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Review Article

Challenges and Strategies: Usage of Multimedia Resources in Teaching Social Studies Concepts in the Junior High Schools of Ghana

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Abstract: Access to and the availability of digital infrastructure remains the most significant issue influencing teachers' use of multimedia technology in teaching and learning processes. Qualitatively, the study focused on a case study research design. The study population consisted of five (5) Social Studies teachers at Presbyterian University College of Education Demonstration Junior High School in the Akuapem North Municipality of the Eastern Region of Ghana. A purposive sampling technique was used to select all the Social Studies teachers for the study. The main instruments for data collection were an interview guide and observation protocols. The data was analysed using the interpretative method based on the themes arrived at during the data collection. The themes were related to the research question and interpreted on the number of issues raised by participants. The study indicated that more resources are needed to use multimedia resources effectively in social studies instruction. Limited access to computers and the internet, unreliable power supply, time constraints for teachers, and a lack of necessary competencies all contribute to this challenge. Although multimedia has become crucial to education, teachers often need more training to utilise these resources fully. The government must collaborate with other organisations to procure ICT resources to address these challenges rather than shouldering the sole responsibility for financing education. Establishing a school-based ICT policy framework to guide technology implementation in teaching and learning is essential.

Keywords: Challenges, Strategies, Multimedia Resources, Social Studies

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1. Introduction

Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources [1]. The implication is that "teachers are to develop appropriate Technological Pedagogical Content Knowledge (TPACK) to improve on their effective formative assessment practices in the classroom" [2]. Integrating Information and Communication Technology (ICT) in education has become a pivotal focus for enhancing teaching and learning processes globally. Governments and educational institutions are increasingly advocating the adoption of new information technologies to improve educational outcomes, particularly in subjects like social studies [3]. Despite these efforts, many Social Studies classrooms still need to catch up in effectively utilising these

technological resources, which hinders the potential for enriched learning experiences [4, 5].

Research indicates that while teachers recognise the benefits of ICT in education, they often need help with its integration. These include inadequate digital infrastructure, insufficient training, and a need for more supportive educational policies [6, 7]. Teachers using traditional teaching methods must adequately prepare students for a networked society, compounding the challenges and leading to a reliance on outdated pedagogical tools [8].

Moreover, Social Studies teachers' competence in effectively utilising ICT is crucial for successfully implementing multimedia resources in their instruction [9]. This posits that " teachers integrating ICT into the Social Studies classroom makes lessons more engaging, varied, and well-presented, as well as allows the teacher to control the instructional time effectively, aids students in comprehending what they have been taught, makes lessons more concrete, and increases students' attention in class" [10]. However, many educators report needing to prepare to incorporate technology into their teaching practices, often resorting to simplistic uses of available tools [5]. A study on Senior High school teachers' Perceptions of Integrating ICT into Social Studies Lessons in the New Juabeng Municipality published in *Social Education Research* revealed that "ICT tools like computers, internet systems, educational software, printers and overhead projectors were found to be limited in the schools" [10]. Integrating Information and Communication Technology (ICT) in education is essential for fostering innovative teaching practices and enhancing student engagement, particularly in subjects such as Social Studies. However, despite the recognised benefits of ICT, many Social Studies teachers in Ghana need to work on effectively incorporating multimedia resources into their instructional practices. Research indicates that barriers such as inadequate digital infrastructure, insufficient teacher training, and a lack of supportive institutional policies hinder the successful integration of technology in the classroom [6, 7]. Moreover, teachers often report feelings of anxiety and lack of confidence regarding their ability to utilise ICT effectively, stemming from limited knowledge and skills in technology integration [5, 11]. This lack of confidence can lead to a reluctance to adopt new teaching methods, resulting in a reliance on traditional pedagogical approaches that do not adequately prepare students for the demands of a digital society [8].

Additionally, institutional factors, such as rigid school timetables and insufficient support from school authorities, further exacerbate educators' challenges in integrating ICT into their teaching [12, 13]. As a result, the potential of multimedia resources to enhance the teaching and learning of Social Studies still needs to be explored, limiting students' opportunities for interactive and engaging learning experiences. This study aims to examine the challenges faced by Social Studies teachers at the Presbyterian University College of Education Demonstration Junior High School in the Akuapem North Municipality of the Eastern Region of Ghana, integrating multimedia resources into their lessons and identify effective strategies that can facilitate the successful use of technology in the classroom. The study sought to answer these research questions: (1) What challenges do social studies teachers face in using multimedia resources to teach social studies concepts in junior high schools? (2) What strategies can be adopted to overcome Social Studies teachers' challenges in enhancing the practical usage of multimedia resources in teaching social studies concepts?

1.1. Challenges of the Use of Multimedia Resources in the Social Studies Classroom

Computer and network technology are widely used in teaching; they undoubtedly benefit the educational sector. Information technology can produce richer curricula, enhanced pedagogies, and higher work efficiency for school teachers. Technology integration has become necessary for teachers' daily teaching [14, 15]. The study reveals that people believe that new technologies support the education system now and in the

future because they provide users with more effective communication and better understanding [3]. Sarowardy reveals that governments around the globe are encouraging schools and universities to engage with new information technologies in urban and rural areas. However, not all teaching classes, especially social studies, use those materials practically [3]. Studies indicated that "the school is an important environment in which students participate in a wide range of computer activities; increasingly, Information Technology is being applied successfully in Social Studies instruction, learning and assessment" [3, 4]. Another opinion confirms that "professional Social Studies teachers must be able to adapt to technological developments as reflected in their ability to utilise digital media and learning resources" [9].

Research stated that "Social Studies teachers seem to believe in the potential benefits for the educational process, but they still face challenges in integrating ICT in their classroom teaching. For instance, despite the many initiatives considering the importance of ICT in the teaching and learning process, schools in Saudi Arabia still fail to integrate ICT into the educational process" [5]. Researchers added that "much of our school learning is still individual-based and traditionally trusted tools of learning are inadequate for preparing children for a networked society" [6]. Therefore, there is a significant need to identify and determine ICT obstruction in schools as this is the first step towards change in ICT use in education [7]. A researcher stated that "the competence of Social Studies teachers to develop learning media based on ICT is very important for the implementation of effective media learning. However, it is unfortunate that, in fact, according to him, teacher competence in utilising information and communication technology in learning is not sufficient; there are still many Social Studies teachers who only use technology and tend to carry out traditional learning due to the numerous challenges they face" [8]. In the work of researchers on the challenges of using ICT in education concluded that "the process of using ICT in everyday education is very complicated" [16]. The opportunities provided by ICT to support teaching and learning are not problem-free. The virtually limitless opportunities of access to information in an educational context can pose a real danger of information overload if the teachers do not have the skills to filter information for relevance or cannot establish a coherent organising principle. Both students and teachers may need more skills to access, process and use information [16]. A study pointed out that "the use of ICT for teaching and learning comes with several challenges, and it is further complicated with the introduction of new technologies every day" [13]. These challenges have been identified from a review of previous empirical studies and, therefore, classified into four main categories: resources, knowledge and skills, institution and subject culture [17]. Inadequate resources arise when ICT is needed to be integrated into Social Studies teaching and learning. Resources may include technology, access to the needed application, and support from technical experts. Inadequate technological resources, including obsolete and insufficient computers and incompatible hardware and software, give Social Studies teachers little chance to include ICT in teaching and students in learning. Integration of ICT into teaching and learning also goes beyond the availability of technology in schools; it includes making the proper hardware and software accessible to teachers and students for use. Insufficient time is also a resource-type challenge in using ICT for teaching and learning [17]. Social Studies teachers need more time to go through web pages and identify pictures they need for multimedia assignments they give students. More technical support as a resource led to social studies teachers and students needing help using different technological approaches to integrate ICT into teaching and learning [13].

