

Enhancing Quality in Teaching and Learning of Social Studies Education for the Fourth Industrial Revolution

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Abstract: The Fourth Industrial Revolution (4IR) has sparked concerns about its potential impact on jobs and traditional teaching methods, raising questions about the readiness of Nigeria's educational system to embrace these changes. While many industries are still grappling with a full understanding of 4IR, its influence is increasingly evident in various sectors, prompting academics, business professionals, and policymakers to take notice. This study explores how 4IR techniques can be applied in Social Studies Education to enhance the quality of teaching and learning, preparing students for the demands of the modern era. Findings indicate that some schools have successfully integrated virtual and hybrid instruction, artificial intelligence, and internet-based technologies to facilitate learning. Educators are employing tools such as Zoom, online messaging, and feedback platforms to enhance student engagement. The study also presents recommendations for further integration of 4IR tools to improve Social Studies education across different levels. Continuous training for teachers on emerging technologies is crucial for advancing the quality of education in this field. The study concludes that Nigeria's Ministry of Education can spearhead a shift by implementing 4IR tools and training initiatives.

Keywords: Fourth Industrial Revolution (4IR), Social Studies Education, teaching quality, virtual learning, artificial intelligence, Nigerian education system

Introduction

Both the explicit and the implicit curricula are exchanged during educational activities, such as teaching and learning in all subject areas. The importance of developing skills and utilizing a variety of technologies is highlighted by the Fourth Industrial Revolution, or 4IR, educational reforms (Yende, 2021). As such, it is crucial to clarify the curriculum outcomes in the field of social studies education, analyse the learning experiences that are connected to these outcomes, and provide evidence for their vital importance. Research that concentrates on students' social statements examines social structures that affect community life, knowledge qualification, and appreciation of human rights and democratic responsibilities. The National Curriculum Framework (NCF) and Other Programs Policy, as well as other programs offered by the National Department of Social Growth (2015), provide a clear explanation of what is taught in Social Studies education. Teachers, curriculum designers, and subject advisors can benefit from having in-depth discussions about these many facets of the sociological field. An educational revolution is occurring because of changes in educational procedures brought about by technological innovation. We are presently experiencing the Fourth Industrial Revolution, or (4IR). Robotics, unmanned aircraft, 3D printing, intelligent materials, genetic engineering, the field of biotechnology machine learning, virtual reality, the internet of matters, big data, blockchain, and online. Social media is essential to

learning and teaching. In the 4IR era, instantly recognizable technologies frequently act as mediators for significant conceptual shifts. The idea that education ought to nurture and impart the skills necessary to help students navigate the quickly changing cultures of the "knowledge age" and, more importantly, become creative thinkers and significant cultural contributors, is becoming increasingly prevalent in educational discourses. Furthermore, it is clear from modern educational policies and practices that personally focused personal learning procedures and results are necessary.

Importance of Quality in Teaching and Learning of Social Studies Education in the 4th Industrial Revolution

Beyond academic brilliance, quality social studies education, particularly in this 4IR, emphasizes overall development, encouraging intellectual curiosity, imagination, and solving problems (Erboz, 2017). It equips students studying social studies to make constructive contributions to society and gets them ready for the difficulties of the real world. A high-quality social studies education in the 4IR fosters students' mental, emotional, and social growth while providing them with the necessary knowledge. Beyond memorization and grades, a thorough and learner-centred approach is required. By offering a supportive setting, high-quality. Students who receive a Social Studies Education are certain to develop the knowledge, abilities, and mindset needed for lifetime study and personal development. In secondary school, where students are equipped to face the problems of everyday life and have the potential to make meaningful contributions to society, it is especially important.

The influence on society is transformative when students studying Social Studies acquire a high-quality education in this 4IR. It benefits the entire community in addition to individuals. It is essential for decreasing poverty since it gives people the means to obtain better job prospects. Additionally, it strengthens social cohesiveness by encouraging respect, empathy, and understanding among various social groupings.

People who receive a high-quality Social Studies Education in the 4IR are better equipped to create vibrant communities. Giving children the tools they need to adjust to a world that is changing quickly encourages creativity and propels economic growth. It promotes entrepreneurship and gives people the freedom to seize their own opportunities, which benefits society overall by fostering growth and wealth.

The 4IR's quality of Social Studies Education has a significant impact on personal growth as well. It supports students in pursuing their goals by assisting them in discovering their hobbies and talents. It gives people a sense of direction and self-assurance, enabling them to overcome challenges and realize their full potential.

A quality Social Studies Education in the 4IR incorporates a comprehensive approach that supports students' mental, emotional, and social well-being in addition to emphasizing academic success. It has a profoundly transforming effect on society, accelerating economic growth, fostering social cohesiveness, and lowering poverty. It permits people to develop personally and gives them the ability to create vibrant communities.

