Application of Information and Communications Technology in Curriculum Delivery: Issues and Challenges in Physical Education

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Abstract
The issues and challenges of application of curriculum delivery particularly in physical education is enormous. Some of the identified challenges include lack of computers with information and communication technology (ICT) tools, complete computer illiterate among teachers and inadequate funding. Other challenges are unreliable internet access, epileptic power supply, the planning of themes of knowledge and ill-perception of some teachers who are supposed to participate in the application of curriculum delivery. The paper describes ICT as tools for educational components involving curriculum delivery and pedagogy into a single entity called ICT enhanced instruction. Curriculum is viewed as a vehicle to reach the goal of education. The paper sees education as possessing growing qualities like a living organism which one of its many attributes is constant change in emphasis by adapting itself to new demands and circumstances (Ivowi 2009). The challenges of application of ICT in curriculum delivery fits into this category. This is because, curriculum is a tool designed for educating a person in order to bring change in orientation, actions, behaviour and value claims to that of a good person. In conclusion, the paper calls for teacher competencies in application of ICT to enhance curriculum delivery. Finally, it is recommended that curriculum developers and ministry of education should incorporate ICT in curriculum delivery in physical education.
Introduction

There is no gain-saying that information and communication technology (ICT) is in-thing now especially in the application of curriculum delivery. Information and communication technology application has assumed rapid global developmental challenges which demand teachers and learners alike the needs to constantly seek new information about curriculum contents implementation on a daily basis in our school system (Ejiwale, 2009).

Information and communication technology consists of the hardware, software, networks and media for collection, storage, processing, transmission and presentation of information. Information and communication technology describes tools and other essential educational components which involve application of curriculum content and pedagogy into a single entity called ICT improved instruction (Ejiwale, 2009). The utilization of ICT in the methods of instruction seem to be the most challenging issues in curriculum delivery, educational planning, curriculum designing, curriculum innovations and research development.

Bamikole (2001) defines information technology (IT) as the creation, collection, storage, processing, transmission, display and use of information by people and machine. Information technology deals with the handling, creating, collecting and processing of information together with application of electronic device. The entire world is now undergoing challenges of dramatic revolutionary changes in all facets of human endeavours including curriculum content delivery due to application of ICT.

Information and communication technology is the fusion of information technology (IT) together with communication technology which encompasses many concepts among which internet is one. While information technology is the handling of instructional methods, curriculum delivery, images, numbers, graphs, texts, sound, music, information storing, retrieving, sorting, analyzing, presenting and communicating (Akabogu, 2009). The development in computer technological application and telecommunication networks had produced challenges in the internet and intranet ICT curriculum content implementation (Ademu, 2001).

Challenges of ICT in Curriculum Delivery by Teachers

As the events of ICT application unfolds itself in our educational systems at all levels, physical education teachers have been exposed to great challenges of using ICT tools in efficient curriculum content delivery to meet the primary responsibility of teaching-learning processes as spelt out in the National Policy on Education (FRN, 2004). Based on the policy statement, primary education is the bedrock of the educational system on which success of other levels depend. This calls for effective curriculum content implementation by applying learning facilities such as ICT.

Curriculum is a vehicle to reach the goal of education and as Ivowi (2009) puts it, education is a difficult term to define because of its growing qualities like a living organism which one of its permanent attributes is constant change in emphasis by adapting itself to new demands and circumstances. Information and communication technology happens to fit in as a new demand in curriculum delivery system. Curriculum is designed as a tool for educating a person in order to change his or her orientation, action, behaviour and value claims to that of a good person whose concern
is not only to develop himself or herself but also the society (Ivowi, 2009). The challenges facing PE teachers in application of ICT include difficulty of defining curriculum since there is no consensus among educators and curriculum experts as to what curriculum or education should be.

