Factors Affecting Teaching and Learning of Basic Science and Technology in Primary Schools

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Abstract

The purpose of this study was to investigate into the factors that affect teaching and learning of Basic Science and Technology in primary schools. The population of the study consisted of 100 male and female teachers in the primary schools. A survey research design was adopted for the study, three research questions and two null hypotheses were formulated base on the specific purpose of the study. The data for the study were collected by means of structured questionnaire developed the researcher. The data collected were analyzed using mean score to answer research questions, while the null hypotheses were tasted using t-test at 0.05 level of significance. The study revealed that most of the instructional materials were not available for teaching basic science in primary schools. The non available of material implies their non-utilization. Primary school administrators should encourage classroom teachers to produce and use instructional materials in teaching. Teachers should not wait for the Government to do everything, they should go extra mile in the provision of instructional materials for their pupils.

Keywords: Basic Science, Technology, Instructional Materials, Education

Introduction

The development of Basic Science and Technology as a subject area occurred in Nigeria in the late 1960s, and its teaching and learning have since been entrenched in schools. A child they say is the father of a man. The education which the child receives today will shape his understanding and vision of life and this in turn will enable him to play a significant role in the making of himself and in the development of his fatherland. The child learns to perform and improve on the quality of the activities and lifestyle of his forebears, thus, pushing forward the frontiers of the cultural disposition of the people.

Formal Education is put in place to give some necessary and acceptable blending of the old and new societal order, and so positively advance the society. The child is the initial beneficiary of this kind of education and whatever he learns enables him to play defined role in the society. In all nations of the world (Nigeria inclusive), Science and Mathematics are given first class attention due to numerous benefits derived from them. For instance, the knowledge of drugs, diseases (their transmission, control and cure), reproduction, child birth, environmental pollution, food production, number and numeracy , telecommunication, chemicals among many others are acquired trough the study of Science and Mathematics (that is, technology) has led to the manufacture of many products and services computers, electronic gadgets air planes, ships, weapons, automobiles, printing press, electrical appliances, mobile phones to mention a few, are all derived from practical application of Science and Technology.

In 1968, a Committee was formed under a cooperative agreement between the then Comparative Education Study and Adaptation Centre (CESAC) now merged into the Nigerian Education Research Development Council (NERDC) and the Science Teachers Association of Nigeria (STAN).

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The Committee produced the first Basic Science and Technology Cumculum (STAN, 1990). The STAN document was far more comprehensive and integrated. It also used the nomenclature for the title of the subject in line with happenings in the developed countries of the world. According to the STAN document earlier referred to a number of questions informed the need for the Basic Science and Technology Curriculum.

Why do we teach science? Is the science we teach appropriate and relevant to the scientific and Educational needs of our children and or our society? There is no doubt that relevance and functionality have become the major consideration for teaching and learning basic science and technology. The consequence of these considerations made the association to design a science that would relate the child to the environment and develop in the child inquisitiveness and skill that relate to the discovery of science concepts and their applications. Every year, primary schools produce graduate who cannot meet up with current science trends in junior secondary school class, especially in the rural setting. This has serious social implications. The root causes of the problems need to be identified so that a solution could be sought for it.

Serious efforts have been made by the Government to improve students in our primary schools in that state. Such efforts include the declaration of free and Compulsory Education to Senior Secondary Level by the present administration. It must not be assumed that all is well with the study of Basic Science and Technology in Primary Schools. There is the need to critically examine the input put to the programme. This study is therefore aimed at investigating the factors that affect Teaching and Learning of Basic Science and Technology in Primary Schools.

