



Teaching And Learning Resources In Secondary Schools In The South West Region Of Cameroon And Its Implication To The Academic Performance Of Students In The Sciences

MBANJO MARTIN EWANGE
Faculty of Education
University of Buea ,Cameroon

ABSTRACT

The use of instructional materials/resources in teaching and learning of sciences in secondary schools today is not absolutely new. What is new is the technological equipments that have been introduced recently into the teaching and learning process. With the evolving technology and the new communication media, efforts are on the increase in the application of instructional aides to teaching and learning of sciences.

It has been observed that there is a serious discrepancy between teaching and learning and the effective use of teaching resources. This study intended to investigate teaching and learning resources in secondary schools in the south west region of Cameroon and its implication to the academic performance of students in the sciences. The research design adopted for this study was the descriptive survey design. The population for the study consisted of all secondary schools in Fako Division of the South West Region of Cameroon in which ten (10) secondary schools were randomly selected for the study. The sample used for the study was given equal opportunity of being selected. The “hat and draw” approach of the simple random sampling techniques was adopted. To gather the data for this study, a carefully structured questionnaire to elicit the necessary information that will help determine whether instructional materials exercise



some basic effects on students' performance sciences in secondary schools in the south west region of Cameroon

The questionnaire consist of part A and B, part A contained bio-data information while part B contained fifteen (15) items questionnaire which respondents were expected to respond by ticking either agreed or disagreed according to the extent of which the statement appealed to them. The results of the findings were presented according to the order of the research question formulated for the study.

Findings of research question one revealed that instructional materials have a significant effect on students' academic performance in science studies in secondary schools

The result of the findings of research question two indicated that the use of instructional materials facilitate and enhance effective teaching and learning of sciences in secondary schools

Meanwhile the result of the findings research question three showed that the use of models and specimens increase the students' knowledge and appreciation of the subject content in science and other similar courses.

Based on the outcome of the study, it was recommended that the public should be aware of the uses of instructional materials which will aid in the understanding of sciences studies. Emphasis must be placed on the use of instructional materials in order to inculcate the spirit of learning sciences to students. Government and non-governmental agencies should assist in the provision of instructional materials for effective teaching and learning of sciences in secondary schools.



KEY WORDS: Teaching, Learning, Resources, Implication .Academic Performance Of Students, Sciences

INTRODUCTION

The use of instructional materials/resources in teaching and learning of sciences in secondary schools today is not absolutely new. What is new is the technological equipments that have been introduced recently into the teaching and learning process. With the evolving technology and the new communication media, efforts are on the increase in the application of instructional aides to teaching and learning of sciences.

Any meaningful education cannot be achieved without appropriate and up to date resources. Cameroon and the International Community identify education as the prime means for meaningful development as well the channel through which posterity is maintained. This explains why education is central and a top government priority. The development needs of the country are translated into educational goals which become the education policy of the nation; and the vehicle through which these educational goals are conveyed or delivered is the curriculum. Any effective curriculum implementation cannot take place without the use of compactable and suitable teaching methods as well as up-to-date teaching and learning resources. Science and technology are indispensable to development and emergence as no nation can be transformed to modernity without science and technology. The importance of science and

technology cannot be over emphasized. It is for this reason that the government of Cameroon emphasized that “priority should be given to the mastery of sciences and technology in order to ensure the independence and progress of Cameroon in a modern world” (Tambo & Ndongko 2000).

Secondary education it should be noted provide the link or forms the bridge between primary and high (tertiary) education. Access to the secondary science curriculum is very important given that Secondary education constitute the foundation on which students build their future careers in the various fields of science and technology such as engineering, medicine etc. poor implementation to the secondary science curriculum might go a long way to affect students achievements which might in turn lead to school drop outs as well as produce students who might find it very difficult adapting or coping with future studies in their different fields or careers in science and technology.

It is on this basis that this study attempts to investigate the teaching and learning resources used in the implementation of the secondary science curriculum and its implicated to students academic performance.

STATEMENT OF THE PROBLEM

The deteriorating state of our educational system is quite worrisome. The problem teachers and students encounter in our educational system include inadequate teaching and learning materials.

Instructional materials are intended to enhance educational achievement whenever they are properly used. Nevertheless, it has been realized that there is a need for a coordinated source of



information for pre-service teachers on the preparation and utilization of instructional materials. This will help to reduce most of the problems in the teaching and learning process. In spite of this, the problem associated with these instructional materials is the procurement of the instructional materials. Other problems that hinder the effective use of instructional materials in schools include lack of electricity supply to operate some visual aids, lack of qualified educational technologists to operate them. However, curriculum planners should emphasize the use of instructional materials by teachers for a break-through in educational attainments. What ponders the mind of researchers and most educationalists is whether introduction of teaching aids during a lesson can achieve results no matter the level of qualification and experience of the teacher. Effective teaching and learning must be done within the context of quality and acceptable teaching materials bearing in mind the objectives of each educational system

CONCEPTUAL BACKGROUND

Bello opined that more is retained when students use both their auditory and visual sense organs simultaneously. In the teaching of science, just like in other areas of instructions, instructional materials are indispensable, as seeing, is said to control a greater part of all sensory information. To buttress the usefulness of instructional materials in creating awareness when used in teaching sciences in secondary schools.

