

Perceptions of Teachers on E-Resources in Teaching and Learning of English Language in Public Secondary Schools in Kakamega County, Kenya

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Abstract: Electronic resources (E-resources) sparked creativity and enlivened teaching and learning process. They also enabled conceptualization of abstract concepts in the curriculum. Despite integration of e-resources in teaching and learning, English language registered dismal performance in Kenya Certificate of Secondary Education (KCSE) examinations in Kakamega County, Kenya. In the years 2012 – 2019 there was negative deviations: 0.0011 – 0.01 in KCSE examinations respectively. The blame was on inadequate and inappropriate integration of e-resources in the curriculum. The purpose of the study was to assess integration of e-resources in teaching and learning of English language in public secondary schools in Kakamega County. Specific objective of the study was to: determine perceptions of teachers on e-resources in teaching and learning of English language in public secondary schools in Kakamega County, Kenya. The study found out that e-resources ensured understanding of concepts (67.6%), ensured long retention in learning (100%), concepts became lively during learning (100%) and enhanced learning in the curriculum (96.5%). Based on the findings, the study recommended that teachers should use e-resources appropriately to improve learning outcomes. The study contributed to development of teacher of English in regard to integration of e-resources in teaching and learning process. It also generated new knowledge of searching, selecting, processing and using technological information adequately in learning of English language.

Key words: Perception, e-resources, Teaching and learning

Acronyms and Abbreviation: ROK - Republic of Kenya, KNEC - Kenya National Examination Council, TV – Television, KCSE – Kenya Certificate of Secondary Education, CEMASTE – Centre for Mathematics and Science and Technology Education in Africa

I. INTRODUCTION

Electronic resources (E-resources) included multimedia elements such as text, image, animation, streaming video and audio in learning environment (Stallings, 2011). They enabled students to investigate, receive feedback, understand, build knowledge and demonstrate greater retention in the curriculum. National Assessment of Education Progress (1997) reported students used computers to write stories. In addition, Cochran-Smith (1991) revealed that when students

used word processors they developed a better attitude toward writing process. Therefore, word processors encouraged early language production and provided students with opportunities to connect reading and writing (Simic, 1994). According to Landon, Hite and Mugimu (2013) teacher Information Communication and Technology (ICT) usage at school was grouped into three categories: administrative (86%), entertainment (45%) and pedagogical (45%). Though administratively, ICT primarily attracted students and increased revenue in the schools. They used stratified sampling to identify seven schools; four additional schools were also purposively sampled based on high levels of ICT in the schools in Mukono, Uganda. The current study used stratified proportional sampling to represent schools in Kakamega County in three categories namely national, county and sub-county.

The main advantage of e-resources over their print counterparts was that they were interactive. Electronic materials produced better results (Ayere, Odera & Agak, 2010) because they involved interaction in teaching and learning process. In spite of advantages in terms of access and search capacities, they were underused (Kantharaj, Prasanna & Deepak, 2012) consequently influenced learning outcomes negatively. The analysis of KNEC (2019) indicated overall performance in English language fell short of the ideal mean of 100 (50%) nationally. This had not changed in Kakamega County where students' KCSE examinations performance in English language showed a downward trend. In the years 2012, 2013, 2014, 2015, 2016, 2017, 2018 and 2019 there was negative deviations: 0.0011, 0.007, 0.0097, 0.1067, 0.3693, 0.2 and 0.01 respectively (ROK, 2020, ROK, 2019). The dismal performance was attributed to inadequate and inappropriate integration of e-resources in teaching and learning of English language in public secondary schools in Kakamega County, Kenya. Specifically, the study: Determined perceptions of teachers on e-resources in teaching and learning of English language in public secondary schools in Kakamega County, Kenya. The key question this study aimed to answer was: What is the perception of teachers on e-

resources in teaching and learning of English language in public secondary schools in Kakamega County, Kenya?

