

LEARNING AND INSTRUCTIONAL MATERIALS UTILIZATION IN NOMADIC SCHOOLS

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Abstract

This study was designed to investigate the learning and instructional materials utilization in nomadic primary science classrooms in Enugu State. Survey research design was employed, and the sample consisted of 294 respondents made up of 283 pupils and 11 teachers. Data were obtained using questionnaire. The data were analysed using percentages and mean scores. The results showed that only 42 percent of the recommended instructional materials were available in the nomadic schools in Enugu State. It was also discovered that the available instructional materials were not utilized to a great extent. The result also showed that gender of the nomadic teacher was not a factor in the extent of utilization of instructional materials. It was recommended that nomadic teachers be supervised regularly to ensure their utilization of available resource materials. It was also recommended that government should provide the unavailable instructional materials and that nomadic teachers should equally improvise to enhance effective teaching and learning.

Introduction

Nomads are members, of tribes that wander from place to place with no fixed home. Nomadic herdsmen number several tens of millions of people, mainly in Africa, Middle East, South West and Central Asia. They include some of the poorest and most vulnerable of all southern populations. Reaching them with formal school has become a major challenge and millions of nomadic children remain outside the school system (National Commission for Nomadic Education, NCNE 2000).

There are mainly three major populations of the nomads in Nigeria - The Pastoralists, migrant farmers and the migrant fishermen (Udum, 2000; Tahir, 1997). The NCNE established formal and non-formal programmes for all members of the nomadic communities in Nigeria. Nomadic education is a special type of education meant for some special types of people (Standford, 1983).

Out of established population of 10 million nomads in Nigeria, about 3.6 million are children of school age (Udum, 2000). These children form a sizeable population that needs to benefit from learning science just as regular children do. The science education web is stretched to accommodate them.

Primary science is one of the subjects offered in nomadic schools for the same objectives stated in the national primary science curriculum but reflects the local conditions of nomadic communities. Instructional materials have critical roles to play in the process of teaching and learning primary science. This is because they facilitate teachers teaching activities as well as make learning more satisfying and more permanent (Iloputaife 1995; Ogunbi 1987). Also, when these

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instructional materials are properly handled by teachers, they stimulate interest among the pupils and make classroom activities more meaningful and lively.

The general opinion on the status of science instructional materials for learning sciences in Nigeria is that they are in short supply. For instance, some researchers like Eze (2000), Iloputaife (1995), Mogbo (1993), and Akinmonya (1990), reported of short supply of science instructional materials in Nigeria regular schools. It is therefore, necessary to find out what primary science instructional materials are available in Nomadic Schools in Enugu State. Further, the issue of academic concern for this study was how, available are the instructional materials for teaching primary sciences in nomadic schools, as well as the extent to which the available ones are being utilised?

Research Questions

The following research questions were considered:

1. What percentage of instructional materials are available to the primary science teachers in nomadic schools?
2. To what extent are these instructional materials utilized?

Method

A survey design was used for this study. The sample consisted of 283 pupils and 11 teachers taken by complete count of the respondents. Data were collected using a questionnaire on available instructional materials as well as questionnaire on the extent of utilization of instructional materials which were developed by the researcher and validated by three experts in science education. The instrument had a reliability coefficient of 0.89. The reliability instrument was established by using the test-retest reliability method. And the reliability coefficient was determined using Pearson Correlation method. The questionnaire elicited responses of the teachers and pupils in the availability and use of different instructional materials in the nomad classrooms. These responses were analysed using numbers and percentages.

Result

Table 1: Shows the Status of Instructional Materials Available in Nomad Classrooms

S/No	Questions	Yes	No	Percentage Yes
1	Does the school have measuring instruments used in teaching measurement of length volume etc?	5	0	100
2	Does the school have chalkboard?	5	0	100
3	Does the school have Jan Jars with soil or sand for teaching conditions under which plant germinate?	3	2	60
4	Does the school have some grains?	2	.3	40
5	Does the school have water provision?	4	1	80

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6	Does the school have balloons and polythene bags for teaching floating in the air?	2	3	40
7	Does the school have charts/diagrams for teaching the feeding, respiratory and excretory system?	3	2	60
8	Does the school have first aid kits?	2	3	40
9	Does the school have clock/stop watch for teaching measuring of time concept?	3	2	40
10	Does the school have mirrors used in teaching of reflection of objects?	3	2	60
11	Does the school have magnets for teaching magnetism?	0	5	0
12	Does the school have flutes/whistles?	5	0	100
13	Does the school have local musical instruments used in teaching sounds and how to make	4	1	80
14	Does the school have toilet and cleaning material for teaching health and safety?	0	5	0
15	Does the school have photographs/pictures of natural resources for teaching erosion, minerals, pollution and exploitation of natural	0	5	0
16	Does the school have photographs/pictures of natural resources for teaching erosion, minerals, pollution and exploitation of natural	0	5	0
17	Does the school have ball-bearing?	0	4	0
18	Does the school have touch light/ candles used in teaching air earth and sky?	1	4	20
19	Does the school have common flowers used in teaching how life begins in flower plants?	1	4	80
20	Does the school have kerosene/ insecticides?	0	5	0
21	Does the school have counters like bottle tops,, sticks etc for teaching mathematics?	4	1	80
22	Does the school have primary science text	4	1	80
23	Does the school have maps/globes?	2	3	40
24	Does the school have radio/cassettes?	0	5	0
25	Does the school have video player/tapes	0	5	0
26	Does the school have computer	0	5	0
27	Does the school have models	2	3	40
28	Does the school have farm tools for teaching agriculture?	2	3	40
29	Does the school have curriculum?	3	2	60
30	Does the school have recreational facilities (indoor games and fields)	0	5	0
	Overall percentage			42

