ResearchGate

See discussions, stats, and author profiles for this publication at: https://www.researchgate.net/publication/370414698

Influence of Outdoor and Indoor Learning Materials on the Academic Performance of Pupils in Numeracy in Moro Local Government Area of Kwara State

Article *in* Epitome : International Journal of Multidisciplinary Research · April 2023

CITATIONS
0

READS
21

4 authors, including:



Kayode Obafemi
Lecturer; Kwara State University
58 PUBLICATIONS **41** CITATIONS

SEE PROFILE

All content following this page was uploaded by Kayode Obafemi on 30 April 2023.

The user has requested enhancement of the downloaded file.

International Journal of Academic Multidisciplinary Research (IJAMR)
ISSN: 2643-9670
Vol. 7 Issue 4, April - 2023, Pages: 221-227

Influence of Outdoor and Indoor Learning Materials on the Academic Performance of Pupils in Numeracy in Moro Local Government Area of Kwara State

[1]Yahaya OLAREWAJU; [2]Kayode Ezecheal OBAFEMI, [3]Adekoge Oladipo OLANIYAN, &[4] Rasheed Alaro Adewale HAMZAT

12&3Department of Early Childhood and Primary Education
4Special Education
1,2&3Kwara State University, Malete
Correspondence: childrenmustgrow@gmail.com
+2348032449774

Abstract: *The study examined Influence of Outdoor and Indoor Learning Materials on The Academic Performance of Pupils in Numeracy. Therefore, descriptive survey design type was adopted and The population comprised private and public primary schools and pupils. Nineteen schools were randomly selected as sample size and primary five pupils, 20 pupils' was selected. The instruments tagged Influence of Outdoor Learning Materials Observation Checklist (IOLMOC) and Influence of Outdoor Learning Materials Observation Checklist (IILMOC). The face and content validity of the instruments was determined by experts. Pearson Product Moment Correlation of Co-efficiency (PPMC) was used to determine the reliability index which was (r=.77). Descriptive statistics of frequency counts, percentage and mean for research questions while research hypotheses were ans wered using inferential statistics of Linear Regression and t-test were used to test the hypotheses. The study shown that outdoor learning materials sometimes used in Moro Local Government Area of Kwara state and indoor learning materials are always used in Moro Local Government Area of Kwara state. It was concluded that outdoor learning materials were sometimes used and indoor learning materials were always used. It was recommended that governments and schools administrators should make more provision to indoor learning materials*

Keywords: outdoor and indoor learning materials and academic performance

Introduction

Numeracy is a compulsory subject which cuts across every human fact, and is equally used in every human endeavour, it also plays a dominant role in the economic development of country. The significance of numeracy in producing versatile and resourceful leaders that are needed for economic development cannot be over emphasized. This is why Setidisho (2006), affirmed that numeracy is a fundamental science that is necessary for the understanding of most other fields in education. He stressed further that, it is obvious that no other subject forms such as strong force among the various branches of science. According to Chief Examiner of West African Examination Council, (WAEC) (2017) reported that 2017 result was better than 2016 result yet not encouraging at all. Poor academic performance in numeracy had been attributed to different factors such as teachers' qualifications, teaching methods, and indoor and outdoor learning materials there have necessitated the findings on indoor and outdoor learning materials.

Outdoor activities; are known as activities that take children out of classes and enable learning in a natural environment. These activities are experimental, open air learning methods based on interdisciplinary curriculum which require the use of all senses involving humans and natural resources. It is an effective method which enables students to learn a subject more permanently and to bear more positive feelings towards both nature and to their friends (Farmer, Knapp, & Benton, 2007). When compared with learning inside the classroom, it is a less structured form of education with a rich curriculum that develops automatically and in which elements of surprising nature can also develop (Lai, Chang, Shiane, Fan & Wu, 2013; Öztürk, 2009; Ramadoss & Poya-moli, 2011).

