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Level of ICT Integration in Teaching of English: The Kenyan Case

Indembukhani K., Maseno University, Kenya
Prof. Indoshi, C.F., Maseno University, Kenya
Dr. Ogange, O. B., Maseno University, Kenya

Abstract

This paper is part of research on ICT integration and its contribution to the teaching of English in Kisumu County Kenya. ICT integration just like other innovations goes through stages as it develops to efficacy. ICT integration program was initiated in the year 2006 in secondary schools in Kenya through equipping schools with ICT infrastructure and training of teachers to implement the program. The purpose of this paper was to assess the level of ICT integration in teaching of English. Descriptive survey and correlational research techniques were used to collect data on the level of ICT integration on teachers of English in selected secondary schools. The study established that ICT integration in the selected schools was at level. It had not reached the transformational level which is the optimal stage where the benefits of ICT integration can be harnessed.

Key Words: *ICT integration, level of ICT integration, teaching of English*

1. Introduction

Integration of Information and Communication Technology (ICT) has the potential to transform teaching of not only English but also other subjects to improve the quality of teaching and produce desired outcomes (Look, 2005, Annie, 2013, Ayere, 2009). However, despite efforts to integrate Information Communication Technologies (ICT) in teaching all subjects to improve quality of teaching and educational outcomes in secondary schools in many countries in the world including Kenya, its implementation of the integration has not yielded satisfactory results in terms of quality of teaching and improved performance in national examinations.

The process of ICT integration in teaching and learning institutions of learning go through different levels. These levels range from emerging stage, where computers have just been introduced to applying stage, infusion stage and transformation stage (UNESCO 2010). Similarly, Unwin (2007) reports that though there has been growth in ICT in all aspects of the society, its rate of growth and utilization has not been uniform among countries, regions, institutions and even teachers. ICT integration at the transformation stage is expected to contribute effectively to the teaching and learning process (UNESCO 2010).

2. Literature Review

Educational institutions typically pass through levels of integration of ICT ranging from the basic stage where computers have just been introduced to transforming stage where ICT is fully integrated into institutions and broadly used on daily basis (UNESCO 2010). Teachers and stakeholders also go through stages from learning the basics about ICT use to integrating it in practice by teaching with and through ICT throughout the curriculum (UNESCO, 2010). The level at which an institution or individual teacher is, influences the extent to which ICT will be integrated in teaching. A number of studies have proposed varied models for assessment of levels of ICT integration which this study assessed.

Filiz and Yasemin (2013) in a study on teachers' perceptions related to Levels of ICT Implementation adapted Hall and Hord (1987) "the concerns-based adoption model" which defined an innovation in eight levels. Filiz and Yasemin modified model suggested that teachers' integration of ICT into learning-teaching process can be defined in five levels as presented below.

a) *Beginning of ICT integration:* Teacher organizes activities to develop students' basic ICT skills, prepares lesson plans including ICT usage, and often takes advantage of available applications.

b) *Second Level of ICT integration:* Teacher gives students homework which they could do research and analysis by using ICT to support their learning processes. Also, teacher uses ICT to teach concepts, themes, and processes related to lesson.

c) ***Third Level of ICT integration:*** The purpose of teachers' ICT usage is to develop higher-order thinking skills of students. For this aim teacher uses ICT to design products that are student-centred, integrated with instructional program. Also, teacher organizes activities to develop students' problem solving and critical thinking skills.

d) ***Fourth Level of ICT integration:*** Teacher and students communicate with other learners and experts via networks beyond the borders of classroom.

e) ***Fifth Level of ICT integration:*** Students use ICT resources and applications to provide solutions to real-world problems related to content.

This model focuses on teachers' use of ICT for preparation for instruction as the foundational level. This is followed by use of ICT to assign learners work and teacher-centred instruction. The next level has to do with ensuring the learners take charge of teaching and learning activities. Next is communication using ICT tools among learners and teachers and lastly use of ICT tools to solve problems in real-world. This model had valuable input in assessment of level of integration; however, it mainly focused on teacher learner activities which left out other aspects of ICT integration.

