

Instructional resources as determinants of academic performance of secondary school students in Imo state

Ohaegbulem Amarachi Constance, Weli Bumia

Department of Curriculum Studies and Educational Technology, Faculty of Education, University of Port Harcourt, Port Harcourt, Nigeria

Abstract

The study discussed instructional resources as determinants of academic performance of secondary school students in Imo State. Two research questions guided the study, this study adopted correlation survey. The target population of this study was 4661 teachers in senior secondary schools in Imo State. A purposive sampling technique was adopted for the study. Yaro Yamen formula was used to draw 370 teachers as the sample of the study. Therefore 370 teachers served as respondents of the study. The instrument was a questionnaire designed to tap information on instructional resources as determinants of academic performance of secondary school students in Imo State. Twenty (20) item questionnaire was used. Ten (10) of the items were designed to tap information on materials for the teaching. The remaining ten (10) items were designed to tap information on the effect of audio, visual and audio-visual materials on the academic performance of students. A research questionnaire was administered and collected on the spot. Data collected were analysed using Pearson Product Moment Correlation. The results revealed among others that there is a significant relationship between the role of instructional resources and academic performance of students in secondary schools and also there is a significant relationship between the academic performance of students in secondary schools and the use of audio, visual and audio-visual materials IMO State. It is therefore recommended that the teachers should use the instructional resources with appropriate teaching methods that will bring about active involvement of the students.

Keywords: determinants, academic performance, Imo

Introduction

Education, according to Charles and Coombs (2010) ^[3] consists of two components. He classified the two components into inputs and outputs. According to him, inputs consist of human and material resources and outputs are the goals and outcomes of the educational process. Both the inputs and outputs form a dynamic organic whole and if one wants to investigate and assess the education system in order to improve its performance, effects of one component on the other must be examined. Instructional resources which are educational inputs are of vital importance to the teaching of any subject in the school curriculum. Instructional material plays a very important role in the teaching-learning process. It enhances the memory level of the students. At this time, education has spread wide and the entire oral teaching cannot be the key to successful pedagogy; therefore, the teacher has to use the instructional material to make the teaching-learning process interesting. The use of instructional material can enhance the learning achievement.

Chang (2009) ^[2] was of the opinion that the use of instructional resources would make discovered facts glued firmly to the memory of students. Slavin (2010) ^[9] also added that, a well-planned and imaginative use of visual aids in lessons should do much to banish apathy, supplement inadequacy of books as well as arouse student's interest by giving them something practical to see and do, and at the same time helping to train them to think things out themselves. Slavin (2010) ^[9] suggested a catalogue of useful visual aids that are good for teachings like pictures, diagrams, maps, film strips and models. He said that selection of

materials which are related to the basic contents of a course or a lesson, helps in-depth understanding of such a lesson by the students in that they make the lesson attractive to them, arresting their attention and thus motivating them to learn. He suggested a catalogue of aids which could be used for teaching. He advocated the use of pictures which will help children in grounding their thoughts and feeling. He said that pictures are used as alternatives to real objects where it is impossible to show students the real objects, and they do serve effectively in imagined activities.

It is also very vital to have sufficient and adequate human resources in terms of teacher quality for the teaching of all subjects in the school curriculum. Without the teachers as implementing factors, the goals of education can never be achieved. In order to achieve a just and egalitarian society as spelt out in the Nigerian National Policy on Education, schools should be properly and uniformly equipped to promote effective teaching. Suitable textbooks, qualified teachers, librarians which are adequate should also be provided for schools. The scarcity of these, according to Charles and Coombs (2010) ^[3], will constraint educational system from responding more fully to new demands. In order to raise the quality of education, its efficiency and productivity, better learning instructional materials are needed.

A careful look at the studies of aforementioned people like Charles and Coombs on the use of instructional resources in improving the academic performance of students generally gave the researcher an insight into how the use of instructional resources in a specific subject can enhance

students' academic performance. This is a major factor that has inspired this study whose aim is to carry out an investigation on instructional resources as determinants of academic performance of secondary school students in Imo State. Several people have written on the importance of instructional resources to teaching, while stressing the importance of instructional technology commented that if the introduced system (6 - 3 - 3 - 4) in accordance with the National Policy on Education is to be a success, then instructional technology has a role to play. Audio-visual materials, as an integral part of teaching-learning situations, help to bring about the permanent and meaningful experience. They provide the first-hand experience where possible or of vicarious one where only that is feasible. In enumerating the factors that could be responsible for varying intra and inter-school academic achievement, Coombs listed four important factors, including the acute scarcity of instructional resources which he said constrained educational systems from responding more fully to new demands. He claimed that, in order to do their part in meeting the crisis in education, educational systems will need real resources that money can buy, they will need a fuller share of the nations' manpower, not merely to carry on the present work of education, but to raise its quality, efficiency and productivity. They will need buildings, equipment and more learning materials.

