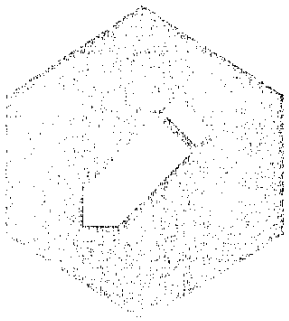

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Resource Materials Utilization among Pre-School Teachers in Lagos State, Nigeria

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Abstract: This study investigated pre-school teachers' use of resource materials in teaching. A descriptive-survey design was used to collect data from 60 pre-school teachers selected by systematic sampling technique. An observational schedule titled Resources Utilization Schedule (R U S) was used to observe and record teaching in the pre-school classes. Data were analyzed using mean, mean rank, chi-square and t-test statistics. Findings revealed the non-availability of resource materials in teaching. Also, the few materials available were not sufficiently utilized. Pre-school teachers' utilization of resource materials was found to depend on qualification, experience and gender but independent of school type.

Keywords: Resource Materials, Utilization, Pre-school Teachers

Introduction

Education is the vital tool for socio-economic, political, scientific and technological development in modern societies. A society that organizes its education well will achieve economic growth but if the system of education is not well managed, the effect will be negative rather than positive (Abidogun, 2006).

Learning is an important component of life and takes place irrespective of age. For several years, the educational policy provision in Nigeria allowed children to start school at the age of six. This practice has since changed as the pre-school education now occupies an important position as specified in the National Policy on Education (NPE, 2004). Osanyin (2002) in a review of research on pre-school education (age 3+ to 5+) noted that the most important period of the life of any individual is from birth to the age of 6 (0-6 years). Bloom (1964) asserted that about 50% of development takes place between conception and age of four, 30% between ages of four and eight and 20% between ages of eight and fourteen. This rate according to Piaget (1952) is subject to environmental stimulation.

Environment is an essential ingredient at the pre-school education level. A child at this level is made to unfold own natural talents through action from the external world. A Pre-school child is a natural explorer, investigator, discoverer, tester etc. Pre-school child finds outlet to the irresistible unending urge to explore the immediate surrounding. The teacher can therefore cope under such classroom climates by creating and providing many instructional resource materials to bequeath on learner desirable learning experiences. At pre-school level, instructional materials are meant to arouse pupil's interest in the learning process; to take care of individual differences and to appeal to pupil's sense of sight, touch, sound etc (Kerry and Farrow, 1996).

There are arrays of these instructional materials available in local and international literature. These include: over-head projector, tape recorder, television – video, slides, flashcards, pictures, computer and board (Kabadayi,2006) to mention but few. Plethora of studies have revealed pre-school teachers' preference for traditionally accepted resource materials kabadayi,2005;Wheatley,2003;Heppel,2003;Balor & Ritchie,2002; ,Han,2002 andPowell,1999). These inculcated in pupil's learning experiences as drawing, modeling, listening to stories, telling stories, singing, dancing, dramatizing etc. To ensure all round development (physical, mental, emotional and social) of children Kabadayi(2006) called for support towards the use of technology in the classroom. This may include the use of computerized simulations to serve as an innovation supplement to an early childhood pre-school learning. Wingert and Kantrowitz

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(1989) observe that ages 3 to 8 are the wonder years when children begin to learn, to reason and cooperate. They can be put in desks and drill; they can also be kept moving, touching and exploring resources around them.

Osanyin (2002) classified the instructional materials thus:

- Physical/motor development experience, including ropes, climbing balancing bounds, tricycles, wheels etc.
- Manipulative and tactile experiences: including balls, block cars, rocking boats, water toys etc.
- Visual experiences: including Television , VCD player and computer.
- Auditory experiences: include bells, squeaky toys etc.

Pre-school teachers should explore these wide arrays of resource materials to aid the child's developmental needs. Despite the growing awareness of the use of resource materials in teaching, Ivowi (1988) identified lack of stimulating learning environment as basic facilities and learning aids are either lacking, grossly inadequate or in a state of non use in many pre-school classrooms setting in Nigeria. The main features of the classroom are therefore mental drills and memorization, which make schools unattractive, boring and uninspiring to pre-school children. Concepts learnt therefore appears unreal, vague and meaningless (Onafowokan, 2005) with attendant unwillingness in learning.

The concern of this study therefore is to investigate the use of resource materials by pre-school teachers and to determine the influence of teachers' teaching experience, qualification and gender on actual use of resource materials by school type (public and private).

Theoretical Framework

This study was guided by Jean Piaget's theory (1957) of cognitive development and Maria Montessori education. Piaget's (1957) was of the view that certain processes underlie all learning and these are controlled by distinct mental structures. At pre- school level, children are at pre-operational stage and with the following features: egotism, inquisitiveness, capable of perceiving objects and reasoning that are not logical. Teachers' should explore and foster these attributes using concrete objects and teaching strategies that are activity-driven and provides hands-on experiences. This corroborates c Maria Montessori view of learning. She opined that learning should take place in a multi-stage classroom with special set of educational materials arranged in meaningful settings to enhance students' cognitive development. She was convinced that children's natural sensorial instincts would lead them to interact with the tools and materials around them, which they would them use to construct meaning of their world.