Key Elements of Quality Education in Social Studies

Quality education signifies an educational experience that effectively supports and promotes the holistic development of students (Erasmus, 2022). Several essential components play a major role in providing high-quality Social Studies Education. These components are essential for establishing an atmosphere that encourages efficient instruction and fulfilling learning opportunities.

Curriculum Design and Execution

The curriculum is a standards-based sequence of planned experiences where students practice and achieve proficiency in content and applied learning skills (Offorma, 2016). It is essential to providing high-quality Social Studies instruction. It ought to be inclusive, pertinent, and grounded in the needs and goals of the pupils. A thoughtfully created curriculum stimulates creativity, supports interdisciplinary learning, and instills a passion for lifelong learning. It's essential for efficient learning as well. In addition to covering the required academic material, it should be flexible and responsive to students' changing requirements as well as the demands of the twenty-first century.

A curriculum must consider the diverse cultural backgrounds and unique learning preferences of each student. Students can make the connection between theoretical understanding and practical implications through a curriculum that incorporates practical uses and practical experiences. Additionally, it fosters problem-solving and critical thinking abilities, preparing pupils for whatever obstacles they may encounter in their future pursuits.

Professional Development and Training for Teachers

The foundation of a high-quality social studies program is its teachers. They need to be up to date on the newest techniques, tactics, and creative approaches. Programmes for ongoing professional development guarantee that educators remain current and deliver education that effectively fulfills the varied requirements of their pupils.

In addition to subject knowledge, training opportunities for educators should emphasize pedagogical skills, managing classroom strategies, and creating a supportive learning environment. The standard of education can be considerably improved by training programs that promote teacher collaboration and offer chances for best practice exchange. Programs for coaching and mentoring teachers can also help them grow professionally by enabling them to continuously enhance their methods of instruction.

Evaluation and Assessment of Students

An excellent Social Studies Education must include assessment and evaluation. They aid in pinpointing areas in need of development and offer insightful information about pupils' progress. A well-rounded assessment strategy that incorporates combined formative and summative evaluations promotes student motivation, engagement, and insightful feedback. (Mezieobi, 2015)

Different assessment techniques should be used so that students can exhibit their knowledge and abilities in various ways. Projects, portfolios, presentations, and group activities can all fall under this category. By offering numerous chances for evaluation, teachers may get a thorough grasp of each student's areas of strength and need for additional assistance. Academic achievements shouldn't be the only criteria used for assessment. It should also include the growth of critical thinking, creativity, emotional intelligence, and problem-solving skills (Brown, 2015). The celebration and nurturing of pupils' total growth is guaranteed by this all-encompassing approach to evaluation. A system of education that enables pupils to develop into lifelong learners, intellectuals, and accountable global citizens may be developed by concentrating on five essential components of a high-quality social studies curriculum. For all parties involved, providing high-quality social studies education in 4IR is a constant process of development and progress rather than a destination.

Difficulties in Social Studies Education Instruction

Danladi, & Mohammed, (2011) gave some difficulties encountered while teaching Social Studies Education at various classroom levels such as Social Studies are highly valued in Nigeria at every school level and also a necessary subject in both junior secondary and basic schooling. Furthermore, it is taught in tertiary institutions as

a formal discipline. Despite this, some writers and academics have noted that there are still significant difficulties in the instruction and comprehension of social studies at the junior secondary school level. These issues are:

❖ **Teaching Staff Quality and Quantity:** This is another barrier to meeting student and societal expectations for teaching staff quality and quantity. Since they're the ones who take the designers' ideas and goals and put them into practice, teachers are seen as especially valuable assets in the method of instruction and learning on this note, social studies teachers should be those trained specialists in the field and not those trained in the related field of study. Ineffective Scheduling Another aspect is the ability of the teacher to manage well the period allotted to social studies instruction. Most teachers find it difficult to make use of the time given to subject matter well thereby encroaching into other periods.

❖ **Resources for Teaching and Learning Resources for Teaching and Learning Present another Difficulty:** These resources are not widely available or purchased by schools. Scientific apparatus, writing materials, books, and an inadequate or outdated library are only a few examples of instructional resources and equipment that are either scarce or non-existent (Kayembe & Nel, 2019).

❖ **Leadership:** This aspect of instruction and learning is extremely problematic since in most cases it is seen in the educational system. The level of corruption that permeates civilization broadly and the education system is a sign of a leadership problem. Most of the time, money set aside for curriculum implementation in schools does not end up where it is supposed to. When they do, a significant portion of the money would have been used on things it was not intended for. The leadership that sets an example for others will guarantee the curriculum's and other relevant changes' seamless and successful implementation (Danladi & Mohammed 2011, pp 89–90).

