USE OF INSTRUCTIONAL MATERIALS AS A DETERMINANT OF TEACHERS' EFFECTIVENESS IN SECONDARY SCHOOLS IN AWKA SOUTH LOCAL GOVERNMENT AREA OF ANAMBRA STATE

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Abstract
This study investigated the use of instructional materials as a determinant of teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State. Three specific purposes, three research questions, and three hypotheses guided the study. Correlational design was adopted for the study. The population of the study comprised all the 516 teachers in the 19 public secondary schools in Awka South Local Government Area of Anambra State. A sample size of 258 teachers was drawn for the study through proportionate stratified sampling technique. Structured questionnaires, "Instructional Materials Questionnaire (IMQ) and Teachers' Effectiveness Questionnaire (TEQ)" were used for data collection. The instruments were face validated by three experts. Internal consistency coefficients of 0.86 and 0.90 were obtained for IMQ and TEQ using Cronbach's Alpha statistical method. The researchers administered the instrument to the respondents with the help of three research assistants. Data were analyzed using Pearson Moment Correlation Coefficient. The p-value was used to determine the significance of relationship at 0.05 significant level for all hypotheses. The findings revealed that there is positive relationship between instructional materials (audio instructional materials, visual instructional materials, and audio-visual instructional materials) and teachers' effectiveness. From the results of the hypotheses, significant relationship was established in all the variables of the study. Based on the findings, the study recommended among others that educational stakeholders should build a standardize laboratories and libraries which will be well equipped with modern equipment and well-furnished to meet modern day demand in producing self-reliance graduates.
Keywords: Instructional Materials, Teacher, Teachers' Effectiveness

Introduction

Education is perceived as the most essential gift children may receive from their parents or guardians who help them become useful to themselves, families and respective societies. This means that the soul of any society depends on education for survival. In the views of Unachukwu and Nwankwo (2012), education is fundamental to all kinds of development such as human, political, economic, social or intellectual. Similarly, Ipole et al. (2018) held that education is the aggregate of all processes by which a child or youths or adult develops the abilities, attitude and other forms of behavior of positive values. Education is also an on-going process and experience everyone comes across from birth till death. Education in Nigeria formally begins from a child enrolling into a school. However, one of the most

important human resource personnel that contribute towards the educational development of students is the teacher. A teacher is a trained person with skills and experiences and whose job is to teach in schools. He is also a person who is capable of imparting knowledge and shaping the youths to the wider scope of knowledge. Uyanne et al. (2020) referred to a teacher as one who holds a teaching certificate and or licensed by the state, owns at least a bachelor's degree from an institution of higher learning and well qualified in his area of specialization. Nwankwo et al (2015) viewed a teacher as a person who stands in the interface of transmission of knowledge, values and skills in the learning process. Thus, a teacher refers to a trained and experienced individual who is employed to impart knowledge, instructs, and guides students in various subjects or skills. Teachers need to be effective because they play a crucial role in shaping the intellectual and personal development of their students. A teacher is said to be effective if he is hard working and diligent to duties and particularly the job he was employed to do in school. With this, it is well understood that for a teacher to be effective in his job, he needs to display professionalism in all his teaching dealings. Effective teachers can inspire, motivate, and facilitate learning, which leads to better educational outcomes and the overall development of students. Teachers' effectiveness impacts students' academic success, personal growth, and future opportunities. Chukwu and Ezepue (2018) referred to teachers' job effectiveness as the degree of which teachers carry out their primary duties of teaching as well as their general attitudes towards the teaching profession and their activities. Similarly, Ojelade et al. (2020) described teachers' job effectiveness as the ability to combine relevant inputs for enhancement of the teaching and learning process. The researchers were of the view that teacher job effectiveness is when a teacher makes good use of his opportunity as a teacher to positively transform the life of his students. This may not be achieved alone by the teacher; the use of instructional materials goes miles to make this dream a success.

