THE CLASSROOM ACTIVITIES AND EDUCATIONAL TECHNOLOGY INTEGRATON IN SOCIAL STUDIES INSTRUCTION

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Abstract
The purpose of this study was to determine the kind of classroom activities tutors and trainees engaged in when they adopted selected educational technologies during Social Studies instruction in Public Primary Teachers training colleges in Kenya. The premise of the study lay in fact that teacher preparation program is vital as it is expected to provide knowledge, skills and positive attitude best for teaching in a dynamic environment. Therefore, where selected conventional and emerging technology is adopted during instruction it is hoped it would support, promote quality and prepare the learners for technology driven market place. To study adopted the Trajectory model and the philosophical stand was pragmatic stance where mixed method approach was utilized. The research design used was cross-section survey which embraced a descriptive qualitative stand. The target population was six public primary teachers colleges, sixty three (63) Social Studies tutors and (17,568) seventeen thousand five hundred sixty eight trainees. Purposive and stratified sampling were used to select the heads of department and tutors while simple random sampling to select trainees. Data was collected using structured and unstructured questionnaires, interview and observation schedule. Data was analyzed descriptively. The findings showed the kind of activities exhibited largely depended on type and extent of technology integrated during instruction.
Key words: Classroom activities, Technology, Integration, Instruction and Social Studies

BACKGROUND OF THE STUDY

1.0 Introduction

The past decade have realized myriad advances and growth in the use of technology in all sectors and have had pervasive impact on society and daily lives (Yuen, Law & Wong, 2003). Among other benefits, it has become principal driver of social change, fostered creativity and social integration among people of diverse backgrounds (Kozma, 2005a). In education sector, technology use have been used in various ways particularly during instruction. Various experiences during instruction over time necessitated the need to establish ways through which learners can learn best. Among other was the need to use various devices to make learning easier and for learners to understand the

technical part. This saw the evolution and development of various devices which when traced from the time when bodies of knowledge and cultures were systematized, pictographs or sign writing invented and used with an aim of transmitting or recording information. Following this advent scholar Pierre, introduced the idea of structuring and presenting instruction using technology. Thereafter, the 19th century scholars and beyond continued to develop other effective technologies such as textbooks, chalkboard and photographs; virtual instructional materials such as educational film (1926); program learning through machines (1926), instructional television programs (1926) and computers among other

Along with these developments, concerns over the kind of activities instructors and the instructed were engaged in became a matter of concern as this would determine the kind of learning that would take place in a classroom set up. It is from this background that the study sought to establish what activities tutors and learners engaged during instruction when various forms of technology was utilized.

Various studies undertaken have shown that technology utilization have provide positive responses and enhanced learning. Among other, was where technology has been utilized during instruction enormous benefits include; learners acquire, develop and improve skills and prepared them for the global economy and information society (Haddad & Draxter, 2002; UNESCO, 2002). In support of this governments through the Ministry of Education Science and Technology in conjunction with education institutions have rolled out of initiatives in various countries and crafting of policies to enable institutions cope with technology utilization in all sectors. With this, continued support for technology use at education institutions and individual level noted have risen tremendously in the past decade.

Even with the benefits, initiatives and policies crafted technology adoption and use at national and individual level, at global, regional and national level showed disparities on availability and onward utilization of technology at institutional, classroom and individual level. The major cause of this disparity is attributed to socio-economic factors, colonial history and its effects, availability of resources that support technology integration, beliefs among others. A survey on technology adoption and integration worldwide showed some countries have invested heavily on provision of facilities and training while others have provided limited facilities.

1.1 Statement of the problem

At the dawn of the 21st century, scholars agree that the method of delivery during instruction should not continue to be business as usual especially when largely conventional technological devices utilized. This state of affair is challenged because of developments and production of numerous emerging technologies which is believed when used it has the potentials to drive, restructure and foster creativity during instruction. In tandem with this, research conducted show an uptake in the use of technology at home and schools (Goddard, 2002). The reason for this being technology use has largely penetrated a larger percentage of households especially with the availability of internet services worldwide. Therefore where this is adopted at classroom level especially during instruction students are able to learn more in less time, focus on global learning environment and as tools which enable learners be engaged during learning process. Organization for Economic Co-

operation and Development and Organization for Economic Co-operation and Development (OECD, & UNESCO, 2001) on the impact of technology in schools, provided richness in learning, motivates and supports development of higher order skills (OECD, 2001).

