

Information communication technology's knowledge and attitude of pre-service social studies teachers in South-West, Nigeria

P. A. Amosun¹, D. A. Falade^{2*} and M. Falade³

¹Department of Teacher Education, University of Ibadan, Ibadan, Oyo State, Nigeria.

²Department of Social Studies, Adeyemi College of Education, Ondo, Ondo State, Nigeria.

³Ondo Boys High School, Ondo, Ondo State, Nigeria.

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ABSTRACT

This study investigated the Information Communication Technology's (ICT's) knowledge and attitude of pre-service social studies teachers in Southwestern, Nigeria. Simple random sampling and purposive sampling were adopted for sample selection. One hundred and eighty six (186) National Certificate of Education (NCE) part two students were selected for the study. Two research questions were raised and answered in the study. The instruments used for the study are Information Communication Technology Knowledge Test (ICTKT) and Information Communication Technology Attitude Scale (ICTAC). The study revealed that pre-service social studies teachers in South-west, Nigeria were poor in knowledge of ICT concepts. 95.7% of the pre-service social studies teachers scored below average in ICT knowledge test. The study also revealed that the pre-service social studies teachers had positive attitude to ICT issues. On the basis of the findings of this study, it is recommended that courses on ICT should be integrated into the NCE social studies syllabus.

Keywords: Information communication technology, ICT knowledge, ICT attitude; pre-service teachers, social studies teachers, teacher education.

*Corresponding author. E-mail: falade.dayo@yahoo.com.

INTRODUCTION

In this 21st century, there is appreciable advancement in Information Communication Technologies (ICT) all over the world. The use of digital, computer system, internet and Global System Mobile (GSM) set to communicate with people thousands of kilometers away is a kind of revolution, which becomes inevitable due to globalization. According to Ogunsola and Aboyade (2005), information has always played a very important part in human life. Particularly, since the mid-20th century, the role of information has increased immeasurably as a result of social progress and vigorous development in science and technology. The society today revolves around technology. Almost everything that is done in this 21st century is internet based or related (Adedoja and Oyekola, 2012).

The President of the Nigerian Internet Group Mr. Jim Ovia, pointed out that there could be no access to information through the internet without the empowerment of the

citizens through education (Tell Magazine, 2002). Apart from the inaccessibility of many Nigerians to information and telecommunication infrastructure, inadequate knowledge and skill in handling the infrastructure is a major problem in developing nations like Nigeria. The extent to which the citizens can benefit from the worldwide advancement in information technology depends on their ability to manipulate and operate the materials/machines. This is the reason why in Malaysia, for instance, the Ministry of Education has initiated a transformation programme in which ICT has become the central concept in the educational system (Kandasamy et al., 2013).

In Nigeria, ICT awareness and skill acquisition has become paramount for social studies teachers. This is to enable them not only to cope with the challenges of technological advancement but also to be able to develop such skills in the learners. Kaur (2011) emphasized that

teachers play the key role in the effective use and integration of technology in education. Teachers should therefore have the knowledge, skills and confidence in the use of ICT in their classrooms.

The role of social studies teachers in assisting learners to acquire relevant skills cannot be over-emphasized. The teacher has vital role to play in the communication and implementation of social studies curriculum. He is the hub of educational system and in the final analysis it is the teacher who translates educational policies into practice and programmes into action (Etim, 1999; Oyekan, 2006). This is the reason why effective training of social studies teachers is pivotal for the attainment of social studies goals and objectives.

Information Technology is already having a significant effect on the world in which we live and the role of the teacher is to prepare the citizens to face the future challenges and draw implications for national development. According to Kandasamy et al. (2013), ICT is an important element in education scenario in order to prepare the citizenry for the future. With more education gained and experienced in using information technology in schools, there will be a perceptible move towards using computers to achieve educational and industrial goals (Odili, 1994; Oyedele and Cirfat, 2000).