It provides the basis for the integration of the individual with nature and learning activities. It enables the individual to use many disciplines in a natural environment and also facilitates the use of interdisciplinary curricula (Uhls et al., 2014). Outdoor education simply takes place outside the school. The individual can use all sense organs in this educational process. In fact, this increases the permanence of learning. It is also an experimental method for learning outdoor training (Priest, 2010).

indoor learning materials are not definite as they are very much affected by factors such as classroom management, materials, teaching strategies, and many others (Reid, 2007). If students feel important and influential in the classroom, they would automatically love the learning that takes place in the traditional classroom setting and show the willingness to engage enthusiastically in the classroom activities (Reid, 2007). It also develops a sense of ownership and belonging being part of the classroom community (Reid, 2007). Another example would be teacher's positive classroom habits (Reid, 2007).

Further complicating this discussion is the question of how different types of public schools (i.e. traditional public schools vs. privately managed publically schools, also called charter schools in the U.S) affect performance. Results on this front have also been

mixed. An American Federation Teachers report indicated that public schools were outperforming charter schools (Nelson et al., 2004; Schemo, 2004). In this study, the researcher seeks to determine the influence of outdoor and indoor learning materials on the academic performance in pupils' Numeracy in Moro Local government area of Kwara state. It has been observed from the literature reviewed that study of this type has never been carried out in Moro Local Government Area of Kwara State. Therefore, this is meant to fill the gap requiring empirical evidence regarding the influence of outdoor and indoor learning materials on the academic performance

Statement of the Problem

According to Chief Examiner of West African Examination Council, (WAEC) (2017) reported that 2017 result was better than 2016 result yet not encouraging at all The low performance of pupils in Numeracy particularly in the recent years has not been encouraging. This poor performance of pupils has been partly attributed to the lack of teaching materials and pedagogical methods adopted by teachers. Claims have been made that the lack of availabilities learning materials of by schools do not allow for pupils' active participation and one of the materials (outdoor and indoor learning materials) which promote active participation of pupils both inside and outside the classroom. Studies on outdoor and indoor learning materials have been conducted but deserved research attention has not been given to the examination of the influence of outdoor and indoor learning materials on the academic performance of pupils in Numeracy at the primary school level. Also, this kind of study has not been conducted in Moro Local Area of Kwara State.

Research questions

The following research questions will be answered.

1. To what extent indoor learning materials are available in Moro Local Government Area of kwara state?
2. To what extent outdoor learning materials in Moro Local Government Area of kwara state?
3. What is the academic performance of pupils in Numeracy in Moro Local Government Area of kwara state?

Research Hypotheses

The following research hypotheses are raised.

$H_0$1: There is no significant influence of indoor learning materials on academic performance of pupils in Numeracy

$H_0$2: There is no significant influence of outdoor learning materials on academic performance of pupils

$H_0$3: There is no significant influence of indoor learning materials on academic performance of pupils' in Numeracy based on school type

$H_0$4: There is no significant influence of indoor learning materials on academic performance of pupils' in Numeracy based on school type

Methodology

The research used descriptive survey design type, as it will examine the influence of outdoor and indoor learning materials on academic performance. The population of this study comprised all private and public primary school and pupils in Moro Local Government Area of Kwara State. According to Annual School Census Report, Kwara State ministry of Education and Human Capital Development, 2019/2020, Moro local government have a total number of one hundred and ninety nine public and private primary schools (199) and 21.428 pupils, nineteen schools was randomly selected as sample size and primary five pupils, 20 pupils' was selected. Researcher designed questionnaire that was used for the purpose of this study. The instruments tagged Influence of Outdoor Learning Materials Observation Checklist (IOLMOC) and Influence of Outdoor Learning Materials Observation Checklist (IILMOC). The face and content validity of the instruments that were used to determine by the researchers' supervisor and experts in the field of early childhood and primary education. Pearson Product Moment Correlation of Co-efficiency (PPMC) was used to determine the reliability index was (r=.77). The data collected were analyzed using descriptive statistics of frequency counts, percentage and mean for research questions while research hypotheses were answered using inferential statistics of Linear Regression and t-test were used to test the hypotheses.

