

AVAILABILITY AND USE OF COMPUTERS FOR FINE ARTS INSTRUCTION IN ENUGU EDUCATION ZONE OF ENUGU STATE, NIGERIA

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ABSTRACT

Education system in this era has made it imperative that integration of technology into teaching and learning in curriculum reforms should be given a high priority among other sectors. This should acquaint teachers and learners the necessary prerequisite for mastering computer skills for effective and efficient teaching and learning process. This study was designed to find out the availability and use of computers and its accessories in secondary schools for Fine Arts instructions in Enugu Education Zone of Enugu State. Ten (10) teachers and twenty (20) students were selected. Fifty (50) hard copies of questionnaires were used to elicit vital information from the respondents. The research questions were focused on the availability of computers, the use of computers, problems encountered by students and teachers and possession of requisite computer skills. The findings revealed that the computers available are not enough for Fine Arts instructions, and the Fine Art teachers do not sufficiently possess the needed computer skills. The paper recommended that the computer instructions should emphasize on practical section that will ensure hands-on experience on systematic training of computer application skills.

Keywords: Use of Computers, Fine Arts, Education, Technology Integration, Self-Reliance

INTRODUCTION

Education properly planned and well directed is the key to success and progress especially in Nigeria. No nation can boast of being democratic, self-reliant, buoyant, etc, without integrating technology in their educational system. Education in developing countries like Nigeria has been described as suffering from 'Nortional Sickness' (learning without well-equipped practical laboratories). Instructions are ineffective in giving students the opportunity to apply the skills learned in actual situations especially in the area of Fine Arts. Today, a child lives in a technological world, a world of technological revolution. He watches films, listens to radio, watches television and video, uses compact disc, versatile compact disc, and digital versatile disc. The child has become influenced in various ways by these media programmes, that he will want to experience these new patterns of communication in his class especially with computer which presents instructions in multimedia system.

According to Nwafor (2017), computer can be defined as an electronic machine that accepts data through input devices, processes it as information, and produces result (information) through the output devices. The origin can be traced to several centuries ago when scientists sought for a mechanical aid to help proffer solution for mathematical problem. However, they finally came out with an electronic solution that solves most of mathematical problem as well as those encountered in Fine Arts and Design. Computer is one of the educational resources/devices that appeal to the senses of hearing and sight simultaneously, and can help the teacher to teach effectively by increasing the level of interest in the instructive lesson delivery.

Richmond (2016) emphasized that educators use computers to track grades and communicate with students through computer-controlled projection units as they can add graphics, sound, and animation to their communications. The importance of computer in Fine Arts instruction cannot be over-emphasized in that it can present information in multimedia format which is essential in teaching of some concepts that are very difficult to comprehend, especially in areas of Art history, Sculpture, Graphics, Textiles where students find it most difficult to understand the concept. Nwafor (2017) posited that multimedia system in education emphasized on the uses of media in teaching which include the use of film, video, and music in addition to more traditional materials and methods computer incorporates in all these attributes of multimedia. Another important use of computer in Fine Arts is Computer Assisted Instruction (CAI) and Computer Aided Design (CAD). These are the modes of teaching which involve the use of

computers for instructional purposes. The use of computers is very important in classrooms in combination with traditional modes of instruction through the use of chalks and blackboards.

Computer Assisted Instruction (CAI) is a diverse and rapidly expanding spectrum of computer technologies that assist the teaching and learning process. Examples of CAI application packages include guided drills and practice exercises, computer visualization of complex objects, and computer-facilitated communication between students and teachers. Information that helps in teaching encourages interaction that can be presented on computers in form of text or in multimedia formats, which include photographs, videos, animation, speech, and music. The guided drill is a computer program that poses questions to students, returns feedback, and selects additional questions based on the students' responses. Recent guided drill systems incorporate the principles of education in addition to subject matter knowledge into the computer programme. This can be seen in Module software which is an Open Source Course Management System (OSCMS) specifically designed for E-learning. This guided drill can be useful in teaching drawings especially gesture Drawing techniques in Fine Arts.