Institutional challenges can also be associated with social studies teachers' and students' use of ICT, including school authorities and timetables or calendars [13]. Studies have proven that "school authorities can impede the integration of ICT into teaching and learning" [12]. Researchers affirmed that "most Hong Kong Social Studies teachers felt their heads in pre-tertiary schools did not know technology and its importance to the

country's shift to more leaner-centered activities" [12]. A timetable which is not flexible can also be a challenge in the use of ICT by teachers and students. In research which covered over four thousand teachers in more than a hundred high schools in America, students had less than an hour for subjects they learned in a class [18]. Such limited time will not allow for the variety of ICT usage by students and teachers. An empirical study suggests "the lack of trained teachers who will impact students' intellect in pre-tertiary schools as the major challenge faced with using ICT for teaching and learning". The same study also found out that "trained teachers who were well equipped in the use of ICT for teaching and learning purposes preferred leaving the continent to the western world due to poor remuneration coupled with inadequate ICT infrastructure". The implication is that "unless school authorities buy into the idea of ICT integration and support its use, teachers have no option to integrate themselves" [19].

A research work posits that "several barriers to multimedia use in teaching and learning were revealed due to a review of several studies. Such barriers include resistance to the adoption of ICT, lack of teachers' confidence in the use of technology, resistance to change on the part of teachers, lack of ICT skills and access to ICT resources. Others identified needing more support, lack of time to learn new technology, lack of instructional content and the physical environment in which multimedia delivery occurred. The barriers identified could be classified into fear or resistance to change. A study on teachers' preparedness for the integration of ICT among some selected training colleges in Kenya identified "lack of competence, insufficient facilities, limited teacher's ICT skills, lack of ICT policies on the integration, and lack of college administrators' support as barriers to the effective implementation of ICT in instructional processes" [21]. A similar study alluded that "both internal and external factors in the part of the teacher can hinder integrating technology in the form of multimedia resources in teaching and learning of Social Studies" [22]. The internal factors include teachers' attitudes, which means teachers themselves may refrain from using technology in the classroom. Recent evidence suggests most teachers do not like to use computers because of their old age; they expect younger people to learn and use them, while they believe that older practitioners do not have to use them anymore.

Additionally, they can use traditional methods to teach interactive lessons like Social Studies without using technology. Moreover, teachers with years of work experience prefer manual methods to projectors [22]. Researchers confirmed in their study on primary school teachers' use of multimedia resources that "the young teachers incorporated ICT in their Social Studies instructions more than older ones. The external factors are due to the teacher's lack of time to prepare the PowerPoint or similar materials for students" [23]. The Survey reports that "the majority of participants complained that they were too busy to mark students' homework and examination papers, in addition, they were forced to finish the syllabus assigned by the school. Using multimedia resources in the social studies classroom is time-consuming, and students cannot complete the syllabus. Indeed, technology integration in the classroom is a burden for them. Teachers are sometimes not committed to this learning-teaching method, not in the classroom but in distant places. The concerns include the support and recognition by the administration while the time used for preparing the lessons lengthens the teaching and learning process" [22].

Another important external factor is that teachers need more training in the use of technology. Some teachers may need more skills to incorporate technology tools because they still need to attend Information Technology training [22]. On the same internal and external factors hindering multimedia usage, research shows "internal factors such as attitudes of teachers and management, support of management and school-related resources, teachers' time, and workload. An added external factor is those associated with barriers outside of the school as any support (technical, resources, strategies and policies, maintenance, training, continuing professional development programmes) coming from

the educational authorities, including the Ministry, and associated educational authorities" [5]. The researcher added that "based on review of various researches, several personal related factors that can be barriers to teachers' ICT use, such as lack of confidence, experience, motivation, and attitude" [5]. A researcher surveyed teachers' perceptions and ICT use among some selected secondary schools in Morogoro municipality, Tanzania. In all, 60 secondary school 20 tutors took part in the research. The findings show that "though tutors' ICT awareness was high, the schools did not have sufficient facilities to facilitate ICT application in learning, and the few ICT resources available were not properly used. Again, the tutors indicated that they had no in-service training related to ICT integration in learning activities" [24, 25]. The implication of all these is that "until teachers realise that the multimedia use in the classrooms outweighs the constraints, be it internal or external, the end product which is the learner would be disadvantaged".

In Ghana, the most challenging issue JHS students face when learning with technology is a regulation prohibiting JHS students from using phones in schools. Researchers surveyed Ghanaian primary schools' application of ICT for teaching and learning. The findings show an inadequate number of computers at Primary schools (4%) compared to Junior High Schools (10%). They further cited 110 electricity fluctuations, low technical know-how, and lack of access to the internet as barriers to the effective integration of ICT in instructional processes. However, the study should have captured the situation in senior high schools. Some scholars have divided these barriers into two categories: extrinsic and intrinsic. Extrinsic as first order and cited access, time, support, resources and training. Intrinsic barriers are second-order and cited attitudes, beliefs, practices and resistance to change [26, 27]. In agreement, a researcher asserts that "the lack of teachers' and learners' competencies appears to be one of the significant obstacles to effectively utilising multimedia resources in learning and teaching settings [28]. Some other researchers grouped the barriers into two categories "teacher-level and school-level. Teacher-level barriers include a lack of confidence, shortage of time, and resistance to change, or to the institution and school-level barriers, such as a lack of effective training in solving technical problems and access to resources" [7, 29]. Other researchers classified barriers into level barriers, such as those related to teachers' attitudes and approaches to ICT, and meso-level barriers, such as those associated with the institutional context. They also added a third group called macro-level barriers, such as those related to the broader educational framework.