Purpose of the study

The purpose of this study is to assess the ICT's knowledge of pre-service social studies teachers in South-west, Nigeria. The study also intends to examine the ICT's attitudes and skills of pre-service social studies teachers in South-west, Nigeria.

ICT in teacher education programme in Nigeria

Teacher education is the key to educational development in Nigeria. The teachers hold the key to national transformation and development. This implies that whatever the quality of education in Nigeria today, is a manifestation of the quality of its teachers. This is so because according to the Federal Republic of Nigeria (2004) no education system can rise above the quality of its teachers. Nigeria has made several attempts to improve the quality of education to meet international standard. This goal cannot be achieved without adequate preparation of pre-service teachers especially in information and communication technology to meet the challenges of our contemporary time.

Filani cited in Aggarwal (2004) opines that teacher education is all formal and informal activities and experiences that help to qualify a person to assume his responsibility as a member of the educational profession or to discharge his responsibility more effectively. This

definition assumes that teacher education is the purposes of preparing persons for teaching and other educational services and for contributing to their growth in competency for such services.

Salami (2011) posited teacher education as a process of professional socialization to acquire the requisite knowledge and also the sense of occupational norms typical of a fully qualified practitioner. He equally said that it includes all forms of education at pre-service training. Nkwodimmah (2003) sees teacher education as the development of teacher for the achievement of education goals. Oyekan (2006) sees teacher education as the provision of professional education and specialized training within a specialized period for the preparation of individuals who intend to develop and nurture the young ones into responsible and productive citizens.

Federal republic of Nigeria (2004) stated that teacher education is to be given continuously major emphasis in all educational planning and development since no education system may rise above the quality of its teachers. Based on that, the goals of teacher education include:

- i) To produce highly matured contentions and efficient classroom teachers for all levels of our educational system.
- ii) To encourage further the spirit of enquiry and creativity in teachers.
- iii) To help teachers to fit into social life of the community and the society at large and enhance their commitment to national goals.
- iv) To provide teachers with the intellectual and professional background adequate for their assignment and make them adaptable to changing situations.
- v) To enhance teachers' commitment to teaching profession.

The Nigerian teacher education is meant to equip teachers with appropriate skills and attitude to carry out their duties to the maximum level. Umar cited in Madumere-Obike and Osaat (2012) identifies two types of teacher education in Nigeria. These are: pre-service and in-service. While the pre-service programmes imply preparatory training meant to initiate beginning teachers, in-service programmes are meant to sharpen and refresh the skills of currently serving teachers.

The age we are is a computer age, if teachers would discharge their duties effectively, there is the need to be versatile in the knowledge of ICT. Presently, most pre-service and in-service teachers are not well equipped with ICT knowledge and skills. Therefore, there is the need to develop in the Nigerian teachers the ICT knowledge and skills needed for effective teaching in the present day Nigeria. Today's students have a global knowledge based age and they deserve a teacher whose training and practice empowers him with the requisite ICT knowledge and skills.

Unfortunately, a cursory look at the educational sector in Nigeria shows that the application of ICT in Nigerian institutions particularly in teacher education programme is still a dream as no significant gain or impact in ICT has been recorded. This is evidenced in the absence of computers, projectors, interactive white boards and other e-learning facilities in the classroom (Nwokeocha and Ezeahurukwe, 2012). According to Ede (2012:174):

Surveys have revealed that thousands of teachers (in developed nations) begin their working day in front of a computer by sending e-mails and visiting websites, checking their day schedules updating their classroom materials and lecture notes, conferring with their colleagues via online chats and e-mailing lists. The survey of our local environment may not reveal similar work approach by our teachers who are still heavily glued to the traditional face-to-face mode of interacting with their learners.

Relevance of ICT in teaching and learning of social studies

Social studies is a pragmatic discipline involving diverse forms of strategies that apply heuristic mode which pave way for integration of reflective enquiry, problem solving, critical thinking, inductive and deductive teaching. This is with the prime purpose of developing learners' cognition in order to inculcate acceptable values and attitude. Information Communication Technology (ICT) is a relevant and useful device for social studies education, particularly in this contemporary time (Akinola, 2011). The world is a global village where people from one country learn about happenings in many other countries. ICT is an eclectic application of computing, communication and satellite technology which is appropriate means of putting across facts and ideas in Social Studies.

