

Assessment of the Implementation of Computer Education Programme in Kano State Science and Technical Colleges

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ABSTRACT

The research was designed to assess the process and extend of implementing the computer education programme in Kano State Science and Technical Colleges. The Federal government in 1988 introduced computer education programme in the Federal Unity Schools. The Kano state science and technical colleges also borrowed a leaf by introducing the same programmes in her schools. This programme is aimed at providing computer literacy to the students and enhancing teaching learning programmes. Moreover, to realize the objectives of the study, a wide variety of literature relating to computer implementation was reviewed. The research used the selected samples questionnaire and other instruments used are observation, interview and documentary analysis. The data was tabulated and analyzed using simple statistical techniques. Many recommendations were made.

INTRODUCTION

Background of the Study

Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs, and habits. Educational methods include storytelling, discussion, teaching, training, and directed research. Education frequently takes place under the guidance of educators, but learners may also educate themselves. Education can take place in formal or informal settings and any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational. The methodology of teaching is called pedagogy.

Education is commonly divided formally into such stages as preschool or kindergarten, primary school, secondary school and then college, university, or apprenticeship.

There are two concepts around the use of computers in education that are frequently misunderstood. These concepts are teaching with computers and teaching about computers. In the earliest days of computers, the only computer education was about computers. At that time, computers were huge, expensive and rare. Computer education was limited to those students with exceptional mathematical aptitude. After all, that's what computers were all about solving mathematical problems.

We, and computers, have come a long way since those days. Now computers have invaded every aspect of modern life. Education is no exception. Much has been made of using the computer as a tool in education. Word processors for writing, spreadsheets for mathematics and science, and databases for organizing information. Lately, the Internet has become recognized as a research tool. The need for computer literate people knows no bounds. Schools have been quick to jump on the computer bandwagon. Well, quick for a system that traditionally moves as slowly as education.

Unfortunately, in many schools computer education has become an educational ghetto. Computer departments, or all too often the "computer teacher", are isolated with their offerings having a tenuous connection to the rest of the curriculum at best. Computers are used to teach about computers. Computers are not being used as tools to teach other subjects.

What we need to do is teach the how of computer use as part of other subjects. Students should not go to a computer lab to be taught how to use a word processor by a computer specialist. They should be taken to a computer lab by their English teacher and shown how to write using a computer. The same elementary teacher who shows a student how to draw a letter shows her how to make words from those letters. The same teacher also shows the student how to read those words to understand history.

Most colleges expect incoming students to be fluent in the big three applications - spreadsheet, database and word processing. We need to move towards where high schools can expect the same. Elementary school students should learn those tools as part of their normal curriculum just as they learn to draw letters, add numbers, and take tests.

Once in high school, with basic computer literacy taken care of, schools can move into computer courses as a separate subject. Though even here, computer courses need to be expanded and broadened to relate to other subjects. Courses in multimedia applications and desktop publishing are obvious examples. Both can relate to art and graphic design. Both can involve making educational presentations on every subject. Both also have fairly obvious use for the student going on to post-secondary education or from school directly to work.

There is an additional area of computer education that is in even more serious need of expansion. That area is computer programming. There is a tremendous shortage of programmers. Estimates of the number of programmers currently needed in America range from a low of 190,000 up to over 450,000. The US turned out only 24,000 bachelor's degrees in computer and information sciences in 1994, the last year for which statistics are available. The good news is that it really doesn't take a degree to make a good programmer.

Federal Government Introduce computer education in the federal unity schools in 1998. The science and technical schools board Kano also in 1991 introduced computer education in all the schools under its control.

However, projected hardware and software, non-projected, aural objects and visual were used to enhance teaching and learning in science the technical schools. But to move with time the science and technical schools introduced computer education with the aim of:

- i. Improving the quality of teaching and learning in her schools.
- ii. Bringing about computer literacy to the students.
- iii. To teach students about words processing and graphics.
- iv. Student to learn spreadsheet.
- v. To learn about language programming.
- vi. And to exposed students in networking.

This is a laudable program in the state because the aim of secondary school education in Nigeria among others is to equip students to live effectively in a modern age of science and technology (National Policy on Education 2000)

Statement of the Problem

Globally we are at a point when critical mass of educator and policy –makers continue to introduce some innovation with the aim of achieving education goals. However, such a change required and effective implementation to realize the objective of their curriculum. in Nigeria, the case is not different, educational sector witness a lots of innovation among which includes computer education and the underlying assumptions for introducing computer education into our curriculum has been the belief that computer has the potential to improve learners achievement while reducing instruction costs.