Avidov-Ungar and Iluz (2014), in a study to examine the levels of implementation of innovative ICT pedagogy in teacher educators and officials at a teacher training college in Israel adopted three levels, based on Toledo's model (Toledo 2005). First on the continuum was the basic level that suggested the use of simple and basic technologies such as presentations or uploading the syllabus to the course site and to a great extent technological dependence, which necessitated constant accompaniment and support. Teacher educators that fit this profile generally lacked technological know-how, which made it difficult for them to combine technological, pedagogical, and content knowledge in an informed manner. This difficulty led to anxiety, related to the use of technological tools. Second, there was the focused level. At this level, teacher educators used ICT in their teaching in a focused manner, to meet their ongoing immediate needs, as they applied the use of ICT to discrete instances and events, entailing short-term usage. Typically ICT use at this level is traditional. Third, there was the creative level which was characterized by cooperation, creativity, and the production of innovative pedagogy in the lessons delivered by the teacher educators. Teacher educators who fit this profile demonstrated openness, conceptual flexibility, and motivation to share their success stories, both in the organization and beyond. This model attached emphasis on the teacher in terms of what they are able to do with ICT. The notions of pedagogical ICT skills took prominence in successful ICT integration. However, this model does not holistically capture the whole developmental process which entails acquisition of ICT infrastructure, training, lesson preparation, communication, and collaboration which the current study sought to assess.

A study in Malaysia on teachers' Levels of ICT Integration and Its perceived impact on teaching and learning, Irfan and Amat (2015) used a Two-Dimensional Model (also known as Pedagogy Technology Model) by Lin, Wang and Lin (2010) as a guide to assess the teachers' level of ICT integration in their classrooms. This two-dimensional model was used to identify the pedagogy and their level of technology that the teachers use. The measurement of the levels of ICT integration was grouped into four levels (Level 0 - Level 3) depending on the frequency of ICT integration. The level of integration was classified into two categories, namely (a) pre-integration and (b) integration. The results from this study revealed that the teachers' level of ICT integration was still at the low level. Similarly, within years of implementing various technology initiatives in Malaysian education systems, Ismail, Zakaria & Aziz (2007) reported that teachers' level of technology integration was still low. There are numerous studies in Malaysian context on in-service teachers' technology integration in teaching and learning (e.g.: Ismail, et al., 2007; Mahmud, et al., 2007; Mohd Salleh, et al., 2008).Such studies were considered under teachers pedagogical ICT competencies in integration of ICT.

According to UNESCO (2010), the levels of integration include emerging stage, applying stage, infusion stage and transformation stage. In the emerging stage, the teacher development focus is on the use of ICT as an additional element on to the traditional curricula and standardized test systems. Teachers and learners are discovering ICT tools and their general functions and uses, and the emphasis is usually on basic ICT literacy and skills.

In the applying stage, the focus is on the development of digital literacy and how to use ICT for professional improvement in different disciplines. This involves the use of general as well as particular applications of ICT (UNESCO, 2010).

In the infusing stage, the teacher development focus is on the use of ICT to guide students through complex problems and manage dynamic learning environments. Teachers are developing the ability to recognize situations where ICT will be helpful, and choosing the most appropriate. The use of ICT tools for a particular task, and using these tools in combination to solve real problems (UNESCO, 2010).

In the transforming stage, the learning situation is transformed through the use of ICT. This is a new way of approaching teaching and learning situations with specialized ICT tools. Teachers are themselves master learners and knowledge producers who are constantly engaged in educational experimentation and innovation to produce new knowledge about learning and teaching practice (UNESCO, 2010). This is captured in the Figure 1.

Stages of ICT usages		Pedagogical usages of ICT
Specializing in the use / design of ICT	**Transforming**	Creating & managing ubiquitous & interactive e-learning environment
Understanding how and when to use ICT	**Infusing**	Facilitating blended learning within and across subject areas
Learning how to use ICT in subject teaching	**Applying**	Enhancing traditional teaching
Becoming aware of ICT	**Emerging**	Applying productivity tools

Figure 1 Levels of integration of ICT
Source: UNESCO 2010.

The present study adopted the UNESCO (2010) model in assessment of ICT integration in teaching of English. This model puts into cognizance acquisition of ICT infrastructure in schools, development ICT skills and awareness of ICT tools in education in the first level. In next level the teacher uses ICT to support the traditional method of teaching. The third level, the teacher acquires ICT pedagogical skills where they determine when and where to apply which ICT tool. Lastly, at the transformational stage there is seamless application of ICT in teaching on daily basis by both teachers and learners.

