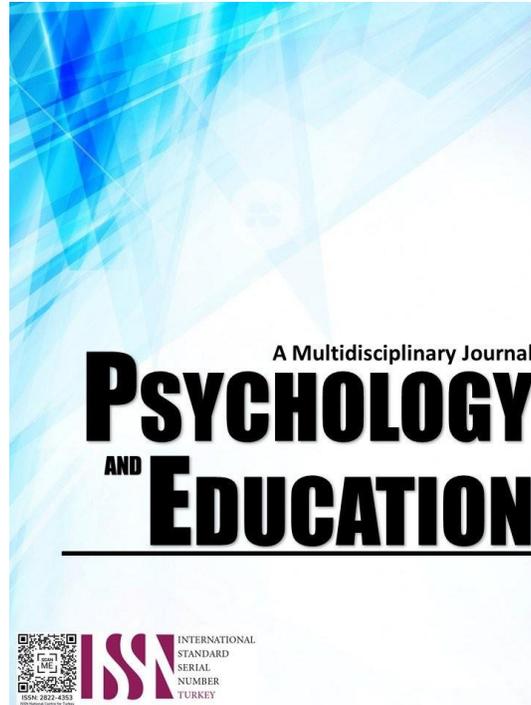


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Play-Based Kindergarten Classroom and the Effect on Pupils' Academic Achievement

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Abstract

The study sought to ascertain the significant relationship between pupils' academic achievements and pupils' academic achievements. The study employed statistical methods such as mean, standard deviation, frequency, and percentage distribution to evaluate the students' level of play-based learning and academic achievement. This research utilized descriptive-correlational methods to discover a significant link between children's academic progress and the degree of play-oriented education (Pearson r). Results showed that 10% of the students studied, totaling 5 individuals, achieved a level of academic success classified as "very satisfactory." As a result, the null hypothesis was upheld. The study recommended that educators thoroughly explore how play-based learning impacts students' cognitive development to improve their academic performance.

Keywords: *play-based learning, pupils' academic achievements, and cognitive development*

Introduction

Children have the opportunity to learn about their environment through exploration, discovery, discussion, and problem-solving. In a play-based environment, they can investigate their surroundings, set their own goals and outcomes, and link their current knowledge with new abilities, attitudes, and skills.

The research is based on the legal and philosophical foundations of RA 10157, also known as the Kindergarten Education Act, which establishes Kindergarten as the first phase of compulsory education. Furthermore, the DO 47 series from 2016 provides a variety of play-based activities that support children in becoming emergent and picking up the required abilities on their own. Teachers are also able to implement play- and theme-based activities for Kindergarten students as part of their daily teaching and learning processes.

Play-based learning offers kids more benefits than just a risk-free method of honing social skills and fundamental abilities. It can reduce achievement disparities that may exist for some kids in all learning situations and fosters a fair and positive atmosphere. According to Taylor and Boyer (2020), teachers find it challenging to incorporate the increasing amount of academic criteria and goals that kids must accomplish into developmentally appropriate learning activities for Kindergarten students. Educators should acknowledge the importance of integrating play into the classroom, especially through suitable developmental practices like play-based learning. The benefits of child-centered play-based learning were underscored as it enhances children's well-being and strengths, promoting their intellectual, social, and emotional growth through engaging and age-appropriate educational activities.

According to Clemente and Rule (2021), children may learn about their own interests, skills, and limitations via play; they can also fantasize, examine, and explore. They take up new skills, acquire language, enhance their memory, and develop social skills with both adults and other kids. Additionally, as play-based learning may be utilized as an intervention to bridge achievement gaps in children between the ages of three and four, it was stressed that this type of learning is highly beneficial.

Nieto and Ramos (2021) revealed that play-based learning greatly boosted learning gains in the cognitive, affective, and psychomotor domains of learning when paired with mix instruction and free guided play-based learning. Additionally, it was highlighted that Kindergarten students may grasp language and literacy, social-emotional abilities, and numeracy through play-based learning.

According to Nolan and Paras (2021), games, open play—where children are free to explore and use their imaginations—and play with resources and limits supplied by instructors are among the forms of play. According to the findings, play should be utilized as a tactic to "tackle inequality and improve the outcomes of children from different socio-economic groups," as opposed to concentrating exclusively on academic success and school preparedness. Educators must understand the importance of play in the classroom, especially regarding developmentally appropriate activities like play-based learning.

In contrast, Gonzaga (2021) discovered that introducing play-based learning resulted in a decrease in cognitive development among Kindergarten students. The researcher conducted this study to examine the impact of play-based learning on both social and cognitive development among Kindergarten students attending rural public elementary schools, with the goal of addressing this concern.