For technology utilization to see its benefits, the availability of varied technological devices at institutional level is key. And where this, has been provided determination of kind and extent of training to can only be an eye opener on extent of integration of technology at classroom level. As regards this study teacher training is recognized as the bedrock of adoption, utilization and onward student benefit from the use of technology during instruction. However, even where there has been increased uptake and utilization of technology in today's classroom the question posed is whether technology utilization really promoted learning in regard to the activities at tutor and trainees levels. Similarly, a question posed is; is there a change in classroom activities when selected educational technologies are utilized during instruction? And whenever utilized what is the role of the tutor and trainee?

1.2 Objective of the study

To assess the kind of classroom activities adopted when educational technology is utilized during Social Studies Instruction

1.3 Research question

What kinds of classroom activities are adopted when selected educational technology is integrated in Social Studies Instruction?

1.4 Justification of the study

The future of education is linked with the integration of educational technological during instruction leading to a shift from total traditional approach to a blend of traditional and modern approaches of instruction. The adoption is believed to present to individual learners educational experiences at a global level which set stage and foundation for effective interaction and experiential learning.

1.5 Theoretical Framework

The study was anchored by the Trajectory Model; a technology and diffusion model (Sherry, Billig, Tavalin, Gibson, 2000) which defines the level and extent of technology use among instructors in an educational setting. The model has it that while technology adoption and use has been acknowledged as a catalyst for social transformation and national progress several factors that may hinder or facilitate the adoption. Similarly, Sherry et al., (2000) recognizes stages which adopters pass through in order to effectively integrate the innovation in everyday experiences which includes, tutors; acquisition of technological knowledge and skills, experimenting with technology at classroom level being aware of possible learning outcomes among others.

LITERATURE REVIEW

2.0 Introduction

The literature was reviewed from textbooks, journals, periodicals, reports, the internet and other publications. Since few studies are available on integration of educational technology in Social Studies, the literature reviewed was generally on integration of technology in relevant fields and where studies had conclusively provided results. The chapter will then provide a review on teacher

education, teacher preparation program, changing context of teacher education and the need to integrate technology during instruction

2.1 Teacher Education

Teacher Education has been an important component of education since time immemorial. This is because societies recognize that teachers transmit knowledge and skills from one generation to another while incorporating current practices at a particular time although much is owed to indigenous African societies (Kenyatta, 1963).

However, from the mid-nineteenth century when formal education was introduced by Christian missionaries (Karanja, 1995) it was patterned and tailored using the western European and Canadian teacher education models. While this was done the need for teacher education became the immediate concern because of the influx of the unplanned, rapid expansion of the "mission" and "bush" schools (Sifuna & Indire, 1974). Similarly, after the First World War (1914–1919) the establishment of secondary schools both for the African and European schools created an increased demand for African education especially higher education. This demand saw the establishment of Makerere College in Uganda which provided diploma in Education in early 1940s, (Beecher Education Commission, 1943; Karanja, 1995), in 1965 and 1966 Kenyatta College and Kenya Science Teachers College were established to train S1 teachers, Kenya Technical Teachers College in 1977 to train teachers in technical subjects and in 1966, University of Nairobi College (Otiende, 1992)

2.2.1 Teacher Preparation Program

To be able to prepare effective and efficient teacher educators, a teacher education programs forms an important component as it is essential in preparing future teachers. Through this teacher trainees are equipped with knowledge, skills and attitudes needed to take up myriad responsibilities that come along with it. The program is ostensibly designed, developed and administered to produce school teachers for the established system of education (Kafu, 2003) and to prepare and provide an opportunity to improve quality of teaching in a society (Otunga & Namunga, 2012). The reason for this is teachers are considered mentors of a society who form the main pillar of a system of education as well as the custodian of the society's culture (Lucas, 1972). As an important component of a country's education system, various government worldwide have set aside, channeled finances, provided grants and subsidies for purposes of improving and constructing new facilities, providing with it tuition supplies as well as improving teacher remuneration and training. The same commitment has been in Kenya as the government continuously developed infrastructure and promoted teacher education with a purpose of accelerating national development (Government of Kenya, 1988).