Statement of the Problem

In Nigeria, Education is seen as an instrument for National Development. The National Policy on Education (NPE 1998) stated categorically, that Education is the most important instrument of change in the intellectual and social outlook that Nigerians must have to proceed in their educational revolution. The National Policy on Education also identified as a one of the national educational goals "the inculcation of the right of values and attitudes for the survival of the individual and the society". These are indeed very laudable goals. However, the extent to which they are achievable depends on the relevance and contents of various subjects taught in schools and the socio-cultural needs of Nigeria as well as how effectively those subjects are being taught. This paper opines that basic Science and Technology is a very important subject and could be used for promoting the knowledge of our pupils if effectively taught. The problem of pupils' drawback in the science especially in the basic science at a higher level calls for a research into the area, at the grassroots level (primary school level). There is therefore need for a research to investigate the factors that affect teaching and learning of basic science and technology in primary schools. This will identify such factors that affect teaching of basic science and technology in primary schools and lead to recommendation that will improve the situation.

Purpose of the Study

The purpose of this study is to investigate factors that the affect teaching and learning of Basic Science and Technology in Primary Schools in Nsit Ata Local Government Area to:

1. Determine the adequacy or otherwise of instructional materials for the teaching of basic science in primary schools in Nsit Atai Local Government Area.
2. Assesses the extent to which the instructional materials are utilized for teaching of basic sciences in primary schools.
3. Assess the major constraints to teachers[7] use of instructional materials in teaching of Basis Science in Primary Schools in Nsit Ata Local

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Government Area.

Research Questions

The followings research questions were answered by the study:

1) What instructional materials are available for teaching of Basic Science in Primary Schools in Nsit Atai Local Government Area?
2) What instructional materials are utilized for teaching Basic Science in Primary Schools in Nsit Atai Local Government Area?
3) What are the major constrains to teacher's use of instructional materials in teaching Basic Science in Primary Schools in Nsit Atai Local Government Area?
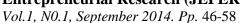
Research Hypotheses

1. There is no significant difference between the mean response of male and female teachers on availability of instructional materials for the teaching of Basic Science in Primary Schools.
2. There is no significant difference between the mean response of male and female teachers on major constraints to teachers use of instructional materials for the teaching of Basic Science in Primary Schools.

Basic Science and Technology in Primary Schools

Prior to 1960, most schools in Nigeria emphasized arts subjects. At the junior forms of secondary schools, general science was taught. (Akpan, 1999), According to him, science teaching and learning in schools was a privilege enjoyed by a few secondary school students. The attainment of political independence in!960 marked the start of a new era in a number of activities in Nigeria. Modification on the basis of nationalism became a common feature soon after independence. In education, new emphasis was placed on science teaching and learning Akpan (1999). According to STAN document, a number of questions informed the need for the Basic Science curriculum.

Some of these questions are:

Why do we teach science? Is the science we teach appropriate and relevant to the scientific and educational needs of our children and of our society? There is no doubt that relevance and functionality became the major considerations for teaching and learning basic science (Akpan, 1999). The consequence of this consideration made the association to design a science that would relate the child to the environment and develop in the child, inquisitiveness and skills that relate to the discovery of science concept and their applications (Akpan, 1999). The Basic Science and Technology was both content and process based. Some form of integration was the focus for basic science. The conceptual approach to content selection was adopted (Akpan, 1999). In organizing the content into teaching units, the spiral approach was adopted. By this, topics were to be treated at an elementary level in the first instance and later, develop further as the child's mind mature and were able to grapple with such scientific process and knowledge. (Akpan, 1999).

Simple scientific process aimed at introducing to the child what science is about and how scientists[7] works were focused upon at the beginning. Such skills as observing, report organizing, generalizing predicting, designing, using modes and confirming the process of inquiry when new data demands this were listed in the STAN document. The course also prescribed a teaching approach for the basic science. This is the guided discovery method. All the feature of content so far indicated on basic science concern, the subject at the junior forms of secondary schools (which is the last three years of primary education in today's system of education). As part of the development in basic science and technology at both primary and secondary schools, major revisions were taken between 1979 and 1982 in the publication of the National core curriculum for the subject at both levels. (FME, 1980,1981, FMEST, 1985).

The National Core Curriculum for primary science was to harmonize the primary science curriculum in the states and the NERSCs NPSMP was based on this. By November, 1989, a revised national core curriculum for primary science was drafted, approved in 1990.