Research Questions

The goal of the study was to determine how play-based kindergarten education affected kids' academic development in Pagalungan Elementary Schools in the City Division of Cagayan de Oro in the 2023–2024 academic year. Specifically, the study sought to answer the following questions:

1. To what extent does Kindergarten students get instruction through play-based learning?
2. What is the level of pupils' academic achievements when they are categorized as;

- 1.1. highly advanced development;
 - 1.2. slightly advanced development;
 - 1.3. average overall development;
 - 1.4. slight delay in overall development; and
 - 1.5. significant delay in overall development?
3. Is there a significant relationship between the pupils' academic achievements and the play-based learning?

Methodology

Research Design

The study utilized the descriptive-correlational research design. Descriptive research according to Calderon, et al (2019) is a fact-finding inquiry or investigation. It is employed to develop a thorough knowledge of the primary causes of the given situations.

In addition, descriptive-correlational design as an inquiry used an in-depth analysis of the problem which data collection methods include, but not limited to the survey questionnaire and the like.

Subsequently, descriptive-correlational research design is used to quantify the problem by way of generating numerical data or data that can be transformed into usable statistics. This method measures variables through the use of quantifiable or finite data and the analysis was based on generated information from statistical tools. This method is also used in an inquiry with larger population.

Descriptive data collection techniques involve several methods of information gathering, including but not limited to the use of survey questions that have been adopted.

Respondents

The respondents of the study were the parents of the Kindergarten pupils of Pagalungan Elementary School of the City Division of Cagayan de Oro.

There were forty-nine (49) parent-respondents of the study who answered the items on the play-based learning of their children. The researcher selected respondents because they were easily accessible and suited the purpose of the study's deliberate selection.

Instrument

The study employed a survey questionnaire adapted from Clemente and Rule (2021), who previously studied the relationship between play-based learning and students' academic accomplishments.

The survey instrument is divided into two (2) primary sections. While the second section examines students' academic achievements, which are divided into five categories—Highly Advanced Development, Slightly Advanced Development, Average Overall Development, Slight Delay in Overall Development, and Significant Delay in Overall Development—the first section concentrates on teachers' play-based learning strategies using twenty (20) indicators.

Procedure

The researcher asked permission from the Schools Division Superintendent through the recommendation of the Dean of the Graduate School and thesis adviser to conduct the study in the City Division of Cagayan de Oro. The same permission was asked by the researcher to the parents of the Kindergarten pupils who answered the survey questionnaire on play-based learning and to permit the researcher to utilize the pupils' academic achievements for research purposes. However, the parents were assured that the data gathered from the survey questionnaire treated to its highest confidentiality and be used for educational purposes only.

After the respondents provided the data, the researcher retrieved the said questionnaire, summarized, tabulated and submit for analysis to the Statistician using appropriate statistical tools and techniques.

Data Analysis

In the study, the following statistical procedures were applied:

Problem 1. Mean value and standard deviation were used to present the extent of play-based learning strategies.

Problem 2. The frequency counts and percentages were employed to display the academic achievement level of the students.

Problem 3. The study revealed a significant correlation between the extent of play-based learning strategies and students' academic achievement, as determined by the Pearson-Product Moment Correlation.

Results and Discussion

This section presents the results, analysis, and interpretation of a study that examines how play-based learning in kindergarten classrooms influences children's academic performance. The data analysis and interpretation are based on survey questionnaire responses that address the specified issues.

Problem 1. What is the extent of play-based learning strategy in teaching Kindergarten pupils?

A play-based learning approach keeps the fun of unstructured play intact and motivates students to participate actively in learning activities while enabling them to relate to the material in a realistic way. When children hypothesized their learning with their teachers and peers, they apply what they have learned to their own lives and make expressive personal discoveries as they headway towards learning goals.

Play-based learning involves a thorough approach to education and cognitive growth. By engaging with objects and symbols, play-based learning supports children in developing essential skills crucial for their social, physical, and cognitive development.

