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Play Materials in the Teaching and Learning Process of Nursery School Children in Katsina-Ala Local Government Area of Benue State

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Abstract

The study investigated the effectiveness of play materials in the teaching and learning process of nursery school children in Katsina-Ala Local Government Area of Benue State. The study was guided by three research questions and adopted the descriptive research design. The population of the study comprise of two thousand, four hundred and forty-four (2,444) caregivers and teachers in all the 42 nursery schools in Katsina-Ala Local Government Area of Benue State. The sample size for the study comprises 302 caregivers and teachers. The instrument used for data collection was a questionnaire developed by the researcher titled "Children Play Questionnaire (CPQ)". Descriptive and inferential statistics were used in data analysis. Specifically, Mean and Standard Deviation were used in answering the research questions while Chi-square (goodness of fit) was used to test the null hypothesis at 0.05 level. the study found that dramatic and role play (80.5%), guided play-based learning (65.6%), games and puzzles (86.4%), role-playing 94.7), (70.2%) and free play or unstructured play (71.9%) are the common methods of teaching used by nursery school teachers. The result showed that building blocks (63.9%), puzzles (71.5%), use of clay dough (60.6%), paints and brushes (60.6%), crayons (90.1%) and construction toys (88.4%) are the types of play materials available in the nursery schools. The study concludes that teachers still use the traditional play materials without realizing that play itself is a learning process. Whatever the child is exposed to during this period of growth and development improves the cognitive, social and emotional development of the young child. These play materials should therefore be properly developed with learning concepts in each of the methods and learning materials used. The study recommends that nursery schools teachers should integrate structured lesson plans that incorporate all the learning components for cognitive, affective and physical development of the child. Teachers should continually upgrade their teaching skills to inculcate the proper elements in the learning environment.

Keywords: Play Materials, Learning mode, Problem-solving skills, Teaching skills

Introduction

Nursery education serves as the cornerstone of early learning, laying the foundation for children aged 1 to 5 plus as preparatory for primary schooling. Section 4 of the National Policy on Education (2013) outlines the primary objectives of nursery education, emphasizing its pivotal role in facilitating a seamless transition from home to school environment. The overarching objective of nursery education is multifaceted. Firstly, it aims to acclimate children to the structured setting of school while providing essential care and supervision, particularly for children whose parents are at work. Additionally, nursery education seeks to instil core social values, fostering a sense of unity and community among young learners. Through engaging with nature, exploring the environment, and participating in activities such as art, music, and play, children are encouraged to express creativity and develop a holistic understanding of the world around them. Moreover, nursery education fosters cooperation and teamwork, nurturing important interpersonal skills from an early age.

Nursery education plays a vital role in promoting health and well-being by teaching children's good habits and hygiene practices. It introduces foundational concepts such as numbers, letters, colors,

and shapes in an interactive and playful manner, laying the groundwork for future academic activities. According to Ayodele (2022), nursery education provides for the physical, motor, health, nutritional, intellectual, aesthetic, emotional and social development of the nursery school child. It is therefore important for the overall health and physical wellbeing of a children. Learning apart from it being a very rigorous exercise, it is procedural. If a child gets a particular step wrong it sets a wrong foundation. This makes the teaching and learning process in the nursery school critical to young children.

Play and use of play materials is important to optimal child development such that it has been recognized by the United Nations as a right of every child. Play is any behavior that is freely chosen, intrinsically motivated, and personally directed by the child. Play is an absorbing natural activity that provides enjoyment and some sort of experiential learning to children.

Play is the fundamental learning mode and emotional outlet of childhood. Play is nature's way of teaching cooperation and building cooperation (Broesch & Robbins, 2023). Beqiri and Mucaj (2025) revealed that, play is a natural compelling activity that promotes the cognitive, physical, social, and emotional wellbeing, offering the necessary conditions for children to thrive and learn. Play functions in biological, social, cognitive, emotional, sensory, and physical development, as well as overall health and wellbeing of a child (Clarkson, Botha & Lindel, 2024). Nnaeme, Okoyeuzu, Chuka, and Ajogwu (2022) reports that play enables children to become active explorers of the environment.

