

Influence of Classroom Environmental Characteristics on Play-Based Activities in Pre- School Curriculum Implementation in Homabay County

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Abstract: Play in Early Childhood Education is paramount in all aspects of growth and development in young children. Play based learning has both developmental and educational benefits. Many children exhibit increased learning difficulties, inability to solve simple problems associated with socialization and control of emotions, many cases of truancy, and aggressive behavior, compounded with total lack of interest towards learning and as a result the study sought to investigate factors influencing Classroom Environmental Characteristics On Play-Based Activities in Pre- School Curriculum Implementation in Homabay County. The study employed concurrent triangulation research design. The study targeted 1257 Pre-school teachers, 908 key informants (lead teachers) and 8 Sub-county directors. The sample size for both pre-school teachers and lead teachers was 297 and 27 respectively. Both Proportionate sampling and Systematic Simple random technique were used to get the actual sample. Purposive sampling technique was used to select the lead teachers and Sub-county directors. Data collection tools were questionnaire, interview schedule, Focus Group Discussion and observation checklist. Data was analyzed using descriptive and inferential statistics using Statistical Package for Social Science version 24. The study established a fairly conducive (mean=3.78; SD=0.74) classroom environmental characteristics in preschool centres in Homabay County. Safety of the learners during play-based activities received the highest rating (mean=4.65; standard deviation=0.60). The study concluded that pre-school teachers appreciate the integration of play-based activities in pre-school teaching/learning.

Key words: *Classroom, Environment, Play-based, Pre-school, curriculum, characteristics.*

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I. INTRODUCTION

Early childhood educators have long believed that play based activities makes important contributions to children's development and therefore must have a key role in pre-school curriculum. These educationists have also known that play is a rich, varied, and complex process that requires ample time, materials, and resources. However, these teachers face mounting pressure from parents and administrators to provide structured, formal instructions as a result, the amount of time allocated to play has been severely reduced in many early childhood programs (Bodrova & Leong, 2007). Insufficient time for play affects children's growth and development.

Despite the numerous benefits derived from play-based activities for children, time for play has been markedly reduced for some children (Shankoff & Philipps, 2000). This has even affected pre-school children, who have had free play reduced in their schedules to make room for more academics. In the present state, many schools are giving children a less free time and very fewer physical outlets at school. Many schools have reduced time committed to recess, creative arts, and even physical education in an effort to focus on reading and arithmetic. This trend may have implications on children's ability to store new information, because children's cognitive capacity is enhanced by a clear-cut and significant change in activity. (Burdette & Whitaker, 2005).

Through play experiences, children learn about themselves, their environment, and the people in their lives, experiment with different ways to solve problems; develop body control; practice social skills; and express their creativity hence they gain confidence as they choose toys and materials that are of particular interest to them. An environment that encourages children to make their own choices helps them feel safe,

valued, adventurous, competent, and confident to take the initiative (Elis & Arnold, 2000). These two further argues that play materials for children add value to play. Children should be provided with playing materials as a way of enhancing their play. Teachers and parents are required to provide playing materials to their children so as to help them get engaged in meaningful play which influences their social skills development.

Large blocks of time (45-60 minutes) in the daily schedule must also be allocated for play so that children may develop play scenarios, get organized, and then execute their plan (Early Childhood Education Syllabus, 2008). The daily schedules in pre-school classrooms that focus on academics and kindergarten readiness often do not provide an opportunity for exploring meaningful and relevant activities. (Nell & Drew, 2013). When children are told frequently to “select another centre” or “it is time to move on to something else”, they are not allowed enough time to engage with the materials long enough to develop problem solving skills that require persistence and engagement. According to the pre-school guidelines, play activity is acknowledged as a vital activity and thus it is allocated much time on the timetable (ECDE guideline, 1983). The guidelines states that play is the most natural teaching technique which would be properly utilized and practiced to ensure crisis-less transition from home environment. The general objectives of Early childhood Education states that allocation of time to play, enables children to enjoy living and learning through play since it develops the children’s self-awareness and self-esteem (Mahindu, 2011). Play and outdoor activities are allocated much time than other activities in early childhood education syllabus (2008). The allocation of time is 5 lessons per week of 30 minutes. Again, play activity is incorporated in almost every other subject taught in Early Childhood Education development. (Mahindu, 2011).

II. REVIEW OF LITERATURE

Curriculum goals are broad and general statements helpful in the development of programs of instruction or for general goals toward which several years of education might be aimed, such as elementary, middle, and high school courses of study (Pinar, 2012). In it are instructional objectives are precise statements that indicate what students will be able to do as a consequence of instruction (Gronlund, 2004). According to Bloom’s Taxonomy, after every learning process, a learner should have acquired new knowledge (cognitive, the head), skill (psychomotor, the hand) and attitude (affective, the heart), which are referred to as holistic education (Clark, 2015). Therefore a teacher training programme should have a curriculum that embraces these aspects.