According to the National Computer Policy (1988), Computer Education programmed was introduced to bring about, computer literate society in Nigeria and appreciate the economic, society and psychological impact of the computer. The introduction of computer into Kano State Science and Technical Colleges if more than a decade at this juncture, the program is

supposed to have been fully functional in all the Science and Technical schools throughout the state. But until today computer program is only functioning in skeleton form.

In view of the above, it has become necessary to examine the proves and implementation of computer program in Kano State Science and Technical Colleges.

Objectives of the Study

This study is set out to achieve the following objectives:

- 1) To find out whether there is a well-designed curriculum for teaching computer education in the schools.
- 2) To find out whether there is adequate manpower to teach computer education in the schools.
- 3) To find out whether there are adequate facilities or equipment to implement computer education in the school.

Research Questions

In line with the research objective, this research is designed to focus on the following: -

- 1) Does each of the school have a well-designed curriculum for teaching computer, education in the school?
- 2) Is there adequate and competent number of teachers to teach computer education in the schools?
- 3) Are there adequate facilities and equipment for implementing computer education program in the schools?

Review of Related Literature

The history of computer dates back to the ages of scientific revolution (1543-1678). The calculation machines invented by Pascal Blaise in 1642 and that of Goffried Leibniz marked the genesis or beginning of the application of computers in industries.

This two developments made by Pascal and Leibniz were not used in many places until a little more than a century when Thomas of Colmar created the first successful, mechanical calculator that could add, subtract, multiply and divide digits, a lot of improved desktop calculators or computers followed.

In 1850 a great advance was made in the history of computer. The start of World War II produced a large demand computer capacity, especially for the military utilization. New weapons and essential data were needed. John P. Eckent John W. Manchily in 1942 and some of their school associates decided to build a high speed electronic digital computer (EDC) and were used form 1946 to 1955.

In the early 1950's and 1960's two important discoveries were mad on changing the image of the electronic computer, to a relatively high reliable and more capable of processing information at a very high speed. However, computer continues networking, computer ail and electronic publishing are few of the application that have grown in recent years.

Advances in technologies would produce more powerful, computer in future to replace human labour in all fields of our lives

Computer today has become more and more involve in over lives for instance without computer, our business today would gird to a halt: millions of people are everyday involved in business transaction around the world. In banks, insurance and super markets computer has altered the business practices. It has drastically reduced or minimized the risks involved in business; people can buy and transport goods computers.

Nowadays, computer have a great contribution toward the development of health sector; such assistance are x-rays films, operations etc. Computer is also contributing in manufacturing sector, military sector and the major contribution of computer is part of education.

Consequently, computers are very important tools that touch every human life, in terms of growth and development.

Computer in Education

Many advanced nations like Japan, United Kingdom and Germany have already gone very far in application of computer in their education industry. Computer courses are now available at all levels and computing has taken rightful place among other subjects even though the demands that it places on teachers and resources are very great. Graham (1999) also agreed that most institutions (Universities and Colleges are equipped with staff and equipment to support the relevant courses, although the financial support may be inadequate.

The use of computer in educational sector made education to progress rapidly and tremendously. It is interesting to note that every subject requires computer literacy in this 21st century, to improve the quality of teaching and learning.

Hence, one can say that Schools or educational sectors cannot resist the influence of computers in our society. It has also been observed that students with learning disabilities can greatly benefit from computers, this because computers are programmed easily to aid children with learning disabilities.

Millions of people in advance countries are taking distance study in correspondence courses (distance education and training council 1999). However, students are opportune to use e-mail to communicate with their instructors and fellow student. Normally lectures are sent via e-mail or posted them on web page and students submit assignments and have discussions using the same method.

One can now find instructional materials prepared and stored within the computer in program form, which is carefully structured for teaching specific lessons. The use of computer as an educational aid is called computer assisted learning (CAL). The computer is to be used as stores of information which can answer questions i.e. as a processor menstruate usually or via educational robots, ideas and concepts.

