



Digitalization of Social Science Education: Implication for the 21st Century Teacher

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Abstract: This study examines appropriate strategies for the digitalization of Social Science education in the 21st century. It is a course that train teachers and its learners for proper integration and participation in the life of their community and society at large. Through its study, the learners are equipped with basic concepts and skills necessary for life in any organized community. And thus the equipped child or learners feels confident to solve his / her problems and that of the society. Digitalization promotes higher- order thinking skills in terms of knowledge acquisition, knowledge deepening and knowledge creation among students and teachers –a transition from lower order thinking to higher order thinking. Therefore the following points were considered in the study. Meaning, nature and scope of Social Science; teaching and learning of Social Science; importance of teaching and learning of Social Science; digital literacy for the 21st century Social Science teacher; information, Media and technology literacy skills in the teaching and learning of Social Science in the 21st century; and Instructional digitalization for the 21st century classroom.

1. INTRODUCTION

Education has undergone serious changes across the globe in the 20th and 21st Centuries, especially as a result of digitalization. There have been efforts through reforms not only to bring education to the door step of people in various nations but also to bring the needed transformation and development. The impact of digitalization is tremendous in the field of education. It is the force behind the changes taking place in higher education globally. The impact of the internet with its extraordinary store of knowledge is a breakthrough in this era. Social

Science is a course that is designed to equip students/learners with relevant knowledge, attitudes, values and skills that will enable them function well in the society i.e. solve their problems and that of the society. The essence, of digitalization in social science education is to make prospective teachers effective in their subject areas in this 21st Century.

2. MEANING, NATURE AND SCOPE OF SOCIAL SCIENCE

Social Science is a branch of science that studies the society and human behavior in it, including anthropology, geography, economics, history, political science, psychology, social studies and sociology. Kisko (1981) cited in Aholu (1990) Social science is defined as a program of study which the society uses to instill to the students, the knowledge, skills, attitudes and actions which they consider valid or important. All Kisko is convincing us is that, social science is more a less a medium through which the society transmits its norms and values to the younger ones which in turn, will help them function well in the society.

Social science as an integrated and multi-disciplinary discipline is wide in scope. This is because it covers the activities of man in his ever changing environment.

2.1. Teaching and Learning of Social Science

The Education axiom that when a learner has not learnt, that is the teacher has not taught is true and directly connected to the concepts of teaching and learning as a process of calculating the right values, attitudes, modern life, knowledge, long-life skill acquisition necessary to make individuals benefit

from the society as well as contribute meaningfully to the society. Wiliki (2009) perceives teaching as a systematic, rational and an organized process of transmitting knowledge, skills etc in accordance with professional principles. The implication is that Social Science teachers who do not perform the act in accordance with the principles of teaching are therefore not teachers. Naturally, the outcome of teaching is learning. Learning is an overt function of teaching which the major function of the teacher is. Where there is relatively positive permanent change in the behavior of an individual, then learning has occurred. Students come from diverse home backgrounds; negotiate their interest and ability to learn, etc. Odjugo {2018} pose it, “Students’ inadequate learning is not an excuse for teachers. Effective 21st century teaching brings about effective 21st century learning. Effective teaching and learning refers to the degree to which goals are achieved through teaching.” Effective teaching of Social Science will definitely give rise to effective learning of Social Science that is, attainment of goals of Social Science as stated above. Ability to apply suitable pedagogical approaches is one sure way of achieving effective teaching and learning of Social Science.

2.2. The Importance of Teaching and Learning of Social Science.

There are many reasons, importance or benefits derivable from the study of Social Science as an integrated and multi –disciplinary discipline.

Amongst them are:

1. Its teaching will help create the awareness in the learners that discipline is an essential ingredient for an orderly and sustainable society.
2. Its knowledge will enable learners to live with mutual understanding in their families, communities, society and the world at large.
3. Also with it, we are taught the value of co-operation, effective citizenship, national unity and inter-dependence.
4. It will help acquire relevant or appropriate knowledge, attitudes and skills for a functional living in a contemporary society like ours.
5. It will help inculcate in the learners a problem solving attitude in life.