At the time of verification, all the five schools representing 100 percent of the schools monitored have measuring instruments, chalk board. Four out of the five schools which were monitored representing 80 percent have water provision, local mineral instruments, common flowers, counters like bottle lops, sticks and primary science text books while one school representing 20 percent does not have items 5,13,10,21 and 22. Also 60 percent of the nomad schools have yam jars,

charts/diagrams, mirrors and curriculum while 40 percent do not have items 3,7,10 and 20. Forty percent of the schools monitored have some grains, balloons/polythene bags, first aid kits, clock/stop watch, maps/globes, models and farm tools while 60 percent of the schools do not have items 4,6,8,9,23,27 and 28. Only 20 percent of the schools had touch lights/candles used in teaching the earth and sky, while 80 percent do not have item 18. Further no percent has item 11, 12,14,15,16,17 20,24,25,26 and 30. General observation from table 1, indicated that only 42 percent of the instructional materials were available in nomadic schools in Enugu State.

Table 2: Shows the Extent of Utilization of Available Instructional Materials

S/No	To What Extent are These Instructional Materials Utilized	Teachers, N=11			Pupils N=283		
		X	SD	DEC	X	SD	DEC
1	Measuring instruments	2.50	0.45	GE	2.45	0.45	LE
2	Chalk board	2.65	0.62	GE	2.55	0.60	GE
3	Yam jars with soil	2.39	0.50	LE	2.30	0.45	LE
4	Some grains	2.70	0.60	GE	2.80	0.62	GE
5	Water	3.30	0.45	GE	3.39	0.50	GE
6	Balloons/polythene bags	2.50	0.69	GE	1.55	1.74	LE
7	Charts/diagrams	2.80	0.62	GE	1.70	0.60	LE
8	First aid kits	2.45	0.67	LE	1.50	0.68	LE
9	Clock/stop watch	2.79	0.60	GE	1.68	0.63	LE
10	Mirrors	2.90	0.95	GE	1.78	0.89	LE
11	Flutes/whistles	2.15	0.86	LE	2.00	0.90	LE
12	Local musical instruments	2.20	0.72	LE	1.96	0.72	LE
13	Touch lights/candles	1.96	0.86	LE	2.15	0.82	LE
14	Common flowers	1.71	0.45	LE	1.70	0.42	LE
15	Counters like bottle top sticks	1.65	0.65	LE	1.68	0.62	LE
16	Primary science text books	1.68	0.50	LE	1.66	0.52	LE
17	Maps/globes	2.20	0.80	LE	2.10	0.81	LE
18	models	2.31	0.90	LE	3.00	0.91	GE
19	Farm tools	2.29	0.69	LE	2.28	0.68	LE
20	Curriculum	2.20	0.90	LE	2.25	0.80	LE
	Overall	2.36	0.67	LE	2.12	1.67	LE

As shown in table 2, the teachers and pupils had different overall mean scores of 2.36 and 2.12 respectively. The teachers utilized items 1,2,4,5,6,7,9,10, to a great extent while the pupils indicated that teachers utilized items 2,4,5 and 18 to a great extent. The teachers and pupils disagreed on the extent of utilization of items 1,6,7,9,10 and 18. The overall mean scores of the teachers and the pupils differed by 0.24 in favour of the teachers. Based on the data, one concludes that the available instructional materials are not utilized to a great extent.

Discussion

The findings of this study suggest that only very few of the instructional materials are available in Enugu State nomadic schools. The result of this study is supported by the findings of earlier researchers (Olagunju, 2000; Agusiobo, 2000; Ige, 2000; Aniodo, 2000; Iloputaife, 1995), that the instructional materials were not available in schools to a great extent. This result further suggests that instructional materials are not enough. Non-availability of instructional material may appear to frustrate the teaching and learning of primary science in Enugu State nomadic schools.

On the extent teacher making use of the available instructional material shows to less extent. This result is supported by the findings of Cirfat and Zurnyil (2000), that, even in school with instructional materials, the teachers do not utilize them for science teaching. The finding confirms that of Ige (2000), that, none of these new media is available, accessible or used in communicating in science. The situation should be reversed as instructional materials stimulate interest, revolutionise teaching and learning processes in schools as well as enhance students learning by appealing to their senses of learning. It is therefore, recommended that:

- i. The issue of non-availability of instructional materials should be given seniors attention by all the stakeholders of education by ensuring the provision of all the recommended instructional materials in schools.
- i. Teachers should be made to understand the use of instructional materials in teaching and learning generally not only in sciences and now to make effective use of them. This could be done through seminars and workshop.
- ii. The supervisors and heads of educational institutions should of usage of instructional materials form the major part of the teachers' lesson notes. The authorities could use the result of the above to reward or discipline the erring teachers.
- iv. Teachers should be encouraged to improvise where the ready-made instructional materials are not available in order to enhance their lesson delivery.

Conclusion

This study had shown that most of the instructional materials were lacking in Enugu State nomadic schools. Even those items of instructional materials available were not effectively utilized. Teachers and pupils do not improvise instructional materials as expected. Also gender is not a factor in the extent of utilization of the available instructional materials in Enugu State nomadic schools.

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