Pre-school globally and Kenya in particular has been recognized as a crucial programme that lays a foundation for a child’s holistic and integrated education that meets the cognitive, social, moral, spiritual, emotional, physical and developmental needs (MOEST, 2005). The play is a fundamental component of child’s growth. It enhances child’s social, emotional, physical and mental development. The absence of play, therefore, renders children ineffective because they will start school unprepared, grow into teens and adults without the required skills and thus unable to attain their potential. Play can also develop child’s level of interaction, social skills, and physical fitness and enhance understanding in class (Ojuondo, Millicent A, 2015).

According to a study Hofferth and Sandberg (2000) in Michigan America that was meant to find out how American children spend their time found out that play receives less time allocation because of the structured educational activities. With time constraint and pressure piled on children, they rarely get enough time to engage in play activities. Both teachers and children now feel the pressure to perform academically thus they end up allocating most of their time in studying rather than skipping rope or riding a bike. Data came from the 1997 Child Development Supplement to the Panel Study of Income Dynamics. The results suggest that characteristics of parents and decisions regarding marriage, family size, and employment affect the time children spend in educational, structured, and family activities, which may affect their school achievement. Learning activities such as reading for pleasure are associated with higher achievement, as are structured time spent playing sports and in social activities. Family time spent in meals and time spent sleeping is linked to fewer behavior problems, as measured by the child’s score on the Behavior Problems Index. The results support common language and myth about the optimal use of time for child development. There is a close correlation between play and academic performance. For instance, use of play props like bicycles, balls, ropes promotes body balance and mental awareness. They also assist in muscle growth and development which consequently keep the writing skills a notch higher. Also, children possess the natural ability to multitask in that they can listen and play at the same time. This exceptional capability enhances brain development through mental coordination. They equally get to learn basic instructions especially on activities that involve their effort during competition.

Coolahan (2000) America in his study that sought to find out the role of peer play in the development of both learning and problem behaviors in pre-school based on sample of 556 low income parents’ children and 43 teachers drawn from pre-schools. Data was analyzed using interactive peer ray scale the pre-school learning behavior scale or the corners teachers rating scale. The study found out that, peer play significantly determines the future development of both learning and problem behaviors in pre-school children. The above stated study had a sample size of 556 children and 43 teachers and data was analyzed using interactive peer ray scale the pre-

school learning behavior scale or the corners teachers rating. The current study on other hand had a sample size of 297 teachers 8 sub county directors and 27 led teachers and data was analyzed quantitatively and qualitatively.

A study by Meghan (2015) in American kindergartens investigated the perspective of kindergarten teachers on play in the classroom and noted that the past decade has seen an increase in research documenting the benefits of children learning through play. However, the amount of play in American kindergarten classes remains on a steady decline. The study article compared the findings from a netnographic study of 78 kindergarten teachers' message board discussions about play in kindergarten with those of more traditional studies and found the teachers' discussions in broad agreement with past research. The results further demonstrated that kindergarten teachers feel pressures from other teachers, principals, and school policies to focus on academic goals and that these pressures lead them to limit play. The current study covered all the pre-schools in Homa Bay County.

A study by Hyvonen (2011) in Finland on play in the school context the perspective of finish teachers noted that playful learning environments (PLEs) have been constructed in schoolyards in Finland with the aim of increasing learning through play in curriculum-based education. In order to better understand and inform this development, he set out to ascertain how teachers view and use play in kindergarten and elementary education. Fourteen teachers were interviewed, and the data obtained were analyzed using the grounded theory approach. Eight play types were distinguished, with the teacher having the roles of leader, allowee, and afforder. Play types were found to be either curriculum-driven, or seen as facilitating friendship or integrating play and learning as a process. 'Playful teaching' was characterized in terms of the roles assumed by teachers and students in different play situations, the design of playful learning processes, the emphasis on developing and using children's creativity, and the importance of fun and enjoyment. He then concluded that teacher education should develop teachers' pedagogical thinking through the theoretical understanding of play and learning, as well as through discussions and the modeling of play and playful teaching within teacher education programs. This study used questionnaires, interviews, FGDs and observation checklist to investigate how play use pre-school learning enables curriculum implementation