Results

Research Question One: What is the extent of the use of outdoor learning materials in Moro Local Government Area of Kwara state?

Table One: Showing the frequency counts, mean and percentages on outdoor learning materials in Moro Local Government Area of Kwara state

S/N	Items	**Always**	**Sometimes**	**Never**	**Mean**
1	The use of playing ground is done regularly	45(28.1)	74(46.3)	41(25.6)	2.03
2	See-saw materials are available for use frequently	34(21.3)	79(49.4)	47(29.4)	1.92
3	Outdoor learning materials are used to enhance teaching and learning activities	23(14.4)	83(51.9)	54(33.8)	1.81
4	Outdoor learning materials are important for teaching and learning success	28(17.5)	63(39.4)	69(43.1)	1.74
5	Outdoor learning promote social skill development of the pupils	31(19.4)	65(40.6)	64(40.0)	1.79
6	Pupils' enjoy using outdoor learning materials because it makes all pupils to be involved	46(28.8)	83(51.9)	31(19.4)	2.09
7	Pupils are actively involved at playing ground teaching and learning exercise	37(23.1)	35(21.9)	88(55.0)	1.68
8	Most of teaching activities need to be done outside the class because pupils' pay much attention	41(25.6)	44(27.5)	75(46.9)	1.79
9	Outdoor learning is fun	46(28.8)	30(18.8)	84(52.5)	1.76
10	If outdoor teaching is not organised properly the objectives might not be achieved	48(30.0)	73(45.6)	39(24.4)	2.06
	Weighted Mean				**1.87**

Decision rule: Never=00-1.49, Sometimes=1.50-2-49, Always=2.50-3.00 Note: The figures in parentheses are in percentages

Table 2 shows the respondents responses on outdoor learning materials in Moro Local Government Area of Kwara state. The weighted average (**1.87**) which is a numeric indicator that outdoor learning materials sometimes used in Moro Local Government Area of Kwara state

Research Question Two: What is the extent of the use of indoor learning materials in Moro Local Government Area of Kwara state?

Table Two: Showing the frequency counts, mean and percentages on indoor learning materials in Moro Local Government Area of Kwara state

S/N	Items	Yes	No	Mean
1	Learning materials inside the classroom are enough to promote learning	54(33.8)	106(66.3)	1.34
2	Words wall are place at strategic inside classroom	111(69.4)	49(30.6)	1.69
3	There is enough instructional materials inside the class	50(31.3)	110(68.8)	1.31
4	Teaching and learning without materials is waste of time	137(85.6)	23(14.4)	1.86
5	Chalkboard/white board are used for the promotion of teaching	141(88.1)	19(11.9)	1.88
6	There are child size furniture inside classroom	145(90.5)	15(9.4)	1.91

7	The school library is accessible for the pupils	35(21.9)	125(78.1)	1.22
8	Lab equipment are always there for the use of the pupils all the time	27(16.9)	133(83.1)	1.17
9	Fan and light accessible in the classroom	21(13.1)	139(86.9)	1.13
10	Indoor learning resources are powerful tools that can promote learning	133(83.8)	26(16.3)	1.84
	Weighted Mean			**1.54**

Decision rule: Sometimes=00-1.00, Always=1.01-2.00 Note: The figures in parentheses are in percentages

Table3 shows the respondents responses on indoor learning materials in Moro Local Government Area of Kwara state. The weighted average (**1.54**) which is a numeric indicator that indoor learning materials are always used in Moro Local Government Area of Kwara state

Research Hypothesis

$H_0$1: There is no significant influence of indoor learning materials on the academic performance of pupils in Numeracy.