Instructional materials are those materials used by a teacher to simplify his teaching. Mustapha et al. (2022) described instructional materials as those resources employed to facilitate effective teaching and learning process. They are used to provide the richest possible teaching and learning interaction between the teacher and the learner by promoting effective communication process. Similarly, Chukwunaso et al. (2022) defined instructional materials as instructional media used for instructional purposes. According to Ahmed et al. (2012), instructional materials constitute alternative channels of communication, which a teacher can use to convey more vividly instructional information to learners. They represent a range of materials which can be used to extend the range of vicarious experience of learners in a teaching-learning situation. Munnir and Musa (2020) acknowledged that instructional materials are such resources used by teachers to aid explanations and make learning of subject matter understandable to students during teaching and learning process. In the researchers' view, instructional materials are visual and audio-visual aids, concrete or non-concrete, used by teachers to improve the quality of teaching and learning activities. They observed that instructional materials have been grouped according to the senses they appeal. Adesola et al. (2022) grouped instructional facilities into visual, audio and audio-visuals; all serving different functions of literacy. Similarly Mustapha et al. (2022) classified instructional materials into three namely: audio media, visual media, audio-visual media, and stressed that when properly utilized bring about effective learning, which consequently results to better academic achievement. Sodangi et al. (2022) gave few examples of visual facilities to include maps, chart and pictures; audio facilities include radio, loudspeaker, audio-tape, talking books and toy telephone while example of audiovisuals includes television, desktop and laptop computers. Visual facilities appeals to the sense of sight, audio facilities appeals to the sense of hearing while audiovisuals appeals to the sense of sight and hearing. The researchers however perceive from literature that the consistent use of instructional materials by teachers contributes to their job effectiveness.

Audio instructional materials are educational resources designed to convey information and facilitate learning through auditory means. They can take various forms, such as recorded lectures, podcasts, audio books, language learning programs, and audio guides. Musah and Umar (2017) described audio instructional materials as educational resources that are delivered primarily through sound, allowing learners to acquire knowledge, skills, and information through auditory means. These materials according to the authors leverage the power of audio to provide instruction, guidance, and support in various fields of study. Audio instructional materials offer a versatile and engaging approach to education, leveraging the power of sound to facilitate learning, comprehension, and retention of

information. Umar et al. (2020) viewed audio instructional material as educational content that is presented in an auditory format, such as recorded lectures, audio books, podcasts, or audio guides. This type of material allows learners to listen and absorb information through sound, enhancing their understanding and retention of the subject matter (Sunder, 2018; Nguyen et al, 2012). Similarly visual instructional materials are other form of instructional material identified in this study.

Visual instructional materials are tools or resources that aid in the process of teaching and learning by using visual elements to convey information. They enhance the understanding and retention of concepts by engaging learners through visual perception. According to Jeronen et al. (2017), visual instructional materials refers to any form of educational material that uses visual elements, such as images, diagrams, charts, or videos, to convey information or facilitate learning. These materials enhance the learning experience by providing visual representations that can aid comprehension and retention of the subject matter. Ezeh et al. (2021) explained that visual instructional material encompasses various visual aids employed in teaching and learning processes. To the scholars, these aids can include slideshows, info graphics, posters, models, maps, graphs, and illustrations. They serve as effective tools to support instruction by presenting information in a visually engaging and easily understandable manner.

Audio-visual instructional materials refer to teaching and learning resources that combine both auditory and visual elements to enhance the learning experience. These materials are designed to engage learners by presenting information through multiple senses, which can facilitate better understanding, retention, and application of knowledge. Effiong and Igiri (2015) defined audio-visual instructional materials as teaching aids that combine both auditory and visual elements to enhance the learning experience. They held that the materials can include videos, slideshows, presentations, animations, and interactive multimedia content that engage learners through both sight and sound. According to Bello et al. (2022), audio-visual instructional materials are educational resources that utilize audio and visual components to deliver information or present concepts. These materials can include audio recordings, images, charts, graphs, diagrams, and other visual representations that complement spoken or written explanations to facilitate comprehension and retention.

