NIGERIAN JOURNAL OF SOCIAL STUDIES VOL. 26 (1) APRIL, 2023

EMBEDDING INFORMATION AND COMMUNICATION TECHNOLOGY FOR SOCIAL STUDIES IN A NEW WORLD: BENEFITS, IMPLICATION AND PROSPECTS

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Abstract
In recent years, Information and Communication Technology (ICT) are being adopted in the educational system and it has become a fundamental part of classroom teaching in many developed countries. The adoption of (ICT) into education has generated educational reforms in Nigeria. Social Studies teachers are now expected to use Information and Communication Technology in teaching in view of (as part of the) Social Studies curriculum implementation. It has been indicated in literature that ICT such as Internet resources/tools, Computer mediated instruction, Twitter, Youtube, Telegram, and host of other technologies can enhance instructional delivery and as well students' learning. Thus, embedding ICT for Social Studies in a new world is important to Social Studies teachers and students for a smooth teaching and learning process. Hence, this study focused on examining the benefits, implications and prospects faced for embedding ICT for teaching Social Studies in a new world.

Keywords: *Embedding, Information and Communication Technology (ICT), Benefits, Implications, Prospects*

Introduction

Social Studies as a discipline has been firmly entrenched in the curricular of Nigeria's educational system. As a subject, it is now offered across all the educational levels; basic, post-basic and tertiary. However, recent national and global developments and events across the world cannot but demand a critical appraisal of the subject Social Studies as a problem-solving discipline (Lawal, 2022). Across the world, access to information and communication technologies (ICTs) and digital literacy, which is vital to knowledge empowerment, information generation, and utilization, is not equally distributed in terms of access to digital tools and infrastructure (Ifijeh, Iwu-Jamesa & Adebayo 2016). Despite the prominent role of new emerging technology in information generation, processing and use in the 21st century, it can be argued that widespread embedment and usage is still at the growing level in many developing countries (United Nations Department of Economic and Social Affairs, 2018).

There are several benefits, prospects and implications which the educational system may face with while embedding ICT for Social Studies, and the educational system as a whole. For example, within countries in Sub-Saharan Africa, Ferriet, Grifoni and Guzzo (2020) pointed out low internet connectivity and infrastructural facilities, inadequate operational capabilities to low teacher quality as some of the implications to embedding ICT for teaching.

There is an urgent need to improve the quality of Social Studies by embedding ICTs such as Internet resources/tools, Computer mediated instruction, Twitter, Youtube, Telegram, and host of other technologies in instructional delivery. There are several benefits as well as some future prospects to be gained when ICTs is embedded into teaching, however, it also has some implication. It is against this backdrop that this paper examined the benefits, implications and prospects of embedding ICTs INTO Social Studies in a new world.

Concept of Information and Communication Technology

Much has been said and reported about the impact of technology, especially computers, in education. Much research has been conducted throughout the world to evaluate the positive effects of technology on learning, and to investigate the kind of enhanced learning environment that technology provides in the classroom. In short, considerable resources have been invested to confirm the role of technology in the educational system and this is confirmed by many research studies which has pointed out the benefits and gain achieved by learners, teachers and school in general. Many definitions have been proffered on what information and communication technology is all about. Technology is an instructional tool; utilizing this in an integrative fashion is an instructional strategy. It is a tool for delivering content to learners" (Woodbridge cited by Yemothy, 2015). Examples of technology integration can range from simply accessing laptops for creating documents or using specific computer programs to more advanced uses of technology to create multimedia projects or broadcast live online.

Information and Communication Technology, as being embedded into the educational system, is rather a phenomenon which is new in the educational system of developing countries as compared to western developed countries. Before the advent of newer technologies, most often referred to as information and communication technology, the only utilized technology by teachers were the television, videos and overhead slide projectors. However, with the advent of ICT, there have been drastic changes in the use of digital technology for educational purposes. Another information Technology which can be embedded into teaching is multimedia technologies which according to Patel (2013) stimulate student's interest in learning. Multimedia technologies contains some forms of audio, video, animation and other technological effects which naturally and humanely provides students with more interesting atmosphere for learning.

Patel (2013) observed that multimedia technologies process the capacity to enhance teaching effect, facilitate teaching

exercise, sustaining the best of class time, erodes the teacher centred teaching style and basically enhance class efficiency. The use of multimedia audio resources facilitates the individualized and co-operative teaching because it is an Information and Communication Technology suitable for effective instructional delivery and students' learning. UdimandEtim (2016) stated that multimedia technologies go beyond time and space and create more vivid, visual and authentic environment for learning, stimulates students' initiatives and economizes class. Another important emerging technology which has been embedded into the instructional process is social media. Social media has been one of the most useful technologies which can be embedded into Social Studies instructional delivery. In today's educational setting, much of the information is sought by students within the classroom and outside the classroom environment through social media. They were designed for the aim of collective connections.

