

THE IMPLICATIONS OF COMPUTER IN ART EDUCATION: PROBLEMS AND PROSPECTS

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Abstract

It is evident that our society is becoming more and more computer literate. The advent of the computer has transformed the way and manner things are done in most industries such as the transport, communication, medical, commerce, art and science. The traditional way of executing art which enhances creativity is gradually giving way to art through the computer. The focus of this paper therefore, is:-what role does the computer play in enhancing the teaching of art education? Will the students' creative skills be enhanced or de-valued as a result of computer usage in art education? Questionnaires were used to collect data, while the simple random sampling technique was used in selecting the respondents. The information gathered was analyzed using descriptive analysis. The test revealed that one of the implications of not implementing the use of computers in art curricula is that, the art students will be well trained in the traditional media, but will become novices in the computer art. They will become incapacitated in the use of computers for educational purposes. To facilitate professional capability and efficiency therefore, students need to be orientated towards the vast opportunities computers can afford as to the execution of art in this dynamic society and how they can be effective and versatile.

Key Words: Art, Art Education, Computer, Implication, Prospects.

Introduction

A computer is a device that can be instructed to carry out sequences of arithmetic or logical operations automatically via computer programming. Modern computers have the ability to follow generalized sets of operations, called *programs*. These programs enable computers to perform an extremely wide range of tasks (Wikipedia, 2018).

Historically, the earliest computing instrument is the ABACUS, which is known and has been in use for more than 2,000 years. It is a wooden rack holding parallel wires on which beads are strung. When these beads are manipulated (moved along the wire) according to ‘programming’ rules that the user must memorize, all ordinary arithmetic operations can be performed with ease. The concept of programmed learning by means of a teaching machine is an old one, but it has been taken a step further by the advent of the computer, and particularly of the microcomputer. Looking at the computer technology and its rapid advancements, educationists must consider art education in the light of a computer age. Moreover, art is indispensable to human existence (Palmer, 2004). Art education is an important tool in shaping the society and the individual student. For example, art produces power for pure sight, pure imagination and it should be a core for school subjects because all subjects have an element of art in them (Uzoagba, 2000).

The researcher is interested in the given topic for the following reasons:

- as a result of the advent of computer and its rapid advancement which is fast progressing, it is relevant to consider how the computer can be used in art education for effective instructions and the impact it can produce on art education students
- computer literacy as an enhancement on art for art education students

- the recent development art education is taking on and the need to re-appraise the art curriculum to include computer literacy in the art curriculum so that art students can fit in well in a technological society
- general ignorance of art students towards the opportunities available for art education in the computer via the internet
- the fear some art educationists exercise when considering the fact that art should be turned on to the computer. Some art educationists opine that, this step of turning art education unto the computer could be dangerous and would result in producing ‘lazy students’ since the computer makes available all the needed materials especially for painting.

This paper is geared towards the enlightenment of both students and teachers of art on the vast opportunities that the computer affords to art and its development in the Nigerian society especially via the internet.

Statement of the problem

It is evident that our society is becoming more and more computer literate. In every field of employment or job-seeking ventures, questions such as ‘Are you computer literate?’ are often asked. The advent of computer and its persistent progress has transformed the information, transport, communication, commerce, and even art sectors. In the area of art as in other areas of study, a lot of artists make use of the computer because it makes things easier. The traditional way of executing art which enhances creativity is gradually giving way to art through the computer. The problem of this study therefore, is, what role does the computer play in enhancing

the teaching of art education? Will the students' creative skills be enhanced or de-valued as a result of computer usage in art education?

With the coming of the computer, art has been transformed. The traditional palette of the artist is now exchanged with an already made palette in the computer where the user makes use of the colors by clicking on the needed section. However, between those who hold to the view of turning over the table of art toward computer programming for art education and those who foresee the mass production of 'lazy artists', there exists a great difference. The latter opines that students' creative skills and abilities will be killed and de-valued by the over-dependence on the computer in executing art.