In a related development Richardson (2000:6) reports the contribution computer in effective teaching of physical geography and fieldwork in the following ways: speeding up data analysis, presenting data in a form easily interpreted, encouraging experimentation with statistical techniques and predictive modelling.

It becomes even more apparent to employ computer considering the research findings of Yusuf (1995) the research findings reveals the poor performance of students in examination (especially external), and students find certain aspects of calculations, statistics, and map work difficult to comprehend. The effective use of computer assisted learning will help to resolve some of the problems associated with teaching and learning.

Therefore, teachers are to face the challenges of using its full potentials taking into cognizance of the fact that teachers are in control.

General Principles of Curriculum Implementation

Pratt (1994) pointed out that, implementing a curriculum conveys change, which implies social action that builds a climate of acceptance for the change.

Major influence in curriculum implementation includes the degree of innovative envisaged in the curriculum, its complexity explicitness, feasibility and adaptability. He went further to stress that implementing a curriculum includes the following steps: -

1. Establishing a climate of trust.
2. Implementing changes that meet the recognized needs.
3. Consult widely.
4. Establishing clear goals and limited scope.
5. Developing an ethics of collegiality.

6. Using personal contact.
7. Providing systematic in – service training.
8. Providing time and resources.
9. Trying not to change everyone, and
10. Not despairing.

In view of the above, one can note that all stakeholders in curriculum implementation have important roles to play. Therefore, they have to prepare to work together as a team to put the curriculum into action so as to benefit students. The more involved of various stakeholders are in curriculum implementation, the more likelihood there is for successful implementation. According to Adegoke (1999) curriculum implementation is generally acknowledged to be one of the most problematic areas of institutionalized education. This according to him is due to the fact that the whole process involves that of translating a complex concept or plan into new patterns of action.

Fullen and Pomfret (1977) identified several reasons for studying program implementation. They can be seen as follows: -

- i. The documentation of the features of the innovation.
- ii. The identification of important variables, associated with the installation of program; and
- iii. The determination of which programmes features are related to outcome measures.

The motive of curriculum implementation all depends on terms of reference, scale and objective for the entire program component involved resources and time.

The objectives of curriculum implementation may include the followings:

1. To create widespread awareness of the innovation carried out in the existing program among practitioners;
2. To afford an opportunity to examine and assess operating qualities of the innovation i.e. to demonstrate the utility of the innovation and build confidence;
3. To fit the characteristics of the program innovation to the characteristics of the adapting institution;
4. To assimilate the innovation as an integral and accepted component of the system.
5. To motivate adopters and support the interest by providing support systems.

- **Theories of Implementation Curriculum Innovation Diffusion Theory**

Rogers (1962) defined diffusion as the process by which an innovation is communicated through certain channels over time among members of a social system. He described innovation as an idea practice or object, which is perceived by an individual as new.

- i) Rogers opined that the rate at which an innovation is taken up by a group of potential adopters is influenced first by characteristics of the innovation itself viz.
 - a. Compatibility
 - b. Complexity
 - c. Trialability
 - d. Observability
- ii) Characteristics of adopters;
 - a. Level of education
 - b. Social status
 - c. Cosmopolitanism

- **Channels of Diffusion Theory**

1. Diffusion theory employs a member of categories for individuals one such group is that of opinion leaders. These individual influence adopter of innovations either positively or negatively.
2. Communication channels, here information about an innovation is exchanged between individuals or group of individual. They may include mass media as face to face exchanges.
3. Time, from first knowledge to decision to adopt or reject.

- **Actor Network Theory**

The actor – network theory emerged from the social constructivist studies of scientific production in 1979 (Brey 1997).

Actor – network theory is underpinned by the assumption that production of knowledge is not an objective exercise (Latour 1987), but rather is influenced by social factors. Callon (1986) stated that this theory does not make prior assignments of attributes to humans or non-humans but rather seeks to trace the mutual negotiation of roles, rather than viewing innovation as a linear process moving along a predictable and visible path e.g. scientific principle leading to technological innovations to micro – economics considerations leading theory attempts to trace innovation.

Empirical Studies in Computer Education

Knowledge is sure to be in continuous increases especially with the latest technological innovation of the computer generation.

Kook (1997) opined that computers connected to communication networks provide convenient access to vast amounts of data from essentially any field of study. In this regard, it is clearly seen that the growth of communication networks will change the image of the classroom for the twenty – first century; the global classroom will be connected by networks that reach around the world and across subject areas.