For this to be successful a curriculum has been designed with core and electives subjects. Among them is Social Studies an interdisciplinary discipline that draws its content from a number of disciplines such as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, appropriate content from the humanities, mathematics, and natural sciences" (National Council for the Social Studies, 1994, p. vii). The primary purpose of teaching social studies is to; acquaint learners with the past geographical and social environment, enable one appreciate Kenya's rich and diverse culture, build social competence and intelligence for democratic citizenship, serve as foundation for future specialization among others. In the process of this, the young people develop higher order thinking skills to function effectively in an increasingly culturally diverse and democratic society (Kochar, 1990).

2.2.2 Changing Context of Teacher Education

Even with the curriculum and trained educators, in the recent past the context of teacher education has changed owing to the changes experienced worldwide and which has had pervasive impact in the society. This brings to us the realization that teachers are an important group of professionals who impact virtually on every sector of the economy and an indispensable driver for economic development (Otunga & Namunga, 2012). For this reason a number of developments have been taking place in teacher education around the country which focus on the improvement of teacher education programs in terms of quantity and quality in curriculum development and mode of delivery. In embracing the spirit of digitalizing the society in all aspects the need to adopt and integrate both conventional and newer educational technologies during instruction which cannot be wished away.

With continued technological progress and where adoption and integration is successful studies show great strides on extent of knowledge gain and acquisition of skills among individuals. This is expected to be translated into positive developments once they enter the labor force. During training both trainer and trainee are expected to develop new knowledge and competencies and to be sensitive to the new demands of a knowledge-based society. This caliber of teaching personnel determine the quality of service provided as noted in a comparative study of education in primary and secondary school teachers (UNESCO, 1991). In relation to this, ILO/UNESCO (1991) recommended the need for teacher education institutions to consider availing adequate and appropriate teacher and learning equipment's such as television, radio, and computer assisted teaching among others that would contribute to the development and improvement of method of delivery in modern education

In line with these expectations, teacher education and professional development (TEPD) in Kenya equipped more than one thousand five hundred (1500) tutors and educational managers with ICT skills to give them the ability to teach well in an increasingly demanding environment and be able to improve the practices and competencies of trainers (MOEST, 2005).

2.2.3 Educational Technology (ET) in Teacher Education

Scholars have made claims on the value of ET when integrated during instruction attract some inherent values such as; technology help teachers teach; learners to learn and to fundamentally change the social and educational context of classrooms; enable more learning to be accomplished in less time when compared to traditional instruction and increase interest, comprehension and retention and to add concreteness to a learning situation (Cuban, 1986; Oppenheimer, 1997).

However, Salomon, (1993) study recognized that though it is difficult to judge the goodness of a technology outside the purpose for which it was created the value of an innovation may be judged pedagogically and whether it achieves what it is intended to achieve. There is need for a deep and complete analysis about on whether educators are provided with comprehensive information about what and how to train future teachers or those in-service.

Now with educational technologies available and teachers trained to integrate technology during instruction the question posed is; what are the tutors and trainee activities during instruction when educational technologies are integrated? The answer to this depends on when both players recognize the importance of technology utilization as not only giving learners the opportunity to control their own learning process and provide ready access to a vast amount of information(Lam & Lawrence, 2002). But for tutor trainer to guide the teacher trainee to identify teacher and learner activities, guide instruction, provide direction, and to supervise overall activities during instruction which then allows room for experiential learning against rote learning situation.

2.2.4 Integration of Educational technologies in Social Studies Teacher Preparation

On instruction, previous research proposed that teachers' use of technology falls along a continuum, which extends from teacher-centered methods to student-centered methods (Gopalakrishnan, & Ross, 2001). In this category, the student's role shifted from a passive listener to an active researcher and presenter while the teacher guides, facilitates, and provides students with tools needed to research, explore, and create meaning (Baylor & Ritchie, 2002; Diem, 1999; OTA, 1995). From the above studies, participants indicated that when technology was utilized during instruction more content was covered more in less time and the students were kept engaged in numerous activities. For example; (a) used various technology tools and research skills to present information, (b) teacher/student and student/student collaboration (c) production of quality work among other. They also assumed new roles which encouraged students to pursue their own inquiries, to make use of different technology tools to gather, organize, and interpret information, and to become reflective and critical about information. Based on the extent of content of Social Studies the need to integrate technology comes in handy both during preparation and during instruction for both the benefit of the tutor and trainee.