Play materials are tools that allowed children to engage in symbolic play, aiding in the development of abstract thinking and problem-solving skills. Play materials are essential for children's development as an aid in cognitive, social, emotional and physical growth. The materials used for play enhance learning and total growth for the child especially on social-emotional development skills. Play material is anything a child can play with safely (Kembe, 2024). Play materials are items and equipment used during play by both teacher and learners in order to enhance child's holistic development.

Traditional play things are intertwined with the common materials found in the locality such as stones, sticks, bottle tops, cowries, seeds, waste paper, corn stalks, grass, sand, clay, old fabrics, discarded cartons, tins, fruits, and other countable, identification, drawing materials that can be converted to play things. The joy in children is to see different play materials and get the freedom to choose what they can play with. A variety of play materials cater for children's different interests and also for individual differences. Play materials have profound effects on early childhood education, (Brown & Lynch, 2023; Moore, Boyle & Lynch, 2023: Clarkson, Botha, & Lindel, 2024). Children pay a lot of attention to materials that look attractive and appealing. This increases attention span, hence promoting acquisition of social, emotional and intellectual skills. Whilst playing together, children learn to co-operate, follow rules, develop self-esteem, control and learn generally how to get along with other people in the use of the outdoor activities (Cohon, et al, 2023). Play is significantly related to creative problem-solving, co-operative behavior, logical thinking, improved intelligent quotient and peer group popularity. So much has been done in achieving the purpose of nursery school education, some investigations have also been done on the types of play materials and the effect of play materials on learning. Not much is focused on the teachers' skills and the effectiveness of use of these learning materials. It is due to the importance of play and play materials that this study was conducted to investigate the effective use of plat and play materials in an era where technology and so much attention given to digital gadgets as pacifiers and play materials have been found in the learning environment. The interest on play materials is no longer limited to unstructured play but to the involvement of teachers and their teaching skills in using play to achieve the learning goals of nursery school education.

Statement of the Problem

In an ideal scenario, nursery schools should seamlessly integrate a diverse array of play materials into the learning and teaching process and play in the teaching methodologies in the nursery schools. One of the critical characteristics of nursery school teachers is to be able to use play-way methods in the pedagogy of nursery teaching. Pedagogical incorporation of play materials would not only align with the curriculum but also cater to individual learning styles and developmental needs of nursery school children. Nursery schools in Katsina-Ala Local Government Area seem to face the challenge of optimizing the use of play materials in the teaching and learning process. Despite the recognition of play as a crucial element in early childhood education, the extent of its effectiveness and instructional value remains unclear, raising questions about its impact on the holistic development of nursery school children.

Presently, the utilization of play materials in nursery schools across Katsina-Ala Local Government Area lacks uniformity and systematic integration. There is a notable absence of standardized practices in selecting, incorporating and effectively utilizing play materials within the curriculum. Teachers often encounter challenges related to limited access to diverse and age-appropriate play materials, hindering their ability to employ these resources optimally. The use of space and effective use of time for play seems to be unregulated leaving much to be desired. Additionally, teacher preparedness and awareness regarding the pedagogical significance of play materials vary, leading to inconsistencies in the utilization and instructional value. The present situation reveals a disparity between the recognized importance of play materials and their actual integration and effectiveness within nursery school education in Katsina-Ala Local Government Area of Benue State. It is on this basis that the researcher is carrying out this study to assess the effectiveness of play materials and its' instructional value in the teaching and learning process of nursery school children in Katsina-Ala Local Government Area.

Research Questions

The following research questions were formulated to guide the study:

1. What are the methods of teaching used by nursery school teachers in the teaching and learning process in Katsina-Ala Local Government Area?
2. What are the types of play materials available in the nursery schools in Katsina-Ala Local Government Area for the teaching and learning process?
3. What is the instructional value of play materials on the teaching and learning process at the nursery school level in Katsina-Ala Local Government Area?

