



APPRAISAL OF AVAILABLE INSTRUCTIONAL MEDIA IN THE IMPLEMENTATION OF COMPUTER STUDIES PROGRAMME IN UPPER BASIC SCHOOLS IN ENUGU STATE, NIGERIA

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Abstract: *The main purpose of the study was to Access available instructional media for implementation of computer studies programme in Upper Basic schools in Enugu State. Two research questions and two null hypotheses guided the study. The study adopted the survey research design. The area of study was Enugu State in the South East geo-Political Zone of Nigeria. The population for the study comprised all the 188 teachers in the 207 urban and rural government owned secondary schools in Enugu State. Made up of 87 computer teachers in urban schools and 101 computer teachers in rural schools in Enugu State. The instrument for data collection was 18-item checklist and 6 items questionnaire developed by the researcher. The reliability of the instrument was ascertained using Cronbach Alpha. Reliability indices of 0.91 and 0.89 were obtained from clusters A and B respectively. The overall reliability index of 0.90 was obtained for the entire instrument. The data collected were analyzed using mean and standard deviation to address the research questions and t-test statistics to test the hypotheses at 0.05 level of significance. The results of data analysis, revealed among others that: instructional media were poorly available for implementation of computer studies programme in urban and rural Upper Basic schools in Enugu State. Recommendations were made among others that stakeholders in education should ensure that schools are adequately provided with instructional media for computer studies implementation.*

Keywords: Availability, Improvisation, Instructional media, Urban and Rural schools, Upper basic

Introduction

Education is an indispensable tool for personal and social development of all nations. Many countries in the world see education as a good investment for national development because it is expected to produce the required quantity and quality of human resources for economic growth. The Federal Republic of Nigeria (FRN, 2014) recognizes education as an instrument par excellence for effecting national development. In order to actually effect national development, or the transformation of any society, available education must not only be qualitative but also functional. Effective teaching in these fields demands full deployment and application of instructional media, availability and

adequacy of instructional media depend largely on funding.

Upper Basic education is the bridge between the primary and Senior Secondary levels of education in Nigeria. The relevance of Upper Basic education in Nigeria made the federal government to succinctly state the broad aims of that level of education in the National Policy on Education, to include among others that education prepares the individual for useful living within the society and for higher education (FRN, 2014). For any education to actually serve its real purpose of societal transformation, the indispensable components of such education must include; quality infrastructure in the form of conducive and adequate classrooms, quality instructors (teachers) who are



highly motivated for commitment plus availability of relevant instructional media for teaching and learning. Instructional media are major tools needed by the teacher to provide quality teaching that will enhance pupils' learning.

One important dimension in teacher education that is getting a lot of attention is the use of instructional media. Instructional media are essential and significant tools needed for promotion of teachers' efficiency and improvement of students' performance. Instructional media make learning more interesting, practical, realistic and appealing. They also enable both the teachers and students to participate actively and effectively in lesson sessions. They give room for acquisition of skills and knowledge and development of self- confidence and self- actualization. Ikerionwu (2017) sees instructional media as objects or devices that assist the teacher to present a lesson to the learners in a logical manner. Such instructional media include visual and audio-visual aids and could either be concrete or non-concrete. These instructional media bring life to learning by stimulating students to learn.

The teaching of computer studies programme in upper basic schools' classrooms in Enugu State has been dominated by lecturing and giving of notes, accompanied by use of the chalkboard/whiteboard and prescribed textbooks (Okafor, 2017). So, the problems of not achieving learning objectives are attributed to teachers' inability to select the instructional procedures and media that will enable the learner to internalize, retain and apply what has been learnt. Discussing the teaching of Computer Studies, Afolabi, (2017) opined that instructional media are not just inadequate but that teachers are also not adequately prepared for selection of the right one and this obviously affects the implementation of Computer Studies programme in upper basic schools.