In view of the above, it is simply not possible for schools to resist the increasing influence of computer technology in our society. Therefore, educators and educational institutions must rise to this challenges or become increasingly irrelevant.

Hannafin and Savenye (1993), computer technology, when used in “tutorial” or “drill and skill” fashion, leads to student gains roughly equivalent to other kinds of classroom interventions such as personal tutoring.

Michael (1977) has given a more elaborate use of the computer in education. According to him the attraction of computers to learning and teaching is three - fold.

Firstly, one can program a computer to execute a particular instructional strategy faithfully.

Secondly, the data collection, storage and analysis capabilities of computer make it an idea base for research.

Third, the complexity of the teaching – learning process is such that only with the help of data processing capabilities of the computer can we hope to improve the learning process from its present stage of development.

The computer as a teaching aid lends itself well as to the study of many subjects presenting the research findings of the use of computers in United States.

In the final analysis the research will agree with Kook (1997:60) as he concluded that because of the speed and pervasiveness of technological growth in society, “practical needs and political demands will mandate a new kind of education”. Therefore, in view of the above educators must expect more kinds of technology including more telecommunications, more networking, more interactive learning, more multimedia learning environments, more computerized speech and handwriting.

Requirement for Successful Curriculum Implementations

For any curriculum implementation to be successful it must meet the peoples perceived needs and these needs must be effectively be implemented. In fact, much emphasis is given to the following elements, curriculum will successfully be implemented.

1. **Resources:** The provision of adequate facilities (resources) in implementation of any curriculum is very necessary for the survival of the program. Adequate resources are essential requirement for effective implementation of curriculum innovation.
2. **Finance:** To keep the program in motion, there must be adequate funds to maintain the existing facilities and buy new ones, to keep abreast with time. Lack of adequate funds led to the collapse of universal Primary Education (Oloye 1981:4).
3. **In Service Training:** Teachers already trained before the emergence of new ideas in education requires in – service training. It is the kind of training the teachers received on the job in order to improve their knowledge of the subject matter and skills.
4. **Manpower:** The success of any program depends to a great extent on the availability and quality of the teachers. Teacher must have the abilities to handle the program with confidence.
5. **Time:** Programmes must be given sufficient time like all other subjects. It is significant to note that the more time the students are given the better chance they have to acquire skills and ideas. The time factor surrounding the implementation process is view by Teachers as being a major barrier in using computers.

METHODOLOGY

Research Design

In this study, descriptive research has been chosen as the appropriate method. This method was adopted due to the facts that the method will help the researcher to gather information, which cut across the entire population.

Population of the Study

The population of the study comprises of all the staff of Kano state science and technical colleges. Below is the population of the teaching staff and principal.

Sample Size

In actual terms, the target population is made up of Government Technical College Ungogo, Government Technical College Kano, Government Technical College Wudil, and Government Technical College Bagauda. Other includes Science College Dawakin Tofa, Science College Dawakin Kudu and delimitation of the population in terms of spaces and physical technologies. In respect of time only teacher's executive secretary, director school management, director curriculum and evaluation respectively.

Sampling Technique

Sampling was conducted in only technical colleges. Thus eight out of the twenty computer education teachers were randomly selected using the Kryice Morgan (1974) criteria for selection of sample.

However, the following science and technical colleges were randomly selected.

1. Day Science College Kano.
2. Girls Science Technical Kano.
3. Science College Dawakin Tofa.
4. Technical College Wudil.
5. Bagauda Technical College.

In each of the school the questionnaire was administrated on sample population

Data Collection Instruments

The instruments used for collecting the data are:

- i. Questionnaire
- ii. Observation
- iii. Documentary analysis
- iv. Interview

However, the research used a closed ended questionnaire for the data collection, which was self-developed containing twenty items. It has been observed that respondents and researchers prefer the closed-ended questionnaire because of the following reasons:

- i. The researcher easily analysis.
- ii. The questions are clear, direct and precise
- iii. Confidentiality can be strictly observed, because some respondents are afraid of been identifies.

❖ Validity

Validity refers to which an instrument serves particular use fullness for which it is intended. The draft was validated using expert's opinion and assessment. The pilot test result was scored and validity coefficient of 0.8 showed that the instrument was highly valid. Corrections and criticism from expert in computer education as well as my supervisor were reflected in the final questionnaire produced.