Statement of the Problem

In recent time, there have been tales of woes and lamentations as regards the overall performance of students, especially in West African Senior School Certificate Examinations and National Examination Council results. Numerous students including high achieving ones perform poorly in subjects and the blame is often shifted to the government, teachers handling the subject and the students. Some variables like teachers' qualification, usage of appropriate methods of teaching, the motivation of teacher and students, stimulating environment and so on have been used in the past researches. Yet researches have not clearly indicated the factors that actually determine the academic performance of students hence the decision of the researcher to carry out the present study. Therefore the essence of this study is to find out whether or not the use of instructional resources could determine the academic performance of students in secondary schools.

Aim and objectives of the Study

The aim of this study was essential to:

1. Find out how various instructional resources can be used to improve the academic performance of secondary school students in Imo State.
2. Find out how audio, visual and audio-visual materials and academic performance of students in secondary schools in Imo State.

Research Questions

This study would specifically answer the following questions:

1. What are significant roles instructional resources play in enhancing the academic performance of students in secondary schools in Imo State?
2. What is the effect of audio, visual and audio-visual materials on the academic performance of students in secondary schools in Imo State?

Significance of the Study

Based on the findings of this study, it is hoped that the teachers would be able to select appropriate instructional resources that could be used to teach secondary school students in Imo State. The learners too, particularly the high-achieving ones would be acquainted with the resources that can enhance their academic performance. Findings of this study will also go a long way to help the parents, the principals, the school administrators and educational planners to know the type of instructional resources to make provision for in our secondary schools in order to ease the job of the teachers.

Reviews

The Significant Role of Instructional Resources

Generally, instructional resources or materials facilitate better learning of concepts presented. Quadri, (2003) ^[6] is of the opinion that contents and usefulness of the instructional materials are based upon the following ideas that learning is more likely to occur in a class where there is:

- Active involvement of learners in the teaching learning process;
- Negotiation of individual learning objectives'
- Opportunities for demonstration, practice and feedback;
- Continuous evaluation of learning;
- Support for learners and teachers.

They highlight the following role of instructional resources/materials in the English Language.

Interest Booster: Instructional resources help in arousing and sustaining the interest of the learners in the teaching learning process.

Knowledge Transmitter: Visual, audio and audio-visual instruments help in precise and easy dissemination of information of facts, information and data, a too large audience with less effort.

Memory Stimulizer: Visual instruments assist in stimulating learning and audio instruments aid in critical thinking and improve the use of imagination.

Time Saver: Instructional materials speed up the learning process because of its prompt, easy, accurate and quick presentation of information. In a similar development, Aremu, (2007) gives a catalogue of roles of instructional resources:

- It saves time;
- It makes learning real and permanent;
- It stimulates the interest of the learner;
- It focuses attention of the learners;
- It provides authority for concepts being presented in the class;
- It enhances teacher-learner relationship; and
- It gives room for meaningful interaction in the class.

For the realization of good performance in a school, instructional resources must be put in place and used effectively in classroom practice. The formal education system of a nation is the principal institutional mechanism used for developing human skills and knowledge. Education is, therefore, viewed as an indispensable catalyst that strongly influences the development and economic fortunes of a nation and the quality of life of its people. In this context, nations, organizations and individuals spend huge sums on the provision and consumption of education for the citizen. In many developing countries formal education is the largest industry and greatest consumer of public revenues.

The priority of all countries, especially the developing ones, is to improve the quality of schools and the achievement of students since learning outcomes depend largely on the quality of education being offered. The high quality of education fosters economic growth and development. Appropriate use of instructional resources is important factor or component during the implementation of the curriculum which helps the implementers to realize their goals and guide them in the teaching-learning process in the classroom practice. This factor is one of the most important ingredients that help the school systems to achieve their objectives and realization of good student academic performance in examinations. Education has been described as an important determinant of upward social mobility and eligibility for employment within the modern sector. Internationally, student's scores in examination have been accepted and used as a proxy of achievements. The most important manifestation of schooling quality is literacy, measurable cognitive abilities and observable student's academic performance.

Evidence from World Bank and other international organizations on the quality of learning in the developing countries pointed out the importance of certain school inputs. Some of the inputs include teachers, classroom size and its environment, instructional materials such as textbooks and other reading materials as well as school buildings and facilities. The Nigeria government policy on education also entails allowing a broad based participation in the provision of education with all the stakeholders taking responsibility for planning and implementation. In line with this policy, the direction is the decentralization of decision making and resource management to lower level structures with Ministry of Education. In addition, inadequate resources among others have led to poor services hence undesirable performance in public secondary schools. The teacher resource is one of the most important inputs to the education system. Being focus of classroom instructional activities and curriculum delivery, teachers are critical determinants of the quality education offered. Teacher's effectiveness at all levels of education has an implication on student's academic performance.