Different authorities have written on ways by which the use of instructional materials determines teachers' job effectiveness. For instance, Kemenanaebi (2017) held that the effectiveness of a teacher is proved on the ways he logically manipulates available instructional materials to gain the confidence of his students. Ogbuze and Okoli (2020) noted that the level of teachers' effectiveness, job performance and their success in teaching various subjects in secondary schools is greatly dependent on the degree and extent of utilization of up-to-date instructional materials; which revolve around facilities, equipment and supplies like the physical plants, printed and non-printed materials. On the other hand, teacher ineffectiveness in the job they are employed to do can be attributed to inadequacy of instructional materials. Kulo and Agbago (2016) discovered that the objectives of school subjects are not achieved as a result of poor teaching and lack or inadequacy of instructional materials to motivate students. Ayuba (2018) also attested to inadequacy of instructional materials and resources as a major blow to teacher effectiveness and job performance.

Purpose of the Study

The main purpose of this study was to investigate the use of instructional materials as a determinant of teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State, Nigeria. In specific terms, the study sought to:

1. determine the relationship between the use of audio instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State;
2. examine the relationship between the use of visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State; and
3. find out the relationship between the use of audio-visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State.

Research Questions

The following questions were raised to provide answers for the study:

1. What is the relationship between the use of audio instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State?
2. What is the relationship between the visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State?
3. What is the relationship between the use of audio-visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State?

Hypotheses

The following null hypotheses were formulated for the study and were tested at 0.05 level of significance.

1. There is no significant relationship between the use of audio instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State?
2. There is no significant relationship between the use of visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State?
3. There is no significant relationship between the use of audio-visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State?

Method

Correlational research design was employed for this study. The study was conducted in Awka South Local Government Area of Anambra State, Nigeria. The population of the study comprised all the 516 teachers in the 19 public secondary schools in Awka South Local Government Area of Anambra State. The sample size of the study was 258 teachers (50% of the population) drawn using proportionate stratified random sampling technique. Structured questionnaires titled: "Instructional Material Questionnaire (IMQ) and Teachers' Effectiveness Questionnaire (TEQ)" were used for data collection. The instruments were face validated by three experts in Faculty of Education Nnamdi Azikiwe University, Awka. Internal consistency co-efficient of 0.86 and 0.90 were obtained for IMQ and TEQ respectively using Cronbach's Alpha statistical method. The researchers administered the instrument to the research participants with the help of three research assistants. Out of the 258 copies distributed, 254 copies were returned duly completed, and used for data analysis. Pearson Product Moment Correlation Coefficient (r) was used to answer the research questions. The (r) was used to determine the nature of the relationship between the variables of the study. The magnitude of the relationship was determined using Nworgu (2015) guidelines, thus: 0.00-0.19, very low; 0.20-0.39, low; 0.40-0.59, moderate; 0.60-0.79, high, and 0.80-1.00, very high. The p-value was used to determine the significance of the relationship for the three hypotheses. The decision rule was: a null hypothesis was not accepted where the calculated p-value was less than the stipulated level of significance (0.05). The reverse is the case where the calculated p-value was greater than the stipulated level of significance. All analyses were carried out using Statistical Package for Social Science (SPSS) Version 25.

Results

Research Question One: What is the relationship between audio instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State?

Table 1: Pearson correlation analysis on the relationship between the use of audio instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State

Source of Variation	N	Audio instructional materials r	Teachers' effectiveness r	Remark
Audio instructional materials	254	1.00	0.805	
Teachers' effectiveness	254	0.805	1.00	Very High Positive Relationship

The results in Table 1 show the relationship between the use of audio instructional materials and teachers' effectiveness in secondary schools. The computed Pearson Correlation Coefficient (r) value

is 0.805, indicating a very high positive relationship. This means that there is a very high positive relationship between the use of audio instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State.

Research Question Two: What is the relationship between the use of visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State?