A study by Almon (2013) in South Africa on the vital role of play in early childhood education found out that; adventure racing, back packing, cycling, camping, canoeing, caving, fishing, hiking, kayaking, mountaineering, photographing, adventure park, rock climbing, running, sailing, skiing and surfing as examples of play activities that are classified as outdoor types of play activities in ECDE centers in South Africa. The surveyed 205 parents and three grandparents, most of whom (88.9%) were female. Parents/grandparents were sent surveys via their children, who each were attending one of eight elementary schools in South Africa. The average population of schools in the division was 200 students. Average class sizes are 15 in primary grades and slightly less than 20 in the upper elementary grades. All participants had children, with 94% having at least one child of kindergarten or grade one age, and 59% of participants had college or university education, 31% had secondary school education, 7% had trades training, certification, or licensing, and 3% identified elementary education as their highest level of education. All participants completed the survey independently without reading assistance. The study used inductive analysis methods for open-ended questions and questions in which participants had been asked to check all responses that applied to them. This involved highlighting key words and phrases, combining these words and phrases into groups, and creating labels to describe what the words and phrases within each group had in common. The current study differed from Almon's (2013) study as it was meant to investigate aspects influencing play based activities utilized by ECDE center.

A study by Abbas, et.al... (2009) in Malaysia investigated the relationship between the physical environment of public pre-schools and the children's play behavior in 20 classrooms in 10 Selangor's pre-schools, and the children's five types of play behaviors. Data collection involved 264 pre-school teachers' questionnaire respondents, natural unobtrusive observations with video recordings upon 494 pre-school children, structured interviews upon 20 pre-school teachers and 37 professional interior architects and Moore's (2008) Children's Physical Environment Rating Scale (CPERS). Data were analyzed using the SPSS statistical analysis. Influence of the physical environment upon the children's behavior was supported and best practices suggested. Results of the study indicated similar findings in that children's behaviours seemed to not only be influenced by the physical environment of the classrooms, but also more positive behaviours being influenced by the more spatially defined areas. Hence, despite the different cultural background, the findings seemed to be universal. The implications are for the design of quality pre-school classrooms, the activity areas within should be well defined. Based on the expert opinion amongst the professional interior architects who rated 70% of the classroom under the present study as moderately-defined for both urban and non-urban located preschools, much yet to be done on the physical environment of the Malaysian classrooms to be of quality. In addition, as location (urban or non-urban) of pre-school significantly influenced the behaviours of children, further studies on that aspect is suggested for future research. The current study employed the use of FGDs in addition to

observation, questionnaires and interviews to establish classroom environmental characteristics that influence play based activities in pre- schools.

A study by Ahmad et.al... (2015) in Malaysia investigated conducive attributes of physical learning environment of schools play a dominant role in the successful delivery of lessons for slow learners. The study proposed a framework towards achieving conducive attributes of pre-school learning environment suitable for slow learners through literature review. In summary, the physical conditions including human comfort (visual, thermal, acoustic), spatial planning, quality of furnishing and finishing and safety features are important attributes to consider for conducive learning environment. A cross-disciplinary approach was used when reviewing the literature to gain better insight into the needs of special children, especially slow learners. This was important element of the study as the needs of slow learners must be studied holistically. The main theoretical framework used in the paper adopted major child developmental theories as the basis of the argument.

This paper established classroom environmental characteristics that influence play based activities in pre- schools. This study will adopt the Constructivism theory of learning by Jean Piaget

A study carried out by Macharia (2012) in central division of Nairobi, Kenya that was meant ought to find out the influence of school playground safety on the participation of pre-school children outdoor activities classified various types of play activities in ECDE centers into indoor play and outdoor play activities. The study had small study sample of 30 pre-school head teachers and 29 pre-school teachers. The study found out that despite the many constraints that make it impossible to ensure total playground safety, children continue to use playground for outdoor type of play activities. This study was different from Macharia's (2012) because of small sample size which is inadequate to give accurate information as compared to the current study which will have a larger study sample that will ensure more accurate data is achieved.

Khalid (2007) carried out a study in Wajir District, Kenya on the role of indoor games and play activities on children academic performance. In the study he pointed out the following as types of games and play activities utilized by ECDE teachers in Wajir district: drought, modeling, role play/drama, singing, and storytelling. The study found out that; indoor games and play activities can keep children busy and prevent boredom when there is inclement weather outdoor; they also make children build social skills and encourage hand-to-eye coordination. Khalid's (2007) study was different from the current study as it seek to find out various types of play activities utilized by ECDE teachers in Homabay County, Kenya which is a different areas study from Wajir District.

A study carried out by Mahindu (2011) in Kenya on that relevance of play on the development of pre-school children's social skills in Kabete zone, Nairobi District, revealed that most children in ECDE centers are involved in physical type of play activities and games that can be classified as both indoor and outdoor types of play activities. Four research questions were formulated to guide the study. The study employed descriptive survey design which is used in preliminary and exploratory studies to allow researchers to gather information, summarize, present and interpret for the purpose of clarification. The population included all the 93 teachers in the zone. The sample for the study was selected using stratified random sampling technique to include both the public and private pre- schools. The study used questionnaires and observation schedules. The instruments were piloted in 3 pre-schools which were not used in the final study. Examples of physical play activities given are; running, jumping, kicking and throwing. The study also indicated that majority of teachers allocated 30 minutes only for children's play in schools. According to the study, most teachers took out children 5 times a week and some did not even take children out, for outdoor type of playing activities as often as every day.