Despite realization of low performance in some parts of Imo State, many students continue to perform poorly. This has been a persistent outcry from all educational stakeholders about this poor performance. As schools are about teaching and learning to realize the good performance of student's and other activities are secondary to these basic goals. These basic goals can only be realized through proper utilization of learning resources. No matter how well staffed the school is, without appropriate learning materials, the basic goals of the school that is teaching and learning to realize good performance in a school can be seriously handicapped.

Concept of Academic Performance/Achievement

Intelligence, creativity and achievement have been central to the various definitions of achievement that have been proposed over the years. Among such definitions is the one given by a notable scholar, Short and Echevarria (2009)^[7], who recognized the value of including special skills and talents describes such children noted for achievement as those whose performance is consistently significant in any potentially valuable area. Achievement can be referred to as possessing demonstrated or potential abilities that give

evidence of high-performance capability in such areas as intellectual, creative, specific academic or leadership ability, or in the performance of visual arts. The United State Department of Education, proposed a new definition of students with achievement, based on a new research of cognition and assessment: children and youth with outstanding talent (achievement), who perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience or environment. These children and youth exhibit high-performance capability in intellectual, creative and/or artistic areas, possess an unusual leadership capacity or excel in specific academic fields. They require services or activities not ordinarily provided by the schools. Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavours. Learning and intellectual characteristics of these persons who are considered to be achieved include:

- The ability to acquire rapidly and use large amount of information;
- The ability to relate one idea to another;
- The ability to make sound judgments;
- The ability to perceive the operation of larger systems of knowledge that may not be recognized by the ordinary person;
- The ability to acquire and manipulate abstract symbol systems; and
- The ability to solve the problem by refraining the question and creating novel solutions.

Smith (2001)^[10], outlines the following characteristics of high-achieving children as follows: High-achieving children are said to have good problem-solving abilities; learn rapidly; has extensive vocabulary; good memory; long sensitivity; and have compassion for others. They have a wide range of interests; ability to puzzle maze of numbers; high sense of maturity; high degree of energy and excellent sense of humor. The high-achievers are also known to have a preference for older comparison and perseverance in areas of interests. Silverman (2005)^[8], identifies the following characteristics of high-achieving learners. They are believed to have intense intellectual curiosity; fascination with words and ideas; perfectionism; the need for precision; learning in great intuitive leaps and intense need for mental stimulation. Moreover, their other traits include difficulty conforming to the thinking of others, early moral and existential concerns and tendency towards introversion.

Instructional Methods for Enhancing Academic Performance

Moughamian, (2009)^[5] discussed instructional methodologies that have demonstrated effectiveness in helping learners build strong academic ability. This developed three strategies primarily for use in classes alone will help to improve students' performance. The strategies are Cognitive Academic Language Learning Approach (CALLA), Sheltered Instruction Observation Protocol (SIOP) and Special Design Academic Instruction (SDAI). CALLA was designed to improve academic achievement for post-primary level learners. The SIOP method draws on and builds upon traditional sheltered instructional strategies, which encourages teachers to speak more slowly, enunciate clearly, use visuals, and scaffold instruction among others. The SDAI strategies

give access to the core curriculum while promoting development, strategies and emphasize the use of manipulative, visuals, and graphic organizers, with plentiful opportunities for peer interaction.

Methodology

This study adopted correlation survey. This is because the researcher intends to correlate instructional resources with students’ academic performance. The target population of this study was 4661 teachers in senior secondary schools in Imo State. A purposive sampling technique was adopted for the study. This technique (purposive sampling) implies that respondents who have the characteristics, available and willing to participate in the study were included. Yaro Yamen formula was used to draw 370 teachers as the sample of the study. Therefore 370 teachers served as respondents of the study. The instrument was a questionnaire designed to tap

information on instructional resources as determinants of academic performance of secondary school students in Imo State. Twenty (20) item questionnaire was used. Ten (10) of the items were designed to tap information on materials for the teaching. The remaining ten (10) items were designed to tap information on the effect of audio, visual and audio-visual materials on the academic performance of students. A research questionnaire was administered and collected on the spot. Data collected were analysed using Pearson Product Moment Correlation.

Results

The result of the study was considered based on the research questions raised.

Research Question 1: What are significant roles instructional resources play in enhancing the academic performance of students in secondary schools in Imo State?

