

PERCEIVED EFFECTIVENESS OF THE USE OF INSTRUCTIONAL MATERIALS IN COLLEGES OF EDUCATION IN NORTH CENTRAL STATES NIGERIA

USMAN, Shola Raheem^{1*}, AJADI, Tunde Abdulkadir²

¹*Department of Curriculum and instruction, Kwara State College of Education, Ilorin, Tel No: 08038205169
Email: uthmanshola@gmail.com*

²*Department of Educational Foundation, Kwara State College of Education Ilorin, Phone No: 08032441757,
Email: ajaditunde75@yahoo.com*

***Corresponding Author:**
uthmanshola@gmail.com

Abstract

Curriculum implementation through teaching and learning activities become more effective when the process is supported with relevant resources. Learning can be enhanced with a variety of educational materials because they stimulate, motivate and hold the student's attention for a while during teaching. The study is aimed at evaluating the effectiveness of the use of teaching materials in colleges of education in the north-central states, Nigeria. The study will directly assess the availability, usability and effective usage of instructional materials with the intention of suggesting ways of exploiting the strength of the materials. The descriptive research design of the survey type was adopted for the study. The population of the study consists of all academic staff and students of State owned Colleges of Education in North-central states Nigeria. 1050 students and lecturers participated in the study. They participants were chosen using Multi-stage Sampling Technique. Data were collected with Lecturer Perceived Effectiveness of Use of Instructional Materials Questionnaire (LPEUIMQ) and Student Perceived Effectiveness of Use of Instructional Materials Questionnaire (SPEUIMQ). The reliability coefficient of 0.72 and 0.76 obtained for LPEUIMQ and SPEUIMQ were considered high. The instruments were administered by the researcher with the help of assistance from the colleges. Data collected were analyzed with descriptive and inferential statistics. Findings from the study revealed that instructional materials were not available in the required quantity and that the available ones were useable to a great extent and fairly utilized. It was recommended among others that college management and regulatory authorities should prioritize.

Keywords: instructional materials, teaching aids, audio materials, visual materials, audio-visual material

INTRODUCTION

Education is regarded as essential to the survival and well-being of individuals and countries in the growing global development. The priorities of the stakeholders in education is to make the process involve in acquire education better. The emerging needs of use of instructional materials for teaching and learning become a mandatory issue.

According to Salami (2008), the development, success and even the National survival requires education at all levels, now more than ever, a sufficient number of experienced, knowledgeable, motivated, dedicated and competent teachers to ensure the proper development of the nation. The teacher is the first medium in the classroom. He is the planner and designer of instruction. He carried out the implementation too through several activities, which is based on communication. Therefore, the teacher requires certain competencies that would enable him to plan, design, develop, produce and utilize series of materials and resources for the purpose of instruction.

The need for modern instructional materials in education is being felt now more than ever before in the history of education in Nigeria. The success of an effective communication in any teaching and learning system lies principally in the use of words and additional support materials. These supports include the curriculum content, teacher preparation, evaluation, identification of resources, and the use of teaching aids (Awolola, 2006). Instructional materials or teaching aids from an input required of a teacher to carry out effective teaching in the classroom. Awolola (2006) assert that the place of teaching aids has long been recognized in the society. It has been quite beneficial as a means of introducing and therefore sustaining the interest of the students. Whereas Ajayi and Salami (2002) declared that most curriculum development authority aids should be an important and integral part of curriculum development.

Instructional materials are meant to hold the attention and create the impression which will last for a long time for both slow and fast learners. Teaching aids provides a variety of information which enhances motivation and interest in students and the success of an effective communication in any teaching and learning system lie principally in the use of teaching aids. According to Abioye (2006), the teacher of yester years relied on few or no said in their teaching because they believed they could force knowledge into the empty brain of their students. Research shows that many or most children find teaching and learning distasteful and unpleasant due to the lack of teaching aids Modern teaching believes that learning should consist of pleasure activities which will appeal to sense of hearing, smelling testing and touching of learners. In order for the teacher to appeal to all the sense above, he needs to use teaching aids.