Table three: Showing the summary of Linear Regression Analysis on significant influence of indoor learning materials on the academic performance of pupils in Numeracy

Variable	Mean	SD	n	R	R Square	Adjusted R Square	F	Sig.
Indoor Learning Material	15.34	2.802	160	.416	.173	.168	33.009	.000
Numeracy	34.05	5.223						

Table 4 shows the regression Analysis on the significant influence of indoor learning materials on the academic performance of pupils in Numeracy

. The result indicated that there was positive influence of indoor learning materials on the academic performance of pupils in Numeracy (R = .416) while the R-Square is .173 which means that the independent variable (indoor learning materials) explained 17.3% variation of the dependent variable (academic performance of pupils in Numeracy). This indicates a good fit of the regression equation. Thus, this is a reflection that there was significant influence of indoor learning materials on the academic performance of pupils in Numeracy ($F_{(1,159)} = 33.009$, $P < 0.05$). The hypothesis is therefore rejected in the light of the result since the significant value is less than 0.05. This implies that there is significant influence of indoor learning materials on the academic performance of pupils in Numeracy.

$H_0$2: There is no significant influence of outdoor learning materials on the academic performance of pupils in Numeracy.

Table Four: Showing the summary of Linear Regression Analysis on significant influence of outdoor learning materials on the academic performance of pupils in Numeracy

Variable	Mean	SD	n	R	R Square	Adjusted R Square	F	Sig.
Outdoor Learning Material	18.67	4.707	160	.841	.708	.706	382.448	.000
Numeracy	34.05	5.223						

Table 5 shows the regression Analysis on the significant influence of outdoor learning materials on the academic performance of pupils in Numeracy. The result indicated that there was positive influence of outdoor learning materials on the academic performance of pupils in Numeracy (R = .841) while the R-Square is .708 which means that the independent variable (outdoor learning materials) explained 70.8% variation of the dependent variable (academic performance of pupils in Numeracy). This indicates a good fit of the regression equation. Thus, this is a reflection that there was significant influence of outdoor learning materials on the academic performance of pupils in Numeracy ($F_{(1,159)} = 382.448$, $P < 0.05$). The hypothesis is therefore rejected in the light of the result since the significant value is less than 0.05. This implies that there is significant influence of outdoor learning materials on the academic performance of pupils in Numeracy.

$H_0$3: There is no significant difference in the availability of indoor learning materials based on School type.

Table five: Summary of independent sample t-test showing significant difference in the availability of indoor learning materials based on School type.

School Type	N	Mean	Std. Deviation	t	df	Sig.	Remark
Public	80	13.35	1.923	-12.813	158	.000	Significant
Private	80	17.34	2.012				

Table 6 shows the significant difference in the availability of indoor learning materials based on School type. There was significant difference in the availability of indoor learning materials based on School type. ($t = -12.813$; $df = 158$; $P < 0.05$). Therefore, in the light of the result, the hypothesis is rejected, hence there was significant difference in the availability of indoor learning materials based on school type since the significant level (.000) is less than 0.05

$H_0$4: There is no significant difference in the availability of outdoor learning materials in Moro Local Government Area of Kwara State based on School type

Table Six: Summary of independent sample t-test showing significant difference in the availability of outdoor learning materials.

School Type	n	Mean	Std. Deviation	t	df	Sig.	Remark
Public	80	18.96	4.743	.788	158	.432	Not Significant
Private	80	18.38	4.683				

Table 7 shows the significant difference in the availability of outdoor learning materials based on School type. There was no significant difference in the availability of outdoor learning materials based on School type. ($t = .788$; $df = 158$; $P > 0.05$). Therefore, in the light of the result, the hypothesis is not rejected, hence there was no significant difference in the availability of outdoor learning materials based on school type since the significant level (.432) is greater than 0.05

Summary of Findings

1. Outdoor learning materials sometimes used in Moro Local Government Area of Kwara state (Mean=1.87)
2. Indoor learning materials are always used in Moro Local Government Area of Kwara state (Mean=1.54)
3. There was significant influence of indoor learning materials on the academic performance of pupils in Numeracy
4. There was significant influence of outdoor learning materials on the academic performance of pupils in Numeracy
5. There was significant difference in the availability of indoor learning materials in Moro Local Government Area of Kwara State based on School type.
6. There was no significant difference in the availability of outdoor learning materials in Moro Local Government Area of Kwara State based on School type.