Table 1: Significant role of instructional resources in enhancing the academic performance of students in secondary schools in Imo State.

Variable	Mean	Std. Dev.	N	R	P	Remark
Academic Performance	75.4000	05.5600	370	145	316	s
Role of instructional Resources	20.8600	1.5780				

N = population size, R = correlation, P = level of significance, s = significant. It is shown in the above table that there is a significant relationship between academic performance and role of instructional resources (r = -.145, N = 370, P >.05). The result implies that instructional resources play a

significant role in enhancing the academic performance of students in secondary schools in Imo State.

Research Question 2: What is the effect of audio, visual and audio-visual materials on the academic performance of students in secondary schools in Imo State?

Table 2: Effect of audio, visual and audio-visual materials on the academic performance of students in secondary schools in Imo State.

Variable	Mean	Std. Dev.	N	R	P	Remark
Academic Performance	75.4000	05.5600				
Audio, Visual and Audio-Visual Materials	10.9800	1.1693	370	.067	.643	s

The above table indicates that there is a significant relationship between academic performance and audio, visual and audio-visual materials (r = .067, N = 370, P > .05). This, in essence, implies that audio, visual and audio-visual materials have a positive effect on the academic performance students in secondary schools in Imo State. In other words, these materials improve the academic performance of students in secondary schools in Imo State.

Discussion

Research Question 1: This study investigated whether or not instructional resources play a significant role in enhancing the academic performance of students in secondary schools in Imo State. Results from this study showed that significant relationship existed between the role of instructional resources and academic performance of students in secondary schools in Imo State. The indication is that instructional resources play a significant role in enhancing the academic performance of students in secondary schools in Imo State. This result is consistent with the findings of (Quadri, Ogunjide and Oladejo, 2003) [6] which showed that there is a positive correlation between the use of instructional resources and performance of high-achieving students. This result was not surprising since certain authors like (Moughamian, Rivera, Francis, 2009) [5] also carried out researches on this issue and came up with similar findings. This result also corroborates with that of Sweller (2009) [11] who discovered

that technical instructional materials like technical on projected aids, photography, tape recorder and radio enhance the performance of high- achieving students.

Research Question 2: This study also investigated the effect of audio, visual and audio-visual materials on the academic performance of students in secondary schools in Imo State. Results from this study also indicated that there is a significant relationship between the academic performance of students in secondary schools and the use of audio, visual and audio-visual materials. This implies that positive relationship exists between the use of audio, visual and audio-visual materials and the academic performance of students in secondary schools in Imo State. This result is consistent with that of Maduewesi (2009) and Kachru (2010) [4] which indicated that strong relationship existed between the use of audio, visual and audio-visual materials and performance of high achieving students in Language. The result of this study is also in line with that of Aremu (2008) [1] who found out that audio, visual and audio-visual materials are instructional resources and instruments that promote learning among students in secondary schools in Imo State.

Conclusion

Teachers in secondary schools should come to understand their unique role in the use of instructional resources such that the outcome of manipulation of such materials in educating students will improve the students’ academic standards.

Teachers should be aware that when instructional resources are adequately used in teaching the students, the role such materials play includes interest booster, knowledge transmitter, memory stimulate, time saver and an eye opener. On the other hand, students should know that without their active involvement while instructional resources are being used by their teachers, learning may not be real and permanent. Therefore, students are encouraged to pay attention in the class whenever instructional resources are used for them in order to maximize their performance. In conclusion, it should be borne in mind that when instructional resources are adequately and appropriately used by the teachers and the students also pay attention in the class and outside the class (in a case of field trips) learning development is bound to be enhanced.

Recommendations

In view of the findings of this study, the following recommendations would be made for the teachers, students, parents and school administrators/government. Firstly, since teachers are the ones who use instructional resources to teach the students, whether such materials will have a positive effect on the academic performance of the students depend on the proficiency with which the teachers handle the resources. It is therefore recommended that the teachers should use the instructional resources with appropriate teaching methods that will bring about active involvement of the students. It is also recommended that the students relate well to the instructional materials and pay attention while they are being used by their teachers to impart knowledge. The resultant effect of this is that they will learn quickly and use their imagination correctly thereby making learning to become real and permanent. Parents are also enjoined to contribute their own quota by ensuring that provisions are made for these instructional resources. They must also encourage their children to imbibe reading culture and form good studying habits both at home and in the school. Parents must also see to it that there should be no communication gap between the home and school. Finally, the school administrators and the government must always have consultations with the experts or professionals in the design of appropriate instructional resources. In-service training programmes, workshops, seminars and conferences on the selection and use of instructional resources should be organized from time to time to enrich and update the knowledge of teachers in the school's system.

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