Additionally, another group of researchers refer to the barriers as those about two conditions: material and non-material [16]. A similar study classifies barriers as "material conditions and non-material barriers. Material conditions refer to the insufficient number of computers or copies of software. The non-material barriers refer to teachers' insufficient ICT knowledge and skills, difficulty integrating ICT into instruction, and insufficient teacher time [30]. The implication is that "whatever the nature of the barrier, all efforts on the teachers' part must be made to encourage multimedia usage". Other barriers to ICT integration include fear of change, inadequate time, lack of accessibility, lack of confidence on the part of some teachers, lack of appreciation of the benefits of ICT, and inadequate resources [31].

In furtherance to the above challenges, a study found that "training and support improve gradually, and they contribute to the integration of technology (multimedia resources) and efficiency of the teachers' teaching methods" [3]. "Without a doubt, the information age promotes new teaching ways, imposing new requirements on the teacher, and they are expected to be well-versed in technology to achieve the expected outcome, which often proves to be a great challenge for the teachers. Despite the ideal learning method that proudly encourages students to use the existing multimedia learning tools, teachers are mostly inexperienced in mastering the computer technology" [3]. A researcher opined, "Some observers have argued that technology in learning has widespread challenges in teaching and learning. One of the reasons was that many

teachers and lecturers in instructional technology were treating students as if they are machines rather than human beings". He further asserted, "Teachers have to be aware of this and not to dehumanise students learning as a machine.

Furthermore, he argued that if teachers perceive learners as machines, they will treat them as such, with or without using instructional media. If teachers perceive their students as human beings with rights, privileges, and motivations, they will treat them as such, with or without using instructional media. In other words, it is not technology that tends to mechanise people but the uses to which people put technology" [32]. This implies that "in the usage of technology in the classroom, learners are sometimes dehumanised".

A researcher saw "the teacher as a person to be the barrier and designated that the teaching staff are the policy implementation members of any institution anywhere in the world through adequate academic communications to learners. Literature supports this argument in that teaching staff is critical in expediting knowledge. Furthermore, teachers' ability to use and control the electronic technology, their attitudes towards the electronic technology devices, and their teaching styles affect how well they will accept the technology [33]. Academic teachers ' acceptance of multimedia technologies is affected by their perceptions, attitudes toward them, the influence of people around them, and accessibility to these technologies. Support from school administrators is critical in indoctrinating teachers' confidence in using multimedia technologies [34]. A submission by a researcher proposes that "the use of new technology (multimedia technologies) by teachers is explicated principally about their discernments about the worth they acquire from new technologies" [35]. Nonetheless, when members only expect slim advantages from the new technologies, they are likely to limit their technology usage to the features they are familiar with. This implies that "teachers who swiftly realise the advantages of multimedia technologies are more likely to be the first to begin using the technologies to enhance their teaching".

In a similar study, researchers discovered "a lack of digital resources, insufficient time, and lack of technical support, power fluctuations, lack of internet, and lack of school-based ICT policies as well as limited funding to maintain ICT equipment as barriers to the effective and efficient integration of ICT in Social Studies instructional processes" [23]. Teacher-related challenges impact fundamental change and are typically rooted in teachers' core beliefs and are, therefore, the most significant and resistant to change [36]. Teachers-related factors refer to teacher comfortability, teacher confidence and teacher competence. Research indicates that a lack of confidence in teachers prevents social studies teachers from using ICT [11]. Similarly, the researchers indicated that "limitation in teacher's ICT knowledge makes them feel anxious about using ICT in the classroom and thus not confident to use it in their teaching. Teachers' computer competence is a major predictor of integrating ICT in teaching" [11]. Teachers' attitudes are influenced by their perception of the usefulness of ICT, their behavioural intentions and pedagogical aspects. Teachers' attitudes towards using ICT in teaching and learning Social Studies are also influenced by several factors [11].

1.2. Strategies to deal with the Challenges Teachers face when using Multimedia Resources in Teaching Social Studies Concepts

Integrating multimedia resources is associated with a shift from instructive to constructivist teaching and learning philosophies. So, technology integration takes time: time to learn about the innovation and time to be adequately prepared to use it. In this respect, school authorities play an essential role and apply different strategies, such as change agents, lifelong learners, principal supporters, and resource providers, to implement ICT in the form of multimedia in schools. Thus, they should be able to identify and articulate a vision, provide an appropriate model, provide individualised support, provide intellectual stimulation, foster acceptance of group goals, and achieve high-performance expectations. They should have knowledge, skills and positive attitudes

toward implementing multimedia in schools. In this way, they can create school changes by focusing on action and converting their teachers into leaders who will eventually become change agents. Therefore, teachers can be leaders when they are committed to a cause and self–managing [37]. An added strategy is the availability of School-Based ICT policy, as empirical studies showed that effective pedagogical use of multimedia resources (ICT) in instructional processes could be directly connected to a favourable policy environment. School-based ICT policy introduces the motivation to design a coherent, clear and workable community of practice linked with effective, regular, efficient and consistent use in the instructional processes. Users need to be made aware of the policies, and policies need to be monitored to ensure that users comply [38].

Additionally, the institution will have specific responsibilities under Ghana's data protection legislation to safeguard users' data. The school-based ICT policies are connected to national ICT in education policies and programmes designed by the Ministry of Education (MoE), Ghana. The MoE facilitates the pedagogical use of ICT in all schools. However, it links this directly to the national examination system, the approved school curriculum, and, in some situations, teacher-centred instructional methods [39]. Adding to the strategies to overcome barriers of multimedia integration, researchers emphasised that "a holistic view to barriers to technology integration in education, came out that the barrier to technology integration is teachers' perceptions of their inadequacy or lack of knowledge and skills. Another barrier is called the institutional barrier, which includes the educational policies of institutions and countries. Educational policies of institutions and countries are effective in achieving technology integration. Policies that support teachers in this regard contribute to the achievement of integration" [40]. The implication here is that "effective policies concerning ICT integration is a sure way of encouraging its usage".

Teacher motivation to use multimedia resources to enhance the learning and teaching of Social Studies concepts plays a critical role in integrating Social Studies classrooms. It has been discovered that teachers displayed less motivation to integrate multimedia resources in teaching and learning when they were not convinced that students would show a desirable outcome in performance during the learning process. Some teachers may also resist change because they do not see the need to change the old ways of doing things. They assume that the new order must be a tried and tested one. For them, changing from the conventional method of instruction to the use of multimedia resources is unacceptable. Some argue that multimedia resources have yet to prove to make any educational gains where they have been applied [40]. Time will inevitably bring about the increased adoption of classroom technology on a large scale. First, teachers must have a say in what technologies they will use in their instruction. Teaching is a profoundly personal experience, and when educators feel they have lost the ability to teach in a manner that best suits them, it can be frustrating and discouraging [41]. Every educational technology will be perfect for some teachers, and educators should be able to select a technology they feel most comfortable with. Allowing teachers more freedom of choice will help them retain an essential sense of classroom control. While the importance of teacher autonomy in selecting educational technology cannot be understated, it does introduce the burden of sifting through many available technologies [41].