Methodology

Research Design

This study adopted descriptive survey research design. Descriptive survey research design is a type of design in which a group of people or item is studied by collecting and analysing data from only a few people or item considered to be the representative of the entire group.

The area of the study was Katsina-Ala Local Government Area of Benue State. Katsina-Ala Local Government is one of 23 Local Government Councils in Benue state.

Population of the Study

The population of the study was two thousand, four hundred and forty-four (2,444). This comprised 1446 caregivers and 998 teachers in all the 42 nursery schools in Katsina-Ala Local Government Area of Benue State (State Universal Basic Education Board UBE, 2022).

Sample and Sampling techniques

The sample size for the study was 302 respondents. This comprised 93 caregivers, 10 head-teachers and 199 teachers. The instrument used for data collection was a questionnaire developed by the researcher titled "Children Play Questionnaire (CPQ)". To determine the face and content validity of the instrument, initial copies of the instrument with the specific objectives, research questions, and hypotheses were given to three experts. An overall reliability coefficient of 0.89 was obtained for the instrument using Cronbach Alpha.

Method of Data Collection

Copies of the questionnaire were administered to the respondents in various schools on a face-to-face basis by the researcher and three research assistants.

Data Analysis Techniques:

Descriptive and inferential statistics were used in data analysis. Specifically, Mean and Standard Deviation was used in answering the research questions. A criterion means of 2-50 was established such that items with mean values of 2.50 and above was considered acceptable while items with mean values below 2.50 was considered unacceptable. Chi-square (goodness of fit) was used to test the null hypotheses at 0.05 level

Result and Discussions

The result of data presented on Table 1 shows the methods of teaching used by nursery school teachers in the teaching and learning process in Katsina-Ala Local Government Area. The result showed that storytelling (80.5%), play-based learning (65.6%), games and puzzles (86.4%), role-playing 94.7), Demonstration (70.2%) outdoor learning (71.9%) and activity based are the methods of teaching used by nursery school teachers in the teaching and learning process in Katsina-Ala Local Government Area.

Table 1: Percentage Responses on Methods of Teaching used by Nursery School Teachers in the Teaching and Learning Process in Katsina-Ala Local Government Area:

S/N	Teaching Methods	N	Used (%)	Not Used (%)
1	Storytelling	302	243 (80.5)	59 (19.5)
2	Play-based learning	302	198 (65.6)	104 (34.4)
3	Games /puzzles	302	261 (86.4)	41 (13.6)
4	Role-playing	302	286 (94.7)	16 (5.3)
5	Demonstration	302	212 (70.2)	90 (29.8)
6	Outdoor learning	302	217 (71.9)	85 (28.1)
7	Cartoon	302	183 (60.6)	119 (39.4)
8	Dramatization	302	192 (63.6)	110 (36.4)
9	Activity based	302	201 (66.6)	101 (33.4)
10	Songs and Rhymes	302	256 (84.8)	46 (15.2)

The result of data presented on Table 2 shows the types of play materials available in the nursery schools in Katsina-Ala Local Government Area for the teaching and learning process. The result showed that fruits (63.9%), puzzles (71.5%), construction toys (88.4 %), pebbles (60.6%), crayons (90.1%) and box sticks (88.4%) are the types of play materials available in the nursery schools in Katsina-Ala Local Government Area for the teaching and learning process.

Table 2: Percentage Responses of the Types of Play Materials Available in the Nursery Schools in Katsina-Ala Local Government Area for Teaching and Learning Process

S/N	Play Materials	N	Available (%)	Not Available (%)	Remark
1	Fruits	302	193 (63.9)	109 (36.1)	Available

2	Puzzles	302	216 (71.5)	86 (28.5)	Available
3	Pebbles	302	183 (60.6)	119 (39.4)	Available
4	Box sticks	302	199 (65.9)	103 (34.1)	Available
5	Crayons	302	272 (90.1)	30 (9.9)	Available
6	Construction toys	302	267 (88.4)	35 (11.6)	Available
7	Paints	302	193 (63.9)	109 (36.1)	Available
8	Brushes	302	178 (58.9)	124 (41.1)	Available
9	Drawing materials	302	201 (66.6)	101 (33.4)	Available
10	Sand	302	236 (78.1)	66 (21.9)	Available

