

## BRIDGING THE TECHNOLOGICAL GAPS IN THE USE OF INSTRUCTIONAL MATERIALS IN HEALTH TEACHING IN NIGERIA

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### Abstract

*Health teaching looks at that aspect of health education involving schooling (formal education), whether in the classroom or through distance learning. The use of instructional materials in making health teaching and learning interesting and effective for both the teacher and the student has been long emphasised. However, the recent explosion in technology has made it more challenging as the provision of the facilities and materials are more expensive and more sophisticated. Expertise and skills needed in handling them on the part of the health teacher are lacking. It is evident that the facilities and materials needed, skills and technical know-how required, are non-existent or poorly exist.*

*This scenario creates a technological gap in the preparedness of the governments, parents, teachers and all other stakeholders in the education industry for the effective deployment of technology to make teaching more effective. Therefore, the paper recommends, among others, that there should be organised. Deliberate efforts by governments at all levels towards providing health teaching materials in all primary and secondary schools and well-planned, well-executed and regular workshops and conferences on making and utilising Information and Communication Technology (ICT) and other health teaching materials should be organised for health teachers.*

**Keywords:** Health teaching, technological gaps, instructional materials.

### Introduction

Health Education should be and is one of the most dynamic components of the entire school curriculum and, of course, a programme to achieve the goals of teaching and community health. The need to teach health and teach it correctly cannot be over-emphasised. Again teaching is a complex phenomenon that requires competence, proficiency and efficiency in terms of skills acquisition and the correct application of appropriate teaching technique(s) that suits the age and size of a particular audience to achieve the desired objectives (Okueso & Akinwusi, 2011).

For good reasons of the explosion of health information and emergencies, i.e. a pandemic, teachers can no longer solely rely on the ordinary board for health teaching these days. Appropriate and up-to-date teaching aids make health teaching not just easy but interesting and effective too in such situations. Moronkola (2012) posited that a combination of proper methods and teaching aids in the hands of a professionally qualified and versatile health educator is essential for effective teaching and learning of health issues. In the emergence of new health issues, some of which even prevent direct contact during the teaching of health, the importance of instructional materials, especially those for distance learning, cannot be overemphasised.

From the preceding, it is irrefutably clear that instructional materials are very important for an effective, healthy teaching and learning process that can only occur if certain things are guaranteed. The instructional materials should be available, and the teachers who use them must possess the required competencies for handling them. Moronkola (2012) asserted that, for any health teacher to teach effectively, he needs to be aware of and have a variety of audio-visual materials, i.e. materials that attract the visual and hearing attention of learners during instructional programmes, thereby making learning more meaningful, interesting and rewarding.

The above calls for attention to the issue of readiness not just on the part of the health teacher but also on the parts of the government and parents. The teacher must possess the competence in using instructional materials that are supposed to have been provided in the school with the full belief that parents would have also done their parts in providing what their children/wards need in the teaching and learning environment, especially when distance learning becomes necessary.

### **Concept of Health Teaching**

It is prudent and rational to know what health and health education mean if one is to value what it means to teach health. Health is one of those terms that many scholars find difficulty in defining even if they are confident of what it means. According to Ademiju (2011), the first globally accepted conceptualisation of health was promulgated by World Health Organisation (WHO) in 1947. It defined health as "a state of complete, physical, mental and social well-being of an individual and not merely the absence of diseases and infirmities". However, this has been challenged by the new movement known as holistic health. This movement, as reported by Ademiju (2011), defines health as "the blending of one's physical, emotional, social, intellectual and spiritual resources as they assist one in mastering the developmental tasks necessary for one to enjoy a satisfying and productive life". Health is a major determinant of the socio-economic development of a people. According to Olise (2012), this is based on the fact that all human endeavours require sound minds in sound bodies for the full realisation of aspirations.

Health Education is the process of impacting health information and skills in an individual or community for change in attitude toward positive health behaviour (Ogbe, 2007). Ogbe (2007) explained that health education is both a public and school health discipline, taught not only in the classroom but through all communication media. In the view of Ayoade & Adesanya (2011), it is the process by which people acquire behaviour, knowledge, and attitude and, promote their health and help them make decisions to solve personal, family and community health issues. Teaching is any interpersonal influence somebody may exert to change how other persons will behave, which can be seen as a system of activities designed to induce learning, making the teacher, in this sense, a facilitator of learning (Sanusi & Gagare, 2012). It means that health teaching in this sense is looking at that aspect of health education involving schooling (former education), whether in the classroom or through distance learning.

