
COMPUTER ASSISTED INSTRUCTIONAL STRATEGY: AVAILABILITY AND USAGE IN STATE OWNED COLLEGES OF EDUCATION

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Abstract

The paper focused on Computer Assisted Instructional strategy in the school system: Availability and Usage in state owned colleges of Education. The concept of teaching method and innovative teaching methods in education were critically examined. The concept of Computer Assisted Instruction (CAI) was defined as the use of computer systems to teach in the process of teaching and learning during learning activities both in classroom and outside classroom teaching situations. The issue of availability and usage of instructional computers in state owned colleges of education were discussed. The paper concluded by asserting that government and school administrators are paying lip-service towards the computerization of the teaching process in the school system. Based on this conviction, recommendations were made.

Keyword: computer assisted instruction

The essence of teaching and learning is to transmit knowledge and develop skills needed for human and societal growth and development. The attainment of this laudable goal in the school system from the lower level of education to the highest level largely depend on the instructional strategy employed in the teaching and learning process. It is generally believed that method of teaching applied during teaching experience to a large extent determine the degree of success achieved at the end of every teaching experience. Teaching method or instructional strategy is an essential part of teaching business in the school system. This significant aspect of the school system have

faced series of transformation most importantly since the introduction of technological materials in the process of teaching and learning.

Meaning of Instructional Strategy

Instructional strategy as a concept has attracted so much attention in the teaching profession in particular and the school system in general. This is mainly because it takes a pride of place in the success of the educational structure of every human society. The success and failure of teaching and learning as a process is largely dependent on the strength of the instructional strategy applied in the process of teaching and learning in the school system. According to Saskatoon Public School (2004-2009) instructional strategy determines the approach a teacher may take to achieve learning objectives. They stated further that instructional strategy or methods are styles used by teachers to create learning environments and to specify the nature of the activities in which the teacher and learner will be involved during the lesson.

The concept of instructional material is commonly referred to as method of teaching in the school system. Method according to Esu and Inyang (2004) is derived from a Greek word “*metahodos*” which means a way and it means the right way for a purpose. From this, according to Mezieobi, Fubara and Mezieobi (2008) teaching method can be said to be a chosen, systematized, ordered and correct way through which the act of teaching is performed in order to accomplish the set objectives of instruction. It is a means, procedure, broad or general way through which the desired positive change in the learner is brought about or learning is induced to occur.

Kpangban and Onwuegbu (1995) in Ukadike (2003) saw method as a combination of activities, which are carried out in the course of a lesson which can be used in the teaching of any subject. In the words of Oyegwe (1998) method as a process is seen as a course of action or a method of operation, which varies according to circumstance. Osakwe and Itedjere(1993) in Ukadike (2003) defined method as a planned or systematic way of achieving set out objectives. Since it is planned to guide a person or persons, method could be said to be personal. That is, there is no universal method for universal application in the academic world. A method can be used by a teacher today to achieve the desired objectives but could fail to achieve even the same objectives with another group or the same group at different time. After a cursory look at the catalogue of definitions of method and strategies of teaching as opined by different scholars, Iwegbu (2009) affirmed that there is no single universally accepted definition of method of teaching in the school system. Ukadike (2004) asserted that effective teaching and learning cannot take place without adequate and appropriate instructional materials. He argued further that the peculiar nature of teaching and learning process makes it possible for variety of instructional materials to be employed in the classroom.

Innovative Teaching Methods

Innovative teaching methods are methods of teaching and learning which have been put together from efforts resulting from various levels of educational research and development tailored towards improved achievement of the goals of education in human societies.

Teaching as a concept or a process cannot be successful on its own without an inter-play of different techniques. Ukadike (2003) asserted that the success of every teaching method in the school system is dependent on teaching technique or techniques applied during teaching experience. He further states that teaching techniques is a set of unique activities which the teacher employs to implement a particular teaching method. He clarified this fact by saying that it is the nature of the dominant teaching techniques employed in any particular lesson that determines which teaching method is being used. With the advancement in the field of science and technological materials into the teaching system, methods and the various techniques of teaching have been dramatically influenced resulting in what is known today as Computer Assisted Instruction (CAI) as one of the novel methods of teaching in the teaching profession.