Discussion of the Findings

The findings of this study revealed that Outdoor learning materials sometimes used and Indoor learning materials are always used. The findings was in agreement with Moses, (2019). His findings of the study revealed that there is a significant relationship between availability of instructional materials, accessibility of instructional materials, utilization of instructional materials and academic performance of students in Biology the academic performance of SS 11 students in Biology in Calabar South Local Government Area of Cross River State.

The finding also revealed that there was significant difference in the availability of indoor learning materials on the academic performance of pupils in Numeracy based on School type and there was significant difference in the availability of outdoor learning materials on the academic performance of pupils in Numeracy State based on School type. The findings was in agreement with the study of Obafemi, Yahaya and Mohammed (2022), their finding revealed that here is no significant difference on preschool teachers perceptions towards inclusive education based on gender and There is no significant difference on preschool teachers perceptions towards inclusive education based on school type

Conclusions

The study shed light on the influence of outdoor and indoor learning materials on the academic performance of pupils in Numeracy in Moro Local Government area of kwara state. Based on the findings of the study, it can be stated that Outdoor learning materials sometimes used in Moro Local Government Area of Kwara state and Indoor learning materials are always used in Moro Local Government Area of Kwara state.

Recommendations

Based on the findings and the conclusions drawn in this study, it is recommended that

- Governments and schools administrators should make more provision to indoor learning materials
- Seminars, workshop, and conference should be organized for teachers on how best to make the pupils' to use the indoor materials
- Governments and schools administrators should make more provision to indoor learning materials
- Seminars, workshop, and conference should be organized for teachers on how best to make the pupils' to use the indoor materials

REFERENCES

Bennett, T., (2019). Investigating the influence of gender, age, and camp type on the outcome achievements of children under 10 years of age at summer camp. *Journal of Outdoor Recreation, Education, and Leadership, 11*(3), https://doi.org/10.18666/JOREL-2019-V11-I3-9202

Berberoğlu, E. O., & Uygun, S. (2013). Examining the development of female education class in the world and in Turkey. *Mersin University Education Faculty Journal, 9* (2), 32-42.

Bølling, M., Pfister, G. U. Mygind, E., Nielsen, G. (2019). Education outside the classroom and pupils' social relations? A one-year quasi-experiment. *International Journal of Educational Research*, 94, 29-41. https://doi.org/10.1016/j.ijer.2019.02.014

Brookes, A. (2003). A critique of Neo-Hahnian outdoor education theory. Part two: "The fundamental attribution error" in contemporary outdoor education discourse. *Journal for Adventure Education and Outdoor Learning*, *3*(2), 119-132.

Erol, T.(2019),Analysis of the influence of outdoor education activities on seventh grade students, *Ordu University Department of Science Education, Ordu, Turkey https://orcid.org/0000-0003-4077-7351*

Ekpo, M. (2014). Impact of instructional material on students' academic performance. Unpublished project, Abia State College of Education, Abia State.

Esu, A. E. O.(2003). Competence for effective teaching. In. S. C. Uche and Enukoha(Eds) *Professional skills for effective teaching. Lagos:* Rehoboth Favours.

Esu, A E .O &Inyang-Abia, M. E.(2004) Social Studies technologies, methods and media. Port-Harcourt: Double Diamond Publication.

Eya, T.A. (2015). Effect of Biology practical on students' academic performance in senior school certificate examination in Kwara state. Lafiagi Journal of Science Education. 1(2), 34 -45

Eze, E. (2015). The availability of instructional material and students' academic performance of students in Biology. Unpublished M. Ed. Thesis University of Jos,

Ibok, E. (2016). The challenge of improvisation in science teaching in the present day Nigeria. Journal of committee of Provosts of colleges of Education, Nigeria. 1 (1),92-123

Kida, P. (2019). Competences and qualifications in outdoor education. *The Journal of Education, Culture, and Society, 1*, 79-92.