II. METHODOLOGY

The study was guided by Bruner's Constructivism Theory (1990) and adopted descriptive survey design. The study population was 150 head teachers, 10,000 Form Two students and 250 teachers of English. Teachers of English were selected because were directly involved in the process of selection and use of e-resources in the curriculum. Simple random sampling technique was used to select a sample of 108 head teachers, 152 teachers of English and 370 Form Two students. Krejcie and Morgan Table determined sample sizes (Krejcie & Morgan, 1970, The Research Advisors, 2006). Stratified proportional sampling was used to represent schools in the county in three categories namely national, county and sub – county. Research instruments included: questionnaire for head teachers, teachers of English and Form Two students; interview schedule and observation checklist were for teachers. Face and construct validity of research instruments was established by judgement of three experts in the Department of Educational Communication, Technology and Curriculum Studies. Reliability of research instruments was established through pilot study on 10 head teachers, 20 teachers of English and 30 Form Two students. The small scale preliminary study assessed feasibility, cost, duration, adverse events and improved upon descriptive survey design prior to performance of full-scale research. The study used test-retest method to estimate degree of reliability of the instruments. Data was analysed through descriptive statistics that included frequencies, means and percentages. Statistical Package for Social Sciences (SPSS) computer based program was used as a tool for data analysis. The findings of the study were presented using tables, frequencies and percentages in relation to objectives of the study.

III. RESULTS AND DISCUSSION

3.1 Perceptions of E-resources

Integration of e-resources enhanced teaching and learning process. They increased participatory learning and communication in the curriculum (Jamalahdin *et al.*, 2017). Head Teacher's Questionnaire (HTQ) sought to find out from headteachers ways in which e-resources influenced students' learning of English language. Findings were summarised in Table 1.

Table 1: E-resources influence
n=108 Headteachers

Influence of E-resources	Number of headteachers (F)	%
Increased retention in learning	56	51.9
Helped in teaching and learning	53	49.1
Ensured understanding of concepts	73	67.6
Made learning lively	68	63.0

From Table 1, 56 (51.9%), 53 (49.1%), 73 (67.6%) and 68 (63%) headteachers suggested that e-resources increased retention rate, helped in teaching and learning, ensured understanding of concepts and made learning lively respectively. Most headteachers showed that e-resources influenced student's learning of English language consequently, improved learning outcomes. The current results were in agreement with Okello-Obura and Magara (2008) study. They revealed that e-resources influenced student's learning as a result of access to quality information. Therefore, they helped learners to acquire knowledge, skills and attitudes to solve situations in learning of English language. They targeted East African School of Library and Information Science in Makerere University only unlike the current research which focused on large sample of 108 public secondary schools in Kakamega County, Kenya. The large sample size limited the influence of extreme observations in the study (Patel *et al.*, 2003). In addition, large sample size allowed researcher to better determine the average values of data and avoid errors from testing small number of possibly typical sample (Zamboni, 2018).

Learner's Questionnaire (LQ) sought to find out students' opinion on use of e-resources in teaching and learning of English language. Each statement had five possible answers: SA (Strongly Agreed), A (Agreed), U (Undecided), D (Disagreed) and SD (Strongly Disagreed). Findings summarised in Table 2.

Table 2: Students' opinion on E-resources
n=370 Students

Statements		SA 1	A 2	U 3	D 4	SD 5
Enhanced learning	F	112	245	13	0	0
	%	30.3	66.2	3.5	0	0
Increased desire to learn	F	166	204	0	0	0
	%	44.9	55.1	0	0	0
Concepts were well understood	F	209	160	1	0	0
	%	56.5	43.2	0.3	0	0
Ensured long retention	F	193	177	0	0	0
	%	52.2	47.8	0	0	0
Concepts became lively during learning	F	204	166	0	0	0
	%	55.1	44.9	0	0	0

In Table 2 majority of learners strongly agreed and agreed that e-resources enhanced learning (96.5%), made concepts well understood (99.7%) whereas all learners (100%) strongly agreed and agreed that e-resources ensured long retention in learning, increased desire to learn and made concepts become lively during learning of English language. The results indicated that students were aware of benefits accrued from integration of e-resources in learning of English language. Learners suggested that e-resources increased level of teaching and learning in English language. Therefore, it was an indicator that e-resources improved learning outcomes in

the curriculum. They supported teaching and learning activities in the curriculum (Lefuma, 2017).