Coyle and Caughan as cited by Osharive (2015) noted that in today's society, students now access media platforms such as Youtube, Twitter, Instagram, Facebook and even Google to be connected with other students or friends and also share information around them. Facebook has been a powerful social media tool which is a unique informal learning tool; there are lots of educative materials on this platform which students can utilize. Social Studies teachers can embed this new emerging technology by setting up Facebook groups and using them to initiate discussions which can be an essential informal medium of delivering desirable learning experiences to different groups at different location (Snelson, 2011). Additionally, teachers can embed emerging digital tools such as YouTube, twitter, telegram and diverse kinds of tablet applications since students are known to be able to access these forms of digital technology for entertainment (Harrison & McTavish, 2018). As technology progresses, teachers start to adopt strategies to embed these changes in their teaching approach, which entailed the inclusion of ICT tools such recorders, camera, projectors, visual and auditory storytellers, iPads, Smartphones, and computers in

different disciplines (Hembre & Warth, 2020; Undheim & Jernes, 2020).

YouTube, another type of emerging technology, as noted by DeWitt et al. (2013), generates knowledge, mainly; it offers multimedia forms of education, the abilities of learners to recall and comprehend improve better when they have a full experience that is when they see, hear, and do.The comprehension level of a subject is higher than 75% when they see, hear, and produce materials during instruction, whereas it is 20% for learners who only understand during preparation, and 40% only is among those who see and hear (Lindstrom cited by Pratama, Arifin & Widianingsih 2020). As explained above, YouTube video is an alternative tool to be used in teaching which provides audio-visual information.

Embedding Information and Communication Technology to the Teaching of Social Studies in a New World

Embedding Information and Communication Technology to the teaching of Social Studies has been a contentious issue. For instance Bancheri as cited by Berrett, Murphy, and Sullivan (2012) stated that 'educational reform involving technology embedment is often directed at changing the teaching methods of educators or modifying the delivery of the 'product' to students'. Teachers embed technology into teaching and advise their students which tools to use to acquire new knowledge and guide them to filter useful information found, whether such information is from the Internet or printed books. Technology has always been an important part of classrooms, although the original intent of its use has changed little over the years, as the forms of ICT have evolved considerably (Kucirkova, 2018). Embedding ICT into teaching of Social Studies will help students through play to create meanings, and come to conclusions easily and comfortably about the importance of technology in their lives (Arnott & Yelland, 2020). Embedding ICT into teaching (especially for Social Studies) is important in our current learning environment, with

students in this generation being more dependent on such ICT than ever before as they have grown up in a technology-driven society (Ahmed& Nasser, 2015).

There are several literatures which seek to pinpoint the optimum method of embedding technology into teaching to identify the effectiveness of specific technological gadgets and applications for better language learning. The general consensus about ICT embedment in students has been positive, and most of the literature suggests that it is through a collaborative and community-based approach that ICT can be used most efficiently and effectively (Kucirkova, 2018; Erstad, Flewitt, Kummerling-Meibauer & Pereira 2019). The varied interactive teaching opportunities offered by digital technologies generate unique benefits for students when used properly. In line with findings made by Zhetpisbayeva and Shelestova (2017), embedding new digital technologies is valuable in the development of varied range of communicative abilities and skills. Another key factor for embedding ICT into teaching is the awareness of how best to utilizing it in the classroom will help students engaged in learning (Neumann, Merchant & Burnett, 2018).

Recently, embedding new digital technologies in the classroom settings has increased (Daniels, 2017). Educators are finding new ways to implement these new digital technologies in classroom settings to encourage interaction and improve not only learning outcomes but also teaching. In fact, in some developed countries, embedding ICTs such as digital and touch screen devices in the classroom may now be considered commonplace (Daniels, 2017). Many teachers have very limited training in effective use of the media platforms, and the perceived associated risks also differ, as parents have diverse levels of expertise over the control of technology and how to make the experience safe for their children. In this regard, Marsh, Perez, and Morales (2019) comment that there is a general lack of guidance for both teachers and parents to support the children's play with technology and proper training is needed for early years' teachers so that technology can support playful pedagogical practice.

According to Tondeur, van Braak, Ertmer, and Ottenbreit-Leftwich(2017), embedding ICT into the educational system requires assuming a constructivist conception of learning and adopting a student-centered approach in which students manage the information through ICT instead of the traditional approach (content-centered). The latter has also reduced dependence on the devices and resources provided by educational institutions. In many technologically advanced countries, it has been said that education is on the verge of change as a result of novel technology for quite some time (Laurillard cited by Saikkonen & Kaarakainen 2021).

