

Effects of Multimedia in the Teaching and Learning of Social Studies in Secondary School in Akure Metropolitan Area

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Abstract

This study examined the effects of multimedia in the teaching and learning of Social Studies in secondary school in Ondo State, Nigeria. The study adopted the survey research design. The participants were six teachers and 194 students. A structured, self-constructed questionnaire ($r=0.70$) was used as the instrument for collection. Three research questions were answered. The findings of the study among others are that multimedia was perceived to impact the teaching and learning of Social Studies in the selected secondary schools. It therefore recommended that, government should continually provide different types of training on internet usage as well as making different types of facilities available for the use of both teachers and the students.

Keywords: Social Studies, secondary school, students, multimedia resources

Introduction

It is hard to contradict the fact that technological transformation in different form is influencing everyday's life around the world. Hence, the educational field is expanding as a result of evolving multidimensional equipment in teaching and learning. The rapidly changing technological progression is affecting education just like other aspects of human endeavour. The number of technological applications used in educational systems of schools is increasing every day. The traditional method of teaching is currently being replaced by evolving and emerging technologies especially multimedia applications. These new technologies have made the teaching and learning processes to become coherent (Thamarana, 2015). Access to these new technologies in the form of Multimedia Resources has also proven to promote assimilation of learning content by learners (Odunta, 2021). Multimedia Resources comprises of any device, application or communication tool that can store retrieve and transmit information in the form of knowledge to its users (Asthana, 2016).

The words "multi and media" are combined to form the word multimedia. The word "multi" signifies "many." Multimedia is a type of medium that allows information to be easily transferred from one location to another. Multimedia is the presentation of text, pictures, audio, and video with links and tools that allow the user to navigate, engage, create, and communicate using a computer.

Multimedia is a combination of more than one media type such as text (alphabetic or numeric), symbols, images, pictures, audio, video, and animations usually with the aid of technology for the purpose of enhancing understanding or memorization (Guan & Song, 2018). It supports verbal instruction with the use of static and dynamic images in form of visualization technology for better expression and comprehension (Alemdag &

Cagiltay, 2018). The hardware and software used for creating and running of multimedia applications is known as multimedia technology (Kapi, Osman, Ramli & Taib, 2017). Multimedia technology has some characteristics like integration, diversity, and interaction that enable people to communicate information or ideas with digital and print elements. The digital and print elements in this context refer to multimedia-based applications or tools used for the purpose of delivering information to people for better understanding of concepts.

Indeed, various aspects of human endeavours, especially the educational sector, are being transformed by the advent of Information and Communication Technology (ICT). ICT involves the use of hardware and software for the purpose of collecting, processing, storing, presenting, and sharing of information mostly in digital forms. Multimedia technology is an important aspect of ICT that deals with how information can be represented and presented digitally, using different media such as text, audio, video, among others (Guan and Song 2018). It involves the combination of several technologies provide information in the best possible formats, packages, and sizes.

However, when used in the classroom or for educational purposes, the design quality and sophistication of multimedia application must be high enough to combine the different elements of the cognitive processes so as to achieve the best mimicking of the teacher. There are different types of multimedia applications available in the market today. These applications have been deployed for different educational purposes such as the works deployed for Mathematics classes, Social Sciences, Sciences, Physiology, Physics and Physical Education Studies (Al-Hariri & Al-Hattami 2017; Shah & Khan, 2015).

Multimedia Resources are applications that are interactive, informative, computer driven and

channels of communication. Examples of Multimedia Resources abound, they include radio, smart phones, television, internet, interactive board, computers, satellite systems and software. Others are slides, overhead projectors, still motion pictures and many more. The information they transmit can be in texts, graphs, audio, image or video mode (Atubi, 2021).

As rightly claimed by Odunta (2021) that there are robust evidences that Multimedia Resources and Information Communication Technology (ICT) have positive effect on education, nevertheless it is the proper perception and usage of Multimedia Resources in Social Studies teaching and learning that can bring about these positive effects and development.