❖ **Motivation:** Students need to be motivated to be interested in computers. It is the role of the instructor to pique students' interest in learning social studies. These interests may be situational or private.

Impact of Technological Developments on Social Science Education

Technology has significantly altered schooling in numerous ways. One major benefit of technology is the increased accessibility of social studies courses. Books were scarce in the Middle Ages, and only a select few got access to formal instruction. To receive an education, people needed to travel to educational institutions. The Internet has made a vast amount of material (books, music, photographs, and videos) easily accessible, and formal education is now offered online to people all over the world through podcasts, conventional distance learning degrees, and other means. Obtaining education Thanks to technology, opportunities today are unequaled in their breadth. (Ramorola, 2013).

Technology has also increased the opportunities for cooperation and communication. In the past, students in identical classrooms or buildings have been the only ones who could collaborate in comparatively isolated classes. Technology today makes it possible to collaborate and communicate in ways that were before unthinkable. In a classroom in a rural part of some of the more developed countries, like the USA, for instance, students may acquire about the North Pole by following the research trip of a group of local scientists, reading their blog posts, viewing their photos, emailing them questions, and even participating in real-time video conferences with the scientists. Students can share what they are learning with students in other classrooms in other states who are tracking the same expedition. Wikis and Google Docs are two examples of technology-based platforms that students can use to collaborate on group assignments (Brown, 2015). With the advent of technology, learning, communication, and teamwork may now occur outside of traditional classroom boundaries.

Technology has also started to alter how students and teachers interact. In a typical classroom, students passively absorb knowledge from their teacher, who serves as their main source of information (Brown, 2015). However, because of the ease of information access and educational opportunities made possible by technology, many Social Studies classes today observe a shift in the role of the instructor to that of the guide on the side as students take greater ownership of their education and use technology to find pertinent information (Ramorola, 2013). Around the nation, colleges and institutions are starting to rethink their classroom layouts to support this new style of instruction, encourage greater interaction and small-group work, and make better use of technology. Technology is a potent tool that may enhance and revolutionize education in a variety of ways. It can facilitate the creation of instructional materials by Social Studies teachers and open up new avenues for individual and group learning. With the Internet's widespread use and global A new era of education that may take place anywhere at any time is emerging thanks to the accessibility of smart gadgets. Making the most of technology's ability to transform education and making quality, efficient education accessible to all will be the responsibility of educators and educational technologies.

Taking Part in Social Studies Learners in the Digital Age

There are more and more strategies available for raising student involvement. Although integrating technology into education can be costly, computer-based technology has grown more accessible and can be paired with an abundance of free or inexpensive internet resources.

AR, or Augmented Reality

AR is a great method to introduce technology to your pupils. This type of technology can significantly aid students in becoming fully engaged with the material. If you're teaching your students about ancient history, for instance, you could allow them to explore a digitally recreated Roman city. AR apps are widely available and may teach everything from interactive whiteboard apps in Social Studies classes to human anatomy. One easy way to expose your kids to additional visual learning resources is by organizing virtual field trips.

Use of Games to Add Fun to Learning

Making learning enjoyable is a terrific method to get kids interested in participating in the process. This may be accomplished with ease by making different tasks into games, which will significantly increase cognitive engagement. For use on dynamic displays, a range of instructional gaming applications and websites are available, including Interactive whiteboard games: Computer games; Interactive history quizzes; and Interactive geography games.

Videos & Podcasts

Teachers of Social Studies who implement the flipped classroom paradigm will find podcasts as well as online video resources especially helpful. Nonetheless, by giving instructional materials a new voice, they can be utilized in any type of educational environment to increase student engagement.

Another useful tool for improving student learning is a podcast or video that allows students to listen to a course. For pupils who find the subject difficult or who have short attention spans, this is ideal. A student's capacity and engagement with learning can be significantly enhanced by having access to classes after the fact. Making yourself podcasts can be a great method to accumulate reusable course materials for your classroom and give your students a range of learning resources if you're using the flipped classroom style. Students will be better able to focus and interact with the academic material because of this.

Online Homework

Making students use digital technology for their schoolwork is an excellent way to increase their level of involvement. You may request them to make podcasts, blog posts, different kinds of videos, or even posts to social media platforms in place of just essays. This will not only encourage positive involvement but also impart the fundamental knowledge and skills required for content production to students, as well as teach them how to use computers responsibly. By including technology-based projects, teachers help students advance professionally in the digital industry and have a better grasp of the advantages and disadvantages of contemporary technology. Students studying Social Studies will have more career options if they can produce great blog posts, make engaging videos, and handle social media accounts.