Objectives of the study

Presently, in most Nigerian institutions the knowledge of the computer has become an important tool in the learning processes and research works. The objectives of this study are to:

- identify some of the negative or positive implications of computer usage in art education
- identify problems that will emerge as a result of over-dependence on the computer for the execution of art works
- suggest better ways in which computer will not reduce artists' creativity despite its usage
- examine the possibility of using computer to improve the standard of art education.

Computer in art education increases a student's access to information. It increases the amount of personalized instruction a student receives. Computer-learning experiences often engage the interest of students, motivating them to learn and increases independence and personal responsibility to their educational pursuits. Consequently, this paper is designed to

explore, document and analyze the students' reaction and output once engaged with the computer via the internet as part of their art curriculum. They can as a result produce artwork with or without aesthetic. This study is in tune trends of this modern era. It takes into consideration, contemporary society's increasing growth and need for computer literacy; Advances have been made in the Medical fields, Sciences such as-Physics, Chemistry, Mathematics and other subjects through the use of the computer. Hence the need for art education / educators and the art curricula to catch up with the new trends.

Computer and Art education

Many art educators do not use computers in their teaching. Computers unlike clay, pigment and charcoal, seem foreign to them. No longer is the knowledge of complex computer languages required to use a computer. Graphic designers have recast the face of the computer screen so that those of us without any computer savvy (understanding) can as the experts put it 'plug and play'. Though some art educators have hesitated to become involved with computers, those machines have learned to speak the art educator's language. While art educators will continue to work with traditional media, there are many reasons why they should also encourage computer art to their students. The reasons are its suitability, versatility, relevance, interest and status. With a click of the mouse, a painting or drawing screen appears with new icons depicting a variety of art media choices: charcoal, ink, oil, spray paint, pastel and water color. With a simple click of the mouse an appropriate icon to choose and use with the required medium can be available. Within an instant, the cursor becomes a paintbrush, spray can or any other tool suitable for one's desired purpose.

Through the World Wide Web (www), an art educator with a computer gains instant access to thousands of internet sites that can assist professional development (Afolayan, 2006). Type 'art lessons' into the search box of any web browser and the screen will be filled with a long list of 'point and click' titles that lead to websites full of art lessons. Many museums have placed their whole collections on the web. Compact Disks (CDs) are available with vast amounts of art material and information on them. People from around the world with shared interests can carry on keyboard conversations through online 'chat sites'. Thus, encouraging exchange of ideas and methods of doing things.

Computer art applications make it possible to do things that are not possible in other media. Computers are also designed to handle some traditional graphic and creative art challenges with much better methods. The computer is a great place to try out artistic ideas. An original sketch can be altered and saved. One can then easily view each of these variations in successions, or display several reduced copies simultaneously on the same screen. To accomplish aforementioned tasks in traditional media might take weeks.

In addition to the above discourse, there is the need to introduce the CorelDraw briefly. The CorelDraw is an essential package for art students. To open the CorelDraw package on a given computer, follow the procedures below:

- click 'Start' on the task bar (at the bottom part of the screen)
- point to 'Programs'
- point to CorelDraw
- click CorelDraw (5,6,7,8,9,10, and so on) or double-click the CorelDraw icon on the desktop.

The computer provides art students a wide scope for enhancing their creativity. Through the graphic CorelDraw package, they can draw portraits, design CD covers, design certificates, logos and make season cards or greeting cards, they can also paint using the color palette. Moreover, there is a great room of varying opportunities for creativity via the computer. The following are just a few out of the many programs that can enhance creativity via the computer:

- Photoshop, Painter 1-7 (exclusively for Digital Art), Pro-series 1-7
- DTPs-Desk Top Publishing; Quark Xpress or Adobe Page Maker can be used for cover pages
- Adobe Premiere 1-7, Aura 2 and Combustion (for film productions)
- 3D studio Max, Maya 1-4, Bryce.