According to Beuke-Amis & Chiware (2016), the use of ICTs in Nigeria and African countries generally is increasing and dramatically growing. However, while there is a great deal of knowledge about how ICTs are being used in developed countries, there is not much information on how ICTs are being introduced into schools in developing countries. Looking at the developing countries according to these authors, there is generally limited access time per month using ICTs by both the teachers and students, and even less time spent with reliable Internet access. It should be noted that availability of ICTs vis-à-vis access in term of ratio of teachers and students differs significantly.

Despite this, the new and emerging technologies challenges the traditional process of teaching and learning, and the way education is managed. While information communication technology is an important area of study in its own right, it is having a major impact across all curriculum areas and that must have informed the emergence of multimedia resources that are part of the constituent elements or outcomes of the Information Technology Communication (ICT). Easy worldwide communication provides instant access to vast array of data, challenging assimilation and assessment skills (Fowowe, 2016). Rapid communication plus increased access to ICTs in the home, at work, and in educational establishment, could mean that learning becomes a truly lifelong activity- an activity in which the pace of technological change forces constant evaluation of teaching process itself, several studies reveal that students using ICT facilities mostly show higher learning gains than those who do not use.

Hannafin and Savenye (2015) point out that the teachers' role in the classroom can be viewed as a continuum. At the one end is the teacher as a traditional lecturer and importer of knowledge. This is in accordance with objectivist views of learning. At the other end is the teacher as a coach, observer, and facilitator. This fits into the constructivist view

of learning. Teaching in pupil-centered learning environments requires a different attitude of the teacher than teaching in traditional instructional settings: 'Teachers will need to move from providing face-to-face teaching and text-based learning to facilitating individualized, interactive, media-based learning, and learners will need to be empowered to accept far greater responsibility for their own learning' (Latchem, 2019).

In a social interaction process among pupils and between the pupils and the teacher, pupils gather knowledge in an active manner. The teacher must not be too supportive, because this forces the pupils into a passive, receptive role. As the pupils show they can perform the respective task independently, the teacher's support gradually vanishes ('fading'). The gradual shift from teacher-centered learning to pupil-centered learning is time-consuming and requires skillful teachers (Robinson and Latchem, 2017).

Iding, Crosby and Speitel (2022) describe several roles teachers fill when they are helping children to learn in computer-enriched classrooms. Initially, they serve as instructors to children in the use of computers. Later, as children gain more experience, the teacher's role moves to that of a coach. By using computers themselves, teachers can also serve as models to children. Finally, teachers must be critics of computer software, learning to select the best software to enhance children's development. Hannafin and Savenye (2013) point out that the teachers' role does not change simply by using the computer in the classroom: 'The change occurs only to the extent to which a shift of responsibility to the learners occurs. The more responsibility and freedom is given to the learners, the greater the shift in the teachers' role'.

In the same vein, Oshinaike and Adekunmisi (2012) posit that multimedia resources are very significant to colleges and universities as well as research organization, especially in developed countries. Multimedia is penetrating the educational arena of not just those of higher institutions but primary and secondary schools. Thus, they can be used to support the efforts of Social Studies teachers in making sure that learners are effectively taught. The conventional media like television and Radio can no longer attend to the demands of modern-day education, hence they are being substituted with modern multimedia technology such as the internet, slides, computer software's, animations and still motion pictures. Multimedia Resources offer mostly individualized learning, whereby the learner controls the process at a self-paced speed.

Also, it is observed that the increasing use of hardware and software in the field of education positively affected learning environment. In this sense, it is observed that educational environments

have also changed overtime with the increase in computer equipment and software. This change also affected Social Studies course, whose target is to raise effective citizens.

However, although it is expressed that the main aim of Social Studies is to raise effective citizens, it is rather difficult to make a clear definition about the field of Social Studies. The main reason of that is the presence of numerous aspects of Social Studies. When national and international scientists' definitions are taken into account, To Öztürk(2016), "Social Studies is a learning program with the aim to raise effective citizens who can solve problems by deciding on information in changing national and international circumstances almost in every aspect which uses the information and techniques from human and social sciences".

In view of the above premise, this research work examines the effective of multimedia in the teaching and learning of Social Studies in secondary school in Akure metropolitan area.