As a second solution to encouraging acceptance of classroom technology, the researcher posits that "there is the need to call for better organisation of available technologies" [42]. "While a typical internet search will yield thousands of results for educational technology tools, few places effectively organise and evaluate available technologies. Teachers should be able to easily find and access rigorously tested technologies within a specific learning domain. Better organisation of empirically validated educational technologies will serve to save valuable time and will place less of a burden on the teacher" [42]. Researchers recommended that "the training of teachers on the use of multimedia in education should be given a facelift in this 21st century" [43].

"This will enable them to appreciate multimedia usage and inculcate the practice into their students. In the long run, this will make the whole educational cycle multimedia-compliant and improve the nation's general well-being [43]. Other researchers recommend "Training Needs Assessment (TNA), which is a gradual investigation of an issue or innovation using data and views from different sources to be able to design effective interventions or recommendations on what should be done, as a strategy for encouraging multimedia use by teachers in the classroom. TNA aims to ensure that the training programmes are well-focused and relevant to meet the needs of the trainees. Government should provide multimedia facilities in various institutions of learning to boost the educational sector and raise it to a standard where it can compete with what is obtained in the Western world" [44]. Another scholarly study recommended "training as a way to encourage multimedia usage and wrote that multimedia classrooms, digital contents and teachers' training together have improved overall quality of learning by promoting effective and participatory learning and eradicating cramming tendencies from the learners" [45]. This implies that "where the majority of the teachers of Social Studies did not have the requisite ICT skills and competencies to integrate ICT in their instructional processes effectively will require further training on those specific areas".

A study on the integration of ICTs in Kiswahili instructions among some selected public SHSs in Kenya recommended that "the need for government and NGOs to supply schools with ICT tools; in-service training for capacity building on how pedagogically use ICT during instruction; the need for more time for the integration; development of relevant e-content; supply schools with generators and solar panels; and hire more ICT technicians as strategies to improve the integration of ICT in Kiswahili instruction" [46]. Other researcher added that "for teachers to achieve effective use of computers, they must experience a paradigm shift from the teacher-centred classroom to the student-centred classroom. In this situation, educational technologies will likely have a more central role because they permit active student learning activities in which the teacher serves as facilitator of the learning process" [41]. A study stated that "one of the barriers to technology integration in Turkish education is the quality of pre-service and in-service pieces of training given to teachers" [47]. it can be concluded that "the training for the effective use of technology in the classroom was insufficient". This was emphasised by a researcher that "technology integration or educational technology courses should enable prospective teachers to apply the theoretical knowledge gained in various periods; in other words, quality training is essential" [48]. Again, factors affecting technology integration in education are considered internal and external. However, it is stated that external factors are more likely to be detected and eliminated than internal factors. Accordingly, teachers' attitudes and beliefs can be seen as why effective technology integration cannot be achieved despite eliminating external barriers such as technology and access to education. Therefore, to achieve an effective integration process, research can be conducted to enable teachers to develop positive beliefs about technology and integration ([49, 50]. Social Studies teachers believe they need more time to plan and use technology in teaching because of national exams, which evaluate students, and teachers' insufficient belief that high-level learning and high success can be achieved through technology integration in national exams. In this respect, it is necessary to develop beliefs that Social Studies teachers' use of technology in teaching does not constitute a barrier to exam preparation. On the contrary, they can achieve higher levels of success with technology ([51].

2. Methodology

The study adopted a qualitative research approach. Qualitative research, however, is more holistic and often involves a rich collection of data from various sources to gain a deeper understanding of individual participants, including their opinions, perspectives, and attitudes, as postulated by [52]. The study focused on a case study research design.

The strength of the case study method is that it allows for the in-depth examination of the phenomenon using various kinds of evidence obtained from interviews with those involved, direct observation of events, and analysis of documents and artefacts [53]. The study population consists of five (5) Social Studies teachers at Presbyterian University College of Education Demonstration Junior High School in the Akuapem North Municipality of the Eastern Region of Ghana. A purposive sampling technique was used to select all the Social Studies teachers for the study. An adequate purposive sample must have clear criteria and rationale for inclusion based on their ability to provide necessary data [54].

The main instruments for data collection were an interview guide and observation protocols. The data was gathered in two sections; the first was open-ended questions that the participants completed at their own pace and had time for reflection. These were completed before the face-to-face interview. Some questions were prepared for the researchers to guide the interview towards satisfying research objectives, but additional questions were encountered during the interviews. However, participants were allowed the freedom to talk about their experiences in a way in which they were comfortable [55]. Lesson observations were used as a data collection technique for the study. Among the different kinds of observations, the researchers' target was to gather evidence about interactions during the teaching and learning processes. Observations enable the researchers to describe situations using the five senses, providing a "written photograph" of the situation understudy. Participant observation allows researchers to check definitions of terms that participants use in interviews, observe events that informants may be unable or unwilling to share when doing so would be unwise, impolite, or insensitive, and observe situations informants have described in interviews, thereby making them aware of distortions or inaccuracies in the description provided by those informants. The data was analysed using the interpretative method based on the themes encountered during the data collection. The themes were related to the research question and interpreted on the number of issues raised by participants. These were based on questions from the semi-structured interviews and observation.

2.1. The Challenges to the Usage of Multimedia Resources in Teaching Social Studies Concepts

This section presents findings and discusses the challenges of using multimedia resources in teaching social studies concepts. Access to and the availability of digital infrastructure remains the most significant issue influencing teachers' use of multimedia technology in teaching and learning processes. A previous study wrote that "much of our school is still individual-based and traditionally trusted learning tools are inadequate for preparing students for a network society" [6]. The participants were, therefore, asked to mention challenges and constraints militating against their effective utilisation of multimedia in Social Studies instruction. The reason is that identifying and determining ICT obstruction in schools is the first step towards change in ICT use in education. The research question was divided into sub-themes regarding barriers to resources, knowledge and skills, institutions, attitudes and beliefs and educational policies for using ICT.

2.2. Resources

This item on the interview checklist reads what are the possible barriers to using multimedia resources in teaching Social Studies concepts in terms of resources? In response, a participant mentioned technology and access to the needed application.