Benefits of Embedding Information and Communication Technology for Social Studies in a New World

There are numerous benefits that both Social Studies teachers and students can derive from ICT if and when properly applied. Few of these benefits are highlighted below: Most of the Social Studies concepts, which hitherto were learnt by memorization and easily be forgotten by students can be easily be learnt by students easily recalled. Teachers, by embedding and utilizing ICT can help students to learn with ease and retain learnt concepts in their memory for a very long period. Embedding ICT into teaching will help improve students' participation in classroom activities; promoting hard work for both students and teacher. It will also help both students and teachers to gain access to current references and standards (Aina, 2003). According to Omosewo (2009), it will also afford both students and teachers the opportunity of holding conferences, seminars and workshops on issues relating to Social education across the globe without boundary restriction.

Embedding ICT will assist teachers and learners to exchange ideas, learn new materials and new teaching/learning strategies quickly. Since knowledge in Social Studies, like most courses, is not static but changes every day embedding ICT will assist both teachers and students not to rely on obsolete information. Thus,

integrating ICT will help users to sustain and update their knowledge. The benefits ICT can bring to Social Studies will be explored in terms of how it can promote citizenship, help to create a collaborative learning community, promote skills which are necessary for Social Studies and increase student motivation and attitudes towards their learning. Technology in education offers a powerful tool to supplement teachers' instruction in classroom. If properly used by teachers, technology can foster more interest in learning on the part of students, and teachers can use it in the instruction of their respective subjects. Technology has the potentials to make instruction easier, more challenging and motivating for teachers.

Implications of Embedding Information and Communication Technology for Social Studies in a New World

Embedding ICT into education has several implications for both instructional delivery and Social Studies learning. It has implications for the school system, teachers and learners who are the major users of ICT. One of the major implication for the educational system is the inadequate/lack of adequate technology facilities. According to Garba andAlademerin (2014) lack of access to basic technology equipment, low internet connectivity and computers and lack of use of educational software has become one of the greatest implications for embedding technology into teaching. An implication of embedding technology in for Social Studies teaching is that teachers will need to learn new skills in ICT utilization. On the part of students, their mode of learning will be impacted, as there will be dramatic changes in their learning strategies. A common theme in the study by Volery and Lord (2000) was that students who have prior experience of using ICT will generally be more successful in a virtual learning environment than those who do not.

Thus, according to Volery and Lord (2000) embedding ICT into the school programme has a lot of implications for the learner since the learner must possess new learning skills to participate in the learning situation. Shabha (2000) extended this line of

reasoning by noting that students over the next ten years will come from a wider age range and background and will have a greater variety of educational experience. As such, as the rate of new technological progress gathers momentum the skill gap widens and the level of training needed to catch up becomes deeper, creating an instant hurdle for those that have not acquired the necessary ICT skills and expertise. Students who having access to computers and other related tools may have the opportunity to experience a more flexible learning process but students and indeed institutions could fail to benefit from this opportunity, due to students not being able to afford or gain access to a computer (Shabha, 2000).

Thus, Shabha (2000) pointed out that the integrating ICT in schools have great implication for learning. Volery and Lord as cited by Ja'ashan (2020) reported that the success of the technological infrastructure also has implications for the success of ICT enhanced learning, as malfunctioning hardware, software configuration, slow or down servers, busy signals and lack of access are all barriers which can cause frustration for students and ultimately affect instructional delivery and as well as the learning process. This issue is difficult to overcome as problems with technology can arise at any time. This challenge is best met by ensuring the functionality of the technological infrastructure before technology-enhanced learning is implemented. The Traditional teaching and learning skills need to change in order to get maximum benefit from technology-enhanced learning hence teachers are posed with the task of developing a new model for better teaching effectiveness (McFadzean, 2001).

The implications of technology-enhanced teaching for Social Studies teachers are significant and should not be overlooked by teachers/institutions that are or may want to embed ICT into teaching. Teachers must be provided with sufficient time and resources to ensure that technology-enhanced teaching are suitably developed and implemented to meet the needs of students. Alongside this, the transition into new teaching styles must be managed effectively to ensure that teachers are supported

through and beyond the evolutionary period. If the provision of ICT is to become a key element of education, especially the Social Studies programme, there is need to provide a major programme of staff development and training. Training and support is required to ensure that technology can be integrated into daily routines and that its use will be efficient and effective (Wilson, 2001).