Bonska, explained that “one remembers only 10% of what is heard and 90% of what is heard, seen, and done. Accordingly, Berry and Buktenica explained that instructional materials are very important in education. This was equally due to the realization of the immense influence which audio visual materials create on a recipient. Also Bouska in realization of the significant role of



instructional materials on learning advised that since resourcefulness is a basic quality for a successful life, classroom teaching activity should involve more problems that are resourcefulness oriented. Thus, the influence of audio visual materials in creating science awareness is more effective than words alone if they are related to the learning process.

This is so because it is believed that some learn better when they hear and see, while others, the sense of hearing, touch, smell, dominates them in acquiring knowledge. This may also confirm the saying that “what we hear we forget, what we see we tend to remember, and what we see and hear we remember more”.

According to Akkinson, the result of the use of resources is more effective than words or verbalization. This can only be done through the influence of instructional materials which represent real life situations. This is because they are capable of conveying the intended message to the recipient as they received it, understand and apply the experience gained to real life situations.

Beside, considering the high level of literacy, poverty, traditional beliefs, ignorance e.t.c. of the rural people, and the use of instructional materials can help arouse their interest, provide a clear mental picture, speed understanding, help memory retention and provide a shared experience which in the end creates historical awareness.

Brown wrote that “Looking at something with the person with whom you are trying to communicate there is something in common, and that is the thing both of you see” as this is shared, the words used are better understood because both the speaker and the listener relate



them to a common instructional materials. For effective use of instructional materials, care must be taken of what is taught and advised if we are not to waste time rather than aid the teaching finally, the use of instructional materials compels attention through their combined influence of movement, sound and a great range of instructional materials.

The term instructional or audio-visual is not a universal language but it refers to relevant materials which when used effectively with sight in either formal or informal classroom situation are generally and easily well understood.

This is because, there are closely related to the way people do things in their everyday life. It is generally assumed that students will understand the things they see very easily than listen to abstract ideas presented in words. Udomior. The above statement therefore justifies a discussion of influence of instructional materials on both the learners and educator during teaching and learning in any given situation.

In accordance with Shneck who said “A look worth a thousand words”.

It is said that one does not learn so much except he pays attention and shows and interest in a subject. This cannot be effectively achieved except something vital that can captivate the expected interest is presented to the learners as aids.

Finally teaching with instructional materials like the television as well as other aids according to Ogunimilade, ease the problems the learners find in the lesson which teachers teach and also help remove any of the disadvantages associated with the system if teaching was limited from a teacher to learners’ direction only.



METHODOLOGY

The research design adopted for this study was the descriptive survey design. This design studies both large and small population in selecting and studying samples chosen from the population to discover the relative incidence.

The population for the study consisted of all secondary schools in Fako Division of the South West Region of Cameroon in which ten (10) secondary schools were randomly selected for the study. The sample used for the study was given equal opportunity of being selected. The “hat and draw” approach of the simple random sampling techniques was adopted.

Pieces of papers were written alphabetically to represent the ten (10) schools to be used as sample. The sample size was considered appropriate as this could reduce sampling error and enable generation of results to cover the division.

To gather the data for this study, a carefully structured questionnaire to elicit the necessary information that will help determine whether instructional materials exercise some basic effects on students’ performance sciences in secondary schools in the south west region of Cameroon

The questionnaire consist of part A and B, part A contained bio-data information while part B contained fifteen (15) items questionnaire which respondents were expected to respond by ticking either agreed or disagreed according to the extent of which the statement appealed to them.



The questionnaire was administered by the researcher to the subjects by hand with the instructions carefully read out and explained to the understanding of the students. They were given enough time to respond to the various questions after which the questionnaires were collected back on the spot to avoid any type of bias that may arise as a result of filling the answers to the questionnaires at home.

After collection of data, the number of responses were under Agreed or Disagreed using a table.

The raw scores were added together and analyzed using the sample percentage method.

FINDINGS

The results of the findings will be presented according to the order of the research question formulated.

RESEARCH QUESTION ONE

Do instructional materials have effect on students' academic performances in sciences in secondary schools?

From the findings, the sample size, 150 representing (75%) of the respondents agreed that instructional materials make the lesson interesting, while 50 representing (25%) of the respondents disagreed with the statement that it does not make science lessons interesting.