Table 2: Pearson correlation analysis on the relationship between the use of visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State

Source of Variation	N	Visual instructional materials r	Teachers' effectiveness r	Remark
Visual instructional materials	254	1.00	0.816	
				Very High Positive Relationship
Teachers' effectiveness	254	0.816	1.00	

The summary of data analysis on the relationship between the use of visual instructional materials and teachers' effectiveness in secondary schools presented in Table 2 reveals that the computed Pearson Correlation Coefficient (r) value is 0.816, suggesting a very high positive relationship between the use of visual instructional materials and teachers' effectiveness. However, there is a very high positive relationship between visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State.

Research Question Three: What is the relationship between the use of audio-visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State?

Table 3: Pearson correlation analysis on the relationship between the use of audio-visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State

Source of Variation	N	Audio-visual instructional materials r	Teachers' effectiveness r	Remark
Audio-visual instructional materials	254	1.00	0.790	
				Very High Positive Relationship
Teachers' effectiveness	254	0.790	1.00	

Table 3 shows the Pearson correlation results on the relationship between the use of audio-visual instructional materials and teachers' effectiveness in secondary schools. The results show that the Pearson Correlation Coefficient (r) value on audio-visual instructional materials and teachers' effectiveness is 0.790. The results indicate that there is a high positive relationship between the use of audio-visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State.

Test of Hypotheses

Hypothesis One; There is no significant relationship between the use of audio instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State.

Table 4: Simple linear regression summary analysis on the use of audio instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State

Source of Variation	N	Audio instructional materials r	Teachers' effectiveness r	df	p-value	Remark

Audio instructional materials	254	1.00	0.805			
				252	.000	Sig
Teachers' effectiveness	254	0.805	1.00			

The analysis of the test of hypothesis two in Table 4 shows that the p-value (.000) is less than .05. However, the null hypothesis was not upheld. This signifies that there is significant relationship between the use of audio instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State with strong R-value of 0.805. More so, the R-square value was 0.626, which also indicates that there is 62.6% significant correlation between the use of audio instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State.

Hypothesis Two: There is no significant relationship between the use of visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State.

Table 5: Simple linear regression summary analysis on the use of visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State

Source of Variation	N	Visual instructional materials r	Teachers' effectiveness r	df	p-value	Remark
Visual instructional materials	254	1.00	0.816			
				252	.000	Sig
Teachers' effectiveness	254	0.816	1.00			

The results of the test of hypothesis two as presented in Table 5 show that the p-value (.000) is less than .05. Thus, the null hypothesis was not upheld. This signifies that there is significant relationship between the use of visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State with strong R-value of 0.816. More so, the R-square value was .529, which also implies that there is 52.9% significant correlation between the use of visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State.

Hypothesis Three: There is no significant relationship between the use of audio-visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State.

Table 6: Simple linear regression summary analysis on the use of audio-visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State

Source of Variation	N	Audio-visual instructional materials r	Teachers' effectiveness r	df	p-value	Remark
Audio-visual instructional materials	254	1.00	0.790			
				252	.000	Sig
Teachers' effectiveness	254	0.790	1.00			

The results of test of hypothesis three shown in Table 6 indicate that the p-value (.000) is less than .05. Hence, the null hypothesis was not upheld. This signifies that there is significant relationship between the use of audio-visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State with strong R-value of 0.790. More so, the R-square value was 0.516, which also point out that there is 51.6% significant correlation between the use of

audio-visual instructional materials and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State.