Table 1. Mean Distribution of Play-based Learning in Teaching Kindergarten Pupils

Indicators	Mean	SD	Verbal Description
1. Teacher provides play-based learning materials such as play and story books.	4.33	.739	Very Highly Developed
2. Teacher provides play-based learning activity that develops the child's competence in decision-making.	4.39	.695	Very Highly Developed
3. Teacher provides play-based learning activity that enhances the child's skills in self-regulation	4.35	1.016	Very Highly Developed
4. Teacher provides play-based learning activity that enhances child's skills in physical well-being	4.35	1.016	Very Highly Developed
5. Teacher provides play-based learning activity that enhances the child's skills in creative thinking.	4.74	.440	Very Highly Developed
6. Teacher provides play-based learning activity that enhances the child's ability to acquire positive attitude	4.68	.582	Very Highly Developed
7. Teacher provides play-based learning for pupils to develop their ability to concentrate and engaged	4.82	.433	Very Highly Developed
8. Teacher provides play-based learning for pupils to relate others and their social environment	4.84	.367	Very Highly Developed
9. Teacher provides play-based learning to allow pupils to express, control, and revealed for inner feelings.	4.90	.300	Very Highly Developed
10. Teacher provides play-based learning to enhance pupil's motor development.	4.90	.300	Very Highly Developed
11. Teacher provides play-based learning to enhance pupils' ability to tolerate frustrations in social settings.	4.82	.477	Very Highly Developed
12. Teacher provides play-based learning to stimulate pupils' engagement in learning performance tasks.	4.86	.446	Very Highly Developed
13. Teacher provides play-based learning to help pupils' demonstrate mutual respect to playmates.	4.90	.300	Very Highly Developed
14. Teacher provides play-based learning to assess learning and achieved desired leaning outcomes.	4.94	.237	Very Highly Developed
15. Teacher provides play-based learning to develop pupils' creativity and imagination.	4.90	.300	Very Highly Developed
16. Teacher provides play-based learning to help pupils develop their language skills.	4.80	.400	Very Highly Developed
17. Teacher provides play-based learning to help pupils' memorize and recall information.	4.80	.400	Very Highly Developed
18. Teacher provides play-based learning to help pupils develop curiosity, innovativeness, and resourcefulness.	4.80	.400	Very Highly Developed
19. Teacher provides play-based learning to promote pupils' artistic and inventive thinking.	4.84	.367	Very Highly Developed
20. Teacher provides play-based learning to encourage pupils develop social-emotional skills.	4.84	.367	Very Highly Developed
Overall Mean	4.74	.479	Very Highly Developed

Legend: 4.21-5.00 Very Highly Developed/3.41-4.20 Highly Developed/2.61-3.40 Moderately Developed/1.81-2.60 Less Developed/1.00-1.80 Not Developed

Table 1 shows the kindergarten students' mean distribution of play-based learning. Overall, the respondents rated all the indicators as "Very Highly Developed" with a mean of 4.74 (SD=.479). This finding indicates that kindergarten teachers fully applied the play-based teaching approach. Play-based learning has the potential to improve children's socio-emotional, communication, and social skills. Research indicates that play-based learning revolves around children, enabling them to explore their interests and curiosities while learning.

Sanchez (2021) pointed out that children love to play especially in the preschool setting where teachers give kids a space to play, where they may interact with their classmates and grow in their social, verbal, and cognitive abilities. Play cultivates and expands a child's interest about the world. Children learn to explore a variety of materials through play.

The indicator which states that "Teacher provides play-based learning to assess learning and achieved desired learning outcomes" obtained the highest mean of 4.94 (SD=.237) which is verbally described as "Very Highly Developed". The outcome shows that educators created and applied the play-based teaching-learning strategy, which lets students use games to explore various learning resources. Through play-based teaching approach children acquire abilities that will benefit them throughout their entire academic career and into adulthood.

It can be deduced based on findings that through play-based teaching-learning approach teachers can assess pupils' ability to master the learning competencies and determine whether specific learning outcomes are attained or achieved. Sanchez, et al (2021) asserted

that young children will meaningfully absorb the concepts learn if teachers include play in their learning activities and classroom experiences. Additionally, it was emphasized that learning outcomes can easily be assessed and evaluated when pupils are exposed to play-based learning because they could reconstruct the experiences learners may involve in the classroom.

On the contrary, the lowest mean of 4.33 (SD=.739) is verbally described as “Very Highly Developed” in the indicators “Teacher provides play-based learning materials such as play and story books”. The result implies that teachers provided the play-based learning materials to pupils such as play and story books to make learning evocative and meaningful. It can be deduced based on findings that play-based learning maintains the pupils maintain the play while they connect play and stories in books to the content. When pupils construct their learning with teachers and peers, they apply it to their own lives and make meaningful personal learning.

Bell, et al (2021) averred that the use of games and stories in teaching Kindergarten pupils provide an environment that encourages participation and engagement in learning activities. Additionally, when engaging with peers, play-based learning fosters the development of social, linguistic, and communication skills in addition to cognitive abilities.

In a related study, Bremme and Erickson (2021) asserted that play-based learning allows kids to participate in a range of social and cognitive activities with their peer groups and encourages their natural curiosity about the world around them.

