten learners. The learning resources and activities are varied, relevant and differentiated which is suited to the kind of learners that the researcher is having. The learning resource underwent quality assurance before it was used as the study's intervention. After the intervention, a post-test was administered. Answers were checked, collected, tabulated, and submitted for statistical treatment. The researcher prepared a Matrix of Activities to track the progress of gathering the data.

Ethical Issues. The researcher properly secured permission from the authorities to conduct the study through written communication. In formulating the intervention materials used in the study, the use of offensive, discriminatory, or other unacceptable language was avoided. This study did not include the respondents' names and other personal data to protect their privacy. Participation of the respondents was also voluntary. Orientation was conducted for the respondents with their parents. Issues and concerns were addressed in the orientation, and consent to be included in the study was signed. The researcher-maintained objectivity in analyzing and discussing the results. All authors whose works were mentioned in this study were correctly quoted and were acknowledged in the reference. Hence, this study focused on the welfare of the learners.

Treatment of Data. Simple Percentage was employed to evaluate the performances of the kindergarten learners in Early Childhood Care and Development (ECCD) assessment tool before and after the integration of play-based learning. **t-Test of Mean Difference** was used to determine the significant difference in the performances of the kindergarten learners in Early Childhood Care and Development (ECCD) assessment tool before and after the integration of play-based learning.

III. RESULTS AND DISCUSSION

Table 1
Performance of Kindergarten Learners Before the Intervention

Score Range	Description	PRETEST	
		Frequency	%
130 & above	Highly advanced (HA)	0	0
120-129	Slightly advanced (SA)	0	0
80-119	Average (A)	11	28
70-79	Slight delay (SD)	29	72
60 and below	Delay (D)	0	0
Total		40	100
Weighted Mean		80.125	Average

Table 1 indicates that the kindergarten children performed prior to intervention based on their pretest scores at various levels of competence. The table indicates that among 40 students, none was placed in the Highly Advanced category (130 and above) or Slightly Advanced (120-129). That is, no students exhibited above-average thinking capacity prior to intervention. Most of the students, 29 out of 40 (72%), were in the Slight Delay category (70-79). This indicates that an overwhelming majority of the learners had some slight problems with their studies and required more assistance to do better. Meanwhile, 11 learners (28%) were in the Average category (80-119), indicating that they comprehended the subject but could perform better. Most importantly, none of the students were in the Delay category (60 and below), indicating that although most of them were behind, none of them were significantly behind in academics. The estimated

average score of 80.125 is in the Average range. This indicates that few students were failing, but their performance was still not good enough to be ready academically for strong performances. The paucity of students in the Highly Advanced and Slightly Advanced ranges indicates few high achievers. This might be due to a lack of opportunities for enriched learning or too little instruction prior to the pretest. These results indicate that without special assistance, most of these students will continue to struggle with fundamental skills. The results indicate the necessity of structured and engaging teaching techniques to enable students to progress from Slight Delay to at least the Average level. The findings indicate that the intervention is required, which will enhance the thinking and learning capacity of kindergarten students, which will enable the development of improved academic performance at various skill levels.

Table 2
Performance of Kindergarten Learners After the Intervention

Score Range	Description	POST-TEST	
		Frequency	%
130 & above	Highly advanced (HA)	0	0
120-129	Slightly advanced (SA)	5	12
80-119	Average (A)	35	88
70-79	Slight delay (SD)	0	0
60 and below	Delay (D)	0	0
Total		40	100
Weighted Mean		91.88	Average