Teaching Basic Sciences

The teaching of basic sciences and technology has been with many problems as revealed from series of studies (Legade, 1984, Aminu, 1980, Oyeneyin and Balogun, 1982 and Olarewaju and Balogun, 1984 for example).

These studies on basic science have revealed a number of facts (Ivowi, 1983).

1. Low level of readability of the instructional materials.
2. Most teachers of basic science were not qualified to teach the subject.
3. The materials in these books were too much and as such none could be completed within one academic year.
4. The teaching strategies designed for the course could not be completely followed because of lack of adequate equipment, teachers and time.
5. In spite of the above short-comings, positive attitude to science have been generated amongst student who took the course.

Despite the fact that the junior secondary school basic science curriculum derived from the experience in teaching the earlier curriculum content, it appears that most of the listed problems still persists. At the recent national curriculum review conference held in Hamdala Hotel, Kaduna, evidences were given by inspectors and practicing teachers to confirm that as far as teaching of basic science was concerned.

1. The lecture method still predominates in contradiction to the agreed guided discovery method of teaching.
2. Because of the lack of experts to the subject, teaching is still essential done by specialist in biology, chemistry or physics with the result and ignore the other components or ignore integration in their teaching.
3. The resulting poor teaching of the subject and the non completion of the prescribed content has introduced a weak background and prevented the introductory purpose of the course to the senior secondary schools (SSS) science subjects from being achieved. Consequently, student readiness for biology, chemistry and physics at the SSS level has become defective.

   The science group reviewed the situation and agreed on the following:
1. The content of junior secondary school basic science was found to be adequate and capable of being expanded by inclusion of more relevant topics, such as geology, environmental education and science, technology and society (STS) theme, especially, at the senior secondary school level.
2. Basic science should be offered at the senior secondary school level by students not offering any of biology, chemistry and physics.
3. The thematic approach for content selection should continue to be used for the subject.
4. The classroom delivery of the subject remained inadequate due to lack of trained teachers and sufficient resource materials.
5. The University and Colleges of Education should intensify the production of teachers of basic science and technology.

Availability and use of Instructional Materials

Lamb and Amola (1980) are of the view that children learn best when they are interested

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and when the activities reflect their own experiences. This goes without argument that children are highly motivated to learn when they see the concepts that are being presented to them. Ezema (1999), remarked that the use of audio-visual aids relaxes the classroom atmosphere, motivates the students and leads to the teaching and learning creatively and interactively. He goes further to assert that they arouse the learners interest, kindle imagination, stimulate active participation in a lesson, help memory and recall the experiences to real life. Doff (1988:10) enumerating his justification of using audio-visual aid, observed that audio-visual aids focus attention on meaning and help to make the classroom instruction more real and alive. Having something to look at keeps the pupil's attention and make the classroom more interesting in order to ensure that children get the best in primary schools; instructional materials should be made available in all the schools. Instructional materials play vital role in the teaching and learning process (Mkpa, 1996, Okwor, 1995). The objectives of basic science may not be attained without the availability and use of adequate instructional materials. Akubue (1993) posits that with the use of instructional materials, the teacher will be able to give students the chance to learn through their senses of hearing, smelling, tasting, seeing and feeling. Stressing the need for instructional materials, Mkpa (1989) argues that children at the junior secondary school level are often young learners who require to be stimulated to learn through a variety of instructional materials.