> *Three (3) participants mentioned limited access to computers and the internet, unreliable power supply, and support from technical experts. The other three (3) participants stated insufficient time as a resource-type challenge, as they needed more*

> *time to mark students' homework and examination papers. In addition, they were forced to finish the syllabus assigned by the school. Added to the barriers mentioned are incompatible hardware and software.*

The participants agree with earlier research that "resource barriers to multimedia usage may include technology, access to the needed application and support from technical experts" [17]. Participants further stated that *inadequate technological resources, including obsolete and insufficient computers and incompatible hardware and software, lead to too little chance for teachers to include ICT in teaching and student learning*. They also added that the *integration of ICT into teaching and learning goes beyond the availability of technology in schools; it includes making the proper hardware and software accessible to teachers and students for use. Insufficient time is also a resource-type challenge in using ICT for teaching and learning.* Previous research supports the study's findings that teachers need more time to go through web pages and identify pictures they need for multimedia assignments they give students. Again, it is time-consuming to prepare PowerPoint for lessons, busy marking students' work and where large numbers exist in the classes, more time is spent in marking. They cannot complete the curriculum using educational technology as it is considered time-consuming. Adequate technical support is needed as a resource challenge, leading to teachers and students being unable needing help to use technological approaches in integrating ICT into teaching and learning [13]. Participants also mentioned limited access to computers and the internet, which aligns with earlier research that concluded that the absence of Internet access is a significant barrier to using Multimedia Resources in education in Africa [49]. An earlier scientific research on Ghanaian primary schools' application of ICT for teaching and learning revealed "an inadequate number of computers at Primary schools (4%), compared to Junior High Schools (10%) citing 110 electricity fluctuations, low technical know-how, and lack of access to the internet as barriers to the effective integration of ICT in instructional processes [26]. These confirm the statements made by the participants that "resource audit by the researchers during the lesson observation in the school indicated that every teacher has been supplied with a Personal Computer by the government and the school has some computers but not sufficient such that every student will have access to one but a number gather around during ICT lessons. The researchers also observed frequent power cuts and unstable internet connectivity when they visited the school. The implication is that "even multimedia resources are inadequate in the school, only a few teachers use the available resources and even their personal computers are used for purposes other than teaching".

2.3. Knowledge and skills (competencies)

This item on the interview guide reads, what are the possible barriers to using multimedia resources in teaching Social Studies concepts regarding teacher competencies? Previous studies state that "the competence of teachers to develop learning media based on information and communication technology (ICT) is very important for implementing effective media learning. However, unfortunately, teacher competence in utilising technology in learning is insufficient; many teachers still use technology and tend to carry out traditional learning due to the numerous challenges they face". It was against this premise that the researchers wanted to know from participants whether insufficient skills and knowledge of the teacher can impede multimedia technology application. *All participants expressed that:*

> *"The most notable barrier in the usage of multimedia in teaching and learning is lack of training to use the technology as most of them have not attended any ICT training before and they have not been taught how to be a facilitator in a technology-rich classroom; even though some have personal computers. They added that for those*

> *who have had training, the said training does not equip or give them the needed skills, competence and confidence to guarantee its application in the classroom.*

This affirms a statement made by a researcher that "the competence of teachers to use learning media based on information and communication technology (ICT) is very important for the implementation of effective media learning. Lack of training to use technology and said some teachers might not have enough skill to incorporate technology tools because they did not attend any ICT training" [56]. An earlier study alluded that "non-material barriers and refer to teachers' insufficient ICT knowledge and skills, the difficulty of integrating ICT in instruction" [30]. This implicates that, "even though multimedia use is becoming the order of the day in education, teachers still do not have the needed competences to guarantee its usage in our schools. By implication, they must be fully prepared to function productively in a technology-oriented society by developing fundamental computer skills and proficiency in using various technology tools in teaching.

2.4. Institutional

Institutional challenges can also be associated with using ICT by teachers and students [13]. A participant mentioned that:

> *"The school as an institution poses a challenge with teachers' use of multimedia resources (ICT) in the form of timetables and the school calendar. The time allocated to the timetable could be more flexible, and it is also a challenge for teachers and students to use ICT, which demotivates them.*

This concurs with the previous studies that "institutional challenges can impede the use of ICT by teachers and students, which include school authorities and school timetable or calendar" [12, 13-18}. *The other participants (3) felt the head teacher and her management team needed to learn about ICT and its importance as a new dawn in education*. Previous studies posit that "institutional challenges can impede the use of ICT by teachers and students, which include school authorities that teachers felt their heads in pre-tertiary schools did not have knowledge in technology and its importance to the country's shift to more leaner-centered activities" [12, 18]. *The last participant mentioned that there is also a need for more support from the school authorities when a teacher wants to integrate multimedia technology into his lesson.* This assertion is supported by a previous study that "support from school administrators is particularly important in indoctrinating confidence among teachers in their use of multimedia technologies" [34]. A study on teachers' preparedness for integration of ICT among some selected training colleges in Kenya identified a need for college administrators' support as a barrier to effective implementation [21]. This implies that "supporting the school as an institution in all aspects is a sure way to enhance multimedia usage in JHS schools in Ghana".

2.5. Attitudes and Beliefs

A teacher's beliefs about using technology become a factor in the ability to adopt the new technology into their pedagogy. The educator's values, beliefs and confidence level are factors in adopting new technologies and pedagogies. A positive attitude toward technology significantly influenced the intention to use educational technology. Positive attitudes influence the acceptance or rejection of integrating new technology [27]. A similar study alluded that "teachers' attitude, which means teachers themselves may refrain from using technology in the classroom as recent evidence suggests most teachers do not like to use computers because of their old ages; they expect younger people to learn and use it, while they believe that older practitioners do not have to use it anymore" [22]. A participant mentioned that:

> *"ICT integration is for the younger generation, as many current teachers of her age grew up without access to technologies like the personal computer and the internet. However, today's students are raised in an environment saturated by computer technology. These "digital natives" can intimidate teachers, especially teachers with little technological experience.*

An earlier study indicates that "without doubt, the information age promotes new teaching ways, imposing new requirements on the teacher, and they are expected to be well-versed in technology to achieve the expected outcome, which often proves a great challenge for the teachers [3]. The "digital natives" can intimidate teachers, especially teachers with little technological experience. Suppose teachers feel they do not have the necessary competencies when using technology. In that case, they may feel less in control of the class, use less technology, and be unlikely to explore new possibilities that utilise technology when designing their classes [3]. A similar study stated that "teachers' ability to use and control the electronic technology, their attitudes towards the electronic technology devices, and their teaching styles all affect how well they will accept the technology. Acceptance of the multimedia technologies by academic teachers is affected by their perception, attitudes toward them, the influence of people around them, as well as accessibility to these technologies" [33]. Three (3) participants' views can be summed up as "*when the Social Studies teacher discerns positively about the worth of multimedia technology in the classroom, he/she uses it. Nonetheless, those who expect slim advantages from the new technology are likely to limit their usage".* An earlier study supports the current study that "the use of new technology (multimedia technologies) by teachers is explicated principally about their discernments about the worth they acquire from new technologies confirms the participants' point made [35]. The implication is that "the teacher's attitude and belief become the significant determining factor in multimedia usage in Social Studies instruction".

2.6. Educational policies

The availability of School-Based ICT policy is essential, as empirical studies have shown that effective pedagogical use of multimedia resources in instructional processes can be directly connected to a favourable policy environment [37]. Teachers' preparedness for the integration of ICT mentioned educational policies among the factors that militate against the usage of multimedia resources [21].