A study by Ouke (2010) reveals that proper time management leads to appropriate learning in class. Time management techniques play a significant role in the overall performance of children in schools. If managed well, time can translate to good grades. In this regard, the schools should provide a platform upon which they time every other activity. As part of planning, schools should structure their master timetables in a way that they can regulate all the activities from the beginning to the end of every term. Consequently, play activities should have specified number of hours in a week just like any other curriculum activity. Failure to incorporate play activities in the block timetable is a recipe for poor results in schools.

III. RESEARCH METHODOLOGY

The study used mixed method research approach. This approach draws the strength of both quantitative and qualitative approaches. According to Oxman et al (2009) mixed methods approach can be used in exploring behavioral process that cannot be captured by using either quantitative or qualitative methods in isolation. Use of both quantitative and qualitative provides rich answers to the research questions. The approach enabled the study to gather adequate information that provided a better understanding of a research problem and answering the entire research questions other than using qualitative or quantitative research approach alone (Creswell and Plano Clark 2011). It increases the overall strength of a study by enhancing the validity and trustworthy of data collected (Denscombe 2010). There reason behind mixed method is that both approaches may be insufficient by

themselves but in this study, either filled in the gaps of the other to provide different evidences that could be corroborated (Mugenda & Mugenda, 2003).

For this study, the target population comprised of 1252 pre-school teachers who were the main respondents, 906 lead teachers and 8 Sub- County directors who were the key informants in the study. The number of public ECDE Centers in Homabay County is 906 (MEO, Homabay County 2016). The research adopted, proportionate sampling systematic random and purposive sampling techniques due to the nature of the target population in order to obtain the sample size, various sampling procedures were used as explained below. The study used questionnaires, interviews, observation and focus grouped discussions in an attempt to provide answers to the research questions. Data was collected by use of the questionnaires and interview teachers' lesson observation schedule in order to get the desired information. For effective administration, the questionnaires, interview schedule and lesson observation schedule was administered to various respondents by the researcher and research assistant. Data collected from administrations of the questionnaire was analyzed quantitatively while data from the interviews, Focus group discussions observation, were analyzed qualitative.

IV. RESULTS AND DISCUSSIONS

The study was to examine the influence of classroom environmental characteristics on play-based activities in pre-school curriculum implementation. This objective was addressed by; first, investigating classroom environmental characteristics and, second, an inferential statistics was used to establish whether the classroom environmental characteristics had statistically significant influence on pre-school curriculum implementation in view of play-based activities. The classroom environmental characteristics were assessed through the use of a ten-Likert-itemed questionnaire (CEC). The pre-school teachers were to respond to each of the items regarding their classroom environment using the rating scale on a five point scale Likert scale ranging from strongly disagree (1) to strong agree (5). Their views were summarized in percentage frequencies as shown in the tables below:

Questionnaire Return Rate

The table below shows the summary of return rate of questionnaires from the respondents, reveals that the questionnaires were adequate for the study.

Questionnaire Return Rate

Respondents	Questionnaires administered	Questionnaires returned	Return rate (%)
Pre-school teachers	297	202	68.8

Source: Survey data (2018)

The above table shows that from a total of 297 questionnaires administered to the preschool teachers, 202 of them were received for data analysis, which is equivalent to 68.8% response rate. Morgan (2006) and Onen (2009) propose that a 50% return rate is adequate, 60% is good enough while the return rate of above 70% is very good. Visser, Krosnick, Marquette and Curtin (2000) on their part observed that surveys with response rates of above 50% for survey data collected from homogeneous population is adequate enough to yield accurate measurements. Grounded on these assertions, the current study's questionnaire return rate of 68.8% is therefore considered good enough. The noted high response rate was attributed to the fact that the questionnaires were personally administered by the researcher to the respondents. The researcher also pre-notified the study participants of the intended and intention of the study, communicated aggressively to track responses and sent reminders to stimulate participation. In addition, the questionnaires were simple, friendly to pre-school teachers whom were assured of confidentiality of the data collected.

Respondents' Demographic Information

The study sought to investigate the demographic characteristics of the respondents. Demographic information was considered necessary for the determination of whether the respondents were representative sample of the target population for generalization of the results of the study. The demographic information investigated include gender and age.

