

THE EFFECT OF LEARNING CENTERS ON AROUSING AND SUSTAINING INTEREST IN NURSERY SCHOOL CHILDREN

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Abstract

The study set out to create in nursery one classroom and to compare the effect of the learning centers on arousing and sustaining interest in the pupils with pupils whose classroom did not have learning centers. The research was conducted over a period of ten weeks in two nursery schools in Jos using pre-test, post test two group quasi experimental design. The population was made up of nursery one pupils whose average age was three years seven months. 56 pupils that were selected through cluster sampling. Data was collected using observation. An observation rating scale was constructed using adaption from Therners and Carlson (2007) observation rating scale for preschoolers. Pre-treatment data was collected from the two schools, then the treatment was administered to school B and then a post-treatment data was collected from the two schools. The data was analyzed using t-test formular for independent samples. The result showed that no significant difference existed between the interest and social skills the pupils at the pretest but there was a significant difference in the interest and social skills of pupils in the post test. It was then concluded that learning centers in nursery one have significance arousing and sustaining interest, keep pupils engage and learning social skills. It was recommended that nursery one classroom should have rich learning centers and that nursery school teachers should be trained on how to create and maintain effective centers in their classroom.

Introduction

Watching children engrossed in play activities in the home and neighbourhood indicate that children are born with curiosity and desire to learn and make sense of out of their world. The enthusiasm they exhibit in their daily activities in the informal setting shows that learning is exciting to them. However for some of them, it seems that this excitement is shut down with entry into nursery school. This is evident in their hesitation to go to school or classrooms. If the experience of children in nursery schools or any other preschool program were uninteresting, unchallenging and not meeting developmental needs, interest in schooling cannot but wane. The direct teaching approach which many nursery school teachers in Nigeria use (Out-Bassey, 2000), emphasizes academic skills and the teaching approach seem to stress young children and make learning at school boring. By their development level, young children need strong base exciting, stimulating and pleasant experiences, that will cultivate love for learning, teach the skills of learning to learn as well as lay a solid attitudinal foundation for later learning.

It therefore appears that the greatest challenge that teachers in nursery school have is that of preserving and fostering interest, curiosity and inquisitiveness in young children at school. To achieve this feat, the arrangement of the classroom environment is a crucial component. One way a teacher can create a developmentally appropriated rich stimulating environment for these young children is through the creation of learning corners. Learning centers are interest that offer children a range of options for engagement in various activities of interest. These centers include blocks, drama play, art, literacy, music, science, mathematics and computer center.

Having taught and known the enormous benefits of learning centers in stimulating interest, excitement and fun in early childhood learning, the researchers decided to experiment on creating learning corners in nursery school classrooms using two schools.

Further more, the situational statistics of preprimary schools in Nigeria show that many of the nursery and pre-primary schools in Nigeria are own by individuals, religious bodies such as

churches and mosques and of work places. (NERDC, 2007). It is likely that these nursery and pre-primary schools do not have sufficient space to build large classrooms that can enable the teachers to set up learning centers in the classrooms.

The organizations of learning centers have been investigated. Rayes (2010) found that the learning centers commonly found in preschool classrooms are the dramatic/play centers, block center, mathematics center, science center and literature center. Brewer (2007) reviewed studies on learning centers in preschool classrooms and concluded that the basic learning centers that are common in high quality preschool programmes are Art, Music, library/listening, writing, block, dramatic, science/discovery, manipulative, mathematics, games, woodwork, water table and quiet activities. The National Minimum Standard for Early Child Care Center in Nigeria (NERDC 2007) list the following classroom corners; science, health and nutrition, drama, shopping and sleep.

The number of learning centers a nursery school classroom can have depends on the availability of space in the classroom; however, Morrison (2009) has recommended six learning centers.

The effect of learning centers on the development of children in early childhood has also been investigated. Rayes (2010) found that learning centers promote and foster excitement in young children and that extension of learning centers for exceptional learners sustain interest and engagement in preschool classroom activities. Copple (2012) has pointed out that learning centers help teachers achieve all the preschool goals which according to her include:

- i. Promoting learning in academics- through the centers children learn names, address, phone numbers, colour, size, shapes, positions, numbers, pre-writing skills, letter recognition, sound, rhyming and science.
- ii. Social and interpersonal skills.
- iii. Self-help and intrapersonal skills which include, taking care of personal needs such as dressing.
- iv. Motivation to learn and developing positive disposition towards learning ,
- v. Learning to learn.