However, this too will have implication, as integrating ICT will add to workload pressure, particularly for those requiring significant training due to a lack of ICT skills and experience. This pressure is augmented by the continual need for retraining as teachers struggle to keep up to date with technological progress and since familiarity with ICT has a direct impact on the success of technology-based courses, the importance of training cannot be over stressed.

Prospects for Embedding Information and Communication Technology for Social Studies in a New World

During the last three decades, the educational system has invested heavily in technology. ICT has had a major impact in the education context, in organisation and in instructional delivery methods. One puzzling question is the effective impact of these ICTs on students' learning and teaching in general. Researchers (Breuleuxet, Laferriere, &Lamon, 2002; Trucano, 2015; Looi & ThE, 2015) have tried to proffer solutions this challenging question at the theoretical and empirical levels. Two main difficulties have been faced. On one hand, students' learning or performance is hard to observe and there is still confusion about its definition. On the other hand, technology is an evolving technology and their effects are difficult to isolate from their environment. There is however, no need to doubting the importance or prospects of ICT for Social Studies instructional delivery. ICT is intended to improve education over what it would be without technology. Some of the prospects are numerous.

For instance, Aduwa-Ogiegbaen and Iyamu (2005) revealed that teachers are of the perception that ICT promotes easy-to-access course materials for both instructors and students. Teachers will be able to post the course material or important information on a course website, which means students can study at a time and location they prefer and can obtain the study material very quickly especially if they were absent from the regular class (Bednar & Sweeder, 2005). What this does is that it promotes student motivation in learning. For instance, computer-based instruction, which is a technology-enhanced learning, can give instant feedback to students and explain correct answers. In developing countries where digital access is still rare, once a project is over, use of technology, if any, becomes more difficult: hardware and software become obsolete; connectivity can be too expensive; technical support and professional development are lacking (Trucano, 2015). So, more often than not, capacity building comes to a stop, and scalability does not occur (Breuleuxet, et al. 2002; Looi & Teh, 2015).

Integrating ICT into teaching has not been occurring effectively or efficiently in the classroom due to barriers reported by teachers and other school staff (Hammonds, Matherson, Wilson & Wright 2013). Worldwide, commonly reported challenges are a combination of low self-confidence, deficiencies in technology competency, and anxiety regarding usage, appearances, and curriculum time (Kopcha, 2012; Ritzhaupt, Dawson& Cavanaugh, 2012). Additional barriers include limited access to technology training opportunities and the lack of support in schools without educational specialists (Kurt, 2013). Moreover, ICT enhanced learning like the computer is patient and non-judgmental, which can give the student motivation to continue learning. According to Kumar (2007), who studied the effectiveness of ICT used for instruction, students usually, learn more in less time when receiving technology enhanced learning, especially through computer-based instruction and they like classes more and develop more positive attitudes toward computers in computer-based classes.

Another prospect of utilizing ICT for teaching is that there is wide participation. Learning material can be used for long distance learning and are accessible to a wider audience. Besides, using technology such as the computer improves student's writing skill. It is convenient for students to edit written work on word processors, which can, in turn, improve their writing quality. The prospect of technology is quite evidence from the educational perspective. Though, over the years earliest technologies such as the radio/television and film in addition to other instructional materials such as the chalkboard and textbooks have been utilized for the purpose of education, none has quite had a great impact like the present ICTs like the computer and its associated facilities. Furthermore, embedding ICT teaching have the potential of improving the learning abilities of students and as well as impacting positively on the academic performance of students.

Conclusion

This paper has explored the benefits, implications and prospects of embedding ICT for Social Studies teaching. Embedding ICTs for education is the applying of modern technologies (information and communication technology to be precise) instructional delivery in the classroom. The constant development of new digital technologies and the large-scale digitalization of human activities necessitated the need to embed technology into teaching so as to benefit from its gains. There are several benefits, prospects and implications which the educational system may encountered while integrating ICTs for Social Studies, and the educational system as a whole.

Suggestions

The following recommendations were made in line with the findings and conclusions from the study. It is recommended that sustained funding ICTs should be improved and proper consideration should be given to the provision of facilities. Also, attention should be given to the provision of facilities such as conducive offices, classrooms, laboratories, supply of electricity,

learning software and information services. Private sector participation should also be encouraged to have active and increased participation in funding the embedding of technology for Social Studies. It is also suggested that to ensure proper embedding of ICT for Social Studies, there should be improved institutional management and support through strategic planning and administrative support. It is recommended that teachers should be given opportunity for development to acquire the necessary competency in utilizing ICTs. Information and Communication Technology appreciation should be introduced at each level of schooling so that embedding ICTs for instructional delivery and for students' learning will become a little burdensome for teachers and learners.

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