The advent and rapid development of the computer in contemporary society has an advantageous effect. However, this does not mean that computer literacy in art programs is without its problems, difficulties, setbacks and prospects, advantages and goodness.

The problem, disadvantages and setbacks that come with the use or the over-use of the computer, is that art students' creative abilities, skills and manipulative capabilities may be devalued. Students will just have to sit down and by clicking on certain buttons and by responding to the commands from the computer, creative designs are made. When art is fully into computer, interest will be lost in the traditional mode of art. The attention, taste and interest of several students will be completely taken away from the traditional method since they will be fascinated at what they can produce via the computer. On the students' side, there will be some discrimination in the pace of learning. Some students of art are conversant with the computer. There may be many students who have never touched, seen or worked on a computer before.

These can pose some problems in a teaching-learning situation. Furthermore, the government pays little or no attention to art compared to science subjects in Nigeria. Therefore, to implement the use of computer in tertiary institutions for the teaching of art by the approval of the government may develop cold feet.

In spite of all these, there are prospects we can foresee with the use of the computer in passing on art instructions and activities. One of the reasons for the use of computers is its ease of use. Another prospect is that computer literacy will serve as an enhancement of art education students. The inclusion of computer literacy in the art curriculum and its implementation will enable the art students fit in well in a technologically complaint society. Also, there is the prospect that the frontiers of art will expand, as many researches, development and inventions will occur in the field of art. There is the prospect that computer literacy in art will improve the students' creative attributes, abilities, skills and will enhance their flexibility. They will have enough freedom to express themselves artistically perhaps in a 'better' way than the traditional mode.

Analysis of the Data

Questionnaires containing eighteen (18) segments were administered to some students in the Departments of Fine Art and Industrial Design. The simple random sampling technique was used in selecting the respondents. The information gathered was analyzed using descriptive statistics. Twenty-five (25) students served as the selected respondents. These students were from the Fine Arts and Industrial Design Departments of the Faculty of Environmental Design in Ahmadu Bello University, Zaria. The use of sample percentage and tables and frequency

analysis were used. The analysis of the findings in this study are presented and discussed in the tables below:

Item 1: Sex

Table 1

	Response	Frequency	Percentage
A	Male	16	64%
B	Female	9	36%
		25	100%

Item2: Identify your Department

Table 2

	Response	Frequency	Percentage
A	Fine Arts	18	72%
B	Industrial Design	7	28%
		25	100%

Table 2: above indicated that out of the total of 25 respondents, 18 (72%) were from Fine Arts while 7 (28%) were of Industrial Design Departments. This shows the keen interest of artists to the contemporary development of art via the computer and internet.

Item 3: Do students in your Department use computers for their school work?

Table 3

	Response	Frequency	Percentage
A	No	12	48%
B	Yes	13	52%
		25	100%

Table 3: shows that 12 (48%) students out of the 25 students opine that they do not use computers for school work in their department. However, 13 (52%) of them answered in the affirmative. This means that most students in their departments especially Fine Arts Department do not use computer for school work. Of the 13 (52%) respondents, all are from the Industrial Design Department who have some computer classes (lectures).

Item 4: How do you view the introduction of computers in your department?

Table 4

	Response	Frequency	Percentage
A	Appropriate	25	100%
B	Inappropriate	-	-
		25	100%

Table 4: shows that all the 25 respondents agree that the introduction of computers in their departments is appropriate. This infers that the study is in consonance with the present age and need of the students in these departments. From this viewpoint, we see that computers can be appropriate in art instruction and activity.

Item 5: What assessment will you give yourself in regards to computer literacy?