Computers can also help students of Fine Arts view some ancient objects, works of Arts that belong to old generation Artists of different Arts movements like Neo-classicism, Renaissance, Impressionism, Baroque, Realism, Romanticism, Rococo, etc. Computer is a good instructional media which students can view objects, scenes, dangerous things like wild animals that are difficult or otherwise impossible to come-by. For instance, computers can be used to display human anatomy for life drawing exercises in Fine Arts. This can be a substitution to Artist's model which are always very hard to control and manipulate during Drawing. It can also be helpful in the area of designs especially the use of CorelDraw and other design software in designing. Exploration and manipulation of simulated environments can be accomplished with CAI and CAD.

CAI can dramatically increase students' access to information. The programme can adapt to the abilities and preferences of the individual student and increase the amount of personalized instruction a student receives. Many students benefit from the immediate responsiveness of computer interactions and appreciate the self-paced and private learning environment. Moreover, computer-learning experiences often engage the interest of students, motivating them to learn and increase undependable and personal responsibility for education especially in Fine Arts where it is encouraged for individual Artist to develop his skills without or little influence from other Artists. The theoretical base for this paper is anchored on Skinner's total education plan when he

developed teaching machines in the year-1950s. The process involved identifying objectives, arranging subject matter into logical sequences, preparing and testing instructional programmes, and then implementing, testing, revising them. Skinner shifted the emphasis in education away from the teacher's presentation of information toward the learner's behavior, and especially in reinforcement of that behavior. His teaching machines provided programmed instructions, which allowed students to proceed through lessons by small steps, at their own pace, following an orderly sequence, and receiving immediate reinforcement for every correct response. Skinner's work on using teaching machines can also be applied in computer system in facilitating individualized learning. Today, an increasing array of communication media combines photographic, mechanical, and electronic devices into teaching and learning systems for individual as well as for large group instruction. The essential purpose is to employ modern communications technology to help solve the educational problems arising from the global population boom, the explosion of human knowledge, the complexity of the information to be taught and learned, the need for individualized instruction, and the shortage of qualified teachers in certain critical areas like Fine Arts. However, in educational practice, it is very pertinent to provide teachers with up-to-date information on the variety of computer resources available and instruction on the intelligent use of them in teaching Fine Arts in schools. Since the world is dynamic, the children of today are growing up in a world of mass media and, as a result, the good teacher should employ computer resources in the daily teaching of Fine Arts.

Challenges (Impediments) to Teaching and learning of Fine Arts:

1. The available computers and accessories for Fine Arts instructions are not satisfactory
2. Insufficient computer systems for teaching and learning of Fine Arts as a result of lack of funding by state and federal government.
3. The major problem encountered with the use of computers in teaching and learning of Fine Arts is lack of constant electricity supply (power supply),
4. High cost purchase of hardware and software components (resources).
5. Lack of skillful computer teachers for Fine Arts instructions.

METHODOLOGY

Design

The design of this study is survey. A survey research is a study in which the inter-relationship of sociological or psychological variables are determined and summarized (William, 2015).The

researcher applied both psychological preliminary survey variables and psychological detail survey variables on the questionnaires that were used to generate output (desired results) by the respondents.

Area of the Study

The area of study is Enugu Education Zone of Enugu State for secondary schools under the Board of Enugu State Post Primary Schools Management Board (PPSMB).

Population of the Study

The population comprised of ten (10) Fine Arts teachers and twenty (20) students who offer Fine Arts in Senior Secondary-one (SS-I) drawn from Queens College Enugu, Government Technical College Enugu, and St. Patrick's Secondary School. Emene, Enugu.

Sample and Sampling

Technique: A random sampling technique of all the 20 SS-I students who offer Fine Arts in these three secondary schools randomly selected were used. And all the ten (10) Fine Art teachers were used.

Instrument for Data Collection

The only instrument for data collection was questionnaire. The questionnaire consists of items in which the respondents were expected to indicate the availability, extent of use of computer/accessories and degree to which they possess computer skills. Two experts from Enugu State College of Education (Technical) Enugu, and Institute of Management and Technology Enugu validated the instrument.