What is Computer Assisted Instruction (CAI)

The effort to achieve efficiency in instruction through the use of computers was put forward by Patrick Suppes of Stanford University, USA in 1969. Computers are a familiar sight in classrooms in the twenty – first century and technology has been used to stream-line many educational tasks, (Mezieobi, Fubara and Mezieobi, 2008). In today’s classrooms there are different types of educational computer use, and not every use of a computer in the classroom is considered computer assisted instruction, such uses as compiling and computing results, keeping records, computer games and watching films when channeled towards entertainment are not considered as computer assisted instruction.

Computer Assisted Instruction according to Mbakwem (2001) is the use of computer to assist in instructional activities. This may imply the use of computer to enhance the process of teaching and learning by using computers as instructional materials. It can also be said to be the use of computers as a mode of instruction which may have informed Okpara (1997) to define computer assisted instruction as the use of computer as a medium of instruction. Generally speaking, Computer Assisted Instruction implies the use of computer system to teach in the process of teaching and learning during learning activities. Ughamadu (1998) referred to computer assisted instruction as an instructional design whereby computer system deliver instruction directly to learners by allowing them to interact/relate with designed lessons that have been programmed into the system.

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The educational uses of computers that are considered to be computer assisted instruction are those cases in which either instruction is presented through a computer programme to a passive student, or the computer is the platform for an interactive and personalized learning environment.

The use of computers in the teaching and learning process in all fields of human endeavours has also permeated all levels of education but only in a negligible few elitist schools in most urban areas.

Availability and usage of Instructional Computers in Colleges of Education

The availability and usage of instructional computers in the school environment for the enhancement of teaching and learning process has been most discouraging. Computers may be available in the school for use in the offices of school administrators and teachers for documentation, record keeping, result compilation and computation, as Suppes (1969) asserted that not every use of computer in the school environment is considered as Computer Assisted Instruction. Mbakwem (2001) asserted further that computers in the school environment (classroom) are only regarded as instructional when they are used to enhance the process of teaching and learning in the school system.

The use of computers in the school environment is considered instructional if it fits in adequately into Suppes classification. According to Ornstein and Levine (1989) Patrick Suppes who coined computer assisted instruction (CAI) classified it into three levels namely; Practice and Drill, Tutoring and Dialogue.

- a. Practice and Drill level; Here according to Suppes, the learner is exposed to computer directed knowledge, concept, skills which he had hitherto learned in order for him to pass through series of computer and drill programmes for the sole purpose of the learner becoming more proficient.
- b. Tutoring level: the computer is more or less the teacher, playing the instructional role of the teacher and interacting with the learner. The computer presents what is to be learned in small units according to their ascending order or levels of difficulty. According to Suppes, the response of the learner is expected and interpreted with its attendant feedback.
- c. Dialogue level: here there is a high level of computer – learner instructional interaction. The learner according to Suppes, response to the learning experiences presented by the computer and in fact asks new questions if need be. On the other hand, the computer gives appropriate feedback in response

In line with Suppes (1969) levels of classification of instructional computers, any use of computer in the school system that does not align with this classification is not considered instructional irrespective of its availability and usage in the school environment. It therefore means that instructional computers in both public and private colleges of education are grossly inadequate and often times underutilized. Theaters,

lecture halls and classrooms in the colleges of education in dare need of instructional computers to meet up with the demand of modern societies.

Conclusion

It is evidenced that despite the importance of instructional computers during classroom instructions as postulated by Patrick Suppes of Stanford University USA in 1969, Government, stakeholders, school administrators, and school managements are still paying lip service to the computerization of instruction in our tertiary institutions generally and particularly, colleges of education.

Recommendation

- a. To achieve effectiveness and efficiency in teaching and learning in this 21st century, there is the urgent need to step up funding of our tertiary institutions and total computerization of instruction in order to meet the demand of the required skills needed for sustainable national development.
- b. Compulsory in-service training for lecturers and teachers on the use of instructional technologies in the school system.
- c. Inculcate into teachers and students the needed maintenance culture in order to keep the instructional computers in perfect working conditions when they are provided.
- d. Provide constant electricity supply in Educational institutions

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