Methodology

This study was carried out in Nsit Atai Local Government Area using five (5) selected public primary schools in Ibedu Clan. A survey research design was suitable for this study because according to Owioduokit (2000); a survey research seeks the opinion of a large number of people about event. The population of this study consisted of all the 100 teachers (male and female) in the five (5) selected public primary schools in Ibedu Clan in Nsit Atai Local Government Area. The study consisted of 100 (male and female) teachers in the 5 selected public primary schools in Ibedu Clan in Nsit Atai Local Government Area. A purposive sampling technique was used in the study. All the 100 teachers participated in the study. The teachers' questionnaire on availability, utilization and major constraints to using instructional materials was designed by the researcher and used for data collection. The questionnaire (TQAUCIM) was presented to experts in the area of Educational Research in the UNIUYO for face validation. Reliability of instrument was established by test retest reliability method. This procedure measured the degree of consistency overtime. A total of 100 copies of the questionnaire (TQAUCIM) were distributed out to the 100 teachers that were used in the study by researcher. The data collected were analyzed using descriptive statistics (means scores and standard deviation). The two null hypotheses corresponding to research question 1 and 3 were tested using t-test at 0.05 level of significance. If the calculated t-value is equal or greater than the table t-value, the null hypotheses was rejected, but accepted if the calculated t-value was less than the table t-value.

Analysis of Data

Research Question 1: What instructional materials are available for teaching basic science in primary schools in Nsit Atai?

The data related to the research questions are presented in the table 1.

S/N	Instructional materials	Male teacher X	Female teacher 1	All respondent Mean of means	Remark
1.	Text Book	2.60	2.60	2.60	Available

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2.	Chalkboard	4.00	4.00	4.00	Available
3.	Flannel board	1.00	1.00	1.00	Not Available
4.	Magnetic board	1.40	1.40	1.40	Not Available
5.	Pictures	2.35	2.25	2.30	Available
6.	Diagrams	2.41	3.43	2.42	Available
7.	Wall charts	2.45	2.45	2.45	Available
8.	Flow charts	1.90	1.90	1.90	Not Available
9. 10.	Flip charts	1.80	1.80	1.80	Not Available Not
11.	Firm strips	1.00	1.00	1.00	Available Not
	Slides	1.00	1.00	1.00	Available
12. 13.	Projector	0.08	0.08	0.08	Not Available
	Radio set	1.90	1.90	1.90	Not Available
14.	Models	1.95	1.95	1.95	Not Available
15. 16.	Tape recorder	1.80	1.80	1.80	Not Available Not
	Posters	1.98	1.98	1.98	Available
17. 18.	Specimen	3.68	3.68	3.68	Available Not
19. 20.	Television	1.50	1.50	1.50	Available
	Comput				Not Available Not
	Video		1.65	1.65	
			1.00	1.00	
TOTAL		1.98		1.98	Available

Table 1 show that most of the instructional materials were not available for teaching basic science in the primary schools in Nsit Atai. Instructional materials that were not available were: flannel board, magnetic board, flow charts, flip charts, firm strips, slides, projector, Radio set, models, tape recorders, posters, television, computer and video. This is indicated by the overall means of each of the items, which is less than 2.00. The items that were available were: Textbooks, chalkboard, pictures, diagrams, wall charts and specimen as indicated by their overall means of 2.62, 4.00, 230, 3.42, 2.45 and 3.68 respectively.

Research Question 2: What instructional materials are utilized for teaching basic science in primary schools in Nsit Ata? The data relating to this research questions are presented in the table 2.

Table 2: Utilization of instructional materials for teaching basic science in primary schools in Nsti Atai Local Government Area

S/N	Instructional Materials	Male Teacher X	Female Teacher X	All Respondent Mean of means	Remark Utilized

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1.	Text Book	2.80	2.80	2.80	Utilized
2.	Chalkboard	4.00	4.00	4.00	Utilized
3.	Flannel board	1.80	1.80	1.80	Not Utilized
4. 5.	Magnetic board Pictures	1.90 2.62	1.92 2.68	1.91 2.60	Not Utilized Utilized
6. 7.	Diagrams Wall charts	3.42 2.35	3.38 2.35	3.40 2.35	Utilized Not Utilized
8.	Flow charts	1.65	1.65	1.65	Not Utilized
9. 10.	Flip charts Firm strips	1.80 0.85	1.80 0.85	1.80 0.85	Not Utilized Not Utilized
11	Slides	0.90			Not Utilized
12. 13.	Projector Radio set	0.60 1.80	0.60 1.82	0.60 1.81	Not Utilized Not Utilized
14.	Models	1.40	1.42	1.41	Not Utilized
15. 16.	Tape recorder Posters	1.90 1.80	1.90 1.80	1.90 1.80	Not Utilized Not Utilized
17. 18.	Specimen Television	2.98 1.30	3.02 1.30	3.00 1.30	Utilized Not Utilized
19. 20.	Computer Video	0.60 0.65	0.06 0.65	0.60 0.65	Not Utilized Not Utilized
	Total	1.96	1.97	1.97	