To affirm the UNESCO model, Unwin (2007) observes that for the last 15 years their has-been growth in ICT in all aspects of society in the world. However, the rate of growth and utilization has not been uniform among countries, regions, institutions and even teachers. This aspect is also captured in a study by Leu and Sim on the extent of adoption of ICT in Malaysia. The study revealed that older teachers frequently use ICT in classroom than younger teachers. The reason is attributed to older teachers having rich experience in teaching, classroom management and competence in ICT so that they were able to integrate in their teaching. This view is supported by Gorder (2008), who reported that experience with ICT raises the teachers comfort level and the liberty to shape instruction.

This is also supported by a number of studies such as Sandholtz and Reilly (2004) who aver that teachers' technological skills are strong determinants of ICT integration but they are not a condition for effective use of technology in the classroom. It is a level towards effective integration of ICT. They further report that ICT pedagogical training and effective technical support are key in integration of ICT in teaching.

Similarly, Albirin (2004) investigated the science teachers' perspective about ICT integration in teaching and learning in Syrian high schools. He found out that science teachers in Syria had positive attitude towards integration of ICT in the teaching and learning process. Furthermore, a majority of teachers in high school were found to be interested in developing their ICT skills and knowledge. However, Albrins study does not elaborate on level integration of ICT in teaching and learning process.

Furthermore, Nomsa (2013) in a study on teachers' readiness in using ICT in the classroom in Botswana found out that despite the initial training on ICT teachers did not have the knowhow on how to integrate ICT in their teaching. He further observed that this was as a result of universities not being able to prepare students on how to integrate ICT in teaching. The current study argued that the exposure to ICT by student teachers at the university is one of the levels in ICT integration.

Mua (2016) also in a study on Use of ICT in the Teaching and Learning Process in Secondary Schools in Cameroon found out that ICT was still an emerging concept in Cameroonian education. Cameroon secondary schools were in the process of acquisition of ICT infrastructure, training of teachers in ICT pedagogical skills was not up to date and as a consequence integration of ICT was at the basic level. Given that Kenya is a developing country like Cameroon this study aimed at establishing at which level of integration is Kenya in terms of teaching English.

Laaria (2013), in addition in a study on skill challenges in adoption and use of ICT in public secondary schools in Kenya, found out that the appropriate ICT skills and competences for teachers which include word processing, data processing,

presentation, spreadsheet, internet and E-mail were variedly used by teachers. However, Laaria's study did not delve into the level of integration of ICT strategies in the teaching of English. The literature reviewed showed that research had been done on levels of integrating ICT in teaching; however there appeared to be insufficient literature on the level of integration of ICT in teaching English in secondary schools in Kisumu County in Kenya which made it important to carry out this study.

3. Research Methodology

Descriptive survey research design was used to gather information on the status of ICT integration in the teaching of English in secondary schools in Kisumu County. While correlation research design was used to provide statistical measure of relationship between aspects of integration of ICT on teaching of English in secondary schools in Kisumu County.

This study was carried out in secondary schools in Kisumu County in Kenya. Kisumu County is located in the western region of Kenya. The county was selected for study because the performance of English in KCSE examination has consistently remained below average for the last five years despite the efforts made by the government, parents and the private sector to provide ICT infrastructure and personnel to facilitate ICT integration.

The study population included 48 teachers of English, 12 Principals in 12 ICT model secondary schools in Kisumu County and 1 County Quality Assurance and Standards Officer. This study therefore used a sample size of 43 teachers of English (83.3%), 10 Principals (83.3%) and 1County Quality Assurance officer (100%) from Kisumu County. The study used questionnaire; interview schedules and document analysis guide to collect data.
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The raw data collected through questionnaires was classified and analyzed through descriptive statistics that include: frequencies, percentages, means and standard deviations based on the objectives of the study. The Statistical Package for Social Sciences (SPSS) was used as a tool for data analysis. Quantitative data collected from the questionnaires was analyzed first by coding and inputting coded responses into the computer for analysis. The scores from each item of research were subjected to t-test and ANOVA to test the significance difference between sub items. This established whether teacher competencies, level of integration, strategies of integration of ICT and challenges encountered were significant to demographic information such as level of education, experience, age, sex among others.

The open-ended questions and data collected from the interview schedules were transcribed and categorized thematically according to the study objectives. Interview responses and data from document analysis were triangulated for discussion while narratives were used for qualitative data. The data was presented in percentages, pie charts, bar graphs and tables in relation to research objectives. Conclusions and recommendations were made from the findings.