English Teacher's Questionnaire (ETQ) sought to find out from teachers their opinions on television (TV) use in teaching and learning of English language. Each statement had five possible answers: Strongly Agreed (SA), Agreed (A), Undecided (U), Decided (D) and Strongly Disagreed (SD). The findings summed up in Table 3.

Table 3: Teachers opinion on Television
n=152 Teachers of English

Statements		SA 1	A 2	U 3	D 4	SD 5
Provided help in teaching	F	103	47	2	0	0
	%	67.8	30.9	1.3	0	0
Provided richer experience	F	32	100	20	0	0
	%	21.0	65.8	13.2	0	0
Expanded curriculum	F	30	98	15	9	0
	%	19.7	64.5	9.9	5.9	0
Limited curriculum	F	0	0	10	90	52
	%	0	0	6.6	59.2	34.2
Had no effect on curriculum	F	0	0	2	60	90
	%	0	0	1.3	39.5	59.2
Improved curriculum	F	34	98	20	0	0
	%	22.4	64.5	13.1	0	0
Improved quality of overall programs	F	24	116	10	2	0
	%	15.8	76.3	6.6	1.3	0

Table 3 depicted that majority of teachers strongly agreed and agreed that TVs helped in teaching (98.7%), provided richer experience (86.8%), expanded curriculum (84.2%), improved curriculum (86.9%) and improved quality of overall programs in teaching of English language (92.1%). The results showed that teachers were aware of merits of incorporating TVs in teaching and learning of English language. It was an effective teaching tool that built literacy skills, addressed current social issues and energized classroom dynamics. According to Durham (2016) study, TVs promoted sound recognition and letter identification during teaching process. Moreover, visual component of TVs improved learning and retention rate in the curriculum. Therefore, it was clear that high quality TV content viewed in moderation actually helped students to learn. Both Durham (2016) and the present results underscored integration of TVs in teaching and learning process.

Furthermore, LQ sought to find out from learners about their attitude of television use in learning of English language. Each statement had five possible answers: SA (Strongly Agreed), A (Agreed), U (Undecided), D (Disagreed) and SD (Strongly Disagreed). Findings summarised in Table 4.

Table 4: Learners View of television

n= 370 Students

Learners' opinions on television use		SA 1	A 2	U 3	D 4	SD 5
Television teacher was better prepared, organized, covered content better.	F	178	41	151	0	0
	%	48.1	11.1	40.8	0	0
Otherwise an available opportunity for education.	F	174	50	146	0	0
	%	47.0	13.5	39.5	0	0
No interruptions.	F	176	194	0	0	0
	%	47.6	52.4	0	0	0
Could not ask question.	F	201	99	68	2	0
	%	54.3	26.8	18.4	0.5	0
Lacked personal contact with teacher.	F	302	20	48	0	0
	%	81.6	5.4	13.0	0	0
TV boring, monotonous, difficult to pay attention	F	0	0	0	173	197
	%	0	0	0	46.8	53.2
The TV teacher was too fast, and if one got lost s/he could not catch up	F	0	0	26	146	198
	%	0	0	7.0	39.5	53.5

