

PROBLEMS IN THE INTRODUCTION OF
COMPUTER TECHNOLOGY INTO THE
NIGERIAN EDUCATIONAL SYSTEM.

CONFERENCE PAPER

BY

S. A. BELLO (Ph.D)
UNIVERSITY OF LAGOS,
AKOKA, LAGOS.

A PAPER PRESENTED AT THE NATIONAL CONFERENCE
ON EDUCATIONAL PLANNING AND ADMINISTRATION
IN THE NEXT MILLENNIUM (21ST CENTURY)"
FROM 27TH TO 28TH APRIL, 1999, ONDO.

A B S T R A C T

This paper sets out to examine problems in the introduction of computer technology into the Nigerian educational system, with sample schools from Surulere Local Education District.

The questionnaire approach was used on students, teachers, school heads and education officials, both male and female in Surulere L.E.D. of Lagos State. Data collected were analysed in table using simple percentages.

Adequacy of computer trained personnel, irregular public power supply, in adequacy of the available computer sets, and prohibitive cost of the computer sets were the identified problems.

The paper suggested the need for more resources and subsidy on the present cost of computers by the government. The organised private sector and non-government organisations should also assist the educational sector.

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Introduction

This is the era of information technology where computer is playing an important role. With the increased use of computerized equipment in industry and commerce, attention is being focused on the use of computers in school settings. The need for computer technology in our educational system has become more relevant. The Federal Government has launched the National Policy on Computer Literacy at Primary and Secondary and Tertiary Levels of Education. For this policy to succeed, computers require special environment and trained teachers.

(Abimbade, 1997).

Presently, in Nigeria, computers have taken over virtually everything in the country. Computers can now be seen in places such as Business Organisations, Development and engineering systems, Traffic control and automation; Banking and Stock exchange; and lately education and research institutions.

Many educational administrators have now realised that, data reduction capabilities of computer has made it possible to produce more reliable, accurate and valid interpretations.

However, inspite of the fact that computer technology is one of the indices for assessing modern technological growth, and that computer technology has become more of a

scientific and that computer technology has become more of a scientific and technological desirable phenomenon that measures the societal growth the introduction of computer technology into the Nigeria educational system has been generating some rippling effects. (Odesanya, 1998).

The focus of this paper therefore is to examine some of the factors that are closely related or responsible for the problems of introduction of computer technology into the Nigerian educational system.

Introduction of Computer Technology

Aseweje (1995) observed that the main reasons for computers being used is that, they can digest vast amount of data and produce information very quickly. Thus, one attribute computers have, and which is not granted to human beings is the ability to undertake routine work at a very high speed. And can also retrieve very quickly alot of information and memorise it within the shortest possible time.

Babalola and Adepoju (1992), while writing on the emergence of computer usage, submitted that the earliest type of computer is the electronic computer which was first introduced in the 1940s in a few research laboratories Briggs developed the logarithm table. Outhred in his own contribution constructed the slide rule. Hollenth constructed the tabulating machine for arithmetic computer.

Pascal and Leibnitz also constructed simple arithmetic calculators while Charles Babbage now referred to as the father of computers devised his proto type modern day computer.

While classifying the introduction of computer technology, stern and Sippl (1983) identified "four generations of computers" The first generation of computers (1951 - 1958) used vacuum tubes; The second generation (1958 - 1964) used transistors; The third generation (1964 - 1971) used integrated circuits; The fourth generation (1971 to date) employed very large scale integrated circuits. Tiny chips holding many circuits have substantially reduced the travel time.

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Importance Of Computer To An Organisation

Babalola and Adepoju (1992) observed that "millions of computers are now being employed in business; engineering science, industry, defence and educational industry to urge authomation, computing, data processing and control systems costing millions of dollars just as the industrial machine eliminates clerical and computational effort from administration and research" and "in Nigeria, the 1980s and the 1990s have witnessed a computer revolution because its usage has been extended to almost all the federal and state ministries, parastatals, private enterprise etc."

Moreover, according to Aseweje (1995), the use of computers today has virtually become magic formula for

all those cumbersome jobs formally performed by employees in the past. With just a press of few keys of the computers, results which could have taken hours or even days to get are received in seconds or minutes.

Obviously therefore, Nwankwo (1985) emphasised, no one can run a modern organisation, who is not extraordinarily gifted in handling the end products of a modern information processing systems.

Computer Technology And The Educational Systems

According to Omosebi, (1992) "... one of the indices for assessing modern technological growth is the computer technology. Computer technology has become more of a scientific and technological desirable phenomenon that measures the growth of any modern society".