Gender and Age of the Preschool Teacher Respondents

The table below shows the gender and age information of the pre-school teachers who took part in the survey.

Demographic Information of the Respondents

Bio-data	Count	Percent	Cumulative percentage
Gender			
Male	13	6.4	6.4

Female	189	93.6	100.0
Total	202	100.0	
Age (Years)			
≤ 30	71	35.1	35.1
31-40	97	48.0	83.1
41-50	28	13.9	97.0
≥ 51	6	3.0	100.0
Total	202	100.0	

Source: Survey Data (2018)

It is evident from the above table that a significant majority 189 (93.6%) of the students were males, with female students being only slightly more than a third of the respondents. This may not be surprising because it is generally believed that male teachers inherently are not keen to teach preschool learners. Pre-school education is generally viewed as female teachers' dominance. However, it is noted that although only 13 (6.4%) of the sampled teachers were males, both gender was represented in the study.

On their ages, it was established from the results of the survey that majority 97 (48.0%) of the respondents were aged between 31 and 40 years. Only 6 (3.0%) of the preschool teacher respondents were aged fifty one years and above, while those under thirty years formed 71 (35.1%) of the entire population of pre-school teachers sampled for the study. These findings imply that most of the pre-school teachers were still young and were able to effectively indulge in play based activities in pre-school curriculum implementation.

Classroom Environmental Characteristics

ITEM	1	2	3	4	5	Mea	SD
Safety is ensured during play-based activities.	0 (0.0%)	3(1.5%)	5(2.5%)	51(25.2%)	143(70.8%)	4.65	0.60
The learners are given adequate time to play.	5(2.5%)	55(27.2%)	6(3.0%)	61(30.2%)	75(37.1%)	3.72	1.28
There is enough space for the learners to play.	13(6.4%)	53(26.2%)	7(3.5%)	44(21.8%)	85(42.1%)	3.67	1.41
Visual materials are appropriately displayed in class.	9(4.5%)	62(30.7%)	12(5.9%)	65(32.2%)	54(26.7%)	3.46	1.29
Learners are grouped in class during play-based activities	4(2.0%)	27(13.4%)	19(9.4%)	77(38.1%)	75(37.1%)	3.95	1.08
The classroom has adequate light and properly ventilated.	5(2.5%)	10(5.0%)	6(3.0%)	65(32.2%)	116(57.4%)	4.37	0.94
Play activities are adequately incorporated in the block	18(8.9%)	60(29.7%)	35(17.3%)	51(25.2%)	38(18.8%)	3.15	1.28
Free learners participation in the play-based activities is encouraged	11(5.4%)	46(22.8%)	18(8.9%)	48(23.8%)	79(39.1%)	3.68	1.33
The classroom has enough and appropriate materials for play activities.	15(7.4%)	72(35.6%)	21(10.4%)	47(23.3%)	47(23.3%)	3.19	1.33
The high number of children in the classroom does not allow effective implementation of	8(4.0%)	38(18.8%)	9(4.5%)	50(24.8%)	97(48.0%)	3.94	1.28
Mean rating of classroom environmental characteristics						3.78	0.74

Key: 5-Strongly Agree, 4- Agree, 3- Undecided, 2- Disagree, 1- Strongly Disagree and SD=Standard deviation.

From the table above the finding of the study established that although there were varied classroom environmental characteristics as presented by the pre-school teachers, there was generally fairly conducive

classroom environmental characteristics in preschool centres in Homabay County, as reflected by a mean average rating of 3.78 in the scale of 1 to 5. The indicators of classroom environmental characteristics were rated between 3.15 and 4.65, implying that there was generally moderate conducive attributes of classroom environmental characteristics on play-based activities in pre-school curriculum implementation. However, it emerged that safety during play-based activities received the highest rating (mean=4.65; standard deviation=0.60), with an overwhelming majority of the pre-school teachers who were sampled for the survey indicating that they always ensured safety of their learners during play-based activities. Likewise, the results of the survey showed that most of the classrooms had adequate light and proper ventilation, as confirmed by a majority 181 (89.6%) of the respondents, translating to mean response rate of 4.37 (SD=0.94).

This implies that safety of the learners in is well considered in most the school and the physical structure of the classrooms are well maintained and functioning. Representative statement from the Focus group discussion with one of the preschool lead teachers also reveal that in most of the schools the safety is given considered important the learning to take place. One of the member said;

“We cannot avoid to expose the young innocent children to an environment that will give room to accidents and cause health hazards it’s the responsibility of the teachers to ensure that school in clean and accommodative to the children” [Focus group discussion, 2].