For effective teaching and learning, social studies teachers need to employ different devices and means which will appeal to the senses of the pupils in the classroom. Necessary stimuli must be provided by the teachers in order to elicit the desired response. This is because educational experiences involving the learner's active participation in concrete instructional activities are retained longer than abstract experiences (Falade, 2005). ICT materials are no doubt most effective in stimulating these senses. These senses include hearing, smelling, feeling and sight in order to increase children level of perception.

The teaching of social studies courses has always been based on limited resources and as a result, the utilization of ICT media among teachers is imperative. There are tremendous potentials for technology to be fostered as tool that can overcome the traditional

isolation of the classroom setting, provide access to expensive resources and improve overall productivity (Inusa, 2009; Abdul and Shamisah, 2008). To achieve the desired outcomes with the utilization of technology, social studies must focus not only on making teachers competent but at the same time promote strategies that enable the integration of technology that enhances teaching and learning of the subject.

Woodrow et al. cited in Inusa (2009) assert that any successful transformation in educational practice requires the development of positive user attitude toward new technology. The development of teachers' positive attitudes toward ICT is a very significant factor not only for increasing computer integration but also for avoiding teachers' resistance to ICT use. They also emphasized that there is the need for research on the use and effectiveness of technology in social studies classrooms that would enhance social studies education. Using instructional media in social studies classrooms widens the channel of communication between teachers and their students. The instructional media allow the growth of specific learning abilities and enhance intellectual skills and motor skills. The use of charts and models enables the teacher to present and illustrate many physical phenomena and issues easily and at the same time, allows them to focus attention on the characteristics of objects.

In tandem with technological advancement, the usage of the instructional media has dramatically increased in the last two decades. In social studies, the use of instructional media is essential to support learning. This is because social studies, is to develop in learners a more global and more balanced awareness of their immediate and remote environments. It is concerned about natural and social phenomenon which cannot be easily expressed without the support of graphic maps, video and pictures (Ajiboye et al., 2005; Inusa, 2009)

Social studies as a subject was introduced into Nigerian school curriculum to inculcate into the Nigerian child necessary skills, knowledge and acceptable norms and values which will equip the child to identify and solve problems in his environment.

A cursory look at the general objectives of teaching social studies in Nigeria reveals that ICT has the potential of creating enabling environment for achieving these stated goals. One of the objectives of teaching social studies is to create an awareness and an understanding of our evolving social and physical environment. The use of ICT has turned the world into a global village. It has an edge over the traditional method of teaching through face to face interaction of teacher with the learner. It has the capacity of bringing into the classroom both our immediate and farthest places.

Also, the objective of social studies is to ensure the acquisition of relevant body of knowledge and information which is essential pre-requisite to personal development as well as personal contribution to the betterment of

mankind. Unlike textbooks, Boris cited in Adigun (2003) affirms that the internet provide the latest information for both the teachers and the learners. In addition, ICT promotes teachers' efficiency, in the sense that, it affords the teachers the opportunity of accessing latest and relevant information that would make him plan ahead for his lesson and adequate planning will enhance efficient dissemination of knowledge to the learners (Adigun, 2003). ICT allows the students to be actively involved in the lesson as much relevant information concerning the topic would have been gotten by the learners thus making the classroom more lively as the teaching process will not be one sided because they will also be contributing to the lesson in the class.

METHODOLOGY

Research design

This study is a descriptive research. The survey design was used to discover the ICT's knowledge, attitude of pre-service social studies teachers in Colleges of Education in South-west, Nigeria.

Population and sample

The population for this study is made up of NCE students in Colleges of Education in Ekiti and Osun States, Nigeria. The sample for this study is made up of part Two (II) NCE students in Ekiti and Osun States' Colleges of Education.