### **Instructional Materials and Health Teaching.**

Instructional materials, which are likened to curriculum materials, resource materials, instructional media, teaching materials, educational resources and so on, are the different

kinds of materials or resources or forms of media that teachers and the entire class use in the teaching-learning process to make it more effective and productive (Onoguere, Muraina & Nyorere, 2014). The use of instructional materials is as old as schooling itself. The evolution of instructional materials can be dated back to when trees, stones, rocks and other items served as media for human expression and communication. In their study, Erimieleagbon and Okonoko (2013) observed that the above later metamorphosed to the use of chalkboard, printed and other materials and then to electronic media of communication in the forms of audio aids such as radio, record players, tape recorders, visual and audio-visual aids like television, motion pictures and so on.

There are various health teaching materials ranging from visual and audio-visual aids and other sense-appealing objects that can assist the teacher and learner in impacting and internalising information. So, as Onoguere, Muraina & Nyorere (2014) classified these materials as visual-print and non-print, audio materials, audio-visual-projected and non-projected materials. Others are forms of communication gadgetry, computers and internet services. However, instructional materials in health teaching specifically include flannel graphs, models, radio, television, films (sound, strips, slides), leaflets, diagrams, pictures, charts, graphs, boards, recorders, musical instruments, audio cassettes, telephones and so on (Konwea, 2011; Kalesanwo, 2011).

Instructional materials make health teachings and learning more enjoyable and effective. These they do by providing the teachers opportunities of bringing into the classroom things, people, places, and events otherwise not accessible to the learners; demonstrate abstract concepts and make them more meaningful to the learners; handle large classes effectively by capturing and maintaining their attention and by allowing the teacher attends to individual persons or groups. On the other hand, using instructional materials provides opportunities for students to listen, touch and manipulate things; participate actively, individually and in groups in the learning experiences. And communicate and express themselves freely and adequately (Ayoade & Blavo, 2012).

Information and Communication Technology (ICT) is a diverse set of technological tools and resources used to communicate, create, disseminate, store and manage information (Oyovwi, 2014). The appropriate use of Information and Communication Technology in health teaching would help to expand access to health knowledge, strengthen the relevant health teaching in the workplace and raise teaching quality by making it an appealing active process connected to real life. ICT, therefore, has become a new teaching option driving the shift from traditional learning communication toward unrestricted global possibilities. ICT often catalyses by producing tools, which teachers use to improve teaching, and by giving learners access to electronic media that make concepts clearer and more accessible. In the view of Lucey (2004), as cited in Obuseh (2015), ICT Education is the acquisition, processing, storage, and dissemination of vocal, pictorial, textual and numeric information by a micro-electronic based combination of computing and telecommunications.

### **The Need for Preparedness in the use of Instructional Materials in Health Teaching.**

Collins Dictionary (2015) sees preparedness as the state of being ready for something to happen, just as Cambridge English Dictionary (2013) sees it as the state of being prepared for a particular situation. The rate at which health knowledge is turning over in modern times is such that teachers of health hardly cope with the pace of development. There is a health

knowledge explosion, and today's teachers cannot solely rely on the board. They need more instructional materials than ever to cope with teaching health in schools (Onoguere, Muraina&Nyorere, 2014). According to Moronkola (2012), students learn more from health class when they have materials to feel, smell and so on, as they are said to learn less from what they hear but more from what they see and hear.

Regardless of the clarity of the role of teaching aids in making teaching more effective and interesting, critical observations have revealed a less than acceptable and required rate of usage. This syndrome can unarguably be attributed to the unavailability of these materials in our various primary and post-primary schools and the lack of readiness and competence on the part of the teachers on the usage, especially of novel materials like those that are electronic in nature. These two edge tragedies of unavailability and incompetence have been hampering the effective development of modern technology in improving health teaching.

As observed earlier, the health teacher must be competent in using instructional materials before he can conveniently take advantage of their positivity in aiding the teaching of health. Regrettably, Nnamdi (2016) revealed that, due to the advanced expertise required on the part of the health teacher on the use of innovative strategies that are not readily available, the approach could not be creatively employed. According to Okueso and Akinwumi (2011) in Okueso (2009), there are limitations to computer-assisted programmes as an approach to health education for behaviour change. These limitations include but are not limited to qualified manpower, cost of procurement, teachers, lack of computer knowledge, erratic power supply and inaccessibility to internet facilities.

More than any change agent in the history of human civilisation, information and communication technology has brought great changes that have charted the course of development (Moemeke, 2012). Eyenaka, John, Idiong and Uwah (2013) corroborated that ICT offers the opportunity to revolutionise pedagogical methods, expand access to quality education and improve the management of the education system. The above source added that when properly integrated into a broader educational programme, ICT facilitates skill and knowledge acquisition, and enhances varieties of learning ideas and opportunities through creative means, making learning interesting, stimulating, motivational and concrete. This must have been the rationale why according to Eluro and Igbodo (2013), the Federal Government of Nigeria in 2001, in realising the impact of ICT education in an emerging globalised society, recommended full integration of it in the teaching/learning process in all the education system including health teaching. Incontrovertibly, Oyakhirome (2014); Obusch (2015) posited that, no matter how good and well planned a curriculum may be, lack of interest and lack of adequate knowledge of the subject matter as well as lack of instructional materials and competence to use them if available can militate against the successful implementation.