2.3. 21st Century Teachers’ Pedagogical Approaches

The teacher as an educator knows the right approach to effective teaching and learning. This entails teachers’ ability to:

- Move with trend in teaching method of teacher-centered to learner-centered methods.
- Plan lesson and write lesson notes
- Utilize adequate teaching methods per topic.
- Utilize adequate teaching skills
- Utilize adequate teaching strategies
- Utilize adequate instructional aids.

No wonder Egbule (2002) stresses that every Social Science teacher must be effective, liberally educated, current in subject matter and its pedagogy, aware of what is expected of teachers and schools, skillful and conscientious in planning, preparing to carry out instructions, respectful towards students and concern about their welfare, being actively involved in school, professional and community affairs.

2.4. Learner -Centered Methods

This is the point of focus in the teaching and learning process. Social Science students should occupy a prominent position in the teaching and learning of Social Science. Teachers should therefore, make these students center of all activities. This entails:

- a. Encouraging active participation of Social Science students in the teaching and learning process.
- b. Agricultural Science students being always actively involved in a manner that they interact with the teacher, with instructional aid and with the environment.

- c. Teaching and learning of Social Science that promotes students' development of basic life skills.
- d. Enabling students to utilize the learnt skills in solving their everyday problems using their own initiatives.
- e. Social Science teachers' effort to discourage rote learning and asininity in the classroom.

Teaching skills vital for quality teaching and learning are the: - Qualitative set induction.

- Stimulus Variation (ensuring that students' senses are involved).
- Repetition (simple, planned, mass, etc.)
- Demonstration (simple, brief and concise)
- Closure (white board summary, written exercises, oral summary, etc.)
- Adequate non-verbal communication
- Reinforcement (reward and relevant punishment)
- Effective communication
- Quality questioning (lower order, middle, higher order and divergent)
- Variation and variety (instrumental aids that could take care of individual differences)
- Supervision (closed supervision, learning processes and activities)

These teaching methods, skills or strategies depend greatly on the ability of the teacher to effectively plan the lesson ahead. Ihebereme (2010) posits that quality teaching and learning is a sine-qua non to prudent adherence to quality indicators in the pedagogical approaches. Babalola (2011) reports of some temporary soft skills that are imperative in teachers' effectiveness in today's global world. He argues that teachers should not only be trained to teach but to become polyvalent by mastering hard and soft skills that make teachers functional in a rapidly changing multi-cultural environment. The implication is that teachers are no longer trained for students' certification alone but for effective inculcation of 21st century learning skills. Students should in addition to learning concepts and themes have deep understanding and application of the learning skills. In the teaching and learning of Agricultural Science in Nigerian secondary schools, the same is expected. Obanye (2010) recommends teaching and learning that revolve around the principles `of transformational pedagogy

2.5. Digital Literacy for the 21st Century Social Science Teacher

To be able to “create, use and manage appropriate technology processes and resources” for teaching and learning one requires digital literacy. Digital literacy is defined as the ability to use ICT tools, activities and techniques – productivity tools, communication tools, and networks to locate information. Olele (2014). This involves the ability to read and interpret media, to reproduce data and images through digital manipulation, and to evaluate and apply new knowledge gained from digital environments as the figure below illustrates:

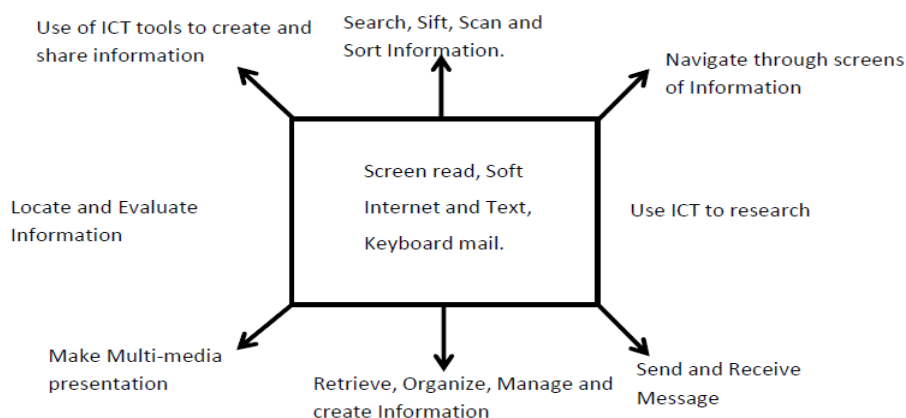


Figure: Digital Literacy

Source: Anderson (2010:27)

The figure illustrates the abilities that can emanate from digital literacy, and it includes literacy across board: basic literacy, visual literacy, technological literacy, information literacy. With all these categories of literacy, social science teachers and students should be able to efficiently and effectively access digital information for investigating issues, solving problems and making decisions, produce creative solutions to support social science, learning, develop new understanding in areas of social science learning, communicate, share and work collaboratively in local and international environments understand the legal, ethical, health and safety issues associated with the use of ICT in social science education.

All these uses will promote higher-order thinking skills in terms of knowledge deepening and knowledge creation among social science students and teachers - a transition from lower order thinking to higher order thinking.

2.6. Information, Media and Technology Literacy Skills in the Teaching and Learning of Social Science in the 21st Century.

We are living today in a technology and media – diffused environment with

- access to abundance of information,
- rapid changes in technology tools, and
- The ability to collaborate and make individual contributions in an unprecedented dimension.
- To be effective in the 21st Century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology in the teaching and learning of social science.

One important fact of educational practice is the identification of the pivotal role that digitalization can play in the teaching and learning process. It is usual when the term ‘media’ is used to think about television, Satellite communication, computers and other sophisticated media technologies. Although, these are media forms, however, the term media means more than flashing lights and computers responding to human command.

Social science students use the technological and multimedia tools now available to them to design and produce websites, television shows, radio shows, public service announcements, mini-documentaries, how- to DVDs, and even films. They find their voices as they create projects using multimedia and deliver these products to real-world audiences, realizing that they can make a difference and change the world. They learn what it is to be a contributing citizen and carry these citizenship skills forward throughout their lives. As a result, standardized test scores are higher (Richardson, 2010). This is because students have learned the skills and content in a meaningful connected way and the understanding is there Odjugo {2018} They in fact know the content on much higher level of understanding and they have developed their basic skills by constant application throughout the duration of the session.

2.7. The Usage of Digital Tools (ICT) in the Teaching and Learning of Social Science

Educational systems around the world are under increasing pressure to use the new information and communication technologies (ICTs) to teach students the knowledge and skills in the 21st century. Information and communication technologies (ICTs) are a major factor in shaping the new global economy and producing rapid changes in the society. Within the past decade, the new ICT tools have fundamentally changed the ways people communicate and do social science business. They have produced significant transformation in Social Science, industry, medicine, business, engineering and other fields. They also have the potential to transform the nature of education- where and how learning takes place and the roles of students and teachers in the learning process.

Bruner (1993) stated that an intentional attempt to use technology in teaching can improve the curriculum and make a difference in the quality of instruction. Technological tools are used in a specific methodology. Social Science course needs to facilitate the students’ technological skills and their methodology for teaching. When prospective teachers do not have technology integrated into the professional courses, they cannot apply technology to teaching and learning well in their fields of study.

The illustration of the dichotomy between technologies as teacher-centered and learner-centered is thus:

1. Demonstration
2. Dramatic Experience
3. Contrive Experience
4. Ratio recording
5. Still Pictures
6. Television Exhibitions
7. Field Trip
8. Verbal Symbol
9. Visual Symbols
10. Discrete purposeful experience.