The educational system, in Campbell, (1970) views comprises of the pupils, the teachers, departmental heads, and the headmaster and or principals. And prominent among the administrators outside the school wall are, local inspectors of education, zonal education officers, officials of the school boards, local and state teaching service commission and ministry of education official including the minister or commissioner for education. Also involved albeit indirectly are the parents teachers association and the school board of governors.

Also contributing to the importance of computer technology in the educational sector, UNESCO (1979) stressed without properly processed information, which is what computer technology aids, the department responsible for the management of education might act in ignorance of the facts and therefore make wrong decisions and take wrong actions.

Llyas Mohammed (1986) identified the benefits of computer technology to the educational system to include:

- i. An important aid to learning a wide variety of subject ranging from basis of reading, spelling and arithmetic to biology, chemistry and physics for students of diversified abilities of all ages and cultures.
- ii. Helps children to acquire the skills which can benefit them in future vocations which are most likely to be dominated by the information technology generated by computers.
- iii. Instrumental in developing a computer culture in a society, thereby making society responsible to the needs of the time and adjusting for hi-tech industrial development which can make direct contribution to computer literacy and ultimate prosperity of a nation.

Moreover, Babalola and Adepoju (1992) reported that "in developed countries, computer usage and literacy have

penetrated their culture. The contemporary educational system and business world in these countries flourish because, computer is utilized in every aspect of institutions and business activities. In educational activities computer can be used for curriculum, research and development, laboratories, library information, data processing, instructional aid etc".

This realisation was what compelled the Honourable Minister of education in December 1987, to inaugurate a committee on National Computer Policy to determine the curriculum contents of computer education policy for Nigeria schools, among other functions. (Omosebi 1992, Ajayi 1991).

It is on record that the micro computer has invaded the classroom in many parts of the world and, according to Nwankwo (1985), has recorded a positive impact upon the learner, especially in raising achievement scores in mathematics, literacy, reading, speech, business education, comprehension, study of foreign language, etc.

Therefore, in consideration of the need to improve the teaching and learning process of Nigerian youth, the federal government introduced computer education in some selected secondary schools, polytechnics, Universities and University of technology.

MAJOR PROBLEMS OF THE INTRODUCTION OF COMPUTER
TECHNOLOGY TO EDUCATIONAL SYSTEM.

Omosebi (1992), while evaluating the effects of the introduction of computer technology in the Nigeria educational system concluded that "There is no doubt that modern computer technology has brought great advancement in all facets of human endeavour, but it is liable to bringing some ills which could arise as a result of the conflict between private interests and public good, between ideals and practice, which could lead to frustrations in an economy that is not strong as ours.

Writing on the same sector, Babalola and Adepoju (1992) opines that some of the major problems facing the use of computer technology are inadequate skilled manpower, since only few schools run such a course, and the prohibitive cost of maintenance and installation.

Moreover, since it is practically impossible for the government to offer places for every candidate seeking computer education, the few private schools available, generally charge astronomically fees. This in turn alienates some perspectives students from the acquisition of computer education.

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Moreover, for any computer to do a job, we need to have not only the software (i.e. the programmes) but also the various electronic parts which make up the complete computer system called the hardware. Therefore, the costs of all these wares makes the introduction and application of computer technology into the educational system to be extremely exhorbitant".

To Aseweje (1995), the major militating factors to computer introduction into the sector includes, inadequate supply of the computer systems in this part of the world, downward trend in the value of the country's currency which sky rocket the prices of the available computer systems. Also, non-provision of adequate resources for the purchase of the needed systems in adequate quantity by the government for the educational system as encouraged by the National Policy on Education (1981). Also, the obvious shortage of trained personnel to judiciously handle the few computer systems made available in limited number of 'elite schools', higher institutions, ministries and other sub - units.

Other problems in the use of computer include:

- i. Poor employment prospects for graduates of computer studies since there only a few institution using computer.
- ii. Lack of repairs and maintenance facilities for even the few existing computers.
- iii. Irregular supply of electricity with the result that the installed computers may lie idle for most of the time because of power cuts. While flunctuating voltage frequently leads to mechanical breakdowns.
- iv. Low level of income which keep the computer out of reach of the ordinary man despite the developments in the manufacturing of the cheap personal computers.

- v. Lack of reliable and adequate collected data to be computerised etc.

In addition, the Guardian Newspapers of September 1st, 1998 identified the "Millennium Bug" as a major threat to the use of the present set of computers in most organisations. The present set of computers are expected to suddenly go blank, deficient and unreliable come December 31st, 1999, as they are not installed with coping capabilities to work beyond the year 2,000. And the Federal Government recognising the significance of this threat has set up a strong committee and budgeted ₦1 billion, to see to the solution of the 'Millenium Bug' (Odesanya, 1998).