The sampling technique used was a mixture of simple random sampling and purposive sampling. NCE Part Two (II) students were purposefully selected because they had been in the institutions for not less than one year. The two Colleges of Education were purposefully selected because of their similar features which include:

- i) They are both colleges of education.
- ii) They had more than one hundred NCE II social studies students.
- iii) They are public teacher training institutions.
- iv) They are from two States with similar political and educational backgrounds.

Intact class was used in selecting the sample for the study. At Ekiti State College of Education, Ikere Ekiti, all the NCE part two (II) students that were in the class during the study were used. Ninety three (93) NCE two students from Ekiti State College of Education were involved in the study. Also, at the Osun State College of Education, Ilesha ninety three (93) NCE two students participated in the study. In all, one hundred and eighty six (186) NCE part two students from Ekiti State and Osun State Colleges of Education were used for this study.

Instrumentation

Two self-designed instruments were used for this study. The first instrument is titled Information Communication Technology knowledge Test (ICTKT). This instrument was designed by the researchers to measure the knowledge of pre-service social studies teachers on ICT concepts. The instrument is made up of two sections. Section A requires the respondents to supply some personal information. Section B is made up of twenty five (25) items. The items were raised to measure the knowledge of pre-service social studies teachers on some ICT concepts.

The second instrument is titled Information Communication Technology Attitude Scale (ICTAC). This instrument was designed to measure the attitude of pre-service social studies teachers to ICT. The instrument is made up of two sections. Section A requires the respondents to supply some personal information. Section B is made up of twenty (20) items. The items were raised to measure the attitude of pre-service social studies teachers to ICT.

Validation and reliability of the instruments

The face and content validity of the ICTKT was done by three social studies lecturers, two of which were from Adeyemi College of Education, Ondo. Also, two computer lecturers from Adeyemi College of Education Ondo were involved in the validity of the instrument. The corrections made by these experts were effected before the final draft was produced. The instrument was administered on 20 NCE two (II) students that were not involved in the study to determine the reliability coefficient. The researcher used the Kuder Richardson (Kr21) to find the reliability. The reliability coefficient of 0.96 was obtained. This was considered high enough to use the instrument.

The ICTAC was also validated. Two social studies lecturers and two computer lecturers from Adeyemi College of Education Ondo validated the content of the instrument. The corrections made by these experts were effected before the final draft was produced. The scale was administered on 30 NCE two (II) students that were not involved in the study to determine the reliability coefficient. The researcher used Cronbach alpha to determine the reliability coefficient.

Research questions

The following research questions were raised and answered in the study:

1. Will pre-service social studies teachers in South-west, Nigeria obtain high knowledge score in ICT knowledge test?
2. Will pre-service social studies teachers in South-west, Nigeria demonstrate positive attitude on ICT issues?

Research procedure

A research assistant was trained and used for the study. Also, social studies lecturers from each institution were involved in the study. The two instruments used for the study were administered by the researchers with the help of a research assistant and the lecturers in the Department. The instruments were collected immediately.

RESULTS

The results are presented in order of the research questions generated for the study.

Research question 1

Will pre-service social studies teachers obtain high knowledge score in ICT knowledge test?

Table 1 reveals that 95.7% of the pre-service social

Table 1. ICT knowledge scores of pre-service social studies teachers.

Knowledge score	Frequency	Rating	Group % and Remarks
0 - 4	16	Very poor	95.7 Below average
5- 8	95	Poor	
9 - 12	67	Fair	
13 - 16	8	Average	4.3
17 - 20	0	Good	Average
21 - 25	0	Excellent	0 Above average

Total score = 25

studies teachers scored below average in ICT knowledge test while 4.3 and 0% of the pre-service social studies teachers scored average and above average respectively in the ICT knowledge test. This indicates that pre-service social studies teachers in South-west, Nigeria had poor knowledge of ICT concepts.