Craig (2005) also emphasize that teaching materials cover all the material and practical ways a teacher can use to make education more effective and easier for students to achieve the purpose of teaching. This could include traditional objects such as boards, charts, slides, overhead projectors, real objects and video or film tapes, as well as new objects and methods such as computer, DVDs, CD-ROMs, the Internet and video conferencing.

According to Aduwa-Ogiegaen and Imogie (2005), these sand resources that include audio recorder, still image, film filters, map chart, graphs and much more provide different or individually integrated learning experience to meet different teaching and learning experience. Fakomogbon (2000) also reports that teaching materials have a quality that contributes to the psychological motivation and structure of students. He went on to say that it contributes to the success of any classroom mobilization, lesson presentation, recall and memory, active participatory guidance and feedback response According to Aduwa-Ogiegaen and Imogie (2005), these sand resources. which includes audio cassette tape, still image, film filters, map chart, graphs and much more provides a variety of individual learning information or integrated to meet different teaching and learning experience.

Fakomogbon (2000) also reports that teaching materials have a quality that contributes to the psychological motivation and structure of students. He went on to say that it contributes to the success of any classroom motivation process, lesson presentation, active participatory guidance and evaluation. It is only when these instructional materials are adequately provided and well utilized that they perform all the enormous purpose that have been said. In Early childhood school and classroom, instructional materials are tools for enriching, visualizing, simplifying, transmitting and accelerating the teaching (Oladipo, 2001).It has been discovered that many teachers teach in abstract without using the required materials (Ibrahim 2000). Very many of them stick to the use of only textbook as their instructional material without necessarily making use of additional aids to compliment their teaching. Many of these materials are not usually available in the school for teachers use.

According to Hassan (2011) schools whose teachers use a lot of teaching materials do better than schools whose teachers do not use teaching materials. This is further in confirmed Ibrahim (2010) study that private schools perform better than public schools because students and teachers are provided with adequate and quality learning and learning resources. Because of this importance, schools at all levels of education have been advised to have quality and adequate teaching resources to improve the quality of learning for their students.

Textbooks are the materials or tools that teachers use to promote students' learning space during teaching and learning so that meaningful learning can take place. Fakomilogbon (2000), described educational materials as resources and resources that can be used to promote. Encourage and simplify the teaching and learning process. He also emphasized that if things

are well put together and used properly; they can help the teacher to teach effectively, effectively and the learner can learn faster and better.

Writing about the role of teaching materials in teaching and learning, Ibrahim (2010) noted that science education programs cannot be taught effectively without the availability of teaching resources. This is because the teaching materials help those who learn to develop problem-solving skills and the scientific attitude. Explaining this point, Ajayi and Ogunyemi (1990) emphasize that when textbooks are provided that meet the needs of the curriculum, students will be able to access the resources provided by the teacher, and each student will be able to read at his own pace. The result is that students will do much better.

The essence of producing teaching materials to simplify the learning process of teaching. The point is not to use educational materials such as ornaments in our classroom or as objects to be presented at award-winning national exhibitions with advanced teaching materials. If the essence of the production of educational materials is to use such materials to facilitate learning, then it seems logical that the best approach that can be taken in any production activity is to predict the production of research findings on how individuals learn. Besides, for example, there are many factors that affect people's attention. There are also ideas about how we look at things. Therefore, for a class teacher, who wants to produce teaching materials, his production should be in line with sound principles.

While introducing a variety of learning theories, one should ensure that the classroom teacher is guided by the views of experts during the production and use of teaching materials. They provide a practical basis for thinking about pregnancy and minimize students' irrational work responses as it makes learning permanent.

The building materials have a high level of interest to the reader; because they provide real, inclusive information on the part of the students. Educational materials promote imaginative development, this is especially true with animated images, as they provide an unparalleled experience with other objects and contribute to diversity, department and diversity. Therefore, the use of teaching aids in teaching / learning process gives the learner basic knowledge and this enriches learning.