Problem 2. What are the academic achievement levels of students when they are classified as; Outstanding, Very Satisfactory, Satisfactory, Fairly Satisfactory, and Did not meet expectation?

Pupils’ academic achievements is measured in terms of mastery of the learning competencies and the development of essential skills required for success in academic activities. Academic achievements is categorized as outstanding, very satisfactory, satisfactory, fairly satisfactory, and did not meet expectations.

Table 2 presents the frequency and percentage distribution of pupils’ academic achievements.

Table 2. Frequency Distribution of Students’ Academic Achievements

<i>Pupils’ Academic Achievements</i>	<i>Frequency</i>	<i>Percentage</i>
Outstanding	13	25%
Very Satisfactory	33	65%
Satisfactory	5	10%
Fairly Satisfactory	0	0%
Did not meet expectation	0	0%
Total	51	100%

As seen, 33 (65%) of the Kindergarten pupils achieved “Very Satisfactory” in their academic achievements. This result suggests that a greater number of kindergarten students demonstrated reasonable performance in their academic activities and learning performance. Thus, it is imperative for teachers to utilize play-based learning approach to efficiently learn and proficiently develop competence in the learning areas. Sanchez (2021) asserted that play-based learning approach creates a meaningful connection to pupils’ engagements in learning, mental activity, social interactions, and academic success.

On the contrary, 5 (10%) of the Kindergarten pupil-respondents manifest “Satisfactory” academic achievements. This implies that only few Kindergarten pupils achieved reasonably. Pupils impartially performed their school and academic activities, they had satisfactory performance in literacy, numeracy, and social skills development. Payne (2022) avowed that Kindergarten students' social interaction, cognitive abilities, and learning performance must all be developed through the use of a play-based learning strategy.

Problem 3. Does the amount of play-based learning impact children's academic achievement?

Table 3 presents the correlation test between students' academic performance and play-based learning.

Table 3. Test of Relationship between Pupils’ Academic Achievements and Play-based Learning

<i>Learning</i>	<i>Pupils’ Academic Achievements</i>			
	<i>(r)</i>	<i>Sig 2-tailed</i>	<i>Interpretation</i>	<i>Decision on Ho1</i>
<u>Play-based Learning</u>	.113	.430	Denotes Negligible correlation	Accepted

**significant at p<0.05 alpha level*

The findings of the study looking into the connection between play-based learning and kids' academic success are shown in Table 3.1. The findings indicate a "Negligible Correlation" ($r = .113$) between play-based learning and students' academic achievement, with a p-value of .430, which is not statistically significant. This result suggests that play-based learning had no notable effect on children's academic performance. As a result, the null hypothesis, which posits that "there is no significant correlation between play-based learning and students' academic achievement," is supported. It can be inferred based on findings that pupils’ academic achievements can be attributed to other factors other than teachers’ play-based teaching-learning approach. This finding opposes to the findings of Sanchez (2022) who suggests that play-based teaching-learning approach help develops pupils’ social interaction skills, cognitive growth, and school learning performance.

According to Bodrova and Leong (2020), despite being an engaging, joyful, interactive, self-reinforcing, and social learning approach,

play-based learning has minimal influence on children's academic performance.

Conclusions

The study's results are based on the following findings:

It should come as no surprise that children learn via play by exploring and comprehending their surroundings. Play-based education is self-selected, collaborative, and process-oriented. These are opportunities for teacher-facilitated and student-directed learning experiences. Kindergarten students' cognitive, physical, social, and emotional well-being are all enhanced by play-based learning. Through play, pupils learn both the internal and external environments. They also learn skills they need for ongoing success at school and skills for life-long learning.

Pupils' academic achievement is measured in terms of their academic and learning achievements which is usually described based on their grades. Pupils' academic achievements is influenced by different factors such as pupils' cognitive and mental readiness, motivation to learn, and parental support.

There are different approaches and strategies which teachers can utilize or employ to help improve pupils' academic and learning achievements. Approaches may also vary depending on pupils' mental readiness and maturity as well as pupils' learning behavior. Additionally, teachers play the crucial role in intensifying pupils' learning performance.

Based on the findings and conclusions presented, the following recommendations are suggested:

Department of Education (DepEd) Officials will be aware of how students' academic performance is impacted by play-based learning so that they can assist in creating a framework to revive teaching-learning methods and enhance students' academic and school performance.

School Principals/School Heads will be aware of teachers' utilization of the play-based learning and how said approach influence pupils' academic achievements. so that they may be able to recommend an intervention to improve the integration of play in learning.

Teachers as Instructional Leaders are recommended to continuously develop and enhance their teaching strategies especially in integrating plays and games in teaching and other authentic learning activities in order improve learning.