Again, the outbreak of Covid-19 has further justified the need for effective use of Multimedia resources to educate our children by carefully transfer our hitherto classroom learning style to online with the help of modern technology, that is computers.

Research Questions

The following research questions were answered.

1. What is the level of exposure of teachers to multimedia resources available in teaching?
2. What is the perceived benefits of use of multimedia in the teaching of Social Studies?
3. What is the perceived benefits of the use of multimedia in the learning of Social Studies?

Methodology

The study adopted the survey design. The participants were six teachers and 194 students. The instrument used for data collection was a structured, self-constructed questionnaire(r=0.70). The questionnaire was structured along a four-point modified Likert scale of Strongly Agree, Agree, Disagree and Strongly Disagree. Data were analysed using descriptive statistics of percentage, mean and standard deviation.

Results

Answering the Research Questions

RQ 1: What is teachers' perceived impact of the use of multimedia on the teaching of Social Studies in secondary schools?

Table 1: Chi square summary showing the Perceived impact of the use of multimedia on the teaching of Social Studies

Items		Response				Total
		SA	A	D	SD	
Multimedia has helped in accessing internationally accepted materials that will harness teaching Social Studies	F %	3 50.0	3 50.0	- -	- -	6 100.0
Chi Square	X ²	1.240				
	Df	1				
	P	<.05				

The result on the influence of effective use of multimedia on the teaching of Social Studies in junior secondary schools as presented in Table 1 above shows that all the teachers (100%) consented the impression that multimedia has helped in accessing internationally accepted materials that will enrich the teaching of Social Studies. This was such that a good number of them (50%) strongly agreed these statements, and similar number of them (50%) agreed.

Further confirming this result is the Chi square value of 1.240, df=1, p<0.5], which indicates that the difference observed in frequencies certify this result to be valid for further conclusion. Thus, it is justified that effective use of multimedia could impact the teaching of Social Studies in secondary schools.

RQ 2: What is the students' perceived impact of the use of on the learning of Social Studies in secondary schools

Table 2: Chi square summary students’ perceived impact of the use of multimedia on the learning of Social Studies in secondary schools

Items		Response				Total
		SA	A	D	SD	
Students exposure to multimedia has helped in accessing academic materials that aids or support the acquired knowledge of classroom learning	F	78	76	28	12	194
	%	40.2	39.2	14.4	6.2	100.0
Chi Square	X ²	69.670				
	Df	3				
	P	<.05				

The result on the influence of effective use of multimedia on learning of Social Studies in secondary schools as presented in Table 7 above shows that higher number of the students (79.4%) affirmed that student's exposure to multimedia has helped in accessing academic materials that aids or support the acquired knowledge of classroom learning. This was such that 40.2% of these students strongly agreed these statements, and 39.2% agreed, even when 14.4% disagreed, while 6.2% strongly disagreed.

Further confirming this result is the Chi square value of 69.670, df=3, p<0.5, which indicates that the difference observed in frequencies certify this result to be valid for further conclusion. Thus, it is justified that effective use of multimedia have impact on students learning of Social Studies in secondary schools.

Discussion of Findings

Majority of Social Studies teachers in the selected secondary schools perceived the effective of multimedia to be high and efficient in promoting the teaching and learners of Social Studies, bring structural changes and provide a practical teaching environment for Social Studies. This is well established in Odunta (2011), Oshinake & Adekunmi (2012) and Semerci (1999). These studies are unanimous in affirming the positive influence which multimedia has on the teaching of Social Studies in secondary schools. The opinion of the respondents clearly indicated that 100% of the respondents agreed that use of multimedia in teaching brings about significant changes particularly to the teaching of Social Studies. Again, 66.7% of the responding teachers were of the view that adopting multimedia has helped in teaching with ease. However, 33.3% of the respondents disagreed that the use of multimedia makes teaching difficult.