Table 5

	Response	Frequency	Percentage
A	Illiterate	6	24%
B	Partially illiterate	8	32%
C	Literate	11	44%
		25	100%

Table 5: above indicated that 6 (24%) of the students are illiterates as far as basic computer literacy is concerned. 8 (32%) are said to be partially illiterate while 11 (44%) are computer literate. Looking at the difference between the illiterate and the literate, the difference is by 20%. This signifies that much has to be done in the field of art and amongst artists so that they can fit into the current technological age.

Item 6: Do you think computers will pose any problem if used for school work especially in your Department?

Table 6

	Response	Frequency	Percentage
A	No	19	76%
B	Yes	6	24%
		25	100%

Table 6: above indicates that 19 students (76%) see no problem that the computer will pose if used in their Departments. However, 6 of the students (24%) affirm that there are problems that the computer will pose. From these two response viewpoints, the researcher inferred that though the computer has profitable prospects it also has problems as a result of over-dependence.

Item 7: If your answer in Question 6 is No, what are your reasons?

The following are some of the reasons given by 19 (76%) students out of the randomly picked 25 students about why they think computers will pose no problem if used for school work in their departments.

- the usage of computer enhances technological advancements in art
- computer is versatile
- the use of computer is essential to make graduates knowledgeable and fit in well in a technological society.

Item 8: If your answer in Question 6 is Yes, what problems do you think/suggest will be encountered?

The following are some suggestions given by 6 (24%) students about some problems that could be encountered as a result of using computers in their departmental work.

- It will encourage laziness and no one will want to do his/her work the traditional way anymore
- Students will over-use the opportunity
- There will be reduced level of draughtsman ship.

Item 9: Will the application of computer affect your creative skills or that of others?

Table 7

	Response	Frequency	Percentage
A	Yes	8	32%
B	No	17	68%
		25	100%

Table 7: above indicates that 8 of the participating students (32%) affirmed that, the application of computer will affect their creative skills while the remaining 17 students (68%) said the application of computer will not affect their creative skills or that of others.

Item 10: Which of the following variables will you prefer?

Table 8

	Response	Frequency	Percentage
A	Computers should be completely out of school	-	-
B	Computers should be implemented because they will enhance one's creative abilities	8	32%
C	Students should work with both the traditional methods and modern methods	17	68%
		25	100%

Table 8: above indicates that none opted for the variable that computers should be completely out of school, indicating that computer is essential in art education. However, 8 (32%) prefer that computers should be implemented because computers will enhance one's creative abilities while 17 (68%) prefer students work with both the traditional methods and modern methods. This variable had the greatest percentage signifying that computers should be used but not over-used and that traditional method should not be completely discarded.

Item 11: Among the two options given below, which do you think will greatly increase your draughtsman ship skills?

Table 9

	Response	Frequency	Percentage
A	Drawing via the computer	7	28%
B	Drawing on paper the traditional way	18	72%
		25	100%

Looking at **Table 9** above, 7 (28%) students consider drawing via the computer as a means that will increase their draughtsman ship skills. However, 18 (72%) students consider drawing on paper the traditional way as a means of increasing their draughtsman ship skills.

Item12: Do you foresee a situation where your total dependence on computer for your works will affect your maintenance of the traditional method?

Table 10

	Response	Frequency	Percentage
A	Yes	17	68%
B	No	8	32%
		25	100%

Table 10: above shows that 17 (68%) students foresaw a situation whereby their total dependence on computer for their works will affect their maintenance of the traditional method. On the other hand, 8 (32%) students did not see any danger in using the computer indicating that they could still maintain the traditional method and media.

Item 13: Have you tried drawing via the computer?

Table 11

	Response	Frequency	Percentage
A	No	6	24%
B	Yes	19	76%
		25	100%

Table 11: above indicates that 6 (24%) students out of the total of 25 respondents have not tried drawing via the computer while 19 of the 25 students (76%) have attempted drawing in

the computer. This connotes the innate desire to explore via the contemporary media of today's society.

Item 14: Would you love to continue with computer as your medium for expression?