This finding also differ with that of the a study conducted by Macharia (2012) who found that despite the many constraints that make it impossible to ensure total playground safety, children continue to use playground for outdoor type of play activities. Ahmad et.al...(2015) proposed a framework towards achieving conducive attributes of pre-school learning environment suitable for slow learners which included physical conditions including human comfort (visual, thermal, acoustic), spatial planning, quality of furnishing and finishing and safety features.

On the flip flop, the findings of the study revealed that many of the pre-school learners’ classrooms lacked adequate spacing for the learners to play. This was confirmed by about one out of every three 66 (32.7%) of the pre-school teachers who took part in the survey who admitted that their classrooms lacked enough space for the learners to play. In addition, 71 (35.1%) of the teachers rejected the generally held assumption that pre-school classrooms usually have visual materials appropriately displayed. In fact, the results of the survey indicate that some of the classrooms did not even have enough materials for play-based activities, as confirmed by 87 (43.1%) of the pre-school teachers who were surveyed. Similarly, qualitative information obtained from the focus group discussions with the preschool lead teachers, also found that there is a worrying trend in terms of space and that there is need for the issue to be addressed. One of the members said;

“The classes are congested and most of the classes are combined and even in some schools a class is partitioned into three units to accommodate baby class kindergarten and pre unit the county government should really look into this issue” [Focus group discussion, 1].

This finding partly differs with Kanje (2009) which asserts that teaching and learning resources are available to specifically assist teachers in improving their classroom environment assessment practices. This means that without enough space and display of play bade material it somehow influences curriculum implementation negatively.

Similarly, whereas 89 (44.0%) of the preschool teachers alluded that play-based activities were incorporated in their school block timetable, a respectable proportion 78 (38.6%) of them said that their school block timetable did not adequately (mean=3.15; standard deviation=1.28) incorporate play activities. Granted, it is generally agreed that play activities receives less time allocation because of the structured educational activities. Suffice, 60 (29.7%) of the pre-school teachers agreed that the learners were never given adequate time to play. Many of the pre-school teachers accepted that they rarely got enough time to engage learners in play activities due to the pressure to perform academically which made them allocate most of the time in doing academic work. This was also echoed by the sentiments during focused group discussions, academics is given priority than play based activities in most of the ECDE centres. One of the members of the discussion said;

“We are more than will to play and engage our children to this activities but our hands are tied from the school management to the parents and community for them they want results just like the KCPE and KCSE. In fact most of the time some parents will ask how the songs and the games we engage the children with help them in the primary school interview when they will be joining class one”. [FGD, 3].

Similarly, during the interviews, it was noted that, Parents have very high expectations from the teachers not in regards to learners’ holistic development but cognitive aspect. One sub county directors had this to say;

“Pre-school teachers are suffering in silence they know and well trained on what to do with the learners but the societal expectation are out of the would parents what their children to memorize very complex things that are not even relevant to their age group”. [Sub county director 6].

This was also echoed by Ouke (2010) reveals that proper time management leads to appropriate learning in class. Consequently, play activities should have specified number of hours in a week just like any other curriculum activity. Meghan (2015) found out that kindergarten teachers feel pressures from other teachers, principals, and school policies to focus on academic goals and that these pressures lead them to limit play. This means that time management techniques and including play in the block time table has significant role in the overall performance of children in schools hence effective curriculum implementation.

In addition, the findings of study established that high number of leaners in a class impede effective integration of play based activities in curriculum implementation. This was confirmed by nearly three quarters 147 (72.8%) of sampled pre-school teachers who observed that high number of children in the classroom do not allow effective implementation of play-based activities. Being able to connect with each individual learner is a necessity when it comes to play-based activities, but that is hard to do when there are oversized classes. It is not easy for the pre-school teacher to effectively implement the curriculum, while integrating play-based activities, when there are very many children in a class, especially when there are not enough resources for all the learners.

On the other hand, the results of the survey show that some pre-school teachers had come up with their own ways of creating conducive classroom environment for play-based activities in the curriculum implementation. For example, about three quarters 152 (75.2%) of the pre-school teachers indicated that they always put their learners in groups during play-based activities in the classrooms. This was necessary so that the learners were able to share the few play materials available in the classroom. Equally, although 57 (28.2%) of the pre-school teachers did not agree, a majority of 127 translating to 62.9% of the respondents confirmed that they always encouraged free learners participation in the play-based activities.