Table 4 revealed that majority of learners strongly agreed and agreed that television teacher was better prepared, organized and covered course better (59.2%); provided otherwise an available opportunity for education (60.5%) and there were no interruptions (100%) during TV program. The results indicated that learners appreciated integration of TV in learning of English language. TVs motivated learners in learning of four language skills namely listening, speaking, reading, writing and grammar use. According to Akinpelu (1991), listening to good users of language improved students' language skills. Televisions use also allowed teachers to reach students more easily (Lacoma, 2011). From the current results and that of Mayer (2001), students learnt more when visual aids were used in teaching and learning process. This was because (Muvango, Indoshi, Okwara & Okoti, 2020) TVs simplified language of authors during learning session. The present research findings were consistent with those of Tiene and Whitmore (1995) study. They revealed that students generally had positive feelings about TVs use in learning process. Therefore, this showed that TVs were the best learning aid in the classroom.

Furthermore, from Table 4, most learners strongly agreed and agreed that they could not ask questions (81.1%) and lacked personal contact with the teacher (87%). The results showed that their classroom teachers did not facilitate learning process appropriately during TV programme. The teacher must be continually in the conversation with learners. Most importantly during television programme the teacher should instruct learners to attend to the screen, ask assisting questions, provide feedback and manage the next learner (Eke, 1997). 100% of learners strongly disagreed and disagreed that TV was boring, monotonous and difficult to

pay attention. They disagreed because whenever one listens to good users of language on television, he/she should be attentive (Bukenya, Kioko & Njeng'ere, 2008); it made learning interesting, motivated and engaged a learner during teaching and learning process.

The study of Sharndama (2013) observed that ICTs made teaching and learning process interactive and collaborative instead of the traditional teacher-talking and students listening approach. This showed that ICT resources were stimulus of effective output in education. Finally majority of learners strongly disagreed and disagreed that TV teacher was too fast and if one got lost s/he could not catch up (92.7%). According to Henson (1996), in case TV teacher was fast, video cassette recorder (VCR) could be used to view TV programs where a student could not catch up during TV lessons or aired at times other than class time. Although, the current study had established that VCRs were inadequate for frequent teaching and learning in public secondary schools in Kakamega County, Kenya. Therefore, teachers should embrace and intensify use of VCRs in the curriculum. In addition, schools management should increase existing VCRs in learning institutions.

The use of e-resources ensured that all learners were involved in teaching and learning activities. Therefore, LQ expected learners to indicate e-resources influence on learning of English language in terms of strongly agreed, agreed, undecided, disagreed and strongly disagreed. The findings summed up in Table 5.

Table 5: Learners Perception on E-resources
n= 370 Students

Statements	Number of learners (F)	Percentage (%)
Strongly agreed	63	17.0
Agreed	172	46.5
Undecided	120	32.4
Strongly disagreed	7	1.9
Disagreed	8	2.2
Total	370	100

In Table 5, 63 (17%), 172 (46.5%), 120 (32.4%), 7 (1.9%) and 8 (2.2%) learners strongly agreed, agreed, undecided, strongly disagreed and disagreed that e-resources influenced learning of English language respectively. Majority of learners 63.5% strongly agreed (17%) agreed (46.5%) that e-resources influenced learning of English language. This was because e-resources improved autonomy in learning, boost self confidence and facilitated learning of abstract ideas (Timothy, 2006). The results of current study revealed learners appreciated use of e-resources because they increased productivity and retention rate in learning of English language consequently, improved learning outcomes. The present results agreed with those of Lefuma (2017) study that indicated e-resources influenced learning process. Lefuma's

study did not target specific teaching subject in the curriculum contrariwise to the current study.

ETQ sought out from teachers of English how much they used e-resources in content areas in teaching and learning of English language. The findings summarised in Table 6.