4. Findings and Discussions

The study sought to assess the level of integration of ICT in the teaching of English in Kisumu county secondary schools. This was important because the output of ICT integration in teaching program is influenced by the level at which the program is. The study adopted the (UNESCO, 2010) model for evaluating level of integration of ICT.

According to the model ICT integration undergoes four stages: emerging level, applying level, infusing level and transformation level. The indicators for emerging stage was: (i) acquisition of ICT infrastructure and (ii) training in ICT skills; applying stage: (i) use of ICT for professional development (ii) use of ICT to enhance traditional teaching methods and (iii) use of ICT to guide students on problem solving; Infusing stage: (i) ICT for managing learning environment (ii) ICT for particular tasks and (iii) us of ICT tools in combination; Transforming stage: (i) transformed teaching approach(ii) use of ICT tools in all teaching and learning activities (iii) creating and managing learning environment.

The level of integration of ICT was measured on a Likert scale of (4) where respondents were to indicate whether the aspects were VERY MUCH APPLIED, APPLIED, LITTLE APPLIED AND NOT APPLIED.

The results on level of integration are captured in table 1 below.

Table 1 Descriptive statistics on Level of ICT Integration

SN	LEVEL OF ICT INTEGRATION	VERY MUCH APPLIED (4)	APPLIED (3)	LITTLE APPLIED (2)	NOT APPLIED (1)	MEAN
1	EMERGING LEVEL (a) My schools has just acquired ICT infrastructure (computers, electricity. Projectors, internet	35(87.5%)	4(10.0%)	0(0.0%)	1(2.5%)	3.825
	(b) Am in the process of training in ICT skills	33(82.5%)	6(15.0%)	0(0.0%)	1(2.5%)	3.775
2	APPLYING LEVEL (a) I use ICT for professional development	7(17.5%)	31(77.5%)	1(2.5%)	1(2.5%)	3.100
	(b) I use ICT generally to enhance traditional methods	5(12.5%)	30(75.0%)	4(10.0%)	1(2.5%)	2.975
	(c) I use ICT to guide students on complex problems	5(12.5%)	22(55.0%)	12(30.0%)	1(2.5%)	2.775
3	INFUSING LEVEL (a) I use ICT to manage learning environment	0(0.0%)	18(45.0%)	20(50.05)	2(5.0%)	2.400
	(b) I use ICT for particular tasks	1(2.5%)	14(35.0%)	23(57.5%)	2(5.0%)	2.350
	(c) I use ICT for in combination to solve problems	1(2.5%)	16(40.0%)	19(47.5%)	4(10.0%)	2.350
4	TRANSFORMING LEVEL (a) I have transformed teaching approach	0(0.0%)	7(17.5%)	22(55.0%)	11(27.5%)	1.900
	(b) I use ICT tools in all teaching and learning activities	0(0.0%)	6(15.0%)	19(47.5%)	15(37.5%)	1.775
	(c) I create and manage interactive learning environment (blogs, wikis, Face book)	0(0.0%)	6(15.0%)	22(55.0%)	12(30.0%)	1.850

Source: Researcher (2019)

The data from table 4.8 above revealed that 35 teachers who represent 87.5 % have adequate ICT infrastructure in their school, 4 teachers who represent 10% said that they have satisfactory ICT infrastructure while 1 teacher representing 2.5 % said the ICT infrastructure is not adequate. Thus most schools among the ICT model schools are passed emerging level where the schools a mean of 3.825.

The findings also revealed that 33 teachers representing 17.5% of the teachers have undergone very satisfactory training in ICT, 6 teachers representing 15.0% have undergone satisfactory training in ICT while 1 representing 2.5% have minimal training in ICT. The ICT model schools have a mean of 3.775 on training in ICT skills confirming that they are passed emerging level.

To complement the results from the teachers' questionnaire the results from interview schedules from Principals indicated that all the 10 ICT schools in Kisumu County have a computer laboratory equipped with computers, electricity and connection to the

internet. Three principals of the 10 schools indicated that in addition, that the teachers have personal laptops, iPod and smart phones that are in use. Some 6 principals revealed that their schools had purchased projectors which the teachers are expected to use.

All the principals in the 10 schools confirmed that 90% of the teaching staff including teachers of English had basic ICT literacy skills. However, only 6 principals indicated that they had facilitated at least one teacher of English to attend training on pedagogical ICT integration skills. Thus all the 10 ICT schools have passed the emerging stage of ICT integration.