Methodology

This study employed a descriptive design to observe, record, describe and determine pre-school teachers use of resource materials in teaching. Population consisted of pre-school teachers in all the 180 public and private schools (86 public and 94 private) in Lagos State with pre school classes. All pre school teachers totaling sixty (17 male and 43 female) were selected by convenience sampling from sixty schools (thirty public and thirty private schools) selected by simple random sampling, three from each of the twenty local government areas of Lagos State,Nigeria were involved in the study. Equal representation of male and female teachers was not possible as there were more female teachers at pre school level.

An observational schedule titled Resource Utilization Schedule (RUS) developed by the researchers was used to collect data. This instrument concerns itself with the efficiency of use of resource materials by pre-school teachers. Three indices of use were identified as follows: Not Available (NA); Available but Not Used (ANU) and Resource In-Use (RIU). Each of these indices of use was divided into 13 sub-columns of used indicators and marked at 3-minutes

intervals. Against these indices was a list consisting of fifteen basic resource materials needed for teaching at the pre school levels. The list was generated through content analysis of the pre-school curriculum as developed by Nigerian Educational Research and Development Council (NERDC).

The instrument was first subjected to peer- review among the researchers and thereafter given to two specialists in Early Childhood education. Their suggestions which included re-wording of some items , inclusion of some resource materials and re-arrangement of few items were duly effected to modify and improve the content and the construct validity of the instrument. The reliability of the instrument was established using test-retest method within three weeks interval and a value of 0.75 obtained.

Administration of the instrument was carried out by the researchers through direct observation of classroom teaching. Each of these pre-school teachers was observed and scored on three different occasions. To achieve this, the researchers visited each of the schools in turn after collecting the school's time-table from the head teachers who had earlier given their consent to involve the schools in the study .The visit to the schools took place between the hours of 10.00 a.m and 12.00 noon throughout the period of data collection .This was done to allow pupils settle down properly. During actual classroom observation lasting 40 minutes (one period), teachers' use of any of the resource materials was noted through a tick at the appropriate column of use indicator of the instrument within 3-minutes time-sampling interval .No repetition of any column of use for a resource material was allowed within three minutes time-sampling interval. Inter-rater agreement among observers was computed using Cohen's Kappa formula (P_o-P_c/1- P_c) and a value of 0.83 was obtained .Data collection lasted for eight weeks.

Data analyzed was carried out through mean, mean rank, chi-square and t-test. To achieve this, non-parametric data were converted to parametric data by changing a frequency count in the In-use column to one point. A frequency distribution table was generated and a line graph plotted which showed the location of mean ,median and mode about the same position ,an indication of normal distribution of data . The two other columns (not available and available but not used) carried no point. This is because the concern for this study is strictly on 'use' of resource materials in teaching at the pre-school level.

Results

Table 1: Mean and Mean Rank of Teachers' use of Resource Materials

Types of Resources	Frequency of Use NA	Frequency of Use ANU	Frequency of Use RIU	Mean Scores	Mean Rank
Auditory Experience					
Bells	16	06	106	18.6	1st
Squeaky toys	128	-	-	00	
Radio	50	10	68	13.1	4th
Physical/					

Motor Development					
Ropes	35	44	49	8.5	7th
Climbing balancing boards	28	05	95	16.5	2nd
Tricycles	104	00	24	3.1	9th
Jingle gyms	21	55	52	11.3	6th
Puzzles	123	05	-	0.0	
Manipulative and Tactile Experiences					
Balls	08	56	64	12.9	5th
Rocking Boats	128	-	-	0.0	
Block cars	128	-	-	0.0	
Water toys	80	16	32	4.3	8th
Paper mache	128	-	-	0.0	
Visual Experiences					
Television & VCD players	27	07	94	15.4	3rd
Rattle toys	121	07	-	0.0	

Table 1 shows generally that most resource materials are not available in schools and where available the use of resource materials is ranked as follows: auditory experiences (1st and 4th), physical/motor development (2nd,6th,7th and 9th) visual experiences (3rd) and manipulative or tactile experiences (5th & 8th).

Table 2: Chi-square Value of Resource Materials Utilization by Teaching Experience

Indices	0-5yrs	6-10yrs	10yrs above	Total	X^2cal	X^2tab	Df	Xy
Auditory Experiences	25 (3.0)	35 (8.5)	24 (18.1)	134				
Manipulative Experiences	14 (2.5)	10 (1.3)	8 (0.9)	32	44.43	12.59	6	0.05
Physical/Motor Development	44 (9.6)	51 (11.0)	70 (17.7)	165				
Visual Experiences	30 (8.1)	33 (8.2)	31 (8.1)	94				
TOTAL	113	129	183	425				

( ) figures in parentheses represent the expected frequency.

Table 2 shows that the calculated chi-square value of 44.43 is greater than the table value of 12.59. Therefore, teachers teaching experience significantly influence their use of resource materials.