Inferential Statistics

The study used inferential statistics to establish whether there was any statistical significant relationship between the predicator variables (classroom environmental characteristics, teachers’ perceptions on play-based activities, instructional practices, availability and appropriateness of content play-based materials) and dependent variable (curriculum implementation).Further, multiple regression was used to provide information about the relative contribution of each of the independent variables on the dependent variable and to develop a model to describe the optimal level of pre-school curriculum implementation in view of play-based activities

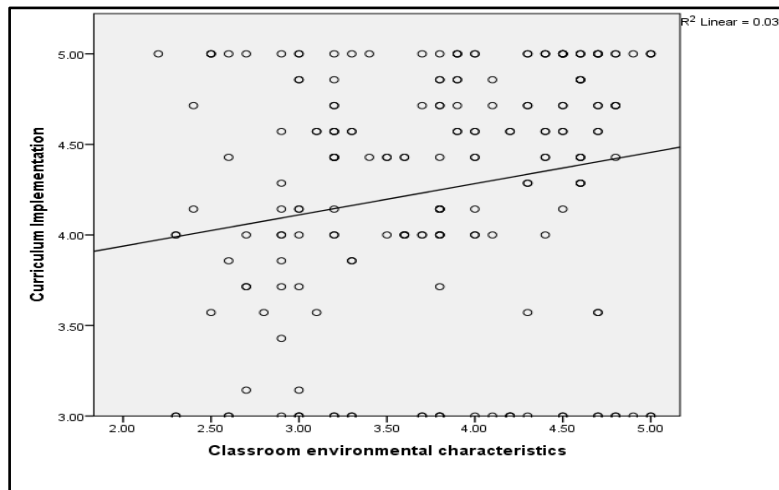
To establish whether there was any statistical significant influence of classroom environmental characteristics in play-based activities on curriculum implementation in pre-school, a bivariate Pearson’s Product-Moment Coefficient of Correlation between the scores of the two variables was computed. The SPSS output tables below shows the correlation results.

Correlation between Classrooms Environmental Characteristics in Play-Based Activities on Curriculum Implementation.

		Curriculum Implementation	Classroom environmental characteristics
Curriculum Implementation	Pearson Correlation	1	.187**
	Sig. (2-tailed)		.008
	N	202	202
Classroom environmental characteristics	Pearson Correlation	.187**	1
	Sig. (2-tailed)	.008	
	N	202	202

** . Correlation is significant at the 0.01 level (2-tailed).

The output indicates a statistically significant, but weak, positive correlation between classroom environmental characteristics in play-based activities and pre-school curriculum implementation (n=202; r =.187; p =.008). Therefore, given that the p-value was less than .05, the null hypothesis which stated that “*There is no statistically significant influence of classroom environmental characteristics in play-based activities on pre-school curriculum implementation*” was rejected. It is therefore acceptable to conclude that there is significant positive relationship between classroom environmental characteristics in play-based activities on pre-school curriculum implementation, with favourable classroom environmental characteristics in view of play-based activities associated with effective curriculum implementation. To further illustrate this relationship, a scatter plot was generated as shown in the Figure below Scatterplot of standardized residuals against standardized predicted values



The scatter plot confirms that there was almost negligible correlation ($r=.187$, $n=202$) between classroom environmental characteristics in play-based activities and pre-school curriculum implementation. It is clearly shown that the dots do not seem to make clear pattern to denote a correlation between the variables. However, the line of best fit (trend line) seem to slope from lower left to upper right signifying that the two data sets had some positive correlation between them. However, to estimate the level of influence of classroom environmental characteristics in play-based activities on pre-school curriculum implementation, a coefficient of determination was computed. This was done using of regression analysis and the results were as shown in table below

Model Summary on Regression Analysis of Classroom Environmental Characteristics in Play-Based Activities on Pre-School Curriculum Implementation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.187 ^a	.035	.030	.67517

- a. Predictors: (Constant), Classroom environmental characteristics
- b. Dependent Variable: Curriculum Implementation

The model shows that classroom environmental characteristics in play-based activities accounted for 3.5% ($R^2=.035$) of the variation in pre-school curriculum implementation in Homabay County. This was a fairly small amount of effect by the predictor on the dependent variable. However, to determine whether classroom environmental characteristic in play-based activities was a significant predictor of pre-school curriculum implementation, Analysis of Variance (ANOVA) was computed as shown in the table below

ANOVA –Influence of Classroom Environmental Characteristics in Play-Based Activities on Pre-School Curriculum Implementation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.295	1	3.295	7.229	.008 ^b
	Residual	91.172	200	.456		
	Total	94.468	201			

- a. Dependent Variable: Curriculum Implementation
- b. Predictors: (Constant), Classroom environmental characteristics

The *F*-ratio in the ANOVA table above tests whether the regression model is a good fit for the data. The finding of the study reveals that play-based activities Classroom environmental characteristics statistically significantly predict pre-school curriculum implementation, $F(1, 200) = 7.229$, $p = .008$ (i.e., the regression model is a good fit of the data). This means that information on play-based activities classroom environmental characteristics could be used to significantly predict of level of curriculum implementation in pre-school education. This finding is echoed by Abbas, et.al... (2009) in Malaysia investigated the relationship between the Classroom environment of public pre-schools and the children’s play behavior in 20 classrooms in 10 Selangor’s pre-schools. The finding indicated that there is a close correlation between physical environment and children’s play behavior and best practices were suggested.