The findings from teachers' questionnaires, principals and CQAO interview schedule show that all the 10 ICT schools have ICT infrastructure, the teachers have basic ICT skills and are aware of ICT. Therefore all the 10 ICT secondary schools in Kisumu County have passed the Emerging stage of ICT integration.

The teachers' questionnaire on applying level sought to find out (a) whether the teachers use ICT for professional development. The findings revealed that 7 representing 17.5% of the teachers use ICT for professional development very satisfactorily, 31 representing 77.5% of the teachers use ICT for professional development satisfactorily, while a small group of 1 representing 2.5% of the teachers use ICT for professional development unsatisfactorily and 1 representing 2.5% does not use ICT for professional development at all. These data translated to a mean of 3.100.

The data on applying level also revealed that 5 representing 12.5% of the teachers very satisfactorily use ICT to enhance the traditional methods of teaching, 30 representing 75.0 % of teachers use ICT satisfactorily to enhance traditional methods of teaching, 4 representing10% of the teachers less satisfactorily use ICT to enhance the traditional method of teaching while1 representing 2.5% does not use ICT to enhance traditional method of teaching adding up to a mean of 2.975.

The findings on applying level also revealed that 5 representing 12.5 of the teachers use ICT to guide students in complex problem solving very satisfactorily, 22 representing 55.0% use ICT to guide students on problem solving satisfactorily, 12 representing 30.0% of the teachers less satisfactorily use ICT to guide students on problem solving while 1 representing 2.5% of the teachers does not use ICT to guide students on problem solving. The data gave a mean of 2.775.

The Applying stage according to UNESCO 2010 involves use of ICT for professional development, use of ICT to enhance traditional methods and guide students in solving complex problems. The findings from the questionnaires' revealed that the 9 ICT secondary schools are at applying stage. The results from principals' interview schedule agree with the findings with the teachers' questionnaire where all the teachers of English use ICT to enhance traditional methods and for professional development.

The findings from the interview schedule revealed that teachers of English from 7 schools of the 10 ICT schools use ICT tools for professional development through self-tutorials to improve their competence in teaching of English. All the principals also indicated that teachers of English use ICT for general use such as surfing the internet for general information, typing exams on the computer and computing marks using Excel. The results thus established that the 10 ICT model schools in Kisumu County have also undergone the applying stage of ICT integration.

The study under infusing level sought to find out in part (a) whether the teachers of English used ICT to manage learning environment. The findings revealed that 18 representing 45.0% of the teachers' satisfactorily use ICT to manage learning environment, 20 representing 50.0 less satisfactorily use ICT to manage learning environment while 2 representing 5.0% do not use ICT to manage the learning environment. These data yielded a mean of 2.400.

The data also revealed that 1 representing 2.5% of the teachers use ICT for particular tasks very satisfactorily, 14 representing 35.0% of the teachers use ICT for particular tasks satisfactorily, 23 representing 57.5% use ICT for particular tasks less satisfactorily while 2 representing 5.0% did not use ICT for particular tasks yielding a mean of 2.350.

The findings also indicated that 1 representing 2.5% of the teachers very satisfactorily use ICT in combination to solve problems, 16 representing 40.0 % satisfactorily use ICT in combination to solve problems, and 19 representing 47.5% less satisfactorily use ICT in combination to solve problems while 4 representing 10.0% of teachers do not use ICT to in combination to solve problems.

Similarly, 5 principals from the interview revealed that teachers use ICT tools for specific tasks such as processing and analyzing English exams. They also noted that the teachers of English allow students to use word processing application to write composition, save and edit them from time to time. Two of the principals also revealed that the teachers of English are identifying specific areas where ICT is applicable in the teaching of English. Few teachers were reported to use ICT tools in combination when teaching English. Thus only a few schools have reached the infusing stage of ICT integration. The infusing stage is a critical level as it enables teachers to manage learning environment, allow teachers to use specific tools for teaching specific language skill and use a combination of ICT tools for problem solving (UNESCO, 2010). The findings therefore established that only a small number of schools have reached the infusing stage.

The study under transforming level sought to assess (a) whether teachers have transformed their teaching environment. The findings reveal that 7 representing 17.5 % have satisfactorily transformed their teaching approaches, 22 representing 55.0% of the teachers have less satisfactorily transformed their teaching approaches while 11 representing 27.5% have not transformed their teaching approaches. The data yielded a mean of 1.900.