One of the major problems education sector in Nigeria is faced with is the low level of the performance of secondary school students in both local and standardized examinations that are computer-based. It has become a great concern for researchers, educators

and all education stakeholders over the years. It was observed by Okafor (2017) that students usually fail in examinations owing to improper teaching methods and lack of essential teaching aids for instructional delivery. The act of teaching is fundamentally concerned with passing ideas, skills and attitudes from the teacher to the learner. In computer studies, experience has shown that spoken words alone in the communication of ideas are grossly ineffective and inefficient in producing desired learning outcomes (Okam, 2013). Every year, when the results of public examinations are released, there had always been mass failure in computer studies. The reason for this could be link to the fact that there are some topics perceived to be difficult in computer studies that pose serious problem of comprehension to students. Such topics may not be taught effectively without relevant instructional media.

Effective implementation of computer studies programme requires a proper availability of instructional media. Availability here means the state of being sufficient in terms of satisfying the standard requirements to enhance effective instructional activities in computer studies programme (Okam, 2013). To ensure quality instructional delivery in computer studies in upper basic schools, the following instructional media should be available; computer hardware and software, textbooks, journals, magazines, periodicals, wall charts, posters, pictures, graphs, maps, globes, filmstrips, slides, projectors, radio, tape-recorders and televisions (Adebule, 2008). The availability of adequate instructional media in the teaching/learning process generally is very important. Olaitan (2010) noted that without the provision of adequate instructional media in schools for teaching computer studies, the achievement of the computer studies curriculum objectives might be quite impossible. Some of the mentioned media like pictures, posters, charts and globes appeal to the sense of sight (visuals), while some like televisions, films and slide projector are audio visuals, as they appeal to both sense of sight and hearing. Okam (2013) stated that, if the instructional media needed are not available, effective



learning may not be achieved. Therefore, government must ensure that instructional media are adequately provided in schools.

Statement of the Problem

Effective teaching of computer studies depends among other factors on the use of instructional media in instruction. It is observed however, that most teachers in upper basic schools preferred the expository method of teaching that is devoid of manipulation of instructional media in teaching and learning as instructional media are known to facilitate effective teaching and learning.

Many problems in different dimensions, confront effective implementation of computer studies in Enugu State. Research evidence has shown these problems to include issues of use of instructional media in the implementation of computer studies programme in upper basic schools. Furthermore, it had been observed that instructional media are inadequate and at the same time, teachers are not adequately prepared.

Therefore, the problem of the study put in question form is; to what extent instructional media are available for implementation of computer studies programme in upper basic in Enugu State, Nigeria?

Purpose of the Study

The main purpose of the study was to access the Appraisal of available instructional media for implementation of computer studies programme in upper basic schools in Enugu State. Specifically, the study sought to:

1. determine instructional media available for implementation of computer studies programme in upper basic schools in Enugu State;
2. find out the extent to which teachers in upper basic schools improvise non-available instructional materials for implementation of computer studies programme.

Research Questions

The following research questions guided the study:

1. what instructional media are available for implementation of computer studies programme in urban and rural upper basic schools in Enugu State?

2. to what extent do teachers in upper basic schools improvise non-available instructional media for implementation of computer studies programme in urban and rural schools in Enugu State?

Research Hypotheses

The following hypotheses formulated to guide the study were tested at 0.05 levels of significance:

1. there is no significant difference in the mean ratings of teachers in urban and rural upper basic schools on the availability of instructional media for implementation of computer studies programme in Enugu State
2. there is no significant difference in the mean ratings of teachers in urban and rural upper basic schools on the extent to which teachers improvise non-available instructional media for implementation of computer studies programme

Research Methods

The researcher adopted descriptive survey design; the study was carried out among the six education zones in Enugu state. All the computer teachers were used because their numbers are manageable and in best position to response to the questions on instructional media since they have first hand information on which are available or not. Population for the study comprises of all the 188. The population was manageable thus census sampling was adopted. The instruments for data collection were checklist and questionnaire developed by the researcher; the instrument was validated by three experts. Cronbach alpha was used to compute the internal consistency of the instruments, the reliability index was 0.50. The researcher uses research assistant for data collection. Mean and standard deviation was used to answer the research questions while t test was used to answer the research hypotheses.