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter delves on the philosophical underpinnings of the study, research design, study area, target population, sample size and sampling procedure, data collection instruments, data analysis and ethical consideration.

3.1 Philosophical Underpinnings of the Research

This study adopted an eclectic worldview stance derived from the work of Pierce, et, al., (Cherryholmes, 1992), a mixed method strategy which embraces both quantitative and qualitative approaches to test different methods of inquiry for their effectiveness in achieving the intended goal.

3.2 Research design

The study embraced a cross sectional survey research design. The choice of this was owed to the widely spread population, noted to be appropriate when gathering data from the selected members of a population and to determine change that occurs in large population.

3.3 Target population

The study was conducted among PTTCs situated across Kenya. The respondents included trained tutors and selected trainees. The approximate number of trainees were seventeen thousand five hundred and sixty eight (17,568), sixty three (63) Social Studies tutors and 21 heads of department (MOEST, 2005).

3.3.1 Sample size and Sampling Procedure

From the twenty one (21) public primary teachers colleges, six (6) were selected, from sixty three (63) tutors twelve (12) were selected and from seventeen thousand five hundred sixty eight (17568) 360 were selected. From the table of determining sample size, the 17,568 trainees (MOEST, 2005) fell in the category 15,000 to 20,000 (Krejcie & Morgan (1970) from which 377 respondents were applicable.

3.3.2 Research Instruments

The main research instruments used to collect the data included questionnaires, interview guide observation schedules and document analysis

3.3.3 Validity and Reliability of Research Instruments

3.3.3.1 Quantitative data

To determine the validity of quantitative instruments, content validity was used where a questionnaire, interview and observation schedules were approved by the supervisors while for external validity the sample was made as representative as possible of the target population.

On reliability of quantitative data, test-retest was carried out when piloting the instruments. A total of fifteen trainees and four tutors selected from a PPTTC which did not participate in the study, were given questionnaires and interview schedules that where both verbal and written. Thereafter, both verbal and written comments were reviewed while responses provided in the questionnaires were evaluated objectively. On reliability of instruments a split-half method was applied on the data and analyzed using Pearson Product Moment of Correlation Coefficient. The scores realized was 0.75 which was greater than 0.5 the minimum reliability coefficient value hence reliable (Koul, 1984).

3.3.3.2 Qualitative data

For qualitative data research instruments were interview guide and observation. The criteria used to evaluate data was based on trustworthiness from the respondents and authenticity.

3.4 Data analysis Techniques

For quantitative data, a software of Statistical Package for the Social Science (SPSS) was used and from it descriptive and inferential statistics aided in the analysis and presentation of the results. While for qualitative data, categories were developed from the transcripts using labels and codes then synthesized into key concepts/themes then interpreted by identifying meaning and implications.

3.5 Ethical Consideration

Clearance was sought from Moi University Dept of CIEM and a permit was provided by MOEST. At the PTTCs visited clearance from the principal's office was sought on my intention of carrying out research. An explanation was made to the HOD on the intention of the study and detailed information on issues pertaining to nature of study, confidentiality, voluntariness and all other aspects that will not threaten the respondents in any way was disclosed. The researcher stressed on participants' freedom to decline participation or even withdraw from the study at any stage if they felt uncomfortable was allowed, without any consequences to them and adherence to anonymity of the participants.

DATA PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION

4.0 Introduction

This chapter presents the analysis, interpretation and discussion of the output from data collected in the field by use of questionnaires, interviews, observation and focus group discussions.

4.1 Social demography of respondents

The respondents of the study included pre-service trainees, three hundred and sixty 360 participated in the study where 187(51.9%) were male while 173(48.1%) were female.