The findings in (b) on use of ICT in all teaching and learning activities revealed that 6 representing 15.0% satisfactorily use ICT in all teaching and learning activities, 19 representing 47.5% less satisfactorily use ICT in all teaching activities while 15 representing 37.5 do not use ICT in teaching and learning activities. This data yielded a mean of 1.775.

The findings in (c) on use of ICT to create and manage interactive learning environment revealed that 6 representing 15.0 satisfactorily use ICT to create and manage interactive learning environment, 22 representing 55.0% less satisfactorily use ICT to create and manage interactive language learning environment while 12 representing 30.0% do not use ICT to create and manage interactive learning environment. This data yielded a mean of 1.850. This implies that most of the ICT model schools have not reached the transforming level of ICT integration.

The results from interview schedule revealed that teachers of English in only 2 schools had transformed the traditional English learning environment. The teachers in the two schools make use of ICT tools such as word processing every day in lesson plan, updating lesson notes, keeping records. They also use internet for research, Email and WhatsApp for communication to inquire and share pedagogical issues from other teachers of English and use projectors for lesson delivery. Therefore only two schools qualified to be in the early stages of transformation. The study therefore established that ICT model secondary schools are yet to reach the transformation stage that is expected to improve the quality of teaching of English.

Table 2 Frequency of ICT Integration in Teaching Phases in English

SN	Teaching Phases	Always (4)	Sometimes (3)	Rarely (2)	Never (1)	Mean
1	Lesson preparation	2(5.0%)	37(92.5%)	1(2.5%)	0(0.0%)	3.025
2	Lesson delivery	1(2.5%)	19(47.5%)	19(47.5%)	1(2.5%)	2.500
3	Evaluation	2(5.0%)	29(72.5%)	9(22.5%)	0(0.0%)	2.825
4	Communication	0(0.0%)	22(55.0%)	18(45.0%)	0(.0%)	2.550

The study further intended in part (b) to investigate the frequency of using ICT tools in the different phases of teaching. The different phases adopted for this study were: lesson preparation lesson delivery, Evaluation and communication. The study established that 2 representing 5.0% of the teachers used ICT tools frequently in lesson preparation, 37 representing 93 of the teachers used ICT tools sometimes for lesson preparation while 1 representing 2.5 students rarely used ICT tools in preparation of their lesson. These results gave a mean of 3.025. The findings also revealed that 1 representing 2.5% of the teachers used frequently ICT tools for lesson delivery, 19 representing 47.5% of the sometimes used ICT tools for lesson delivery, 19 representing 47.7% of the teachers rarely used ICT tools for lesson delivery while 1 representing 2.5 % of the teachers never used ICT tools for lesson delivery. This data yielded a mean of 2.5.

The findings of the study also established that 2 representing 5.0 % of the teachers frequently used ICT tools for evaluation, 29 representing 72.5 % of the teachers sometimes used ICT tools for evaluation, and 9 representing 25.0 % of the teachers rarely used ICT tools for evaluation. This data yielded a mean of 2.825.

Table 3 Frequency of Integration of ICT Tools in Teaching Phases in English

SN	TEACHING PHASE	Ms. Word	Ms. Excel	Ms. Power Point	Internet	Email	Combination of two	None
1.	Lesson preparation	31(77.5%)	0(0.0%)	0(0.0%)	6(15%)	0(0.0%)	3(7.5%)	1(2.5%)
2.	Lesson delivery	0(0.0%)	0(0.0%)	34(85.0%)	0(0.0%)	0(0.0%)	0(0.0%)	6(15.0%)
3.	Evaluation	1(2.5%)	32(80.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(2.5%)
4	Communication	0(0.0%)	0(0.0%)	0(0.0%)	1(2.5%)	35(87.5%)	0(0.0%)	4(10.0%)

The study on the frequency of integration of ICT tools in communication revealed that 22 representing 55.0% of the teachers sometimes used ICT tools for communication, 18 representing 45.0% of the teachers rarely used ICT tools for communication.

The data yielded a mean of 2.550. Teachers of English use ICT tools for lesson planning and evaluation more than lesson delivery and communication. Minimal use of ICT tools in delivery of English lessons and communication with the both teachers and students denies the English teaching and learning process the important aspects of interaction, collaboration, communication and motivation that ICT tools offer at the transformational stage (UNESCO, 2010).