Research Question 1: what instructional media are available for implementation of computer studies programme in urban and rural upper basic schools in Enugu State?



Table 1: Mean and Standard Deviation on the Instructional Media Available for Implementation of Computer Studies Programme in Urban and Rural upper basic Schools in Enugu State

N = 184										
		URBAN			RURAL			OVERALL		
S/N	Items	$\bar{x}$	SD	DEC	$\bar{x}$	SD	DEC	$\bar{x}$	SD	DEC
The following Instructional Media are Available for Implementation of Computer Studies Programme in Urban and Rural upper basic Schools in Enugu State										
1	Computer system	2.77	1.17	A	2.11	0.98	D	2.42	1.12	D
2	Projector screen	2.02	0.85	D	2.02	0.79	D	2.02	0.82	D
3	Tablet PC	2.10	0.80	D	2.06	0.81	D	2.08	0.80	D
4	Scanner	2.10	0.78	D	2.07	0.76	D	2.09	0.77	D
5	Smart Board	2.01	0.85	D	2.06	0.97	D	2.04	0.91	D
6	White Board	2.05	0.87	D	2.12	0.98	D	2.09	0.93	D
7	Computer laboratory	2.02	0.78	D	2.12	0.79	D	2.08	0.79	D
8	Personal Digital Assistant	1.78	0.86	D	1.94	0.82	D	1.86	0.84	D
9	Pictures	2.00	0.84	D	1.89	0.81	D	1.94	0.82	D
10	Radios	1.98	0.83	D	2.05	0.78	D	2.02	0.80	D
11	Televisions	1.92	0.83	D	2.01	0.83	D	1.97	0.83	D
12	Video compact Discs	2.02	0.84	D	2.13	0.78	D	2.08	0.81	D
13	Furniture’s like chairs and table	2.85	1.22	A	2.05	0.80	D	2.42	1.09	D
14	Uninterrupted power supply	2.03	0.85	D	1.97	0.82	D	2.00	0.83	D
15	Conducive class	1.99	0.77	D	1.99	0.81	D	1.99	0.79	D
16	Electric power supply	1.98	0.83	D	1.90	0.83	D	1.93	0.83	D



17	Internet facilities	2.05	0.85	D	2.08	0.94	D	2.07	0.90	D
18	Solar power	1.93	0.82	D	2.10	0.82	D	2.02	0.82	D
Grand Mean and Standard Deviation		2.09	0.87	D	2.04	0.84	D	2.06	0.86	D

Results of analysis in table 1 showed that the overall mean responses of items 1-18 on the checklist were less than the cut-off point of 2.50, and therefore considered to be Disagree (D). High mean responses were, however, recorded for items 1 ($\bar{x} = 2.77$, $SD = 1.17$) and 13 ($\bar{x} = 2.85$, $SD = 1.22$) among teachers in urban schools, indicating that they agreed that computer systems and furniture were available in their schools. This was not the case for teachers in rural schools, which recorded low mean responses for the items. Overall mean responses were, however, low for both items. Furthermore, the value of the grand mean responses of teachers in urban schools was low ($\bar{x} =$

2.09, $SD = 0.87$). Similar trend was also recorded for teachers in rural schools ($\bar{x} = 2.04$, $SD = 0.84$). The overall grand mean response was also low ($\bar{x} = 2.06$, $SD = 0.86$). This implies that instructional media were scarcely available for implementation of computer studies programme in urban and rural upper basic schools in Enugu State.

Research Question 2: to what extent do teachers in upper basic schools improvise non-available instructional media for implementation of computer studies programme in urban and rural schools in Enugu State?