The materials are in various classrooms; sound audible or audible, visual or audio. Audio tutorials therefore refer to those devices that use only hearing aids, such as television, audio tape, etc. visual aids are those visual aids such as board, slide chart, film. clip, etc. audio and visual teaching materials are therefore a combination of materials that appeal to your senses both hearing and seeing as a television and computer animation.

McMillan and Forsyth (2011) believed that among the teaching materials a classroom teacher uses visual and audio-visual combinations. In visual separation, two different groups appear and are a digital icon.

The visual structure looks like independent objects such as drawing, drawing, recording, etc. For example when we draw a computer, the image gives an idea of what the computer looks like. On the other hand, what is seen is digital where the representation is not the same as what the object represents. So when we write the word Computer instead of drawing it we use digital visual. Lack of knowledge is lost when digital is used rather than a visual image.

In addition to classifying sensors based on sensory methods, there are four other ways to differentiate and print and unprinted Hardware / Software and software / first-use software, second and third generation with high technology / high cost and low technology / low cost teaching materials. As mentioned earlier the sensory mode consists of three groups (a) audio (b) visual and (c) audio and visual.

Phase 1: Mode of audio audio visual audio disposable audio, audio tape, audio (real to real tape). Visual effects of project slides etc. Book journal, maps, newspaper graphs, charts, charts, posters, sketches, sketch and board etc. computer TV, animation, video language laboratory, etc.

Section 2: Printed and non-printed teaching materials Printed materials unpublished journals for books, magazines, graphic newspaper charts, cartoon graphs, etc. television, board model, animation etc.

Category 3: Hardware / Hardware and Software / Items: Hardware / Hardware and Software / Equipment Computer TV, record player, over slide projector, play board, video play track, machine etc. (audio and video chalk etc.)

Phase 4: First, second and third generation of teaching materials. The first three-dimensional board, magazine, chart, maps, drawing posters, pictures etc. television, films, video, video system, radio, projector, etc. computer satellite etc.

Category 5: High-tech / high-cost and low-cost / low-cost materials include both second- and third-generation teaching materials available in section 4 above while low-cost items include generation items.

The list of teaching materials that teachers can use to improve teaching quality is endless. Teachers' level of ingenuity, ingenuity and imagination are endless. The teaching materials will therefore include all kinds of information that can be used to promote and encourage effective teaching and learning activities.

Much research has been done on the use of teaching aids in teaching and learning process. Hassan (2011) researched on the effect of teacher training materials on the performance of Muslim students in secondary schools in the Zaria Local Government Area of Kaduna State. A sample of 100 SSII students was randomly selected, pre-tested and divided into test and control groups. The students in the experimental group were taught Islamic subjects using teacher-made teaching materials while those in the control group were taught without them. Pre- and post-test assessment data were analyzed to determine equity for group skills and student achievement in assessment and control groups. Results: shows that about 42% of Islamic teaching schools with teaching resources made by teachers work better than teachers who do not teach.

Similarly, Abas (2000) conducted research on problems affecting the teaching of Islamic subjects in some selected high schools in the major cities of Katsina. The purpose of this study was to identify the challenges affecting the Islamic education system. Four research questions were formulated and the questionnaire was used for data collection. The results showed that there was a shortage of Islamic studies teachers in schools. The study recommends that adequate and qualified teachers of Islamic studies should be employed and that parents should support their ward in the pursuit of Western and Islamic education; that teaching resources should be provided to schools by the government, and teachers on their side should make some kind of development, as teaching resources contribute positively to teaching and learning; in schools.

Stephen and Isaac (2013) investigate the impact of teaching materials on student performance in Chemistry at Cross River State High Schools. The design of the two groups prior to the pre-test was approved by the study. A single research questionnaire and a single hypothesis designed to guide research. A total of 100 (SS 1) Chemistry students were selected from Yakuur Local Government School of Cross River State using simple random sampling techniques. 50 SSI (Assessment Group) students were taught teaching aids while another 40 (Control Group) were taught without teaching aids. A validated Chemical Success Test (CAT) test was used to collect research data and a half-breakdown was performed using Pearson product correlation to obtain a reliability coefficient of 0.67. It shows that students using teaching aids perform better than those taught without teaching aids and that the use of teaching aids often improves students' understanding of concepts and leads to higher academic success.