Administration of the Instrument

The researcher personally administered the questionnaire to respondents and collected on the spot were fourteen (14) copies dully completed questionnaire used for data analysis.

Method of Data Analysis

Mean variation were used to answer the research questions two (2). Three (3) and four (4). An item-to-item analysis was carried out to determine responses at various levels of the instruments, items that have mean analysis between 2.15 and 3.50 were considered. Sufficiently Possessed or Highly Extent, 1.51 and 2.50 were Not Sufficiently Possessed or Less Extent and 0.51 and 1.50 were Not At All.

Checklist was used to answer question one.

Results generated

Table 1: Available computer/accessories for Fine Arts instructions.

S/NO	COMPUTER/ACCESSORIES	RESPONSES
1.	Personal computer (PC)	AV-AVAILABLE
2.	Laptop	NA-NOT AVAILABLE
3.	Palmtop	NA
4.	Pentium TV	NA
5.	Internet radio	NA
6.	Printer	AV
7.	Scanner	NA
8.	Digital camera	NA
9.	Light pen	NA
10.	Speakers	NA
11.	CD writer	NA
12.	Power point projector	NA
13.	External CD Rom	NA
14.	Corel draw	NA
15.	Macromedia	NA
16.	Dreamweaver	NA
17.	Freehand drawing	NA
18.	Adobe flash	NA
19.	Adobe page maker	NA
20.	Adobe Photoshop	NA
21.	Publisher	NA
22.	2D and 3D Max	NA
23.	Interruptible power supply (UPS)	NA
24.	Joystick	NA

Key

AV - Available

NA - Not Available

Table 1 shows that the out of 24 computer/accessories listed only personal computers and printers are available for teaching Fine Arts.

Table 2: Extent of use of Computer/Accessories

S/NO	AVAILABLE COMPUTER/ACCESSORIES	MEAN	DECISION LE
25.	Personal Computers	2.04	AV
26.	Printers	1.32	NA

Key

LE = Less Extent

NA - Not At All

From table 2, it is observed that, personal computers were utilized to a less extent while printers were not utilized at all.

Table 3: Problems encountered in the teaching fine arts with computers

S/NO	PROBLEMS	MEAN	DECISION LE
27.	Technical problems (in terms of functioning of the system	3.20	HE
28.	Efficient manipulation of the computer system	2.91	HE
29.	Power Supply	3.10	HE

Key

HE = High Extent

Table 3 indicates that items 27, 28, and 29 have mean scores of 3.20,

2.91 and 3.10. These mean scores show that teachers and students encounter problems in the use of computers and their accessories

Table 4: Computer skills possessed by fine art teachers.

S/NO	COMPUTER SKILLS	MEAN	DECISION
31	Computer Appreciation	2.03	NSP
32	Booting	2.61	SP
33	Knowledge of Operating windows	2.53	SP
34	Knowledge of Operating DOS	1.13	NA
35	Application of Microsoft word	1.72	NSP
36	Application of Microsoft power point	0.51	NA
37	Application of Corel draw	1.04	NA
38	Application of Dreamweaver	0.12	NA
39	Application 2D and 3D Max	0.07	NA
40	Power Point Presentation	0.02	NA
41	Application of Adobe Photoshop	0.02	NA
42	Application of Page maker	0.31	NA
43	Application of Instant Artist	0.22	NA
44	Application of Print artist	0.11	NA
45	Application of Adobe flash	0.09	NA

Key

NSP = Not Sufficiently Possessed

NA = Not At All

SP = Sufficiently Possessed

Table 4: indicates that items 31 and 34 have mean score of 2.03 and 1.13 respectively. These mean scores show that teachers do not sufficiently possess the skills of computer appreciation and application of Microsoft word. Items 31 and 32 have mean scores of 261 and 253 respectively. This shows that teachers sufficiently possess the skills of booting the computer system and knowledge of operating computer windows. Also items 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43., 44, and 45, have mean scores of 2.53, 1.13, 1.72, 0.51, 1.04, 0.12, 0.07, 0.02, 0.02, 0.31, 0.22, 0.11 and 0.09 respectively. These mean scores indicate that the teachers do not ; at all possess the skills of applications of Microsoft word, Microsoft power point, Microsoft Excel, CorelDraw, Dreamweaver, free=hand drawing, 2D and 3D Max, power point presentations, Adobe Photoshop, Adobe Page Maker Instant Artist, Print Artist and Adobe Flash.