Parents are advised to constantly give their kids the assistance they require in their schooling and to make sure that parents and teachers work together to boost their kids' education. They are also enjoined to provide an inclusive support to their children's education through the provision of learner-centered home school learning environment.

Community Officials/Other stakeholders are recommended to always support and provide the needed logistical assistance to the school especially in the utilization available community resources.

Future Researchers They are assigned to conduct a similar study that thoroughly investigates the connection between students' academic performance and play-based learning, with the aim of establishing a framework to enhance the implementation of play-based learning.

References

- Bell, E. R., Greenfield, D. B., Bulotsky-Shearer, R., & Carter, T. M. (2021). Peer play as a context for identifying profiles of children and examining rates of growth in academic readiness for children enrolled in head start. *Journal of Educational Psychology*, 108(5), 740-759.
- Bodner, G. M. (2020). Constructivism: A theory of knowledge. *Journal of Chemical Education*, 63(10), 873
- Bodrova, E. & Leong, D. J. (2020). Uniquely preschool: What research tells us about the ways young children learn. *Educational Leadership*, 63(1), 44-47.
- Bremme, D., & Erickson, F. (2021). Relationships among Verbal and Nonverbal Classroom Behaviors. *Theory into Practice*, 16(3), 153-161.
- Bruce, T. (2021). The whole child. Play. In T. Bruce (Ed), *Early childhood practice: Froebel today* (pp.5-16). London, UK: SAGE Publication Ltd.
- Chudacoff, H. (2020). *Children at play: An American history*. New York: New York University Press.
- Clemente, K., Rule, A. (2021). Kindergarten scores, storytelling, executive function, and motivation improved through literacy-rich guided play. *Early Childhood Education Journal*, 45(6), 831-843.
- DeLuca, C. (2021). Assessment in play-based kindergarten classrooms: An empirical study of teacher perspectives and practices. *The Journal of Educational Research*, 110(5), 457-466.
- Goldstein, L. S. (2019). Between a rock and a hard place in the primary grades: The challenge of providing developmentally appropriate early childhood education in an elementary school setting. *Early Childhood Research Quarterly*, 12(1), 3-27.

- Gonzaga, P. (2021). The decline of play and the rise of psychopathy in children and adolescents. *American Journal of Play*, 3(4), 443-463.
- MacKay, S. H. (2021). Teaching and learning: A Starting with story workshop. *International Journal of Education and Humanities*. Volume 1, number 2, pp (12-21)
- Montessori, V. (2020). Effects of play interventions on young children's reading of environmental print. *Early Childhood Research Quarterly*, 9(2), 153-170.
- Nieto, C., & Ramos, C. (2021). Preschoolers' free play - connections with emotional and social functioning. *The International Journal of Emotional Education*, 8 (1), 48-62.
- Nolan, A., & Paras, L. (2021). (Re)affirming identities: Implementing play-based approach to learning in the early years of schooling. *International Journal of Early Years Education*, 26(1), 42-55.
- Nunes, S. R., Stahl, S. A., & Willows, D. M. (2021). Systematic Phonics Instruction Helps Students Learn to Read: Evidence from the National Reading Panel's Meta-Analysis. *Review of Educational Research*, 71(3), 393-447.
- Payne, R. G. (2022, July). Read, play, grow! Enhancing early literacy at Brooklyn Public Library. *School Library Journal*, 59(7), 22-25.
- Piaget, J. (2020). *Play, dreams and imitation in childhood*. New York, NY: Norton & Company.
- Pyle, A., & Danniels, E. (2021). A continuum of play-based Learning: the role of the teacher in play-based pedagogy and the fear of hijacking play. *Early Education and Development*, 28(3), 274.
- Pyle, A., Priolella, J., & Poliszczuk, D. (2021). The play-literacy interface in full-day kindergarten classrooms. *Early Childhood Education Journal*, 46(1), 117-127.
- Sanchez, A. (2021). *Contemporary Perspectives on Play in Early Childhood Education*. Greenwich, Conn: Information Age Publishing.
- Taylor, M.E., Boyer, W. (2020). Play-Based Learning: Evidence-Based Research to Improve Children's Learning Experiences in the Kindergarten Classroom. *Early Childhood Educ J* 48, 127-133 (2020).
- Vygotsky, L. S. (2020). The role of play in development. In the published work by Lev Semyonovich Vygotsky entitled: *Problems of psychology*. In M. Cole, V. John-Steiner, S. Scribner, & E. Souberman (Eds.), *Mind in Society. The Development of Higher Psychological Processes* (1979, pp. 92-104).

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