Discussion of Findings

Findings on the relationship between the use of audio instructional materials and teachers' effectiveness as displayed in Table 1 revealed that there is a very high positive relationship between the use of audio instructional materials and teachers' effectiveness in secondary schools. The findings in Table 4 also showed that there is a significant relationship between the use of audio instructional materials and teachers' effectiveness. The finding is in line with the findings of research conducted by Wada et al. (2022) on the perception of teachers and administrators on instructional materials utilization for effective teaching of electrical installation and maintenance works in Technical Colleges of Adamawa State, Nigeria. Their findings revealed that instructional materials such as electrical drawings for residential wiring diagrams, recorded compact disc, filmstrips, computers, audio players, microphones and televisions are available for teaching and learning of electrical installation and maintenance works trade. The finding is also in line with the findings of Ishola and Falobi (2018) who appraised of instructional materials as being used in secondary schools in Mushin Local Government Area of Lagos State, Nigeria. Their study found that there is a significant relationship between teaching materials (audio, visual and audio-visual) and teaching effectiveness among teachers in Lagos State public schools and that there is a significant improvement in the academic performance of students due to the use of teaching materials in Lagos State public schools.

The findings in Table 2 on the relationship between the use of visual instructional materials and teachers' effectiveness showed that there is a very high positive relationship between visual instructional materials and teachers' effectiveness in public secondary schools. Similarly, the results in Table 5 indicated that there is significant relationship between the use of visual instructional materials and teachers' effectiveness. The interpretation of the findings is that when teachers in Awka South Local Government Area of Anambra State imbibe the use of visual instructional materials in instruction delivery this will result to an increase in their efficiency. The finding is in agreement with Isah (2016) who established that there is there is a significant difference in the academic performance of students taught social studies using visual instructional resources and those taught using lecture method in junior secondary schools in Yobe State, meaning that students in the experimental group performed significantly better than their counterpart in the control group. The study findings also tallies with the findings of Dalali and Mwila (2022) who found that The use of visual aids in teaching and learning process lead to active participation of students in the teaching and learning process which in turn influences their academic achievement. Visual aids are important and effective in the process of teaching and learning, thus encouraging every teacher to improvise and use visual aids during lesson presentation.

Regarding the relationship between the use of audio-visual instructional materials and teachers' effectiveness, the results as displayed in Table 3 indicated that there is a high positive relationship between audio-visual instructional materials and teachers' effectiveness in secondary schools. Results in Table 6 also showed that there is significant relationship between the use of audio-visual instructional materials and teachers' effectiveness. This signifies that and increase in teachers use of audio-visual materials will lead to improvement in their job effectiveness. In line with the above finding, Ojalade et al. (2020) study which investigated the effects of audio-visual instructional materials on teaching science concepts in secondary schools in Bwari Area Council, Abuja, Nigeria. The study findings revealed among others that audio-visual instructional material has a significant effect on students' achievement in sciences; also the use of audio-visual instructional material enhanced the effectiveness among male and female students learning science without gender disparity. Similarly, Sunder (2018) work on the effectiveness of audio-visual aids in teaching-learning process found that the use of audio-visual aid makes the subject matter easy to understand and explain and students learn quickly and facilitate the acquisition, retention and recall of lessons learned. The study also revealed that audio-visual aids help the teachers to control the class room and overcome the physical difficulties. Finally, study established that the use of audio-visual instructional materials in teaching literature is less time

consuming and as a result, teachers have ample time to create enjoyable classroom activities and conduct an effective teaching and learning process.

Conclusion

Based on the findings of the study, it was found that there is relationship between the use of instructional materials (audio instructional materials, visual instructional materials & audio-visual instructional materials) and teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State. However, the study concluded that the use of instructional materials is an important variable that determines teachers' effectiveness in secondary schools in Awka South Local Government Area of Anambra State.

Recommendations

Based on the findings of the study, the following recommendations were made.

1. Educational stakeholders should build a standardize laboratories and libraries which will be well equipped with modern equipment and well-furnished to meet modern day demand in producing self-reliance graduates.
2. School management, the government and other educational stakeholders should pay more attentions to instructional materials by ensuring that secondary schools are provided with modern and sophisticated teaching aids as it was recorded that teaching aids enhance student's retentions and learning.
3. Teachers should encourage active student's participation in class work by adopting instructional materials interactions.
4. Principals should design workshops, seminars, conferences or orientation courses to acquaint the teachers with the latest development in the field of Computer and other modern instructional materials.

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