Majority of secondary school students in Akure South Local Government Area of Ondo State

recognize the fact that the use of multimedia helps to motivate students, understand concepts and make them to learn anytime and anyplace. This is in consonance with studies of Akinoso (2018) and Dwyer (1993) that students learn more effectively and perform better by applying multimedia. The higher percentage of the responding students' (72.7%) affirmed that adopting multimedia in teaching had resulted in motivation to learn Social Studies amidst the students, meanwhile 27.3% of them report differently. It is also glaring from the responses that nearly all the responding students (91.3%) admitted that adopting multimedia in teaching Social Studies had promoted retention in the memory; however, 8.7% had contrary opinion. In spite of the variation in the responses, it could be ascertained that multimedia has positive impact in the learning of Social Studies.

The level of exposure of teachers to multimedia resources in teaching in selected secondary schools was also evaluated. The available multimedia variables are graphics, audio-visual, animations and maps, internets and slides/projects. The responses indicated that higher percentage of the responding teachers (66.7%) affirmed that their usage of graphics to teach, though 33.3% of them report differently. A good number of the responding teachers (50%) report that they use audio-visual techniques in teaching, meanwhile similar percentage of them (50%) refuted. Majority of the teachers (83.3%) were of the idea that they use animations and maps as materials in teaching, meanwhile 16.7 % of them refuted. All the responding teachers (100%) agreed that they do surf the internet to get materials for teaching. Lastly, 83.3% of the teachers were of the opinion that they engaged the usage of slides and projectors while teaching in schools, although 16.7% of them were also of a contrary opinion. The synopsis of the matter is that the available multimedia resources make the teaching of Social Studies effective and efficient.

On the part of the students' accessibility to the multimedia resources and how it has influenced their learning of Social Studies, the responses show that (71.1%) were of the view that they had access to surfing the internet to search for Social Studies contents online, though 28.9% of them deposed this view. Higher percentage of the responding students' (68%) affirmed that they had access to interactive boards while learning, meanwhile 32% of them report differently. The selected students in their larger number (74.2%) were of the opinion that the use of animations and images has helped their learning, however 25.8% of them were of a contrary opinion. The students in their reasonable percentage (69.1%) had supported that they had access to audio-visual resources while learning in schools, meanwhile 30.9% of them refuted. Lastly, nearly all the responding students (91.7%) had thought that they had access to the use of slides and projectors while learning in schools, though 8.3% of them thought contrarily. The basis of the argument is that multimedia is the way to go in this current trend as it helps to boost the interest of the students in the learning process.

Conclusion

It is therefore conspicuous that the deployment of multimedia resources in teaching and learning of Social Studies is immeasurable and promote the acquisition of knowledge as could be deciphered from the responses generated. The recent global pandemic is even a case to mention when it comes to the necessity of utilizing variety of multimedia tools to teach students. This in itself is an innovative measure to ignite and incentivize the students and the euphoria on the part of the teachers when it comes to the adoption of the resources. Attitudes and beliefs towards the use of technology in education, lack of teachers' confidence and resistance to change, lack of basic knowledge and ICT skills, lack of technical, administrative and financial supports, lack of physical environment are some of the barriers identified. These barriers affect the integration of multimedia in education. The study therefore shows that by using multimedia, not only are different teaching and learning styles used, but the approach to learning is also different and it helps learners to construct their own knowledge. Current teaching strategies have not been successful in promoting problem-solving skills, curiosity, and critical and logical thinking. ICT and its innovative possibilities cater for enriched approaches for meaningful learning (Shah & Khan, 2015:349). The use of the multimedia could be useful in Social Studies in teaching and help to make the learning experience more meaningful.

Recommendations

Based on the outcome of this study, the following recommendations are offered;

1. From the effect of multimedia on student achievement, which requires computer skills of the teachers; it could be stated that teachers should not be behind in terms of technology knowledge. For this, in-service courses should be opened.
2. Materials with today's technology for Social Studies lesson should be chosen and developed.
3. The technological groundwork of the schools should be improved and schools should be designed in a way to present opportunities for multimedia use.
4. The number of movies, slides, animations, photographs and voice records used for the objectives of the lessons should be increased.
5. Students should be integrated more into the learning process by enabling them to prepare some multimedia materials (slides, Internet searches, etc.).
6. School authorities should investigate various multimedia resources and technologies that might capture students' interests, resulting to hopefully increased reading comprehension skills.
7. They should also think about maximizing the potential of using multimedia in all subject areas in their classroom.

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