Table 2: Mean and Standard Deviation on the Extent to which Teachers in upper basic Schools Improvise Non-available Instructional Media for Implementation of Computer Studies Programme in Urban and Rural upper basic Schools in Enugu State

N = 184										
S/N	Items	URBAN			RURAL			OVERALL		
		$\bar{x}$	SD	DEC	$\bar{x}$	SD	DEC	$\bar{x}$	SD	DEC
	Extent to which Teachers in Secondary Schools Improvise Non-available Instructional Media									
1	Teachers improvise periodic charts to introduce a topic computer studies	2.87	1.24	GE	2.97	1.11	GE	2.92	1.17	GE
2	Teachers improvise weaved objects from the raw material in the environment for teaching of computer studies	1.79	0.77	LE	1.96	0.81	LE	1.88	0.79	LE
3	Display of apathy by the student towards the implementation of computer studies	2.01	0.85	LE	2.03	0.82	LE	2.02	0.83	LE
4	Teacher draw pictures/graphic representations of keyboarding objects to be taught	2.91	1.21	GE	2.97	1.12	GE	2.94	1.16	GE
5	Teachers personally molds objects like monitor for the teaching of computer studies	2.08	0.83	LE	2.01	0.82	LE	2.04	0.82	LE
6	Teachers use students to demonstrate diagram of how computer definition look like while teaching computer studies	2.10	0.83	LE	2.16	0.77	LE	2.14	0.79	LE
Grand Mean and Standard Deviation		2.29	0.95	LE	2.35	0.91	LE	2.32	0.93	LE

Results of analysis in Table 3 showed that the overall mean responses of items 1 and 4 were higher than the cut-off point of 2.50, and therefore considered to be Great Extent (GE). Low mean responses were recorded for other items, indicating that teachers improvise periodic charts, and draw pictures/graphic representations as improvisation, to a great extent. Furthermore, the value of the grand mean response of teachers in urban schools was low ($\bar{x} = 2.29$, $SD = 0.95$). Rural schools also recorded low mean responses ($\bar{x} = 2.35$, $SD = 0.91$). The overall grand mean

response was also low ($\bar{x} = 2.32$, $SD = 0.93$). This implies that teachers in upper basic schools improvise non-available instructional media for implementation of computer studies programme at a low extent.

Hypothesis 1: There is no significant difference in the mean ratings of teachers in urban and rural upper basic schools on the availability of instructional media for implementation of computer studies programme in Enugu State



Table 3: t-test of Mean Ratings of Teachers in Urban and Rural upper basic Schools on the Availability of Instructional Media for Implementation of Computer Studies Programme in Enugu State

LOCATION	N	Mean	Std. Deviation	t-cal	df	t-crit	Dec.
URBAN	86	2.09	0.23	1.60	182	1.96	NS
RURAL	98	2.04	0.20				

Table 3 shows that the t-value for the difference in mean ratings of teachers in urban and rural upper basic schools on the availability of instructional media for implementation of computer studies programme in Enugu State is 1.60 at 0.05 level of significance and 182 degree of freedom. Since 1.60 is less than the critical t-value of 1.96 at 0.05 level of significance and 182 degree of freedom, the null hypothesis is therefore not rejected. Hence, there was no significant difference in the mean ratings of teachers in urban and rural upper

basic schools on the availability of instructional media for implementation of computer studies programme in Enugu State.