Dhakal (2017) examined the availability and use of teaching materials in teaching Geography in public secondary schools in the Kathmandu region, Nepal. A sample was made up of 174 students from selected school schools. Data is analyzed using percentages. The results show that printed textbooks and geography textbooks in high schools are available and their use is high while audio, visual and audio instruction in geography is inadequate and rarely used in classrooms. Teaching geography. Local materials are rarely used by teachers in schools. All education stakeholders must face the challenge of making learning resources available and be used.

The above-mentioned researchers have found that trained teachers use a variety of teaching materials to teaching their subjects, and therefore, this research will be conducted to investigate the effectiveness of teaching aids in teaching and learning process in the North-central State Colleges of Education. in Nigeria

Statement of the problem

Achieving educational goals depends on the quality of education provided to the learner at a particular level. Part of the curriculum needs to be planned, designed and structured in such a way that the focus learner will benefit from meaningful and meaningful learning in school. Studies on teacher education and the use of teaching resources have been conducted by several researchers for instance, Ibrahim (2010) conducted a research on effects of classroom variables on teaching and learning of social studies in secondary schools in Ilorin metropolis. The work focused primarily on a single subject at the secondary school level of education in Ilorin metropolis. Findings from this and many of its kinds cannot be generalized to tertiary institutions such as the College of Education. In the same vein, Sulaiman (2013) examined the use of instructional materials for effective learning of Islamic studies in junior secondary schools in Kano State. This study is also limited in scope as the coverage was on a single subject at a lower level of education in school located in another geopolitical zone. Dhakal (2017) conducted a research on availability and Utilization of Instructional Materials in Teaching Geography in secondary schools in Oyo state. This study look at availability and utilization of instructional material in secondary schools in Oyo state while the present work is effectiveness of instructional materials in Colleges of Education in North Central Nigeria. Available literature show a clear gap in knowledge on the state of instructional materials availability, usage and effectiveness in North-central Nigeria College of Education.

Purpose of the Study

The purpose of this study was to:

1. Investigate the availability of instructional materials in the North-Central colleges of education in Nigeria
2. Establish the extent to which the available instructional materials are useable during teaching and learning
3. Investigate the effectiveness of use of instructional materials in the colleges
4. Find out if there is difference in the students and lecturer perception of the effectiveness of instructional materials.

Research Questions

The research were guided by the following questions:

1. Are instructional materials available in adequate numbers in the colleges of education?
2. To what extent are the available materials useable for teaching and learning?
3. To what extent are instructional materials effectively utilized in the colleges?

Research Hypothesis

The following hypothesis has been raised for the purpose of this study:

1. There is no significant difference in the lecturer and students perception on the effectiveness of instructional materials.

Methodology

This study employed the descriptive research design of the survey type. The population of the study consists of all academic staff and students of State owned Colleges of Education in North-central states Nigeria. The sample consists of 350 academic staff and 700 students which were proportionally sample from the population using Multi-stage Sampling Technique. At the first stage simple random sampling techniques was used to select three states out of six states in North-central States of Nigeria.

At the second stage, simple random sampling technique was used to select three Schools from each of the Colleges sampled. In the same vein, four departments were selected from each from School. At the third stage, proportional sampling technique was used to select 350 academic staff and 700 students that responded to the instrument used in this study. Two sets of instruments tagged Lecturer Perceived Effectiveness of Use of Instructional Materials Questionnaire (LPEUIMQ) and Student Perceived Effectiveness of Use of Instructional Materials Questionnaire (SPEUIMQ) were used for the purpose of data collection in the study. LPEUIMQ was responded to by the academic staff while SPEUIMQ was administered to students. Both instruments are designed to elicit information on personal characteristics of the respondents and the effectiveness of the use of instructional materials. The two instruments seek specific information on the availability and usage of audio, visual and audio-visual materials in the colleges. Face and content validity of the instruments were ascertained by experts in educational curriculum study in Kwara State College of Education Ilorin, Kwara State. The reliability of the instruments were ensured using test-retest method. The instruments were administered twice on lecturers and students in a college of education that is not part of the sample within an interval of two weeks. The results of the two tests were correlated using Pearson Product Moment Correlation (PPMC). The coefficient of 0.72 and 0.76 obtained for LPEUIMQ and SPEUIMQ were considered high and the instruments were adjudged reliable. The instruments were administered by the researchers with the help of trained research assistant in the selected colleges. Data were analyzed using both descriptive and inferential statistics. Hypotheses were tested at 0.05 level of significance.