Learning centers have also been found to contribute to brain development in early childhood due to the interconnectivity of experience the child gain from various learning centers. Espinosa (2010) reported neuroscience research by the National Council on Developing Child at Harvard University in 2007 which found the rapid growth of the brain development based on enriched learning opportunities that allow children to make connections across various regions of the brain, process language, develop cognitive abilities and process emotions. The neuroscience researchers therefore concluded that enriched early learning opportunities enable learners to think, develop ideas and become socialized in their world.

Finally Rayes (2010) found that learning centers and their extension make the difference in children's involvement and learning. She found that children were actively engage in hands-on-activities in the learning centers or the extensions.

The absence of attractive, stimulating and neatly organized classroom with learning centers in many nursery schools in Jos and environs poses a threat to developmentally appropriate practice in early childhood education in the state capital and state as a whole. The problem that this situation poses is how can teachers create stimulating rich classroom environment with learning centers in nursery schools and what are the effects of the learning centers on arousing and sustaining interest in schooling and learning among nursery schools pupils?

The daily routine of many nursery schools show the list of subjects that follow a rigid sequence in the school day for young children. This could be boring and stressful for them. The question that this study set out to answers is, what difference will learning centers make on the interest, participation and social skills of young children in nursery one?

- Two research questions guided the study while two hypotheses were tested and they include:
- Is there any difference in the mean and standard deviation of interest, participation and social skills between school A and B before the creation of the learning centers?
 - Is there any difference in the mean and standard deviations of interest, participation and social skills between pupils in school A and pupils in school B after the creation of learning centers in school B?
 - There will be no significant difference in the interest, participation and social skills observed in nursery one pupils in school A and school B before creating learning centers in school B.
 - There will be no significant difference in the interest, participation and social skills observed in pupils of school A and school B after learning centers were created in the classroom school B.

Method

The study used the pretest, post test, two groups quasi experimental design in which two nursery one classrooms were selected based on the similarity in background, age of pupils, classroom organization and teaching approaches. School B served as the experimental group while A served as control group.

The population consisted of pupils in nursery schools in Jos Metropolis. Two of the schools were selected as sample schools for the study based on the following criteria;

- i. Both schools were located in the same community therefore the background experiences of the children were parallel in every way.
- ii. Both schools were church-owned schools of the same denomination.
- iii. Both had no learning centers in their classroom organization.
- iv. Both school had teachers and auxiliary staff with parallel qualifications.

The study was carried out in nursery one of both schools where the average age of pupils was 3.7 years old in school A and 3.6 in school B.

The instrument used for data collection was observation. An observation rating sheet was adapted on the Themer and Carlson (2007) observation rating for preschool. Each behavior attribute was rated on a five point scale of (i) not at all (0), (ii) highly inadequate (1), (iii) inadequate (2), (iv) adequate (3), (v) highly adequate (4). The instrument adapted was given to an expert in test and measurement to validate after watching the DVD of Themer and Carlson's observation rating for preschoolers. The observation rating sheet consisted of two sections.

- (i) Indoor environment and behavior.
- (ii) Behaviour attributes

The study was carried out in two phases.

Phase I - Two weeks observation of three days per week of both classrooms. The data collected was analyzed to give a pre-test score for each group.

Phase II - Four learning centers were created in school B using large size mats and rugs as follows:

- i. **Dramatic and play centre:** Had collection of toys which include automobiles of various kinds, occupational kits such as doctors Kit, Kitchen set, Baby dolls, puppets, builder's kits models of different kinds of household, objects such as hoe, mortar and pistle, clothes, grinding stones and blender.
- ii. **Literacy center:** This consisted of variety of alphabet and number charts, posters, pictures, pictures books (both published and handmade) child size writing boards, charts and boards for matching letters and pictures, magnetic alphabet board, large charts made by research depicting different action such as running, walking, sweeping, crying, clapping, laughing, talking, teaching and large pictures of different events such as spots, marriage, installations, swearing in, festivals and conflict and worship. There were also flash card of alphabets and pictures writing books and sheets, crayons and story books.

- iii. **Mathematics/science center:** Items in this consisted of counters of different objects, shapes, charts of numbers and shapes, magnetic board, magnifier, models of different animals and birds, sand, water containers of various size and color, soap, toilet paper, comb. Near this center were a block/manipulative corner which consisted of blocks and puzzles.
- iv. **Art corner-clay:** This center was equipped with crayons, water paints of various colors, brushes, plain sheets of paper, variety of pictures and books: The art corner was set on plastic mat.