This finding partly differs with Kanje (2009) which asserts that teaching and learning resources are available to specifically assist teachers in improving their classroom environment assessment practices. This means that without enough space and display of play based material it somehow influences curriculum implementation negatively.

Similarly, whereas 89 (44.0%) of the preschool teachers alluded that play-based activities were incorporated in their school block timetable, a respectable proportion 78 (38.6%) of them said that their school block timetable did not adequately (mean=3.15; standard deviation=1.28) incorporate play activities. Granted, it is generally agreed that play activities receives less time allocation because of the structured educational activities. Suffice, 60 (29.7%) of the pre-school teachers agreed that the learners were never given adequate time to play. Many of the pre-school teachers accepted that they rarely got enough time to engage learners in play activities due to the pressure to perform academically which made them allocate most of the time in doing academic work. This was also echoed by the sentiments during focused group discussions, academics is given priority than play based activities in most of the ECDE centres. One of the members of the discussion said;

"We are more than will to play and engage our children to this activities but our hands are tied from the school management to the parents and community for them they want results just like the KCPE and KCSE. In fact most of the time some parents will ask how the songs and the games we engage the children with help them in the primary school interview when they will be joining class one". [FGD, 3].

Similarly, during the interviews, it was noted that, Parents have very high expectations from the teachers not in regards to learners' holistic development but cognitive aspect. One sub county directors had this to say;

"Pre-school teachers are suffering in silence they know and well trained on what to do with the learners but the societal expectation are out of the would parents what their children to memorize very complex things that are not even relevant to their age group". [Sub county director 6].

This was also echoed by Ouke (2010) reveals that proper time management leads to appropriate learning in class. Consequently, play activities should have specified number of hours in a week just like any other curriculum activity. Meghan (2015) found out that kindergarten teachers feel pressures from other teachers, principals, and school policies to focus on academic goals and that these pressures lead them to limit play. This means that time management techniques and including play in the block time table has significant role in the overall performance of children in schools hence effective curriculum implementation.

In addition, the findings of study established that high number of leaners in a class impede effective integration of play based activities in curriculum implementation. This was confirmed by nearly three quarters 147 (72.8%) of sampled pre-school teachers who observed that high number of children in the classroom do not allow effective implementation of play-based activities. Being able to connect with each individual learner is a necessity when it comes to play-based activities, but that is hard to do when there are oversized classes. It is not easy for the pre-school teacher to effectively implement the curriculum, while integrating play-based activities, when there are very many children in a class, especially when there are not enough resources for all the learners.

On the other hand, the results of the survey show that some pre-school teachers had come up with their own ways of creating conducive classroom environment for play-based activities in the curriculum implementation. For example, about three quarters 152 (75.2%) of the pre-school teachers indicated that they always put their learners in groups during play-based activities in the classrooms. This was necessary so that the learners were able to share the few play materials available in the classroom. Equally, although 57 (28.2%) of the pre-school teachers did not agree, a majority of 127 translating to 62.9% of the respondents confirmed that they always encouraged free learners participation in the play-based activities.

V. CONCLUSIONS AND RECOMMENDATIONS

The study was to establish influence of play-based activities classroom environmental characteristics' on pre-school curriculum implementation. The findings of the study established that there was generally fairly conducive (mean=3.78; SD=0.74) classroom environmental characteristics in preschool centres in Homabay County. Safety of the learners during play-based activities received the highest rating (mean=4.65; standard deviation=0.60). However, it was established that although most of the classrooms had adequate light and ventilation, many of the pre-school classrooms lacked; enough space for the learners to play, enough materials for play-based activities and enough time for teachers to engage learners in play activities due to the pressure to perform academically. High number of leaners in a class was also established to impede effective integration of play based activities in curriculum implementation. On the influence of environmental activities in play-based activities, it was established that it had statistically significant, but weak, positive correlation to pre-school curriculum implementation (n=202; $r = .187$; $p = .008$). Classroom environmental characteristics statistically significantly predicted pre-school curriculum implementation, $F(1, 200) = 7.229$, $p = .008$ and it accounted for 3.5% ($R^2 = .035$) of the variation in pre-school curriculum implementation in Homabay County. Response from the lead preschool teachers cemented that the school environment in most of the schools is safe. Similarly Sub County Directors responses indicated that most schools lack space and suffer over enrolment. It was also

established that for each one unit improvement in classroom environmental characteristics with regard to play-based activities, there was a corresponding improvement in pre-school curriculum implementation of 123 units.

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