RESULTS AND DISCUSSION

Research Question 1: Are instructional materials available in adequate numbers in the colleges of education?

Table 1: Availability of instructional materials in adequate Number

Instructional Materials	Rating				Remarks
	Adequate	%	Inadequate	%	
Audio	341	32.48	709	67.52	Inadequate
Visual	211	20.1	839	79.9	Inadequate
Audio-Visual	226	21.52	824	78.48	Inadequate
Average	259	24.67	791	75.33	inadequate

Table one presents the responses on availability of instructional material in adequate number in the Colleges of Education. The table shows that 341(32.48%) respondents said the audio materials were available in adequate number while 709(67.52%) rated the availability as inadequate. On visual materials, 211 (20.10%) said they were adequate while 839(79.90%) argued they were inadequate. The table shows that 226(21.52%) of the respondent agreed that audio visual materials were adequate while 824 (78.48%) said they were inadequate. On the average, 259(24.67%) of the respondent agreed instructional material were adequate in the colleges of education while 791(74.33%) submitted the materials were inadequate in number. Thus, instructional material were not available in adequate number in the Colleges of Education

Research Question 2: To what extent are the available materials useable for teaching and learning?

Table 2: Extent of usability of available instructional materials

Materials	Rating						Remarks
	not useable	%	useable to some extent	%	useable to a great extent	%	
Audio	277	26.38	308	29.33	465	44.29	Useable to a great extent
Visual	216	20.57	376	35.81	458	43.62	Useable to a great extent
Audio-Visual	119	11.33	476	45.33	455	43.33	Useable to some extent
Average	204	19.43	387	36.83	459	43.75	Useable to a great extent

Table two shows the extent to which the available instructional material are useable for teaching and learning. The table indicated that 277(26.38%), 308(29.33%) and 465(44.29%) agreed that audio materials are not useable, useable to some extent and useable to a great extent respectively. On the usability on visual materials 216(26.57%), 376(35.81%) and 458(43.62%) said they were not useable, useable to some extent and useable to great extent respectively. On the average, 204(19.43%), 387(36.83%) and 459(43.75%) submitted that the available instructional material are not useable, useable to some extent and useable to great extent respectively. Thus, the available instructional material in the colleges are found useable to a great extent by lecturer and students for teaching and learning.

Research Question 3: To what extent are instructional materials effectively utilized in the colleges?

Table 3: Extent of effective utilization of instructional materials

Materials	Rating						Remarks
	Not effectively utilized	%	Effectively utilized to some extent	%	Effectively utilized to a great extent	%	
Audio	346	32.95	422	40.19	282	26.86	Effectively utilized to some extent
Visual	334	31.81	456	43.43	260	24.76	Effectively utilized to some extent
Audio-Visual	256	24.38	502	47.81	292	27.81	Effectively utilized to some extent
Average	312	29.71	460	43.81	278	26.48	Effectively utilized to some extent

Table three shows the extent at which the instructional materials are effectively utilized in the colleges of education. 346(32.95%) respondent said that audio materials are not effectively utilized while 422(40.19%) and 282(26.86%) said they were effectively utilized to some extent and effectively utilized to a great extent. On visual materials, 334(31.81%), 456(43.43%) and 260(24.76%) were of the view that they were not effectively utilized, effectively utilized to some extent and effectively utilized to a great extent respectively. 256(24.38%) 502(47.81%) and 292(27.81%) agreed that audio-visual material were not effectively utilized, effectively utilized to some extent and effectively utilized to a great extent respectively. In all, 312(29.71%) said the instructional material were not effectively utilized while 460(43.81%) and 278(26.48%) of the respondent agreed they were effectively utilized to some extent and effectively utilized to a great extent. Thus, instructional materials are effectively utilized in the colleges of education to some extent.