In highlighting some of the major factors militating against the maximum development of instructional materials, including ICT to better teaching in Nigeria, Piwuna and Scholar (2010) outlined the following:

- lack of qualified teachers who are ICT literate and capable of operating the modern ICT facilities and equipment.
- lack of modern teaching aids like computers, especially in public schools, due to underfunding by the government.

- where the facilities and equipment are available, they may not be enough, or there may be non-existence of proper software and a lack of adequately qualified technicians to maintain them.
- erratic and unreliable power supply, which makes using modern ICT components in the form of electronics like computers near impossible.
- high poverty level and low literacy among Nigerians hinder the possession of modern ICT components like computers, internet services, television etc., by parents for use at home by their children as an extension of school learning.

### **The Way Forward:**

Correct and adequate knowledge of teaching aids and materials is required to enable the health teacher to make, buy or select the appropriate and adequate audio-visual materials for the class or school. The ability of the health teacher will depend on professional training background, teaching experiences and resourcefulness (Moronkola 2012). The teacher must be trained and retrained to acquire the required current skills in handling the seemingly sophisticated technologies and technicalities in handling health teaching aids in the current teaching and learning situation. This is because; no matter how good a curriculum may be or seem, its impact on the health behaviour of the student depends largely on the implementation by the health teacher. The health teacher is the most important single determinant of what takes place in any classroom, and the teacher's total performance in a classroom is a function of his training experience, natural flair and availability of tools. The health teacher's quality must not be joked with by all stakeholders in the education industry as this quality encompasses, among other things, the capacity to deploy the expertise in the use of modern technologies to better the teaching of health. In a study, Iyamu (2010) opined that no one could afford to undermine the duty of the health teacher in the curriculum implementation process as the relationship between it. The effectiveness of the health teacher perhaps underscores the altruism that no education system can rise above its teachers in terms of quality, quantity, efficiency and effectiveness.

With the awareness of the possibilities which ICT holds for development, the Federal Executive Council, in March 2001, set up the National Information Technology Development Agency (NITDA), charged with the responsibility of motivating the nation's growth in Information Technology (IT) knowledge and use with the mission statement: To use IT for education among other things (Moemeke, 2012). In line with this, it has been long suggested that Local Education Authorities, Ministries, and other bodies concerned with education should provide all the schools with a set of required teaching facilities and equipment (materials) (Sanusi & Gagare, 2012). This is more important because, in the view of Oyovwi (2014), the encompassing philosophy of education in the 21<sup>st</sup> century and the infusion of Information and Communication Technology (ICT) into an increasingly digital society have created the need for a new form of teaching and learning.

For the teaching of health to be effective and interesting to both the learners and teachers, there must be an improvement in the quality of teachers and the provision of equipment and instructional materials that will facilitate the successful implementation of the novel health education curriculum. Relevant authorities should organise workshops or seminars for health teachers. In agreement with this fact, Oyakhirome (2014) suggested that instructional materials be provided, and teachers should be given in-service training and be

sponsored to attend seminars, workshops and conferences on health teaching methods and the use of instructional materials, to increase their competence and effectiveness. Unfortunately, the government and all other stakeholders in the education industry have not been very deliberate, frank and vigorous in pursuing these goals.

### Conclusion and Recommendations.

Teaching health in the 21st century, just like other subjects, requires good and effective use of instructional materials. For this to take place, it is expected that significant authorities adequately provide the facilities and materials and that the health teachers who are expected to implement the process are skilful enough to handle the facilities, materials as well as curriculum as this is a drive towards closing the technical gaps. The paper has observed the non-existence of the facilities, materials and competence among health teachers in Nigeria and therefore recommends the following:

- i. Governments should be coordinated and deliberate efforts at all levels towards providing health teaching materials in all schools.
- ii. Provision of source for constant power supply in Nigerian schools should be pursued with every sense of sincerity and vigour by all stakeholders in the education industry.
- iii. Well-planned, well-executed, and regular workshops and conferences on making and utilising Information and Communication Technology and other health teaching materials should be organised for health teachers.
- iv. Teachers should be adequately remunerated and paid commensurable allowances for this shall improve their capacity to improvise when necessary.
- v. Parents should endeavour to provide for their children/wards as may be required of them for effective deployment of technology in the usage of health teaching materials.

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