> *Participants stated that the school-based policy will motivate designers to design a clear and workable community of practice for effective, consistent, and regular use of Multimedia Resources in instructional processes. This should be backed by users being made aware of such policy and monitored by school authorities.*

This participant observation concurs with previous findings that "School Based ICT policy is an effective pedagogical use of multimedia resources (ICT) in instructional processes can be directly connected to a favourable policy environment. School-based ICT policy introduces the motivation to design a coherent, clear and workable community of practice linked with effective, regular, efficient and consistent use in the instructional processes. Users need to be made aware of the policies, and policies need to be monitored to ensure that users comply" [38]. A similar study also mentioned "the lack of ICT policies in their study on teachers' preparedness for ICT integration in Kenya among some selected training colleges [21]. The implication is that "unless schools as institutions buy into the idea of ICT policy formulation and support its use, teachers have no option to integrate themselves".

2.7. Strategies to deal with the Challenges teachers face when using Multimedia Resources in Social Studies Concepts

Participants suggested various strategies to overcome social studies teachers' challenges with integrating ICT in multimedia resources to teach and learn the subject at the JHS level in Ghana. The following was the Social Studies teachers' views on strategies to overcome the challenges they faced when integrating or using ICT in the form of multimedia resources in their lessons:

> *"In collaboration with the private sector and Parent Associations, the government should invest financial resources to procure and maintain ICT tools (resources) in Junior High Schools and the demonstration schools, especially in the country".*
>
> *"Head teachers should guide teachers to develop school-based ICT policies to guide the implementation of technology in the teaching and learning towards the desired end product in Social Studies".*
>
> *"In-service training workshops should be organised to build the capacity of teachers to effectively incorporate multimedia into their lessons to enhance students learning outcomes".*
>
> *"All Junior High Schools should be connected to the Internet and equipped with T.V. sets and White Interactive Boards to support the integration of ICT in Social Studies instruction."*
>
> *"JHS instructional timetables should be flexible to integrate ICT in Multimedia forms in instructional processes. The number of weekly periods for Social Studies lessons should be increased to effectively implement ICT in instructional processes to foster lifelong learning."*
>
> *"Social Studies teachers should be motivated in every way possible to stimulate them to incorporate technology in their instruction to enhance students learning".*
>
> *"Social Studies curriculum for Junior High Schools and that of teacher training institutions should be revised to make room for the integration of ICT in instruction to enhance teaching and students learning".*
>
> *"Education on transforming teachers' belief and philosophy concerning the integration as educational media usage is largely influenced by their beliefs and philosophy".*

In agreement, Cambridge Education identifies the availability of School-Based ICT policy as an effective pedagogical use of multimedia resources in instructional processes. According to the writer, school-based ICT policy introduces the motivation to design a coherent, clear and workable community of practice linked with effective, regular, efficient and consistent use in the instructional processes [38]. Users must be made aware of the policies, which must be monitored to ensure that users comply. Additionally, a similar study suggests that "educational policies of institutions and countries are effective in achieving technology integration. Policies supporting teachers in this regard contribute to achieving integration" [40]. The implication is that "effective policies concerning ICT integration is a sure way of encouraging its usage".

Again, a previous study supported the current findings that "the need for the government and NGOs to supply schools with ICT tools; in-service training on how to integrate ICT in instruction; the need for more time for the integration; capacity building for the older teachers to change their negative perceptions of ICT integration; development of relevant e-content; supply schools with generators and solar panels; and

hire more ICT technicians as strategies to improve the integration of ICT in the Social Studies and other subject areas instruction" [46]. For teachers to effectively use computers, they must experience a paradigm shift from the teacher-centred classroom to the student-centred classroom, as educational technologies will have a more central role because they permit active student learning activities in which the teacher facilitates the learning process [41]. A researcher emphasised that "technology integration or educational technology courses should enable prospective teachers to apply the theoretical knowledge gained in various periods; in other words, quality training is essential [48]. In this context, it implies that "the training for the effective use of technology in the classroom for teachers is paramount. This will allow professional teachers to adapt to technological development as it will reflect their ability to utilise digital media as a learning resource".

An earlier study recommends that "Training Needs Assessment (TNA), which is a gradual investigation of an issue or innovation using data and views from different sources to be able to design effective interventions or recommendations on what should be done, as a strategy for encouraging Multimedia use by teachers in the classroom. TNA aims to ensure that the training programmes are well-focused and relevant to meet the needs of the trainees. All these are in line with the participants' suggestion that pre-service, in-service training and workshops should be organised to build the capacity of teachers to effectively incorporate ICT into their lessons to enhance students' learning outcomes" [44]. A similar study also confirms that "in multimedia classrooms, digital content and teachers' training together have improved the overall quality of learning by promoting effective and participatory learning and eradicating cramming tendencies from the learners. Teacher motivation to use multimedia resources to enhance the learning and teaching of Social Studies plays a critical role in the integration in Social Studies classrooms" [45]. It has been discovered that teachers displayed less motivation to integrate multimedia resources in teaching and learning when they were not convinced that students would show a desirable outcome in performance during the learning process [40]. "Within the school context, the encouragement from the management to incorporate multimedia resources in instructional processes and the motivation to foster networking among teachers in the school plays a critical role in causing positive attitudes towards the adoption of ICT in teaching and learning, but this must start with governments, which bear the primary responsibility to ensure the right to quality education and lifelong learning" [39].

The education issue of transforming teachers' beliefs and philosophy as educational media (multimedia) usage is primarily influenced by such beliefs and philosophy when teaching social studies concepts. The findings of this study confirm the similar study that "successful integration of educational media into teaching depends on transforming teachers' belief and philosophy concurrently and teachers must be willing to change their role in the classroom and becomes a facilitator and allow students take a proactive role in learning and must exhibit more constructivist teaching practices" [51]. Another study postulates that "multimedia provides a sensory and real learning experience and offer greater opportunity for learning and the teacher's attitude can also impact motivation of the learners. So, teachers must sustain and promote positive attitudes toward using multimedia resources and reflect this positivity in their classrooms [57]. Another participant suggested barriers to multimedia resource usage can be overcome: "*Social Studies teachers should be motivated in every way possible to stimulate them to incorporate technology in their instruction to enhance students learning"*. This aligns with a similar study, which states that "teacher motivation to use multimedia resources to enhance the learning and teaching of Social Studies plays a critical role in the integration in the Social Studies classrooms. It has been discovered that teachers displayed less motivation to integrate multimedia resources in teaching and learning when they were not convinced that students would show a desirable outcome in performance during the learning process" [41].

3. Conclusions and Recommendations

The study indicates that more resources are needed to use multimedia resources effectively in social studies instruction. Limited access to computers and the internet, unreliable power supply, time constraints for teachers, and a lack of necessary competencies all contribute to this challenge. Although multimedia has become crucial to education, teachers often need more training to utilise these resources fully. The government must collaborate with other organisations to procure ICT resources to address these challenges rather than shouldering the sole responsibility for financing education. Establishing a school-based ICT policy framework to guide technology implementation in teaching and learning is essential.