The data in table 2 shows that most of the instructional materials were not utilized for teaching of basic science in the primary schools in Nsit Atai Local Government Area. The affected items were: Flannel board, magnetic board, flow charts, flip charts, firm strips, slides, projector, radio set, models, tape recorder, posters, television, computer and video. This is evident by the overall means of the items being below 2.00, instructional materials that were put to effective use were: Textbooks, chalkboard, pictures, diagrams, wall charts and specimen as shown by the overall means of 2.80,4.00,2.60,3.40,2.35 and 3.00 respectively.

Research Question 3: What are the major constraints to teachers[7] use of instructional materials in teaching basic science in primary schools in Nsit Atai? The data related to this research question are presented in table 3.

Table 3: Major constraints to teachers' use of instructional materials in teaching basic science in primary schools m Nsit Atai

S/N	Major constraints to Teachers' use of Instructional Materials	ISiale Teacher	Female Teacher	All Respondent	Remark
		X	X	Mean of means	
1.	Non availability	4.10	4.00	4.00	Accepted
2.	Lack of funds	3.60	3.60	3.60	Accepted
3.	No encouragement by government	3.40	3.40	3.40	Accepted
4.	No electricity in school	3.35	3.35	3.35	Accepted
5.	No knowledge/training on use	1.80	1.80	1.80	Not Accepted
6.	No time to use them	1.95	1.95	1.95	Not Accepted
	Total	3.03	2.88	3.01	

Table 3 reveals non-availability and lack of fund, no encouragement by the government and no electricity as major constraints to teacher's use of instructional materials. This is indicated by the overall mean of 4.00, 3.60, 3.40 and 3.45 respectively. The items in the group that did not show constraints were knowledge/training on use, no time to use them indicated by the overall means of 1.80 and 1.95 respectively.

Hypothesis 1
There is no significant difference between the mean responses of male and female teachers on availability of instructional materials for teaching of basic science in primary school.
Table 4: t-test analysis on availability of instructional materials for Teaching of Basic Science in Primary Schools

S/N	Items	Male TEACHERS S_i	SD_t	Female Teachers l_2	SD_2	t-cal	Remark
1.	Textbook	2.60	1.32	2.64	1.33	0.4	Not significant
2.	Chalkboard	4.00	0.89	4.00	0.89	4.64	Not significant
3.	Flannel board	1.20	0.32	1.20	0.32	-2.7	Not significant
4.	Magnetic board	1.40	0.70	1.40	0.70	-7.52	Not significant
5.	Picture	2.35	1.02	2.25	1.02	0.87	Not significant
6.	Diagram	3.41	1.29	3.43	1.30	-0.35	Not significant

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S/N	Items					t-cal	Remark
7.	Wall charts	2.24	1.03	2.45	1.03	4.15	Not significant
8.	Flow charts	1.90	0.80	1.90	0.80	0.97	Not significant
9.	Flip charts	1.80	0.25	1.80	0.25	1.24	Not significant
10.	Firm strips	1.00	0.32	1.00	0.32	-2.07	Not significant
11.	Slides	1.00	0.32	0.100	0.32	-2.07	Not significant
12.	Projector	0.80	0.85	0.80	0.85	-1.04	Not significant
13.	Radio set	1.90	0.82	1.90	0.92	1.23	Not significant
14.	Models	1.95	0.80	1.95	0.80	1.81	Not significant
15.	Tape recorder	1.80	0.25	1.80	0.26	1.24	Not significant
16.	Posters	1.98	0.26	1.98	0.26	1.25	Not significant
17.	Specimen	3.68	1.02	3.68	1.02	0.35	Not significant
18.	Television	1.50	0.43	1.50	0.43	-2.05	Not significant
19.	Computer	1.65	0.73	1.65	0.73	1.22	Not significant
20.	Video	1.00	0.32	1.00	0.32	-2.7	Not significant
	Grand means X and grand standard deviation (SD)	1.98	0.69	1.98	0.69	-0.06	Not significant