Socio-Demography of the Respondents

4.1.1 Trainee's bio-data

Variables	Response	F	Percentage (%)	Total
Gender	Male	187	51.9	51.9
	Female	173	48.1	48.1
	Total	360	100	100

Age	20-25 years	283	78.6	78.6
	25-30 years	67	18.6	18.6
	Above 30 years	10	2.7	2.7
	Total	360	100	100
Year of study	1st year	232	64.4	64.4
	2nd year	128	35.6	35.6
	Total	360	100	100

From the data provided on 12 tutors selected 7(58.3%) were male while 5(41.7%) were female. For six (6) the heads of department (33.3%) were female while 4(66.7%) were male.

4.1.2 Head of Department & Tutors Bio-data

		Tutors		Hods	
Variables	Response	F	(%)	F	(%)
Gender	Male	7	58.3	4	66.7
	Female	5	41.7	2	33.3
	Total	12	100	6	100
Age	25-35yrs	1	0.8	1	16.7
	35-45yrs	5	41.7	4	66.7
	45-50yrs	5	41.7	1	16.6
	Above 50yrs	1	0.8	1	16.6
	Total	12	100	6	100
Qualification	Post-graduate	3	25	4	66.7
	Graduates	9	75	2	33.3
	Total	12	100	6	100
Teaching experience	10-15yrs	4	33	-	-
	15-20yrs	7	58.3	2	33.3
	20yrs	1	0.8	4	66.7
	Total	12	100	6	100
In- service	No	9	75	2	33.3
	Yes	3	25	4	66.7
	Total	12	100	6	100

4.2.1 Classroom Activities Adopted and Educational technology

An observation schedule was designed with two columns. One with type of technology another classroom activities. Using this schedule, the following information was obtained. Out of the twelve sessions the study was scheduled to collect the data only eight sessions were observed.

During session one, type of technology used was topographical maps. Trainees were given some tasks and expected to use the maps from which trainee activities included observation, identification, interpretation, discussion in small groups, asking and answering of questions. In second session; the type of technology used was the chalkboard. The tutor used the chalkboard to make illustration and sketches. The kind of activities trainees were engaged in included note taking and drawing of sketches and answering of questions. During third session, the type of technology used was a combination of computers and overhead projectors. The tutor set the equipment and used during teaching. The kind of activities trainees were engaged in included observation and making short notes and occasionally questions were asked by both the tutor and trainees. During subsequent session the type of technologies used were a combination of the textbooks and chalkboard. What was observed was kinds of activities were taking short notes, asking and answering questions observation, drawing, discussion and snap research at different stages of the lesson as it progresses.

4.2.2 Results of the study

On the kind classroom activities that were occurred when ET was integrated during instruction, major findings revealed that textbooks and chalkboard were largely used by all tutors. This showed that the major activities both tutor and trainees were engaged in included making of notes, observations of features available in books, writing short notes, drawing of sketches and illustrations. On photographs and topographical maps, tutors felt that this technology could be used to infuse practical aspects in instruction. Although the kind of activities slightly changed it ranged from observation, drawing, measurements, identification that led to interpretation.

4.2.3 Conclusion and Recommendation

In conclusion the research showed that largely the kind of activities which tutors and trainees engaged in were largely dependent on the availability and type of technology. That variety of technology to be used during instruction are not uniform in PPTTCs making technology integration a matter of concern. The recommendations made by the study are that where varied number of technologies to be provided, applied and integrated during instruction, the activities undertaken would also vary in relation to the technology applied. Similarly varied types of activities can be incorporated such as demonstration, measurement, observation, application, discussion and evaluation which are associated with the practical part of the subject and which encourage the development and application of higher order thinking.

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APPENDIX VIII: OBSERVATION SCHEDULE

1.1 Date …….. Time ……

Type of Educational technologies available in the institution for use during social studies instruction

Type of technology	**Available**	**Not available**
Printed texts		
Chalkboard		
Radio		
Television		
Tape recorders(audio)		
Films		
Photographs		
Topographical maps		
Computers		
Overhead projectors		
Video		
Internet		
Digital camera		
e-curriculum		

1.2 Classroom observation schedule

	Technology used	Classroom activities
1.		
2.		
3.		
4.		
5.		

Challenges noted during use of instruction

i)

ii)

iii)

iv)