Okebukola (2006) states that with the application of ICT in education, there will be improvement in the service delivery and access to knowledge, the curriculum and at the same time encourages critical thinking and offers unlimited means of achieving educational goals.

According to UNESCO (2007), the use of ICT can contribute to a movement towards constructive teaching approaches as shown in the table below.

Table1.1. *Instructional process and uses of ICT*

S/N	Learning Aspects	Non Application of ICT	Uses of ICT
1.	Classroom activity	Teacher-centered (didactic)	Learner-centered (inactive)
2.	Teacher’s role	Facts teller (Always expert)	Collaborator
3.	Student’s role	Listener (Always learning)	Collaborator
4.	Instructional emphasis	Fact Memorandum	Relationship (Inquiry and invention)
5.	Concept of knowledge	Accumulation of facts	Transformation of facts
6.	Demonstration of success	Quantity	Quantity of understanding
7.	Assessment	Non-referenced multiple choice term	Criterion-referenced
8.	Technology use	Drill and practice	Communication, Collaboration, Information access, Experience

Source: UNESCO Bangkok ICT and Pedagogy (p.10).

2.8. Instructional Digitalization For The 21st Century Classroom

Instructional digitalization is a subset of educational technology. It essentially deals with the process of using technology as a tool for instruction and as well describes the technologies that facilitate access to information of various kinds. It is concerned with the acquisition, processing, storage and dissemination of information in all of its various forms. A more comprehensive approval to the meaning of instructional technology is seeing it as the theory and practice of design, development, utilization, management and evaluation of processes and resources (Richey, 2008). This approach does not see technology as an end itself but rather as a delivery tool and a means to an end. This same approach also emphasizes that the use of technology only in the Social Science classroom cannot compensate for instruction that is poorly designed, developed and executed. Instructional Digitalization for the 21st century includes:

- a. **Interactive white board:** The SMART board is a real example and is finding its way into the classrooms today. The Social Science teacher can draw and write on it digitally as it has sensors that make these activities possible. It also has an array of templates and applications that make drawing, tabling and other manipulative functions possible. Its access to the websites makes it an ideal technology for the class and can also serve for power point presentations amongst other functions.

- b. Websites or Blogs:** These are personal websites that allow updating by the author. Teachers can create domain name for themselves to enable them access any blog on a host site. This is bound to enhance interaction and communication. Social Science content can be easily created and shared by making the blog accessible to others
- c. Classroom Pcs:** When a teacher and students have their Pcs, teaching and learning is enhanced. Projected instructions enable students to use their Pcs alongside the teacher and what is taught is easily comprehended.
- d. Projectors:** Especially when used with a computer, presentations become very fascinating and appealing to students. In technology learning, the use of power point presentation is today a common phenomenon.
- e. Software and Computer:** Educational software in an individual's personal computers can facilitate learning without a student carrying hardcopies of learning materials.
- f. Sound Amplifiers:** The place of sound amplifiers or public address system is indispensable especially for a large class size. They come in different kinds and categories.
- g. Hand held Data Collector:** A graphing calculator used as a laboratory instrument to collect and manage data.
- h. Eggs Pert:** An interactive, flashing, bee and buzzing game system that has two fun game modes; quiz show and wheel of fortune. They are gaining prominence in the education sector.
- i. Television:** It can be used to show Instructional DVDs or other relevant events that would aid a lesson in Social Science classroom.

3. CONCLUSION

To use digital resources and processes effectively one must be digitally literate. Digitalization of education helps to promote higher-order thinking skills in terms of knowledge acquisition, knowledge deepening and knowledge creation among students and teachers – a transition from lower-order thinking to higher-order thinking. The study examined the meaning; nature and scope of social science; teaching and learning of Social Science; importance of teaching and learning of Social Science; digital literacy for the 21st century Social Science teacher; Information, Media and Technology literacy skills in the teaching and learning of Social Science, and Instructional Digitalization in the 21st Century classroom.

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