Table 6: Effectiveness of E-resources in content areas
n=152 Teachers of English

Content areas		Very Often	Often	Fairly often	Rarely often	Never at all
Speaking and listening	F	90	15	21	14	12
	%	59.2	9.9	13.8	9.2	7.9
Reading and writing	F	83	23	27	13	6
	%	54.6	15.1	17.8	8.6	3.9
Reading and listening	F	77	29	13	30	3
	%	50.7	19.0	8.6	19.7	2.0
Writing and grammar use	F	57	63	24	5	3
	%	37.5	41.4	15.8	3.3	2.0

Table 6 depicted that most of teachers used e-resources in teaching integrated English language skills. This implied that integration of language skills and e-resources improved student's knowledge, skills and attitudes in learning of English language. Studies showed that teaching language structures in isolation was boring and produced learners who lacked communicative competence. Integration of e-resources simplified abstract content and created interest in teaching and learning process. Significantly, the results indicated that simultaneous use of multiple forms of e-resources in the curriculum had unlimited potential benefits for learners and teachers of English language. The current results were consistent with the study of Hadi and Zeinab (2012). They showed that teachers used e-resources very often, often and fairly often in the curriculum. They also observed that e-resources made the task of teaching easy. They targeted teachers only whereas the current research involved headteachers, teachers of English and Form Two students in 108 public secondary schools in Kakamega County, Kenya.

ETQ sought from teachers of English available e-resources for teaching integrated language skills. The results showed that teachers handled comfortably integrated approach in teaching and learning of English language. The present results were in tandem with Mwangi, Kisirikoi, Gichema and Mukunga (2018) observation that when e-resources and language skills were integrated dexterously, made learning process enjoyable and enriched student's learning in the curriculum. The current study established that: radio, CD – ROM, mobile phone, video, film and OHP were used for teaching listening and speaking skills while CD-ROMs, e-reader, computer, laptop and OHP were used for teaching writing skills, reading skills and grammar use. E-readers and e-newspapers were used for teaching reading skills, listening skills and grammar use. However, the current results contradicted Miima (2014) study

which revealed that majority of Kiswahili language teachers (60%) were uncomfortable teaching grammar and listening skills using ICTs. Miima's results pointed out that inappropriate use of e-resources directly influenced negatively communication, collaboration and critical thinking (CEMASTE, 2019) in learning process. In addition, Manduku (2012) revealed that most schools used e-resources inappropriately in teaching and learning process. Therefore, curriculum implementers should encourage teachers to use e-resources appropriately to improve learning outcomes in secondary schools. They should also enforce strictly ICT training policy among teachers and even to schools librarians. This would enhance effective integration of e-resources in teaching and learning process.

IV. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study showed that e-resources influenced teaching and learning of English language concepts. They enhanced students' interaction and learner centred activities which improved learning outcomes. Teachers liked using e-resources in content areas like listening, speaking, reading, writing and grammar use. Benefits accrued from integration of e-resources in the curriculum were: increased retention rate, helped in teaching and learning, ensured understanding of concepts, made learning lively, provided rich experience and improved quality of overall programs. The results indicated that students learnt more by seeing and doing during teaching and learning of English language. Therefore, integration of e-resources emphasized on doing and discovering and not on what learners were expected to know.

Policy Recommendations

The study recommended:

Establishment of Regional English Language E-resource Centre (RELEC) that should be in-charge of evaluating acquisition of proficiency in English language skills in secondary schools. This would involve assessing interaction between students, content, teachers and outside experts for effective output in teaching and learning of English Language.

Kenya Institute of Curriculum Development (KICD) should develop and use e-resource model lessons to improve learning outcomes in English language. E-resource model lessons should be displayed on screen technologies that would act as models of efficiency in the curriculum. Display screen technologies included: Computers, whatsapp, OHP, CDs and laptops.

RELEC should emphasize use of e-resources appropriately so as to improve learning outcomes in English Language. Expected learning outcomes in e-pedagogic practice included communicating fluently, acquisition of language skills and communication amongst students. The purpose of integration of e-resources was to facilitate communication and to enhance English language learning in the curriculum. Appropriate use

of e-resources would help in making the spoken words clear during teaching and learning process.

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