A learning centre period of one hour was included in the daily routine of the class. During this period, pupils were asked to choose the centre they wanted to work in and then asked to change after 20 minutes so that at end of the period of learning centre time, a child would have visited and worked in three learning centers.

Additional new materials were added to each centre after two weeks for the purpose of sustaining interest in the activities in the learning centers. The treatment lasted for eight weeks. During phase II, data was collected using observation sheet during the learning centre time and the data was also collected in school A on the same behavior attributes as in school B. At the end of the eight weeks average behavior score of each child on interest, participation and social skills was computed. The scores of the two groups were then compared using t-test.

Results

TABLE 1: MEAN OF INTEREST OF PUPILS IN SCHOOL A AND SCHOOL B AT THE PRETEST.

School	N	$\sum x$	\bar{x}	SD
A	30	67	2.23	0.732
B	20	50	2.17	0.736

The analysis show only slight difference in the mean score of interest at the pretest.

TABLE 2: MEAN OF PARTICIPATION IN LEARNING ACTIVITIES OF PUPILS IN SCHOOL A AND SCHOOL B AT THE PRETEST

School	N	$\sum x$	\bar{x}	SD
A	30	61	2.03	0.550
B	20	53	2.30	0.558

The analysis show only slight difference in participation of pupils in school A and school B

TABLE 3: MEAN SCORE OF SOCIAL SKILL OF PUPILS IN SCHOOL A AND SCHOOL B AT THE PRETEST.

School	N	$\sum x$	\bar{x}	SD
A	30	42	1.42	0.6329
B	23	37	1.60	0.5529

The analysis show that the mean score of social skills of pupils in school A and school B do not differ much

TABLE 4: MEAN SCORE OF INTEREST OF PUPILS IN SCHOOL A AND SCHOOL B AFTER TREATMENT

School	N	$\sum x$	\bar{x}	SD
A	30	75	2.5	0.6822
B	23	79	3.43	0.5081

Mean score of school B is higher than school A

TABLE 5: MEAN SCORE OF PARTICIPATION OF PUPILS IN SCHOOL A AND SCHOOL B AFTER TREATMENT

School N	$\sum x$	\bar{x}	SD
A	30	60	2
B	23	86	3.7

Mean score of school B is higher than school A

TABLE 6: MEAN SCORE OF SOCIAL SKILLS OF PUPILS IN SCHOOL A AND SCHOOL B AFTER TREATMENT

School N	$\sum x$	\bar{x}	SD
A	30	57	1.9
B	23	65	2.8

Mean score of school B is higher than school A

TABLE 7: t-test EXAMINING THE DIFFERENCE IN INTEREST OF SCHOOL A AND SCHOOL B BEFORE THE TREATMENT.

School 1	N	$\sum x$	\bar{x}	S^2	SD	t-value	DF	Sign
A	30	67	2.23	0.5369	0.5635	0.5635	51	1.684
B	23	50	2.17	0.5425	0.7366			

Decision: The t-value is less critical value $t = 0.5635 < 1.684$ there the null hypothesis is accepted to mean that there is no significance difference in the interest of the two groups

TABLE 8: t-test EXAMINING THE PARTICIPATION OF PUPILS IN SCHOOL A AND SCHOOL B BEFORE THE PRETEST

School 1	N	$\sum x$	\bar{x}	S^2	SD	t-value	DF	Sign (0.05)
A	30	61	2.03	0.3092	0.5501	1.811	51	1.684
B	23	53	2.30	0.3122	0.5582			

Decision: t-value is greater than the critical value $1.811 > 1.684$ therefore, the null hypothesis is rejected.

TABLE 9: t-test EXAMINING THE SOCIAL SKILLS OF PUBLIC IN SCHOOL A AND SCHOOL B BEFORE THE TREATMENT

School 1	N	$\sum x$	\bar{x}	S^2	SD	t-value	DF	Sign
A	30	42	1.42	0.4085	0.6329	0.9757	51	1.684
B	23	37	1.6	0.3052	0.5526			

Decision: t-value $0.975 < 1.684$ therefore the null hypothesis is accepted to mean that no significant difference exist.

TABLE 10: t-test EXAMINING THE INTEREST OF PUPILS IN SCHOOL A AND B AFTER TREATMENT

School 1	N	$\sum x$	\bar{x}	S^2	SD	DF	t-value	Sign (0.05)
A	30	75	2.5	0.4655	0.6822	51	5.69	1.684
B	23	79	3.43	0.2582	0.5081			

Decision: t-value is $5.69 >$ than critical value 1.684 therefore, the null hypothesis is rejected.