Table 12

	Response	Frequency	Percentage
A	No	11	44%
B	Yes	14	56%
		25	100%

Looking at **Table 12** above, it shows that 11 (44%) of the students out of the 25 students do not love to continue with computer as their medium for expression. On the other hand, 14 (56%) affirm that they will love to continue with computer as their medium for expression. This suggests the prospects that the students foresee the computer would afford in the execution of art and art education.

Item 15: If your answer to Question 14 is No/Yes, write out reasons for your response.

In response to the above question, 11 (44%) respondents gave the following reasons as to why they would not love to continue with the computer as their medium for expression. Below are some:

- the computer does not give room for flexibility especially to the professional painter
- using computer to draw has limitations to one's individual style of expression
- it is quite difficult to manipulate

However, 14 (56%) respondents affirmed that they would love to continue with the computer as their medium for expression. Some of their reasons are as follows:

- the computer has room for imputing the traditional mode of expression and replicating it

- the usage of the computer makes it possible for one not to be left behind in this dynamic age of ours. The society has advanced technologically and computer usage is a sure way for the artist to move with the times.
- It will grant access to explore the vast opportunities embedded in the world wide web (www) for the artist.

Item 16: Are there disadvantages the computer can afford you as a creative student in your department?

Table 13

	Response	Frequency	Percentage
A	No	-	-
B	Yes	25	100%
		25	100%

Table 13: above shows that none of the respondents see any disadvantages that the computer can have on their creative skills. Nevertheless, all the 25 respondents (100%) affirmed that there are advantages the computer could afford to their creative abilities. The above table denotes that every one of the respondents agree with the computer and its relevant position in this era.

Item 17: If your answer to Question 16 is Yes/No, write out reasons for your response.

Considering the table above (**Table 13**), all the respondents affirmed that there are advantages that computer does afford. Below are some of their reasons:

- the computer saves time
- it is a sure link to improvement as an artist
- it meets the demand of our contemporary art society
- the educative software on art and samples of masterpieces on the computer will enhance ambitions and creativity in the field of art.

Item 18: Comment freely on your general views concerning computer usage.

Opportunities were given to the respondents to comment freely on their views regarding computer usage. The following were some comments given:

- computers are essentially used in all spheres of life
- it is a big advantage to art education
- computer usage is part of the way forward
- computer is a means to an end and not an end itself.

Findings/Conclusion

The findings in this paper have some implications for the students as well as the teachers of art. The main reason computer should be taught and used in art education, is to promote computer literacy, to increase students' access to information, to arouse the interest of students, motivating them to learn and increase independence and personal responsibility for education. In addition, the art student would be able to fit in well in this technological advancing society. The computer can be used to make learning acquired to become permanent, since it is viewed as an advanced teaching aid. However, the use of traditional media and the old method of teaching which is still being practiced till date in some quarters will not help if used alone. There is the need to implement computer literacy in art curriculum especially at secondary school levels and also in the tertiary institutions.

The academic implication of not implementing the use of computer in the art curricula is that the art students will be well trained in the traditional media, but will become novices in the computer art. They will become incapacitated in the use of computers for educational purposes. On the other hand, however, if computers are implemented in art education, it implies that there

will be a production of ‘balanced artists’ trained and proficient in the traditional and modern media. To facilitate professional capability and efficiency therefore, students need to be orientated towards the vast opportunities computers can afford as to the execution of art in this dynamic society and how they can be effective and versatile so that at the end they can defend their art profession even in a dynamic computer age.

Recommendations

The following recommendations if considered will go a long way to facilitate the teaching and learning processes by the use of computers in art education:

- computer literacy and programming should be inculcated into the art curriculum
- seminars and workshops should be organized for art teachers and students to enlighten them about the importance of computers in art education
- establishment of e-libraries and e-galleries in the Departments of Fine Arts and Industrial Design within Nigerian universities will also enhance the use of computer in art education
- further research should be taken on this topic or related studies

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