Therefore, as can be deduced from analysis of problem militating against the introduction of computer technology into the Nigeria educational system, there is the dire need, according to Nwankwo (1985), for re-evaluation of effects of such introduction so far, and properly identifying the major militating factors as a necessary step towards solving them.

Research Design And Procedure

The type of design adopted for this study is a descriptive survey type. The total of Ten (10) schools were selected from the population of schools within the Surulere Local Education Districts. A questionnaire technique with the likert 4-point scale was used to collect the necessary data for the study.

For data analysis, manual treatment of data was used initially. The statistical method found most appropriate and therefore wholly used is the simple percentages.

Some of the research hypotheses formulated and tested in this study include the following:

1. The number of computer systems in the educational sector will be perceived as significantly adequate.
2. The effects of high cost of the present computer on its rate of acquisition for use in the educational sector will be perceived as significantly high.

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FINDINGS AND RESULTS

Hypothesis 1:

The number of computer systems in the education sector will be perceived as significantly adequate. The result of the above hypothesis is presented on the table 1 below.

Table 1. Adequate of the Number of computer systems in the educational sector.

Min Officials			School Head		School Teachers				Students			
Item No	N	%	N	%	N	%	%	%	N	%	%	%
3	0	0.0	4	44.4	2	11.1			17	23.9	19.9	
4	2	22.2	7	77.8	6	33.1			41	53.3	46.7	
5	0	0.0	5	55.6	4	22.2			42	53.9	32.9	

N = 3

X ---- 50% = Sig = 0

X 50% = Not Sig = 3

The table above indicates the 100% of items describing the adequacy of the number of computer systems in the educational sector in Surulere L.E.D. are rated as significantly low. That shows that majority of the respondents disagreed that the number of the computer systems available is adequate. Therefore, hypothesis 1 is rejected.

Hypothesis 2

The present acquisition rate of computer systems will be perceived to be significantly affected by their present high cost.

The result of this hypothesis is presented on table 2 below:

Table 2: The effect of cost of computer systems on its rate of acquisition for use in the education sector.

	Min Officials		School Head		Sch. Teachers		%	%
Item No	N	%	N	%	N	%	X	Sig.
16	9	100.0	3	90.0	15	33.3	91.1	100%
17	9	100.0	2	80.0	18	100.0	93.3	
19	9	100.0	10	100.0	14	77.8	92.6	
20	9	100.0	10	100.0	14	93.3	97.8	

$$N = 3$$

$$X = 30\% = \text{Sig} = 4$$

$$X = 50\% = \text{Not Sig} = 0$$

Table 2 above shows that 100% of items indicating the effect of high cost of computer systems on its rate of acquisition for use in Surulere L.E.D. are rated as significantly high. That indicates that majority of the respondents agreed that the costs of computer systems is affecting the acquisition number in the educational sector. Therefore, hypothesis 2 is accepted.

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CONCLUSION

This paper examined problems of the introduction of computer technology into our educational system. Certain problems have been identified. These problems range from inadequacy of the present number of computer system in the educational sector, irregular power supply, inadequacy of computer trained personnel, the high cost of the present computer systems also significantly affects it's rate of acquisition.

In the light of the above findings, the author therefore recommended that:

Firstly, there is a need for more commitment on the part of the Government and her officials especially in the educational sector. More funds, grants and other resources should be made available to the sector.

Moreover, just like in the developed countries, Non-governmental organisations, firms and public spirited

individuals should be enlightened, educated and encouraged to assist the educational institutions.

It should be noted that the output from these government owned institutions are discharged into the society for use by different sectors. Therefore, they should assist in training and equipping these skilled labour to increase the human capital within the economy.

Also, computer as a subject should be introduced into the school curriculum or syllabus right from the nursery and primary school stage. And by doing so, more people would have been introduced to computer technology at a very early stage in life.

In addition, schools, the organised private sector, and other interested organisations, should be encouraged by the Government to organise periodical workshops, seminars, symposiums, film shows etc. to students, teachers, school head, ministry officials, and the interested public to further open more avenue for the acquisition of computer technology knowledge within the society.

Towards this end, Government would have to provide more subsidy on computer sets. These subsidy could come in form of duty free on the imported computer sets or subsidize the final prices charged for the sets, etc. Obviously, this will go a long way in encouraging individuals, organisations and institutions in procuring for use, the highly needed computer sets.

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