The t-test analysis in table 4 shows that there is no significant difference between the mean responses of male and female teachers on availability of instructional materials for the teaching of basic science in primary schools in Nsit Atai Local Government Area. This is indicated by the calculated t-value of most of the items and the overall t-value which is less than the table t-value of 1.96 at 0.05 level of significance.

Hypothesis 2

There is no significant difference between the mean responses of male and female teachers on major constraints to teachers' use of instructional materials for teaching of basic science in primary schools.

Table 5: t-test analysis on major constraints to teachers[7] use of instructional materials for teaching of basic science in primary

S/N	Items	Male TEACHERS		Female Teachers		t-cal	Remark
1.	Non Availability	%	SDi	XL	SD2		
2.	Lack of funds	4.00	1.02	4.00	1.02	0.38	Not Significant
3.	No encouragement	3.60	1.32	3.60	1.32	0.39	Not

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	by government						Significant
4.	No electricity in School	3.40	3.40	3.40	1.28	-0.34	Not Significant
5.	No Knowledge / training on use	3.35	3.35	3.35	1.02	0.97	Not Significant
6.	No time to use Them	1.80	0.25	1.80	0.25	1.24	Not Significant
	Grand means (X) and grand standard deviation (SD)	1.95	0.80	1.96	0.80	1.81	Not Significant
		3.02	0.95	3.02	0.95	0.74	

The t-test analysis in table 5 shows that there is no significant difference between the mean responses of the male and female teachers on major constraints to teachers' use of instructional materials for the teaching of basic science and technology in primary schools. This is indicated by the calculated t-value of most of the items and overall t-value which is less than the table t-value of 1.96 at 0.05 level of significance.

Finding of the Study
The following are the findings of the study:
1) Most of the instructional materials are not available for teaching basic science in the primary school in Nsit Atai Local Government Area. The instructional materials not available were; flannel board, magnetic board, flow charts, flip charts, firm strips, slides, projector, radio set, models, tape recorders, posters, television, computer and video, (Table 1).
2) Most of the instructional materials were not utilized for teaching basic science in primary schools in Nsit Atai Local Government Area. These items not utilized were: flannel board, magnetic board flow charts, flip charts firm strips, slides, projector, radio set, models, tape recorder. Posters, television, computer, video etc. (table 2). Items that were utilized were: Textbook, chalkboard, picture, diagrams, wall charts and specimen (table
3) Non availability of instructional materials, lack of funds, electricity and no encouragement by government constitutes major constraints to teachers' use of instructional material (table 3).
4) There is no significant difference between the mean responses of male and female teachers on the availability of instructional materials for the teaching of basic science and technology in the primary schools as indicated by the calculated t-value which is less than table t-value of 1.96 at 0.05 level of significance (table 4).
5) There is no significant difference between the mean responses of male and female teachers on the major restraints to teachers' use of instructional materials for the teaching of basic science in the primary schools as indicated by the calculated t-value of 1.96 at 0.05 level of significance (table 5).

Discussion of the Findings
This study has revealed the non-availability of instructional materials for teaching basic science in primary schools. Only text books, chalkboard, pictures, diagrams, wall charts, and specimen were

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available in the schools. As many as 14 items of the 20 listed items were not available in the schools. Non-availability of instructional materials has been identified as a major short coming of curriculum delivery in Nigeria (SAPA, 1993, Onyekwelu, 1995, 2000). Only the basic instructional materials like textbooks, chalkboard, diagrams, wall charts, pictures and specimens were available for teaching basic science in the primary schools. The electronic media were almost nonexistent in the schools (Akubue, 1993). Most of these materials can be provided or improvised at little or no cost. The need for teachers to make simple and inexpensive instructional materials is obvious. These teacher-made materials would supplement whatever is available in the schools. The non-availability of instructional materials for teaching basic science in the primary schools implies their non-utilization by the teachers. This has been revealed by the study, only the textbook, chalkboard, diagram, wall chart, pictures, specimen were utilized.