Table 2 indicates what the kindergarten children were able to do following the intervention, and with considerable improvement over their pretest scores. Post-test results indicate that none of the students remained in the Slight Delay (70-79) or Delay (60 and below) categories, and therefore all students advanced from the lower ranks of performance. There is observable growth in the Average range (80-119), with 35 out of the 40 students (88%) scoring within this range. This is a significant improvement from the 11 students (28%) on the pretest, indicating that most students enhanced their learning capacity following the support they had received. Five students (12%) also scored within the Slightly Advanced range (120-129), indicating that they had improved above average. There were no students, however, in the Highly Advanced range (130 & above), which indicates that even though they had improved, additional support may be needed to facilitate the students to the highest level of achievement. The computed weighted mean was 91.88, still at the Average level but a significant improvement from the pretest weighted mean of 80.125. This improvement is proof that the intervention enhanced the learning capacity of the students. The fact that no students were reported in the delay categories and the movement to the higher performance levels indicates that the intervention was successful. The results show that the teaching practices utilized assisted in consolidating basic skills and ensured that all students stayed in line. However, since no students reached the Highly Advanced level, it shows that while the intervention was able to propel students to an acceptable level, additional effort might be required to drive excellence and encourage more students to reach advanced levels. In conclusion, the results show that the intervention successfully improved the academic performance of kindergarten students.

Table 3
Test of Difference in the Performance of Grade 1 Learners in
Comprehension Skills Before and After the Intervention

Test Scores		Standard Deviation	Computed T	Critical T	Decision	Interpretation
Pre	80.12	4.19	17.73	2.02	Reject H_0	Significant
Post	91.88					

Table 3 indicates the outcome of a test that examined Grade 1 students' capacity to understand before and after intervention. From the table, the pre-test average score was 80.125, while the post-test average score was 91.88. The improvement evidently indicates that the intervention improved the capacity of the learners to understand. The standard deviation of 4.19 indicates the amount of variation in the scores. It indicates there may be a consistent improvement in the students. The T-value of 17.73 is significantly greater than the critical T-value of 2.02. Thus, we reject the null hypothesis. This outcome indicates that there is a considerable difference between the pre-test and post-test scores, suggesting the increases observed were not the result of chance. The interpretation of "Significant" also warrants the conclusion that the intervention may have improved the learning of the learners. The increase in scores, together with the significance of the findings, indicates that the instructional method adopted may have been effective in enhancing the performance of the learners at school. These findings underscore the importance of well-designed methods in assisting in closing learning gaps and improving comprehension skills. Failure to reject the null hypothesis means that only the application of traditional instruction methods may not have been enough, and intervention was key in improving the learners' ability. In the future, we can apply such methods or enhance them to further improve learning outcomes and ensure continued academic development in young learners.

IV. CONCLUSION

The research indicated a sharp change in the performance of kindergarten children after the intervention. Most kindergarten learners were graded as "Slight Delay" while others were at the "Average" level. There was a sudden turn after the intervention started great leap on the performance of the kindergarten learners in ECCD. The statistical inference led to a T-value much greater than the critical, resulting in rejection of the null hypothesis. Hence, this study revealed a significant difference in the performances of the kindergarten learners before and after the integration of play-based learning in developing required learning competencies for the grade. This suggests that the intervention had a significant effect on the performance of kindergarten learners. The results of the research indicate that the strategy employed by teachers was vital in enhancing the knowledge and skills of students, as not only did the intervention enhance scholastic achievement, but also eradicated incidences of "Slight Delay" among learners. Further, this implies that it is effective in enhancing early childhood education outcomes.

V. RECOMMENDATIONS

1. The intervention can be embraced by the school as a standard practice to improve understanding abilities in kindergarten children.
2. Educators should be trained in effective ways of helping students to learn better. Training courses or workshops can guarantee that teachers have the required skills.
3. The curriculum should include more participatory and interactive learning styles, including hands-on activities, visual aids, and cooperative learning strategies.
4. There should be ongoing monitoring to monitor learners' performance and detect areas that need additional intervention.

5. The parents must be motivated to support learning at home through directed tasks and guided reading to reinforce the child's skills of comprehension.
6. Longitudinal impact of the intervention, generalizability to other levels, and interaction with other types of learning methods can be targeted in future work.

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She is currently a Kindergarten Teacher in Alpha Christian School, Inc. Guadalupe, Baybay City, Leyte. During her elementary up to undergraduate years, she was devoted and passionate in handling young learners in school and in church ministry. Her dedication to education, combined with her rich background in handling Kindergarten pupils with love pushed her to finish this study.