TABLE 11: t-test EXAMINING POST TEST SCORES OF PUPILS IN SCHOOLS A AND B ON PARTICIPATION

School 1	N	$\sum x$	\bar{x}	S^2	SD	DF	t-value	Sign (0.05)
A	30	60	2	0.5517	0.7427		10.303	1.684
B	23	86	3.7	0.2032	0.451	51		

Decision: t-value of 10.303 > critical value of 1.684 therefore, the hypothesis is rejected.

TABLE 12: t-test EXAMINING POST TEST SCORES OF PUPILS IN SCHOOLS A AND B ON SOCIAL SKILLS

School 1	N	$\sum x$	\bar{x}	S^2	SD	DF	t-value	Sign (0.05)
A	30	57	1.9	0.3949	0.628		4.6825	1.684
B	23	65	2.8	0.5455	0.733	51		

Decision: t-value 4.6875 > critical value of 1.684 therefore, there null hypothesis is rejected.

The analysis of data shows that;

1. In the pre treatment score there was no significance difference obtained between school A and school B in the areas of interest, and social skills but there was in participation.
2. There was a significant difference between the post-test score for school A and school B in interest, participation and social skill showing that the treatment given, that is the setting up of learning centers had increased the interest, participation and the acquisition of social skills of pupils in school B.

Based on these findings, it was therefore concluded that the use of learning centers in nursery one arouses and sustains interest in school. It also facilities pupils involvement in learning activities as well as foster the acquisition of social skills.

Discussion

The learning centers made so much impact in arousing as sustaining interest in school activities. The first day children in school B arrived in school and found their classroom organized with materials at designated places in the classroom as well as charts, pictures and posters decorating the walls of their classroom, the buzzed with excitement. The children curiously explored at centers jumping from one center to another touching and exploring or playing with the new things in the environment. There was overt expression of curiosity and interests as children grasp and manipulates different objects and ask questions. These responses were similar to the findings of Rayes (2010) who in a similar study added extensions to learning centers for the purpose of engaging fast learners who finished their work early. She found that learning centers that have been enhance with new objects attracted the pupils.

The dramatic play center which had a variety of toys such as occupational kits and household equipment attracted pupils the most. In that center, children became engrossed in pretend play for instance being a chef, doctor, mother, shop keeper or buyer and farmer. The learning center provided hand-on-activities for children. At the science/mathematics centre for example, children were involved in trying which object are attracted by magnetic boards and which were not, they were involved in trying which objects are attracted by magnetic boards and which were not, they were using magnifiers to see things and it offered opportunities for discovering properties of different kinds of objects wood, stone, metal etc. children also showed interest in weighing and measuring using lengths and containers of different lengths and sizes.

In the aspect of communication, cooperation and sharing, small groups afforded the opportunity to learn social skills of sharing, cooperation, suggesting and helping each other especially in the block manipulative centers.

Commenting on the spontaneous interest exhibited by the children while working in learning centers, Eliason and Jenkins (2008) observed that children need variety of experiences that will make them to manipulate, explore, use their senses, build, create, discover, construct, take apart and ultimately understand in world. These experienced were provided at the learning centers.

Recommendations

1. Nursery schools should foster interest and curiosity by creating learning centers. Centers make the classroom indoor environment rich with concrete, sensory, manipulative experiences that allow children to satisfy their curiosity through their senses.
2. Building plans for nursery classrooms should make provision for learning centers especially when considering fixed features such as doors and windows.
3. The state universal basic education at the local government and state levels should organize workshop and short-term courses for teacher on how to create and maintain rich indoor environment for nursery school children using the National Education Research and Development Council (NERDC, 2007) hand book for making toys as manual for such training.
4. There should be budgeting by school authorities every year for creating or enriching learning centers in nursery schools.
5. Nursery schools teachers in Nigeria need appropriate expert training in early childhood education. Therefore, Faculties of Education should establish departments of early childhood education. From the jamb brochure of 2010/2011 session only six universities run programs for training teachers young children. This is highly inadequate. All colleges of education have been directed by the Commission for Colleges of Education (NCCE) to commence training teachers in Early Childhood Education. These graduates of colleges of education should have opportunity to improve their knowledge and approaches in early childhood through university education.
6. The state universal basic education and local government should ensure that early childhood education receives adequate allocation of fund in their budget and ensure the implementation of the budget. This will ensure that nursery schools are properly funded and learning centers can establish and maintained in classrooms.

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