MODULE 6 AREAS OF APPLICATION OF COMPUTERS

Unit 1   Application of Computers in Education
Unit 2   Computer Applications in Business and Industry
Unit 3   Computer Applications in Government, Science,
             Engineering, Transport, Communications, Recreation
             and the Military

UNIT 1   APPLICATION OF COMPUTERS IN EDUCATION

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11.0 INTRODUCTION

The computer has become a universal tool for modern men and women. Literacy today is not defined only in terms of the ability to read and/or write but in addition, it includes the ability to use and communicate with the aid of the computer. In the education sector, computers are being used to promote teaching and learning.

12.0 OBJECTIVE

At the end of this unit you should be able to:

☐   identify some areas of application of computers in the in the field of education.

3.0   MAIN CONTENT

3.1   Application of Computers in Education

The field of education provides the most fascinating application of the computing system. This has consequently attracted considerable attention from educationists and policy

makers since the late 1960s, when computers were introduced into the classroom. The entry of the computer into the classroom has now offered opportunities and possibilities for students to develop their potential with computer-aided instruction packages. A considerable number of fascinating and entertaining educational computer software packages are now available in almost every subject. These self-tutor instruction packages are well designed to enable the user to learn at their own time, speed and convenience. The role of the teacher here is that of a guide so that the student can think more logically and can gain meaningful experience in such structured situations, role playing and other well programmed exercises so that the student can have a better understanding of the interrelationships of variables to real life situations.

Apart from the use of the computer as an instructional aid, it is also used in the execution of routine and administrative tasks such as the keeping of academic and administrative records on admissions, examinations, staffing and other routine functions.

The computer has also revolutionised the services rendered by libraries to readers. A computer based on-line public access catalogue system manages a search for materials using indices such as author's name, book title, subject and class mark. Readers using public terminals can go through a menu-driven programme to find specific books or periodicals, recall books on loans and also make requisitions for short loan items.

Furthermore, optical character reading devices are used to scan the bar codes on readers' library cards to offer a computer based issuing of books to readers. A computer based security system is used to maintain security services in libraries as well. In educational institutions such as nursery schools, primary schools, secondary schools, polytechnics, colleges of education and universities, the computer can be used for the following:

- Computer aided self-tutored application packages.
- Computer instructional aids e.g. digital projectors.
- Microsoft PowerPoint application software for preparing slide shows, speeches, seminars, workshops, lectures etc.
- Computer simulated graded exercises and group work.
- Computer-aided laboratory experiments and investigations.
- Computer-aided software packages for special students e.g. the mentally/physically disabled (the blind, deaf etc), adults, KGs, teenagers etc.
- Distant learning programmes e.g. sandwich programmes, through the virtual library technology. Teleconferencing technology.
- Placing and sourcing of educational materials/resources e.g.
  papers, journals, newsletters, magazines, textbooks, and films, on the Internet.
- Computerisation of library services to make cataloguing indexing, retrieval, borrowing, return and other library services easier and faster.
- Keeping the records of students, teachers and teaching facilities.

- Estimating the teacher-student ratio with a view to assessing the adequacy of teaching and learning.
- Estimating the ratio of students to teachers and teachers to teaching facilities with a view to assessing the adequacy of teaching and learning.
- Timely generation of students' examination results.
- Automatic generation of lecture and examination time tables.
- Aiding students to learn basic theoretical concepts. There are currently, some computer aided learning software packages and hardware devices that are readily available in the market.

4.0   CONCLUSION

Computers have been applied in virtually all fields of human endeavour. This unit presents an overview of some of the key areas of its application. The application of computers in education has been discussed in detail.

5.0   SUMMARY

This unit gives detailed information on how the computer can be used to advantage in the field of education.

6.0   TUTOR-MARKED ASSIGNMENT

You have just been appointed as the principal of a model secondary school. Write a proposal to the school governing council on the areas of application of computers to the operations of the school.

7.0   REFERENCES/FURTHER READING

Akinyokun, O.C. (1999). *Principles and Practice of Computing Technology*. Ibadan: International Publishers Limited.

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