Furthermore, providing pre-service and in-service training to build the capacity of teachers is crucial. Ghana Education Service can collaborate with other stakeholders and organisations to acquire ICT resources such as computers and laptops, and internet connectivity, and to construct more ICT laboratories for junior high schools in Ghana. Furthermore, the government and stakeholders should adopt a consistent maintenance culture of ICT tools in schools. The junior high educational system needs a coherent ICT policy structure to guide effective integration into teaching and learning. The absence of a practical framework shows that the JHS in Ghana needs to be equipped to keep up with the ICT revolution. However, the GES should take advantage of the technological advancement and ensure that all JHSs in the country develop their school-based ICT Policies. These policies will guide them in implementing multimedia Resources in their instructional processes to enhance quality education in connection with Sustainable Development Goal 4. Heads of JHSs in Ghana should incentivise teachers who incorporate ICT in their instructional processes. Extrinsic motivation, such as certificates of appreciation, donations of new computers, and sponsorship for conferences, should be granted to teachers who employ technology in their instruction. These incentives will motivate the teachers to effectively integrate technology in their instructions to improve students' learning outcomes.

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References

[1] Lumen, H. (2020). Education and the Global Perspective. Accessed on 15/05/22 Retrieved on 3/3/23 from: https://courses.lumenlearni ng.com/boundless-sociology/chapter/education-and-the-global-perspective.

[2] Bordoh, A., Eshun, I., Ibrahim, A. W., Bassaw, T. K., Baah, A., & Yeboah, J. (2022). Technological Pedagogical Content Knowledge (TPACK) of Teachers and Their Formative Assessment Practices in Social Studies Lessons. Universal Journal of Social Sciences and Humanities, 2(4), 201–209. Retrieved from https://www.scipublications.com/journal/index.php/ujssh/article/view/459

[3] Sarowardy, M. (2019). The impact of ICT on education: A global perspective. *Educational Review*, 71(4), 456-472.

[4] Hasan, M. (2014). The role of technology in Social Studies education. *International Journal of Social Studies*, 5(3), 25–34.

[5] Alharbi, A. (2021). Challenges in the integration of ICT in Social Studies education. *Journal of Educational Technology*, 15(2), 45–60.

[6] Selvaganesan, T., & Jayachithra, M. (2021). There is a need for more traditional learning tools in a networked society. *International Journal of Learning and Development*, 11(2), 112-125.

[7] Bingimlas, K. A. (2019). Barriers to successfully integrating ICT in teaching and learning environments: A literature review. *European Journal of Educational Studies*, 6(1), 1-10.

[8] Supriyanto, A. (2020). Teacher competence in utilising ICT for effective learning. *Journal of Educational Research and Practice*, 10(1), 215-230.

[9] Tatto, M. T. (2021). Teacher education and the integration of technology in Social Studies. *Journal of Teacher Education*, 72(3), 245–258.

[10] Gyasi Mensah, E., & Osman, S. (2022). Senior High Schools Teachers' Perception of Integrating ICT into Social Studies Lessons in the New Juaben Municipality. *Social Education Research*, *3*(1), 112–132. https://doi.org/10.37256/ser.3120221053

[11] Amuko, J., Mihesi-O'Connor, C., & Ndeuthi, M. (2015). Teacher confidence and competence in ICT integration. *International Journal of Educational Research*, 10(1), 55–70.

[12] Fox, R., & Henri, J. (2015). The role of school leadership in ICT integration: A study of Hong Kong social studies teachers. *Educational Management Administration & Leadership*, 43(4), 564-580.

[13] Koehler, M. J., et al. (2012). The technological pedagogical content knowledge framework. *Journal of Educational Technology*, 12(3), 1-6.

[14] Mahmood, W., Alvi, S. A., Afzal, B., Shah, G.A., & Atzori, L. (2015). Internet of Multimedia things: Vision and Challenges. Ad Hoc Networks 33(6), doi:10.1016/j.adhoc.2015.04.006.

[15] Pilloni, V., & Atzori, L. (2017). Consensus-based resource allocation among objects in the Internet of Things. *Annals of Telecommunications*, *72*, 415-429.

[16] Hadi S. & Zeinab S. (2012). Challenges of Using ICT in Education: Teachers Insights. *International Journal of e-Education, e-Business, e-Management and e-Learning*, *2*(1), 3-7.

[17] Koehler, M. J., Mishra, P., & Cain, W. (2014). What is technological pedagogical content knowledge (TPACK), *Journal of Education, 193*(3), 13-19.

[18] Somekh, A. (2018). ICT and Time Use of Students. *American Journal of Educational Research, 6*(8), 64–71.

[19] Cobbold, C. (2015). Solving the Teacher Shortage Problem in Ghana: Critical Perspective for Understanding the Issues. *Journal of Education and Practice, 6*(9), 62–69.

[20] Abdulrahman, M. D., Faruk, N., Oloyede, A. A., Surajudeen–Bakinde, N. T., Olawoyin, L. A., Majabi, O.V., Imam-Fulani, Y.O., Fahm, A. O., & Azeez, A.L. (2020). Multimedia tools in the teaching and learning process: a systematic review. Retrieved on 22/8/22 from: https://www.ncbi.nlm.gov/pmc/articles/PMC7644889

[21] Omariba, A., Ayot, H., & Ondigi, S. R. (2016). Teachers Preparedness in Integrating Information Communication Technologies in Public Primary Teacher Training Colleges in Kenya. *International Journal of Education and Research.* 4(9), 67-72.

[22] Kumutha, R. & Hamidah, Y. (2014). Barriers Teachers Face in Integration of ICT During English Lessons. A Case Study. *The Malaysian Online Journal of Educational Technology, 2*(3), 1 – 5.

[23] Bariham, I., Ayot, H. O., Ondigi, S. R., Kiio, M. N., & Nyamemba, N. P. (2019). An Assessment of Basic Schools Teachers' Integration of Computer Based Instruction into Social Studies Teaching in West Mamprusi Municipality; Implications for Further Development of Computer Based Instruction Use in Ghanaian Schools. *International Journal of Research and Innovation in Social Science, 3*(5), 54- 61.

[24] Malekani, A. W. (2023). Examining the Efficac of Electronic Document Management System and Employees' Perceptions of its Usefulness at Sokoine University of Agriculture. *University of Dar es Salaam Library Journal*, *18*(1), 112-133.

[25] Esfijani, A., & Zamani, B. E. (2020). Factors influencing teachers' utilisation of ICT: The role of in-service training courses and access. *Research in Learning Technology*, *28*.