The study further sought to establish the kind of ICT tools integrated at each phase of teaching. The study revealed that 31 representing 77.5% of the teachers used Ms. Word for lesson preparation, **6** representing 15% of the teachers used internet for lesson preparation while 1 representing 2.5% of the teachers used none of the ICT tools for lesson preparation.

The study revealed that 34 representing 85% of the teachers used Ms. Power point for lesson delivery, **6** representing 15% of the teachers used none of the ICT tools for lesson delivery. On evaluation the study revealed that 1 representing 2.5% of the teachers used Ms. word for evaluation, **32** representing 80.0% of the teachers used Ms. excel for evaluation while 1 representing 2.5% of the teachers used none of the ICT tools for evaluation. The study also revealed that 35 representing 87.5% of the teachers used email for communication, **1** representing 2.5 % of the teachers used face book for communication while 4 representing 10% of the teachers used none of the ICT tools for communication.

The County Quality Assurance Officer (CQA&SO) revealed that since the inception of ICT model schools the rate of growth and utilization has not been uniform. That the 10 schools did not receive ICT infrastructure at the same time hence they are not at same level of integration. The CQA&SO also reported that the inconsistency occasioned by transfer of teachers has slowed down the transition from one level of integration to another. Thus the level of integration varies from school to school.

According to UNESCO (2010) integration of ICT goes through four stages: emerging stage, applying stage, infusion stage and transformation stage. It is at the transformation stage that it is expected that ICT integration in teaching should produce maximum results. Unwin (2007) observed that growth and utilization of ICT in institutions of learning has not been uniform. This study on the level of integration ICT is in agreement with Unwin's view in that although ICT schools acquired infrastructure within the same period, they are not at the same level.

Further, the findings of the present study agree with the Becta (2005) findings which reported that as much as most countries have prioritized the use of ICT in education in the last decade the situation in application in education has not been uniform. In some countries some schools have integrated ICT into the curriculum and have transformed teaching and learning with the use of innovative technologies. However, most schools across the world are still at the basic level in integrating ICT and no records for significant improvements have been achieved.

Table 4 ANOVA Results for Level of Integration and Achievement in English

		Sum of Squares	Df	Mean Square	F	Sig.
Achievement English * Level of Integration	Between Groups (Combined)	2148.233	17	126.367	2.342	.031
	Within Groups	1186.867	22	53.948		
	Total	3335.100	39			

Source: Research data (2019)

The ANOVA analysis revealed that there is significant relationship between level of integration in ICT and achievement in English (F (5%, 17, 22) = 2.342, P = 0.031<0.05). The implication is that that the level of integration influences the quality of teaching which translates to improved performance of English in secondary schools.

5. Summary of the Findings

The study proved that all schools in the study had gone through the emerging stage of ICT integration. The schools have satisfactorily acquired ICT infrastructure: electricity, computers, power point projectors, internet connection Further, the teachers have also taken basic ICT skills training and are aware of the potential of ICT in teaching. The Study also proved that all schools have gone through applying stage of ICT integration. Teachers use ICT to enhance traditional method of teaching. They also use ICT for professional development and in helping in guiding the students in solving complex problems. Only a few schools are at the infusing stage where teachers are in the process of using ICT in managing learning environment. None of the schools have reached the transformation stage. The study thus, proved that the level of integration of ICT in teaching of English in ICT schools is at applying stage.

The study proved that there is significant relationship between level of integration in ICT in teaching English and achievement in English. Therefore the higher the level of integration of ICT in teaching of English the high likelihood of improvement in quality of teaching English.

6. Conclusion

The ICT secondary schools in Kisumu County have gone through the emerging stage of ICT integration. Which implies that all the selected schools have acquired basic ICT infrastructure that can facilitate ICT integration such as electricity, computers, projectors and internet connectivity? However this infrastructure is not sufficient nor is it uniform in all the schools.

The ICT secondary schools have also gone through the applying level of integration of ICT. Teachers use ICT tools to enhance the traditional methods of teaching. They also use ICT for professional development and in guiding students in problem solving. Few schools have reached at the infusing stage, while none of the school is at the transformation stage.

The study also established that there is a relationship between level of integration of ICT in teaching of English and achievement in English. The achievement in English is still low because the level of integration in ICT schools is still low.

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