Item 2, also revealed that 120 representing (60%) of the respondents agreed that instructional materials used in teaching sciences make the lesson realistic, whereas 80 representing (40%) of the respondents said no to the statement.

In item 3, 140 representing (70%) of the respondents were of the opinion that instructional materials create opportunities for participation in the lesson, while 60 representing (30%) of the respondents disagreed with the facts.

Item 4 also showed that 130 representing (65%) of the respondents responded positively to the item, while 70 representing (35%) gave a negative response.

In item 5, it was affirmed that 170 representing (85%) of the respondents said instructional materials help in representing concrete facts, whereas 30 representing (15%) of the respondents said it does not.

Based on this research question, the findings revealed that instructional materials have a significant effect on students' academic performance science studies in secondary schools.

In support of this claim Udomior (1999) states the instructional materials have an effect on learning, with good understanding in less time as well as means of communication between



teachers and learners. Akinson (1999) says that it gives rise to a more effective learning than lecturing.

RESEARCH QUESTION TWO

Does the use of instructional materials facilitate and enhance effective teaching and learning of sciences in secondary schools?

The use of instructional materials as it facilitates and enhances effective teaching and learning of social studies in secondary schools.

From the findings, 120 respondents representing (60%) agreed that instructional materials simplified and saves time in teaching. Whereas 80 (40%) of the respondents are not in support of the statements.

Item 7 also indicated that 110 representing (55%) of the respondents agreed that instructional materials make easy. The presentation of lesson topic, while 90 representing (45%) of the subject sounded positively, while 75 representing (37.5%) respondents sounded negatively.

In item nine (9), 115 representing (57.5%) of the respondents agreed that instructional materials also help to arouse learners interest, while 70 representing (42.5%) disagreed. From this analyses the result of the findings indicated that the use of instructional materials facilitate and enhance effective teaching and learning of sciences in secondary schools.



In line with the above, Bonka and Gollonary (1991) opined that it is generally assumed that students or learners will understand the things they see very easily than listen to abstract ideas presented in words.

Bello (1999) opined that instructional materials influence both the learners and educator during the teaching and learning process in any given environment.

RESEARCH QUESTION THREE

Does the use of models and specimens increase knowledge and appreciation of the subject content?

Results here showed that 120 respondent representing (60%) of the subject agreed that instructional materials create a mental picture in the students, while 80 representing (40%) said it does not. similarly in question twelve (12) 140 representing (70%) of the respondents agreed that when pictures and charts are used students understand the lesson they are taught very fast, while 60 representing (30%) of the respondents said they do not.

in item 13, 150 representing (75%) of the respondents revealed that teaching becomes effective when film strips, chemicals, maps, and other pictorial materials are used, while 50 representing (25%) disagreed with the opinion.

Question fourteen (14), also affirmed that models also make lessons interesting when used. This represents 120 (60%) as against 80 (40%).



In the last item, fifteen, 100 individuals representing (50%) of the respondents agreed that teacher used appropriate and relevant instructional materials to deliver his/her lesson, while 100 representing (50%) of respondents of the same figure disagreed. The result of the findings shows that the use of models and specimens increase the students' knowledge and appreciation of the subject content in social studies and other similar courses.

Awoniye (1988) in confirmation holds that models and specimens are a kind of short cuts or substitutes for the study of real things and are sometimes even more effective than reality.

Akinson (1999) describes models as being particularly useful for limited class room teaching and learning process.

CONCLUSION

Based on the findings, the following conclusions were drawn.

1. Instructional materials have a significant effect on the academic performance of students in sciences in secondary schools.
2. The use of instructional materials facilitates and enhances effective teaching and learning of sciences in secondary schools.
3. The use of models and specimens increases the knowledge and appreciation of the subject content.

IMPLICATIONS OF THE STUDY



This research has a lot of implication for the students, teachers, as well as policy makers in education. From the findings, instructional materials have a significant effect on the academic performance of students in sciences in secondary schools. There is, therefore, the need for proper education of teachers on the importance and use of instructional materials in teaching of sciences in secondary schools.

On the other hand, teaching of sciences without instructional materials makes teaching and learning difficult. But if instructional materials are used in teaching sciences, it will arouse the interest of learners. There is a saying that one does not learn much except he pays attention and show interest on the subject.

RECOMMENDATIONS

The following recommendations are made:

1. The public should be aware of the uses of instructional materials which will aid in the understanding of sciences studies.
2. Emphasis must be placed on the use of instructional materials in order to inculcate the spirit of learning sciences to students.
3. Government and non-governmental agencies should assist in the provision of instructional materials for effective teaching and learning of sciences in secondary schools.

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