[26] Natia, A. N., & Al-hassan, A. (2015). Promoting Teaching and Learning in Ghanaian Basic Schools through ICT. *International Journal of Education and Development using Information and Communication Technology (IJEDICT), 11*(2), 113-125.

[27] Ertmer, P. A., & Ottenbreit-Leftwich, A. (2015). Removing obstacles to the pedagogical changes required by Jonassen's vision of authentic technology-enabled learning. *Computers & Education, 6*(4), 175-182.

[28] Asan, P., (2018). Selection and Utilisation of Instructional Media for Effective Practice Teaching. Retrieved on 05/02/22 from: https://www.semanticscholar.org/paper/selection

[29] Dysekina, K. A., & Shirokova, Z. K. (2021). Challenges of Using ICT in the Teaching Processing New Conditions. *Редакциялық алқа*, 134.

[30] Pelgrum, W. J. (2015). Obstacles to the Integration of ICT in Education: Results from Worldwide Educational Assessment. *Computer & Education, 3*(7), 163-178.

[31] Ibrahim, M., Gunu, I. N. & Fuseini, I. (2022). Assessing Information and Communication Technology (ICT) Integration into the Curriculum of Ghanaian Pre-Tertiary Schools: A Case Study of Sagnerigu Municipality. *International Journal of Education and Development using Information and Communication Technology (IJEDICT), 18(1),* 253-263

[32] Mantiri, F. (2014). Multimedia and Technology in Learning. *Universal Journal of Educational Research 2*(9), 589–592. Retrieved on 7/7/22 from: http://www.hrpub.org doi: 10.13189/ujer.2014.020901
[33] Kawulich, B. B. (2012). Collecting data through observation Accessed on 15/05/22 Retrieved from: https://www.researchgate.net/publication/257944783.
[34] Alharbi, K. (2023). Enhancing technical vocabulary acquisition: a multimedia strategic approach for English for specific purposes during COVID-19. *Interactive Learning Environments*, pp. 1–19.
[35] Alenezi, A. M., (2012). Faculty members' perception of e-learning in higher education in the Kingdom of Saudi Arabia (KSA). (PhD Dissertation, Texas Tech University, Lubbock, TX). Retrieved from: https://ttu-ir.tdl.org/ttuir/handle/2346/45399.
[36] Fullan, M. (2012). *Stratosphere: Integrating Technology, Pedagogy, and Change Knowledge*. Boston, MA: Allyn and Bacon.
[37] Samat, M. S. B. A., & Aziz, A. A. (2020). Indigenous Student's Perception of Multimedia Learning as an Approach to Enhancing Reading Comprehension Skills. *Asia Proceedings of Social Sciences*, *6*(1), 12-15.
[38] Cambridge Education. (2017). A Survey of ICT Capacity in Ghana's Public Colleges of Education. Retrieved on 6/6/22 from: https://docs.edtechhub.org.
[39] Iddrisu, B. (2020). Senior High Schools Preparedness for Integration of Computer Based Instruction in Teaching and Learning Social Studies in Northern Region, Ghana. *Global Journal of Arts, Humanities and Social Sciences, 6*(3), 25–32.
[40] Koranteng, D. A. (2023). *Assessing the usage of multimedia resources in teaching and learning of social studies concepts in junior high schools in Ghana*. Unpublished M.Phil Thesis, University of Education, Winneba.
[41] Johnson, A. M., Jacovina, M. E., Rusell, D. G., & Soto, C. M. (2016). Challenges and solutions when using technologies in the classroom. In S. A. Crossley & D.S. McNamara (Eds.) *Adaptive Educational Technologies for Literacy Instruction;* 13-32.
[42] Cleaver, S. (2014). Technology in the Classroom: Helpful or Harmful? Retrieved on 5/5/23 from: http://www.education.com/magazine/article/effective-technology-teaching-child.
[43] Onah, D.O. & Nzewi, U. M. (2021). Examining Barriers to Multimedia Integration in Teaching and Learning of Science. *Journal of Research and Methods in Education.* 11(5), 23-73. Retrieved from: iosrjournals.org.
[44] Daweh, A., Agarwal, S., Oppong, D., Darko, E. O., & Gagakuma, W. (2016). Importance of Training Needs Assessment at the Ghana Atomic Energy Commission Radiation Protection Institute. *Research on Humanities and Social Sciences, 6*(14), 25–48.
[45] Mamataz, I. A. (2017, March 4). *Use of Multimedia in Classroom: Successes and Challenges*. Retrieved 18/6/22 from: https://www.daily-sun.com/arcprint/details/209947
[46] Miami, F. (2014). Integration of information and communication technologies in teaching and learning Kiswahili language in public secondary schools in Kakamega County, Kenya. Unpublished Doctoral Thesis: Kenyatta University.
[47] Arslan, S., (2016). A Holistic View to Barriers to Technology Integration in Education. *Turkish Online Journal of Qualitative Inquiry (TOJQI), 10*(4), 439–461.
[48] Belland, B. R. (2019). Using the theory of Habitus to move beyond the study of barriers to technology integration. *Computer & Education*, 52, 353–364.
[49] Nikolopoulou, K., & Gialamas, V. (2016). Barriers to integrating computers in early childhood settings: Teachers' perceptions. *Journal of Education and Information Technologies, 20*(2), 285-301.
[50] Hur, J. W., Shannon, D. & Wolf, S. (2016). An Investigation of Relationship Between Internal & External Factors Affecting Technology Integration in Classrooms. *Journal of Digital Learning in Teacher Education. 32*(2), 105–114.
[51] Ertmer, P. A., & Ottenbreit-Leftwich, A. (2015). Removing obstacles to the pedagogical changes required by Jonassen's vision of authentic technology-enabled learning. *Computers & Education, 6*(4), 175-182.
[52] Nassaji, H. (2020). Good Qualitative Research. Language Teaching Research. *International Journal of Innovation, Creativity and Change, 24*(4), 427–431.
[53] Yin, R. K. (2014). *Case Study Research Design and Methods. (5th ed.).* Thousand Oak, CA: Sage 282 pages. Retrieved on 28/7/22 from: https://www.referencespapers.net
[54] Jenjekwa, V. (2023). COVID-19, kovhidhi, dzihwamupengo: Language use, language change, and pandemic perceptions among Shona-speakers in Gweru, Zimbabwe. *The African Journal of Information and Communication*, *2023*(31).
[55] McMullin, C. (2021). Transcription and Qualitative Methods: Implications for Third Sector Research. *International Journal of Voluntary & Non-Profit Organizations, 2*(3), 64–73.
[56] Supriatna, N. (2021). The Modernization and Globalization of Teaching Materials for Social Studies. *The Innovation of Social Studies Journal*, *3*(1), 15-22.
[57] Gursoy, E. (2018). Prospective ELT teachers' attitude towards the English language in an EFL context. *Journal of International Education Research*, *9*(1), 107-114