As many as 14 out of 20 items were not utilized for teaching basic science in the primary schools. The non-utilization of instructional materials by teachers in our schools has been revealed by several studies (SAPA. 1993; Akubue, 1993; Onykwelu, 2000). The SAPA (1993) study revealed that 52% used no teachers use less than 25% teaching aid, while 31% used no teaching aids at all. Akubue (1993) noted that none of the teachers in the 60 social studies lessons she observed in JSS in the former Anambra State used instructional materials in teaching. Teachers made no effort to use such materials as atlas, Maps, pictures, even when they were within their reach. The study also revealed the non-availability of instructional materials, lack of funds, electricity in schools and no encouragement from the government, as major constraints to teachers' use of instructional materials to teach pupils in the primary schools.

The t-test analysis in hypothesis 1 revealed that there is no significant difference between the mean responses of the male and female teachers on the availability of instructional material for the teaching of basis science in the primary school. The non-significant difference between the mean responses of the two groups of respondents could be attributed to the fact that the situation had not changed with respect to availability of instructional materials in the primary schools. The null hypothesis is therefore accepted. Also there is no significant difference between the mean responses of the male and female teachers on the major constrains to teachers' use of instructional materials for the teaching of basic science in the primary schools. T his is revealed by the t-test analysis for the null hypothesis 2 in the study. This is a clear indication that much is needed to be done by the teachers and the government to change the situation. The null hypothesis is therefore upheld. Advantages of the use of instructional materials are enormous. In addition to saving words, time and effort of the teachers, they make learning more interesting, clarify and concretize complete concepts and stimulate learners imagination.

Summary of the Finding

1. Most of the instructional materials were not available for teaching basic science in the primary schools. The materials available were: textbook, chalkboard, diagram, wall chart, picture, and specimen.
2. Most of the instructional materials were not utilized for teaching basic science in the primary schools. Only textbook, chalkboard, diagram, pictures, wall chart and specimens were utilized by teacher in the schools.
3. Teachers saw non- availability of materials, lack of funds, electricity and no encouragement by the government as major constraints to teacher's use of instructional materials.
4. There is no significant difference between the mean response of the male and female teachers on availability of instructional

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materials for teaching of basic science in the primary schools.

5. There is no significant difference between the means responses of male and female teachers on major constraint to teachers' use of instructional materials for the teaching of basic science in primary schools.

Conclusion

Evidence from the research findings of the study show that instructional materials are not available in many primary schools in Nsit Atai local Government Area; the non-availability of instructional materials implies their non-utilization. Basic science teachers do not utilize instructional materials in teaching. Teachers do not produce simple and inexpensive instructional materials. The non-availability of materials, electricity, lack of funds and no encouragement by the government are major constraints to teachers' use of instructional materials in the teaching and learning of basic science and technology in the primary schools.

Recommendations

1. Primary school administrators should encourage classroom teachers to produce and use instructional materials in teaching.
2. Teaches should not wait for the government to do everything, they should go extra mile in the provision of instructional materials for the pupils
3. Primary schools can liaise with universities, college of education or fine art unit of tertiary institutions to get materials produced by students after their examinations.
4. The federal and state Governments should ensure the implementation of section 10 of the national policy on education (1981) on educational services.
5. Educational resources centres and audio- visual Aids centres and the various agencies charged with the production of instructional materials should be established to ensure their availability in schools.
6. Government should organize short courses workshops, seminars on materials improvisation, production and utilization, for teachers of different subjects.
7. To ensure effective utilization of instructional material in schools, the ministry of education should direct every school to set up instructional materials Acquisition/production, utilization and maintenance unit (IMAPUMU)

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