Hypothesis one: There is no significant difference in the lecturer and students perception on the effectiveness of instructional materials

Table 4: Difference in the Lecturer and Students perception on the effectiveness of instructional materials

Variables	N	Mean	SD	df	t-cal.	p-value
Lecturer	350	27.37	3.1107	238	1.939	0.054
Students	700	28.33	2.93			

Table four shows the t-cal as 1.939 with a p-value of 0.064 which indicate that the result is not significant. Thus, the null hypothesis was not rejected. This means that there was no significant difference in the lecturer and students perception on the effectiveness of instructional materials

Discussion

Findings from this study revealed that instructional materials are not available in the required number in the colleges of education. Thus implies that teaching and learning activities are not adequately supported with audio, visual and audio-visual material such as audio recorder, still image, film flutters, map, charts, graphs among others. The inadequate supply could be ascribed to low funding of education in the country as the internally generated revenue of the college are not sufficient to make instructional material available for lecturer and student usage. This aptly justifies the position and argument of Oladipo (2001) that many teachers teach in abstract without using required materials.

The result equally showed that the available instructional materials in the colleges of education were found useable for teaching and learning to a great extent by both student and learners. The implication of this is that audio, visual and audio-visual material are in good state and could be utilize for teaching and learning activity in the college. It equally means that the available materials are not obsolete thereby meeting the instructional needs of both student and lecturers. This finding could result from the increasing understanding of school managers and regulatory authorities that instructional materials must be in good conditions to serve educational purposes. Thus, the management must have put appropriate maintenance measures in place. This finding corroborate the position of Fakomilogbon (2000) that educational material should be apt to promote student learning, encourage and simplify the teaching learning process.

Findings on the extent to which the available instructional material are effectively utilized revealed that it was to some extent. This implies that the audio, visual and audio-visual materials available to the colleges were not underutilized and were not fully utilized for teaching and learning purpose. This finding could be attributed to the fact that lecturers and student are careful in order to avoid overusing them. This position aligns with Aduwa-Ogiegaen and Imogie (2005) that resources such as audio recorder, still image, film filters, graph and others requires some level of skills in order to use them provide different integrated learning experiences to learners.

In testing hypothesis finding revealed that there was no significant difference in lecturer and student rating of the extent to which instructional materials are effectively utilized. This implies that the user and recipient of educational resources in the colleges of education did not differ on the report that audio, visual and audio-visual materials were effectively utilized to some extent. This finding could be ascribed to the fact that lectures and student benefit equally from the available instructional materials in that teaching activities are made easy for the former while the assimilate more when the materials are utilized appropriately this finding affirmed the Ajayi and Salami (2002) and Awolola (2006) positioned that as a means of sustaining learners attention, instructional materials development be an integral part of the curriculum development process.

Conclusion

Based on the findings from this study, it was concluded that college of education in north central , Nigeria do not have sufficient instructional materials needed for teaching and learning activities. It was also concluded that the available instructional materials are in usable state and are fairly utilized by lecturers and students. Was equally inferred that both lecturer and students agreed on the extent to which the available materials are utilized.

Recommendations

The following were the recommendation in view of the findings from this study:

1. It was recommended that government and college of education management should prioritize then provision of necessary instructional materials,(audio, visual and audio – visual) in the right quantity as this would make teaching and learning activities less tasking and more interesting to the students.
2. The college management should sustain the current serviceable status of available instructional material and those to be provided later in order to make them serve the desired purpose. This can be achieved by putting maintenance measures in place across the department and schools within the college.
3. Management in each college of education should as a matter of necessities mandate the optimum use of the available resources in order to avoid depreciation that often follows disuse. This can be achieved by monitoring students and lecturers. Use of the materials and providing needed guidance on their usage.

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