Table 3: Chi-square values of Resource Materials Utilization by Teachers' Qualification

Indices	School Cert.	NCE	Graduate	Total	X^2cal	X^2tab	Df	Sig
Auditory Experiences	10 (1.2)	78 (18.3)	46 (11.1)	134				
Manipulative Experiences	2 (0.1)	14 (2.4)	16 (2.7)	32	17.90	12.59	6	0.05
Physical/Motor Development	8 (0.3)	81 (18.4)	76 (22.3)	165				
Visual Experiences	15 (1.1)	50 (16.3)	29 (13.1	94				
TOTAL	35	223	167	425				

( ) figures in parentheses represent the expected frequency.

Table 3 shows that the calculated chi-square value of 17.90 is greater than the table value of 12.59. Therefore, teachers teaching qualification significantly influence their use of resource materials.

Table 4: t-test Comparison of Resource Utilization by Gender

	N	X	SD	t cal	t tab	d.f	a
Male	17	19.56	4.73	5.59	2.00	58	0.05
Female	43	15.80	3.11				

Table 4 shows that critical t value of 5.59 is greater that the t table value of 2.00 (df = 58, a = 0.05). Therefore, there is a significant gender difference in resource materials utilization.

Table 5: t-test Comparison of Resource Utilization by School Type

School	N	X	SD	t cal	t tab	d.f	A
Public	30	16.40	4.63	1.38	2.00	58	0.05
Private	30	16.58	3.92				

Table 5 shows that t cal value of 1.38 is less than the t tab value of 2.00 (df = 58, a = 0.05). Therefore, there is no significant variation in resource utilization between the public and private schools.

Discussion of Findings

This study has revealed the non-availability of resource materials (see table 1) in teaching at pre-school level. This finding is in agreement with earlier findings by Bajah (1991) and Akpan (1982) that resource materials are often insufficient or completely absent in schools. The play-way technique advocated by the curriculum cannot be completely achieved as the classroom under this situation will be restricted to singing and dancing and devoid of interaction with real objects. This observation at pre-school level portrays serious danger because teaching at this level is through play way techniques where utilization of resource materials is essential. This inadequacy can make teaching and learning boring thus making pupils loose interest in the topic being taught at that particular time.

This study further revealed that the few learning experiences presented to pupils (table1 refers) favoured auditory experiences and physical or motor development more than visual and manipulative or tactile experiences. This should not be so bearing in mind Piaget's (1957) theory of intellectual development of a child. At pre-school level, pupils are within the pre-conception stage (2-4years), a sub-level of pre-occupational stage (2-7years). They are to experience the world through the senses. They should therefore be presented first with resource materials that will appeal to their sense of sight and touch rather than those that appeal to their sense of hearing.

The teacher is a major role player in the educational sector because he holds the key to the door of success (Abidogun & Adebule,2006). Resource materials utilization has revealed in this study (table 2 & 3) depends on teachers' qualification and experience. The better qualified a teacher is as well as the longer a teacher stays on the job, the more efficient he utilizes resource materials. This result agrees with Ogwo (2005) that teachers with higher degrees and experience are more effective teachers. Well experienced and better qualified teachers are more aware of the

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fact that resource materials are instructional aids that provide learners with concrete experience and making learning interesting, stimulating and permanent .The relationship between teachers with experience and teachers with qualification could not be established as it was difficult to separate teachers by these two variables. Most teachers with teaching experience in the study sample also possess teaching qualification.

Gender difference in resource material utilization as revealed in this study (table 4 refers) agrees with (Han,2002) finding. However, greater mean value of male teachers compared to female teachers as revealed in this study contradicts Han (2002) finding which was in favour of females teachers. It was expected that children are more emotionally attached to their mothers at early childhood since pre-school classes are more of an extension of home, female teachers are endowed and possessed innate qualities that should enhance resource materials utilization .Perhaps the unequal sample size between male and female teachers which could not be controlled because of preponderance presence of female teachers at pre-school level accounted for this observation.

There was no significant variation of resource material utilization by school type (table 5 refers). This corroborates previous findings by Owolabi (2006) that implementation of a curriculum is not dependent on school type or location. This observation is shocking to the researchers because the private schools receive huge amount of money as school fees from parents and one would have expected that part of the school fees collected should have been used to cater for the provision of these resource materials needed for effective teaching and learning .Could it be that awareness on the importance of resource materials is not intense among owners of private schools or mere negligence of responsibility.

Conclusions and Recommendations

Provision of resource materials in teaching at pre-school level has been found to be in a precarious situation. Also, the few resource materials available are not efficiently utilized either because teachers are not familiar with the use or that they have not acquired the needed training. To ameliorate the situation, the following are suggested:

- To improve funding of schools especially at pre-school section of private schools.
- Specialists and experienced teachers of primary education/early childhood education should be attached to the pre-school section.
- To ensure and sustain quality delivery, pre-school teachers should be exposed to refresher courses like seminars, workshops and conferences at regular interval.