Response Mechanisms for Students

Clickers or responses from students are an excellent way to get immediate feedback from your class if you want to keep an eye on student participation on the spot. It will enable you to assess whether the manner you are currently teaching is engaging pupils in how you had hoped. Additionally, employing student response systems can assist you in determining whether you need to think about introducing alternative techniques to support your class in meeting its learning objectives. One of the best ways to track how students learn and which teaching strategies increase their motivation is to monitor student engagement.

Involvement in Social Media

Social networking is now a part of everyday life and isn't going away anytime soon. Teachers should actively interact with social media to teach their pupils the best ways to use it, as opposed to ignoring it. Introducing this form of technology into the school environment may help teachers provide students with the necessary skills needed for using social media on a professional level.

Online Application

Online forms are a useful tool for teachers to use when assigning fast online quizzes to their students and a wonderful way for students to express feedback. You can monitor student comprehension and productivity with online forms. For instance, you can have students submit an online form upon completion of a work, which will enable you to monitor which students are finishing assignments quickly and which ones might want more assistance.

Online Learning Environments

Teachers can learn a lot from using online classrooms like Google Classroom. Teachers will be able to easily design courses, track students' progress, and create a special learning environment for their classrooms in addition to giving students personalized feedback on their work. When severe weather prevents students from attending class in person, virtual classrooms come in quite handy. A digital homeroom is highly helpful when employing the technique of flipped classrooms since it allows teachers to easily share new content with students and helps them keep track of how they are doing. It also implies that all required materials are centralized, simplifying the process of accessing earlier lectures.

Methods for Improving Social Studies Education Quality during the Fourth Industrial Age

The technologies that go along with the fourth and subsequent industrial revolutions must be embraced to prepare students for them. Systems, programmes, and curricula in education must be adaptable to the needs and interests of the students. Qualifications must be evaluated and granted for learning through formal, non-formal, and informal channels, and they must be pertinent to unforeseen employment and social concerns. Since teachers are the main educators, it goes without saying that they should never stop studying to develop the skills and

knowledge needed to integrate both new and old technology into the ever-evolving learning environment and process. (Gleason, 2018)

In summary, for an adaptive and flexible educational system, emphasis must be placed on the Internet and future technology, teacher preparation, and lifelong learning. A system like this needs to be outcomes-based and guarantee ongoing enhancements to both the educational setting and the instructional strategies. In addition to facilitating the adaptable awarding of educational certificates based on outcomes-based units, emerging education systems should place a heavy emphasis on outcomes-based curricula and programs. (Danladi, & Mohammed, 2011)

According to Mazur (2013: p.6) sees learning “as a process of change that occurs because of an individual’s experience”. Learning, whether official or not, should be turned into a kind of block system that people will utilize to construct educational certificates. Blocks are used to make different figures. This will help to facilitate actual lifelong learning possibilities and award relevant qualifications.

Techniques to Improve the Quality of Instruction and Learning

- ❖ Technology Integration: Make use of online resources and instructional software to help students learn interactively and deeply examine social studies subjects.
- ❖ Project-based learning: to give students a practical grasp of social concerns and historical events, assign them projects that call for study and problem-solving.
- ❖ Collaborative Learning: To equip students for a globalized and interconnected world, put in place mechanisms that allow them to work as a team and collaborate even when they are far away.
- ❖ Critical Thinking: Encourage students to construct their own opinions and viewpoints by encouraging them to analyze historical and contemporary evidence in order to enhance their critical thinking skills.
- ❖ Flipped Classroom: Apply the flipped classroom concept, in which students study the material for discussions and real-world applications outside of class time.
- ❖ Personalized Learning: Use technology for adaptive learning that adjust to the demands of each individual student, enabling customized learning pathways.
- ❖ Include Soft Skills: As they are crucial in the workplace of the twenty-first century, leadership, communication, and interpersonal skills should all be included in the school's curriculum.
- ❖ Ongoing Professional Development: Ensure that educators receive regular training in the newest teaching techniques and educational technologies.
- ❖ Global Awareness: Establish connections between students and peers globally using technology to promote an awareness of diverse cultures and global concerns.
- ❖ Data analytics: Use data analytics to assess student performance and modify instruction to get better results.

Conclusion and Recommendations

This study examined how the 4IR can be used to enhance quality teaching and learning in Social Studies education. This study shows that academics could incorporate various 4IRs in teaching and learning, such as writing tests using technological innovations, digitalized testing, internet-connected computers, and hybrid learning for quality teaching and learning of Social Studies education. It became apparent from the literature reviewed that 4IR tools impact teaching and learning. Without these tools, social studies students could be ill-

equipped for work, and teaching and learning may be affected in the long run. As such, these tools foster the quality of teaching and learning of Social Studies education. This study, therefore, recommends that training be provided for social studies educators who struggle to utilize these tools as this will prepare them for the challenges ahead and future services.

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