The result of data presented on Table 3 shows the instructional value of play materials in the teaching and learning process at the nursery school level in Katsina-Ala Local Government Area. The result showed that all the items were agreed by the respondents since their mean scores were above the set mean value of 2.50. The table has a cluster mean of 2.98 and this is an indication that play materials have high instructional value in the teaching and learning process at the nursery school level in Katsina-Ala Local Government Area

Table 3: Mean and Standard Deviation of Response on the Instructional Value of Play Materials in the Teaching and Learning Process at the Nursery School Level in Katsina-Ala Local Government Area

S/N	Items	N	Mean	SD	Remark
1	Fruits enhance counting and number recognition.	302	3.26	0.83	Agree
2	Puzzles enhance hand-eye coordination and fine motor skills	302	2.93	0.69	Agree
3	Pebbles enhance sensory development through touch and exploration	302	2.86	1.02	Agree
4	Box sticks aid in learning shapes and basic math concepts.	302	3.16	0.70	Agree
5	Crayon enhances creativity and self-expression.	302	2.82	0.94	Agree
6	Fruits encourage language development through naming and describing	302	2.86	0.79	Agree
7	Puzzles develop patience and perseverance.	302	2.58	0.72	Agree
8	Pebbles support counting, sorting, and pattern recognition.	302	2.63	0.88	Agree
9	Box sticks promote teamwork and social interaction in group activities.	302	2.50	0.82	Agree
10	Crayons encourage color recognition and artistic development.	302	2.68	0.63	Agree
	Cluster Mean		2.98		High

Discussions

The findings of this study based on research question one revealed that storytelling (80.5%), play-based learning (65.6%), games and puzzles (86.4%), role-playing 94.7), field trips (70.2%) and outdoor learning (71.9%) are the methods of teaching used by nursery school teachers in the teaching and learning process in Katsina-Ala Local Government Area. Achanya (2023) affirmed the above view by stating that the extent of utilization of play method of teaching in pre-primary schools and effective use of instructional materials otherwise called teaching aid have impact on the overall development of a child. Cohen et al. (2023) also stressed that outdoor play spaces as instructional materials are often designed with developmental characteristics in mind and can improve creativity, variety and flexibility, social skills and communication if incorporated into play-based teaching methods. However, lack of access of these play materials, equipment, resources, or play opportunities can lead to play deprivation and can affect a child's overall development, health, and well-being. Abdullahi, Efe, and Okoro (2023) too concurred with this finding that there is a significant positive relationship between play and social skills development. Play activities were found to improve cooperation, communication, and conflict resolution skills among children. Teachers incorporating these play materials into learning activities corresponds with the varied teaching methods identified in Katsina-Ala.

The findings on the types of play materials available in the nursery schools in Katsina-Ala Local Government Area for the teaching and learning process showed that, there are varied types of play materials in percentages as indicated thus: fruits (63.9%), puzzles (71.5%), puzzles (60.6%), pebbles (60.6%), crayons (90.1%) and box sticks (88.4%). Aina, Akiode and Abidogun (2023) found a significant relationship. Kwame (2022) revealed that the availability and use of play materials significantly improved pupils' coordination, balance, and fine motor skills.

Conclusion and Recommendations

The study concluded that nursery school teachers in Katsina-Ala Local Government Area widely use diverse teaching methods such as storytelling, play-based learning, games, role-playing, and outdoor activities to enhance the teaching and learning process. Additionally, various play materials with high instructional value, including building blocks, puzzles, crayons, and construction toys, are available and extensively utilized by teachers in their instructional practices. Based on the findings of this study, the following recommendations are made.

1. Teachers should be trained on how to use play materials effectively for skill-building and problem-solving exercises.
2. Government policies should emphasize the consistent use of play materials in teaching, backed by necessary funding and resources.
3. Teachers and care givers should improvise play materials and teaching aids using available local materials to facilitate nursery school teaching and learning in the study area.

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