Research question 2

Will pre-service social studies teachers in South-west, Nigeria demonstrate positive attitude on ICT issues?

The pre-service social studies teachers had positive attitude to ICT issues. Table 2 shows that 76.3% of the pre-service social studies teachers agreed that there was no concept in social studies that could not be comprehended with the use of ICT. Also 61.3% of the pre-service social studies teachers responded that they needed sufficient knowledge of ICT to be effective teachers. Again, 60.2% of the pre-service social studies teachers disagreed with the statement that the learning of ICT concepts should be optional for pre-service social studies teachers while 59.7% of the pre-service social studies teachers disagreed with the statement that the inclusion of ICT in the social studies teacher education programme would make the subject un-pedagogical and a bit difficult.

DISCUSSION

This study examined the ICT knowledge of pre-service social studies teachers in South-west, Nigeria. The findings from the study showed that pre-service social studies teachers in South-west, Nigeria had poor knowledge of ICT concepts. Table 1 showed that 95.7% of the pre-service social studies teachers scored below average in ICT knowledge test. This may be due to the fact that ICT courses are not incorporated into the NCE social studies teacher education curriculum in Nigeria.

This is in agreement with Nwokeocha and Ezeahurukwe (2012). They investigated ICT in teacher education programmes for effective teaching and learning and discovered that pre-service teachers were very limited in ICT knowledge because NCE students are only exposed to a general (introductory) aspect of ICT in just a semester.

This is further substantiated by Sharehu (2012) who posited that the NCE teacher education programme in Nigeria tend to be insufficient for the demands of this present knowledge economy. Iheonunekwu et al. (2012) also investigated the need for the integration of ICT into teacher education in Nigeria. They discovered that teacher training programme and the development of teachers in Nigeria is currently facing a number of challenges.

This study also investigated the ICT attitudes of pre-service social studies teachers in South-west, Nigeria. The findings from the study revealed that the pre-service social studies teachers had positive attitude to ICT issues. Table 2 showed that 61.3% of the pre-service social studies teachers responded that they needed sufficient knowledge of ICT to be effective teachers. Again, 60.2% of the pre-service social studies teachers disagreed with the statement that the learning of ICT concepts should be optional for pre-service social studies teachers. Moreover, 59.7% of the pre-service social studies teachers disagreed with the statement that the inclusion of ICT in the social studies teacher education programme would make the subject un-pedagogical and a bit difficult. These findings are supported by Nwakonobi and Obiagwu (2012) who discovered that students gave positive responses to the ICT issues raised showing that they appreciated and encouraged the use of ICT in teaching and learning of biology in colleges of education.

Implication of findings

This study investigated the ICT's knowledge of pre-service social studies teachers. The findings of the study

Table 2. Attitude of pre-service social studies teachers on ICT issues.