DISCUSSION OF FINDINGS

The findings of the study revealed that computers and its accessories for teaching Fine-Arts are not available. Of all the 24 items needed for effective teaching of Fine Arts with computer and its accessories, only personal computers and printers are available. Even these few computer accessories were to less extent put into use. These findings are agreement with Adewunmi (2016) who found out the non-availability and low level utilization of computers in the secondary schools in Enugu Education Zone. The situation seems worse in Nigeria and needs to be re-addressed. The number of computers in American schools has risen from one for every 125 students in year '2000' to one for every nine students in year '2016' (Lotta, 2018). Nowadays, it is one computer for every student as seen in well-ICT driven teaching and learning academic environment. While the United States leads the world in the number of computers per school student, Western European and Japanese schools are also highly computerized. The study showed that the teachers and students do not make use of the computers. This is as a result of being deficient on the required computer skills. This is highly worrisome if the quality of the Universal Basic Education advocated by the stakeholders can be achieved by mastering basic skills in computer operations, and should be integrated in curriculum reforms in the 21st century. The findings also revealed that there are some problems encountered in the use of computers and computer accessories for Fine Arts instructions. There are great many unknown or unsolved problems in using computers for teaching of Fine Arts, among which are: identifying the most appropriate uses of computer software. This means that for an Fine Art teacher to achieve his/her aim successfully, he/she should have knowledge of computer skills and effective instructional packages to impart the ideas to the students. Gaitskell in Ibenegbu (2017) stated that, what determines the measure the value of Fine Arts instruction in the teaching method can create in children a thorough dislike for Arts that may remain with them for the rest of their life. Another serious problem is inability to have enough Arts studios that will accommodate the required number of computer systems. Some schools do not have Arts studio at all. The use of computers is hampered by non-availability of a well-spaced studio. For instance, it is highly impossible to administer a lesson using computer with power point projector in a very compact studio. Since this will be kept at an eye level while in use. Learning of Fine Art in the classroom can cause a lot of inconveniences for both students and their teachers.

Talabi in Ibenegbu (2017) pointed out that in some schools there are no rooms allocated for Arts teaching with furniture designed for this purpose Teaching is carried on in-make-shift

classroom and this can be uninspiring and boring. Inadequate fund, non-existent and epileptic power supply in schools and insecurity of these equipment pose a lot of problems in the use of computers in instructions.

Implication of the Findings

The non-availability of required number of computer systems makes it impossible for arts students to benefit more from Fine Arts instructions.

The Administrators and Art teachers have important role to play in this aspect, and exposure to computer operations during this time is helpful in increasing student's teacher's willingness to integrate computer technology in Fine Arts instructions (Adewunmi, 2017). The educational goal in the 21st century requires curriculum reformers to integrate technology (computer) in not only in Fine Arts instructions but at all education levels.

RECOMMENDATIONS

I therefore recommend as follows that:

- (i). The computer resources and the substantial number of its accessories should be made available in all the education levels in Nigeria.
- (ii). The lessons should have an in-built practical section that will ensure the systematic training in computer skills.
- (iii). The teachers should be trained and retrained in order to be conversant with the chances arising from newer computer software and hardware resources.
- (iv). Computer instructions should be a core curriculum content in the teacher training process at all levels of education.

CONCLUSION

The conventional education practices in Nigeria no longer provide prospective Arts teachers with all the necessary skills for teaching students, in terms of technology integration in Fine Arts instructions.

This may hamper their survival in technological competitive world wide today. To ensure their appropriate knowledge and proficiency in computer applications skills, computer packages require systematic training of teachers in this area. There is great need to emphasize practical skills in general computer operations to expose Art teachers to the broad spectrum of computers and its accessories in teaching and learning.

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