However, it has to be acknowledged that in spite of the difficulty of defining curriculum, curriculum experts and educators have identified four elements which constitute the term to include goals/objectives, content/subject matter, learning experiences and evaluation. In fact, experts in curriculum have generally agreed that a careful analysis of a given curriculum of a school would indicate these four elements either stated or implied (Ivowi, 2009).

Akabogu (2009) asserted that ICT triggers changes and challenges in the curriculum delivery, activities, interpersonal relationships in environment and it is reciprocally affected by the very changes it causes. The current teaching–learning processes in the school system in Nigeria have been considered inadequate for the nation to achieve the goals of education as stipulated in the National Policy on Education (FRN, 2004). These include the quality of curriculum implementation strategies, teaching staff, physical plant, equipment, libraries and tones of schools which have posed challenges for ICT application in Nigeria (Sule and Enueme, 2007).

Application of ICT in Nigerian schools is still facing instructional delivery challenges due to constant changes in the nation’s educational system which renders little or no help to teachers who are expected to incorporate ICT into the curriculum offering and curriculum delivery. Basically, three prominent impediments trigger up challenges to easy application of ICT:
(a) Firstly, most teachers are completely computer illiterate,
(b) Secondly, some teachers are semi-computer literate and
(c) Thirdly, lack of computer and ICT tools in the schools.

Obviously, experiences in educational system in Nigerian schools show that ICT has not been generally incorporated into curriculum offering and curriculum delivery system in almost all the school subjects. Evidences are many in research literature about militating factors responsible for the slow pace towards application of ICT in the curriculum implementation in Nigeria. Such identified challenging issues include inadequate funding, shortage of hardware and software, lack of basic computer skills, inadequate ICT professional skill acquisition in curriculum implementation, ICT network failure, unreliable internet access, epileptic power supply and lack of political will (Ejiwale, 2009).

Benefits for Application of ICT in curriculum Delivery

The utilization of ICT in curriculum implementation is not a very new development as such. It is as old as other technologies such as radios, televisions, video tape and others. ICT has increasingly attracted the attention of educators as a result of rapid development of emerging – technology like web-technology (Ejiwale, 2009). Application of ICT in this study is viewed as any information resources on the web, multimedia programmes in CD-Roms, learning objects or other tools to boost the capacity of learner’s skills of acquisition of practical knowledge.
Application of ICT exposes teachers and learners to effective pedagogical and technological competencies required in this age. Issue of pedagogical competency addresses why, when, where and how application of ICT tools contributes to objectives of effective curriculum delivery. The use of ICT leads to a combination of basic computer literacy. Information and communication technology application fine-tunes the employment of hardware and software in teaching-learning encounters. Information and communication technology helps teachers access, gather, present, communicate, manipulate the available information in the form of text, image, title page, sound, design and reference. Teacher competencies for ICT application does not stop at learning basic skills in word processing, spread sheets, multimedia, accessing instructional web pages (curriculum delivery option) and developing specific skills in ICT video editing and flash drive development.

Conclusion

Teacher competencies in application of ICT in curriculum delivery are paramount in as much as his or her understanding of the packages are concerned. Essentially, ICT predetermines how to incorporate curriculum delivery. Hence, this paper can be concluded that the need for teacher’s ability to equip himself or herself with application of ICT in curriculum cannot be over-emphasized. Incorporating ICT in curriculum implementation is a little bit technical and teachers who have not been exposed to ICT application may be ignorant of its effectiveness. Awareness campaign on the values of ICT application in physical education curriculum delivery should be organized to enable P.E teachers acquire skills required.

Recommendation

Emanating from the foregoing, it is recommended that application of ICT in curriculum delivery need to be adequately structured to:
- expose both serving and pre-service teachers to various technology resources in the application of ICT in curriculum delivery particularly in PE.
- expose teachers and learners to competencies required in the application of ICT curriculum implementation.
- expose teachers to the use of computer software and hardware tools for searching and using internet resources.
- urge curriculum developers and instructional designers to incorporate application of ICT in teaching-learning processes.

References