S/N	Statements	SA	A	SD	D	SA & A	%	SD & D	%	X	\bar{X}
1	Teaching and learning tasks in social studies can be accelerated through the integration of ICT.	61	40	40	45	101	54.3	95	45.7	101	1.8
2	There is no concept in social studies that cannot be comprehended with the use of ICT.	50	92	20	24	142	76.3	44	23.7	142	1.3
3	I enjoy independent learning through ICT means like web quest and interactive white board than learning directly from my lecturers.	60	56	20	50	116	62.4	70	37.6	116	1.6
4	Assignments and research works in social study can be facilitated through the deployment of ICT.	45	60	39	42	105	56.5	81	43.6	105	1.8
5	Using ICT tools would make the teaching and learning of social studies more interesting and productive.	66	34	36	50	100	53.8	86	46.2	100	1.9
6	There are online learning environments tailored towards the teaching and learning needs of social studies.	48	50	48	40	98	52.7	88	47.3	98	1.9
7	Social networking websites are significant to social studies.	57	48	40	41	105	56.5	81	43.6	105	1.8
8	The incorporation of ICT into social studies is unrealistic in this age.	20	61	50	55	81	43.6	105	56.5	81	2.3
9	I need sufficient knowledge in ICT to be an effective teacher.	66	48	22	50	114	61.3	72	38.7	114	1.6
10	I don't need any technical skill to use ICT facilities.	48	42	66	30	90	48.4	96	51.6	90	2.1
11	The inclusion of ICT in social studies teacher education will make the subject un-pedagogical and a bit difficult.	23	52	71	40	75	40.3	111	59.7	75	2.5
12	I prefer assignments that require library books than those that require browsing	52	30	84	20	82	44.1	104	55.9	82	2.3
13	The inclusion of ICT into the Teacher Education programme is not a necessity	46	40	62	38	86	46.2	100	53.8	86	2.2
14	The learning of ICT concepts should be optional for pre-service social studies teachers	30	44	74	38	74	39.8	112	60.2	74	2.5
15	I am always happy when lecturers ask us to download learning materials from the net	51	44	45	46	95	51.1	91	48.9	95	1.9
16	I make use of web quest a lot whenever I want to get new information on social studies issues	61	42	40	43	103	55.4	83	44.6	103	1.8
17	Interactive white board is readily available during our class room activities	45	72	30	39	117	62.9	69	37.1	117	1.6
18	I have acquired sufficient ICT pedagogical skills required for teaching social studies concepts and issues.	48	50	40	48	98	52.7	88	47.3	98	1.9

Table 2. Continues.

19	One of the major means of learning social studies in my school is videoconference	66	56	14	50	122	65.6	64	34.4	122	1.5
20	Mobile learning does not facilitate learning and retention in social studies when compared with reference library.	54	40	42	50	94	50.5	92	49.5	94	1.9

revealed that pre-service social studies teachers had poor knowledge of ICT concepts. This indicates that the non-inclusion of ICT concepts into the NCE social studies teacher training programme in Nigeria limited the extent to which pre-service social studies teachers could benefit from basic ideas and facts on ICT. One of the major implications of this finding is that since these prospective teachers are expected to teach in the Nigerian primary schools where they would teach all the schools subjects including computer studies, they would lack the required knowledge for effective and efficient performance.

Moreover, the results of this study revealed that the pre-service social studies teachers manifested positive attitude to ICT issues. This indicates that the pre-service social studies teachers had some measure of interest in ICT. This implies that the non-inclusion of ICT course into the NCE teacher education curriculum as well as non-availability of ICT facilities in the social studies workshop were deterrent to better positive ICT disposition of the pre-service teachers. It could be deduced from this finding that if ICT courses are incorporated into the NCE social studies teacher training programme in Nigeria and if social studies workshops are equipped with ICT facilities, pre-service social studies teachers would have better knowledge and attitude to ICT.

Conclusion

The acquisition of relevant knowledge and skill on ICT is paramount for social studies teachers in Nigeria particularly in this 21st century. This is to enable them not only to adopt ICT devices in their teaching activities, but to also help them to equip the learners with ICT knowledge and skills.

The study revealed that pre-service social studies teachers in South-west, Nigeria had poor knowledge of ICT concepts. The study also showed that the pre-service social studies teachers had positive attitude to ICT issues. The non-inclusion of ICT courses into the NCE social studies teacher education programme in Nigeria is a deterrent to ICT knowledge as well as better positive ICT disposition of pre-service social studies teachers.

RECOMMENDATIONS

On the basis of the findings of this study, the following recommendations are made:

1. Courses on ICT should be incorporated into the NCE social studies teacher education programme in Nigeria.
2. Provision of social studies workshop should be a mandate for all the colleges of education in Nigeria. Such workshop should be equipped with ICT facilities.
3. Accreditation of NCE teacher training programme in the Nigerian colleges of education should put more emphasis on the availability and use of ICT facilities.
4. Social studies teacher educators in the Nigerian college of education should adopt teaching strategies that would require the students to obtain part of the instructional materials from the net rather than limiting them to lecture notes and text books.

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