Kinsman, J. (2019). Understanding life in school: From academic classroom to outdoor education. *Educational Philosophy and Theory*, 51(5), 531-534. https://doi.org/10.1080/00131857.2018.1449462

Knight, S. (2018). Translating forest school: A response to Leather. *Journal of Outdoor and Environmental Education, 21*(19), https://doi.org/10.1007/s42322-017-0010-5

Köğce, D., Aydın, M., &Yıldız, C. (2009). Revision of bloom taxonomy: A general overview. *Elementry Online, 8*(3), 1-7.

Lai, H. C., Chang, C.Y., Shiane, L. W., Fan, Y. L., & Wu, Y.T. (2013). The implementation of mobile learning in outdoor education: Application of QR codes. *British Journal of Educational Technology*, 44 (2), 57-62, https://doi.org/10.1111/j.1467-8535.2012.01343.x

Lappin, E. (1984). *Outdoor education for behavior disordered students. ERIC Digest*. (*National Inst. 'of Education), Washington*, 2-4 Date: 02.08.2018 n https://files.eric.ed.gov/fulltext/ED261811.pdf

Igwe, J.K. (2010). The Prospective Biology Teacher. Basic Concepts in Science Ilorin, Nigeria: The author Publisher .

Ikemowo, J. B. (2014). A comparative study of educational achievement n urban and rural primary schools in Ondo State, Nigeria. African Journal of Educational planning and policy studies.

Ikwuas, E. & Onwiodiket, L (2016). The accessibility of instructional material and students' academic performance of students in Biology. Unpublished M. Ed. Thesis University of Ibadan.

Inyang, O. (2017). The utilization of instructional materials and students' academic performance of students in Biology. Unpublished M. Ed. Thesis University of Uyo.

Macaulay, P.I (2010). A study of relationship between in instructional resources And students' academic performance (Unpublished master's thesis), Nigeria. University of Ilorin, Ilorin

Moses, V. U.(2019) Influence of instructional Materials on students' academic performance in Biology in Calabar South Local Government Area, Cross River State.

Morohunfola, O.M. (2015). Instructional materials and study Science subject: some policy implications. European Journal of Humanities and Social Sciences, 2(1), 34-90

Nelson, F. H., Rosenberg, B., & Van Meter, N. (2004). *Charter School Achievement on the 200 National Assessment of Educational Progress*. Washington, DC: American Federation of Teachers.

Neill, J. T. (2008). *Enhancing life effectiveness: the impacts of outdoor education programs*. Doctor of Philosophy, University of Western Sydney, Australia

Ofoegbu, A. (2017). Principles and techniques of improvisation of instructional materials for teachers of private schools in Rivers State. Unpublished paper presented at National Biology conference at Rivers State University, October,

Okon, A. & Iyeke, U. (2014). The availability of instructional materials and students' academic performance of students in Bi ology. *Journal of Education Review, 8(7),68-99*

Priest, S. (1986). Redefining outdoor education: A matter of many relationships. *Journal of Environmental Education, 17*(3), 13-15. (Published online: 15 Jul 2010)

Priest, S. (2010). Redefining outdoor education: A matter of many relationships. *The Journal of Environmental Education*, 17(3), 13-15. https://doi.org/10.1080/00958964.1986.9941413

Reid, G. (2005). *Learning Styles and Inclusion,* California: SAGE.

Reid, G. (2007). *Motivating Learners in the Classroom: Ideas and Strategies,* California:

Tsai, J.T. (2006). The identification of the components for an outdoor education curriculum in Taiwan. PhD Thesis, Indiana University, USA.

Uhls, Y. T., Michikyan, M Morris, Ü., Garcia, D., Küçük, G. W., Zgourou, E., & Greenfield, P. M. (2014). Five days at outdoor education camp without screens improves preteen skills with nonverbal emotion cues. *Computers in Human Behavior*, 39, 387-392. https://doi.org/10.1016/j.chb.2014.05.036

Yaşin, İ. (2012). *The expectations from outdoor lesson activities of teacher and students participating outdoor lesson activities in second grade primary education and secondary education (example of the province of Yozgat).* Unpublished Master's Thesis, Gazi University Institute of Educational Sciences, Ankara

View publication stats