Hypothesis 2: There is no significant difference in the mean ratings of teachers in urban and rural upper basic schools on the extent to which the teachers improvise non-available instructional media for implementation of computer studies programme

Table 4: t-test of Mean Ratings of Teachers in Urban and Rural upper basic Schools on the Extent to Which the Teachers Improvise Non-Available Instructional Media for Implementation of Computer Studies Programme

LOCATION	N	Mean	Std. Deviation	t-cal	df	t-crit	Dec.
URBAN	86	2.30	0.44	0.86	182	1.96	NS
RURAL	98	2.35	0.44				

Table 4 shows that the t-value for the difference in mean ratings of teachers in urban and rural upper basic schools on the extent to which the teachers improvise non-available instructional media for implementation of computer studies programme is 0.86 at 0.05 level of significance and 182 degree of freedom. Since 0.86 is less than the critical t-value of 1.96 at 0.05 level of significance and 182 degree of freedom, the null hypothesis is therefore not rejected. Hence, there was no significant difference in the mean ratings of teachers in urban and rural schools on the extent to which the

teachers improvise non-available instructional media for implementation of computer studies programme.

Findings

From the results of data analysis, it was found that:

1. Instructional media were scarcely available for implementation of computer studies programme in urban and rural upper basic schools in Enugu State.
2. The extent to which teachers in upper basic schools improvise non-available instructional media for implementation of computer studies programme is low;



Discussion of findings

The results of data analysis for the research questions and corresponding null hypotheses were described as follow:

Instructional Media Available For Implementation of Computer Studies Programme

Results of analysis for Research Question 1 showed that instructional media were poorly available for implementation of computer studies programme in urban and rural upper basic schools in Enugu State. Further analysis showed that there was no significant difference in the mean ratings of teachers in urban and rural upper basic schools on the availability of instructional media for implementation of computer studies programme in Enugu State. This finding agrees with the observation of Ogbondah (2008) who alerted on the gross inadequacy and underutilization of instructional media necessary to compensate for the inadequacies of sense organs and to reinforce the capacity of dominant organs. In a similar vein, Enaigbe (2009) noted that basic media such as textbooks, chalkboard and essential equipment like computers, projectors, televisions and video machines are not readily available in many schools. Okebukola (2017) also decried the situation where computers are not part of classroom technology in public schools in Nigeria. This ignores the warning of Okam (2013) that, if the instructional media needed are not available, effective learning may not be achieved. Okam's point is buttressed by the assertion that availability of educational facilities enhances students' learning by allowing them to be involved in demonstrations and practice which would continue to build their skills (Oyinloye & Oluwalola, 2014). The consequence of the finding of this study is as submitted by Oluwagbohunmi and Abdu-Raheem (2014), who stressed that non-availability and inadequacy of instructional media are major causes of ineffectiveness of the school system and poor performance of students in schools. There is the need, therefore, for efforts by stakeholders towards addressing the anomaly in upper basic schools in Enugu State.

Improvisation of Non-available Instructional Media by Teachers

Analysis on Research Question 5 showed that teachers in upper basic schools do not adequately improvise non-available instructional media for implementation of computer studies programme. It was further found that there was no significant difference in the mean ratings of teachers in urban and rural upper basic schools on the extent to which the teachers improvise non-available instructional media for implementation of computer studies programme. Poor improvisation has been bemoaned by previous researchers such as Ogbondah (2008), Ololube (2008), Oso (2011), Ugwuanyi (2014) and Abdu-Raheem and Oluwagbohunmi (2015). Ugwuanyi (2014) observed that gender disparity, ignorance and lack of proper guidance in schools are major factors that result in little or no interest in the utilization of improvised media. The finding does not augur well for the computer studies programme considering that improvisation of locally made teaching aids could assist to improve quality of graduate turnout from schools and can raise standard of education generally. Abdu-Raheem and Oluwagbohunmi (2015) also corroborated the idea that resourceful and skillful teachers should improvise necessary instructional materials to promote academic standard in Nigerian schools. Considering that instructional materials are poorly available to teachers, improvisation stands out as the next best option, and efforts should be geared towards equipping and motivating teachers towards adopting it.