❖ Reliability of the Instrument

Reliability refers to the extent to which the instrument measures what it is expected to measure consistently. To be more explicit, reliability refers to the consistency and dependability of the data collected.

However, a test – retest method of testing instrument reliability was adopted, carried out in the school.

❖ Data Collection Procedure

The researcher took research letter to the executive secretary science and technical schools board, seeking his permission to conduct this study.

The questionnaire was given to each school under study; the researcher went back after three days to collect the completed questionnaire.

❖ Data Analysis

The researcher used simple percentage to analyze the data collected.

❖ Data Presentation & Analysis

Section A of this presentation is the teachers' response on their personal data, while Section B is also teachers' response about the implementation of computer education program in Kano state science and technical college.

SECTION A

• Teachers Response

Personal Data of the Teachers

S/N	Qualification	No	Percentage
1	B.Sc Computer Edu	-	-
2	N.C.E Computer Edu	1	4.2%
3	Diploma in Computer Edu	-	-
4	Certificate in Computer Edu	23	95.8%

5	Others (specify)	-	-
	Total	24%	100%

The teacher's responses to their educational qualification as presented above table. This shows that 90% of the computer education teachers are intermediate trained teachers with only computer certificates. The remaining 10% percent are NCE computer certificate holders. Consequently, the new national policy of education revised (2004) stated categorically, National Certification in Education (NCE) is the minimum professional and academic qualification needed for entry into teaching profession in Nigeria. Therefore, by implication the computer education teachers in science and technical colleges are unqualified to teach computer education.

Teachers working experience

Year	Frequencies	Percentage
1-5	16	66.7%
6-10	4	16.7%
10 and above	4	16.7%
Total	24	100%

The data in the table indicated that majority of the teachers 70% have 1-5 years teaching experience, while 20% have 6-10 years and only 10% have 10 years and above teaching experience. In view of the above the data has shown that most of the teachers have no teaching experience in computer education.

Related to the above the research finding revealed that the teachers lack experience and this will affect the effectiveness of teaching.

To summaries it all, in experience teacher cannot teach the content of a new curriculum effectively as experienced is an added advantage to teaching profession.

Research Question One:

Does each of the school have a well-designed curriculum for computer education?

		S/A	A	D	S/D	TOTAL
1	The curriculum has a designed curriculum for teaching computer education	0 0%	7 29.2	16 66.7%	1 4.2%	24 100%
2	The curriculum is able to meet the social and academic needs of the learners	1 4.2%	0 0%	2 8.3%	19 79.2%	24 100%
3	The curriculum was designed the federal ministry of education	0 0%	5 20.8	8 33.3	11 45.8	24 100%

In the table above item 5, 16 staff representing 66.7% disagree that there is no designed curriculum for teaching computer education in science and technical schools as against 7 (29.2%) and 1(4.2%) who said they agree and strongly disagree respectively.

Item 6 above 21 staff representing 85.4% strongly disagree while 2(8.3%) and 1 (4.2%) who said they disagree and strongly agree with the statement that, the curriculum is able to meet the social and academic needs of the learners.

Item 7, 11 staff representing 45.8% strongly disagree with the statement that the curriculum was designed by the federal ministry of education as against 8 (33.3%) and 5 (20.8) who said contrary.

It is clear from table above that the curriculum is wanting as majority of the teacher agreed that there was no designed curriculum for teaching computer education.

The researcher was able to trace a drafted curriculum designed by the science and technical colleges that is leaded with much emphasis on the cognitive domain of learning.

In view of the above for learning to take place there must be a change in behavior and strike a balance in the cognitive, affective and psychomotor domains.

In summary, the content of curriculum must be powerful to influence the mental, attitudes and curiosity of the learner in a more positive way.

RQ2: Are there adequate and competent teachers to teach computer education in the schools.

S/N	ITEMS	S/A	A	D	SD	TOTAL FREQ
1	The teachers of computer education in science and technical colleges are not professionally train to teach computer education.	11 45.8	3 12.5%	4 16.7%	6 25%	24 100%
2	The computer education teachers in science and technical colleges are only trained to teach one aspect of compute education.	3 12.5%	5 20.8%	10 41.7%	6 25%	24 100%
3	Computer education teachers in science and technical colleges acquired the computer skills through the training they attended.	4 66.7%	13 54.2%	4 16.7%	3 2.5%	24 100%

In item 8, 11 staff representing 45.8% said that they strongly agree that teachers who teach computer education in the school are not professionally trained to teach computer education as against 3 (12.5%) 4 (16.7%) and 6 (25%) who said they agree disagree and strongly disagree with the statement respectively. This is a clear picture that computer education teachers in science and technical colleges are not professionals. About 58% believe this while 42% disagree.

In items 9, 10 staff representing 41.7% said that they disagree that teachers who teach education in the schools are trained to teach only one aspect of computer education program as against 3(12.5%) 5(20.8%) and 6(25%) who said that they strongly agree and disagree respective. This shows that 67% believe that computer education teachers all aspect of computer education, while 33% have contrary education, view.

In item 10, 13 people representing 54.2% agree that the teachers teaching skills requirements in computer education are met through the training they attained as against 4(16.7%), 4(16.7%) and 3(12.5%) who said they strongly agree, disagree and strongly disagree to the statement. On whether teachers teaching skills requirements in computer education are met through the training attended 71% agree while 29% disagree. This shows that seminars, training courses and conferences organized for Teachers to attend are beneficial.

In the light of the above findings, one my opined that the teachers who teaches computer education in science and technical college are professionally and academically unqualified to become computer education teacher.

RQ3: Are there adequate computers and facilities for implementing computer education program in the schools?

Availability of computer in the schools.

S/N	ITEMS	S/A	A	D	SD	TOTAL FREQ
1	The school has well equipped	1	3	7	13	24

	computer laboratory for practical	4.2	12.5%	29.2	54.2	100%
2	The school has well equipped computer laboratory for practical.	1 42%	3 12.5%	7 29.2	13 54%	24 100%

In items 11, 9 staff representing 37.5% strongly agree to the statement that the schools have computer laboratories but no enough computers provided for practical lessons. On the other hand 7 (29.2%) 4(16.70%) and 4(16.7%) indicated they agree, disagree, disagree and strongly disagree respectively on whether the laboratories are provided with computer facilities for practical. 67% agree, while 33% disagree.

In item 12, 13 staff representing 54.2% strongly disagree that the school have well – equipped computer laboratories for practical as against 7(29.2%) 3(12.5%) and 1(4.2%) who said they disagree, agree and strongly agree respectively with the statement. Here about 83% believed that the schools are provided with well-equipped computer laboratories for practical. The shows that the students are only exposed to theoretical aspects of computer education.

In this situation the research concluded that there is no wide margin between what the researchers. Observed and what the teachers responded in their questionnaire supporting the facts that there are no enough computers for practical in the schools.

❖ Summary of Major Findings

The summary is based on the findings of the research questions. The results are presented according to each research question as posed in chapter one.

The result indicated that there is not designed curriculum for teaching computer education in Kano State science and technical colleges. There was only a drafted so called curriculum designed by the Board and the content was over headed with much emphasis on cognitive domains. The findings therefore did not collaborate with Brenner (1999) and Nyerere (2000) curriculum should be loaded with the ability to inculcate the learner with practical skills.

The results indicated that all the computer teachers found in the school were only train with requisite skills to teach computer education. However the findings did not reflect the National Policy in Education that clearly stated that the minimum requirement for teaching profession is National Certificate in Education (NCE).

In view of the above, the computer teachers in Kano State Science and Technical Colleges are professionally and academically unqualified to teach computer education.

The findings reveal that there was shortage of computer facilities to fading computer education, only two to three computers are found in the so called computer laboratories.

❖ Recommendations

In view of the findings of this study, the following recommendations are hereby made for an effective way of implementing computer education programme in the state and other stat within Nigeria.

1. The need to design a computer education curriculum, which reflects our needs, interest, norms, values and attitudes.
2. The manpower to implement the programme must satisfy all the conditions of the National Policy of Education. And the government can encourage and provide all the necessary facilities of training computer teachers in Universities.
3. The Federal Government should review the present policy of funding education and re-examine the strategies for achieving the objectives of secondary school education should inspect facilities for computer education in states.

The Local Government should also give a helps hand and providing financial supports to Schools located within their vicinities.

The Federal ministry of Education should joint hand together with the state and organize seminars, workshop, conferences for Teachers, to catch up with new methods techniques and strategies of teaching.

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