Conclusions

This study sought to access the appraisal of available instructional media for the implementation of computer studies programme in upper basic schools in Enugu State. The findings from results of data analysis revealed that instructional media were poorly available for implementation of computer studies programme in urban and rural upper basic schools in Enugu State. There was also no significant difference in the ratings of teachers in urban and rural upper basic schools in all the findings. This implies that the challenges affect all



schools irrespective of location. It is therefore, important for relevant stakeholders to focus on implementing the proffered remedies with a view to bringing about a positive paradigm shift in the implementation of the computer studies programme in upper basic schools in Enugu State.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Relevant stakeholders such federal and state ministries of education, faith-based organizations, non-governmental organizations and parents should collaborate towards ensuring that schools in urban and rural areas are adequately equipped for implementation of the computer studies programme.
2. In-service trainings should be organized and sponsored by state ministries of education to continually equip teachers for the implementation of the computer studies programme.
3. Teachers should involve students in the improvisation of locally made instructional media as part of learning activities in order to ensure that they improvise in schools.

References

- Adebule, O. I. (2008). Quality assurance in teacher production: Issues and considerations for colleges of education. *Nigeria Journals of Curriculum Studies*. Special edition: 282-291
- Afolabi, S. S & Adeleke, J. O. (2017). Assessment of resources and instructional materials status in the teaching of mathematics in south western Nigeria. *European Journal of Scientific Research*, 43(1), 406-410
- Enaigbe, A. P (2009). Strategies for Improving Supervisory Skills for Effective Primary Education in Nigeria. *Edo Journal of Counseling*, 2(2), 235-244.
- Federal Republic of Nigeria (2014). *National Policy on Education*. Sixth edition, Lagos: NERDC press.
- Ikerionwu .I. (2017). Social studies and resources. In Edinyang, S.. D. & Effiom, V. N. (eds) *Social studies Material & Resources*. Calaba: Maesot & Company
- Ogbondah, L. (2008). An appraisal of instructional materials used to educate migrant fishermen's children in Rivers State, Nigeria. *International Journal of Scientific Research in Education*, 1(1), 13-25.
- Okafor, A. A. (2017). Straggles for effective teaching and learning of science and technology; The mathematical view point. Presented at inaugural conference on STAASES at BSU Makurdi.
- Okam, C. C. (2013). Needed paradigm shift for re-positioning social studies education to meet vision 20-20-20 challenges. *Nigerian Journal of Social studies and Civic Education (NJSSCE)* Vol. 2 (1) 39-52
- Okebukola, P. (2017). Old, new and current technology in education. *UNESCO Afric*, 14(15), 7-18
- Olaitan, S. O. (2008). Communication technologies for increasing consumers choice of goods and services in African environment. In B. G. Nworgu (Ed). *Education in the information age: global Challenges and enhancement strategies*. Nsukka: University Trust Publishers.
- Ololube, N. P. (2006). Teachers Instructional Material Utilization Competencies in Secondary Schools in Sub-Saharan Africa: Professional and non-professional teachers' perspective. In *Conference Proceedings of the 6th International Educational Technology Conference*.
- Oluwagbohunmi, M. F, & Abdu-Raheem, B. O (2014). Sandwich undergraduates' problem of improvisation of instructional materials in social studies: The case of Ekiti State University. *Journal of International Academic Research for Multidisciplinary*, 1(12), 824-831
- Oluwagbohunmi, M. F, & Abdu-Raheem, B. O (2015). Pre-service teachers problem of improvisation



of instructional materials in social studies: The case of Ekiti State University. *Journal of education and practices*, 6(4), 15-18

Oso, L. (2011). Need for improvisation in classroom teaching. *The Punch*, June 20.

Oyinloye, O. T. & Oluwalola F. K. (2014). Modern office instructional facilities in office technology and management in polytechnics: a

means to insecurity management in Nigeria. *ABEN Conference Proceedings* 1(1) 125-133

Ugwuanyi, J. C. (2004) Provision for basic instructional materials; Panacea for effective teaching of physical education in Nigeria secondary schools. *The Science Teachers Today Journal of Science*. Eha-Amufu Federal College of Education, vol. 2(1), 56-61