

# English Language Teachers' Competence in Integrating Information and Communication Technology in Secondary School Teaching in Kenya

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## ABSTRACT

The integration of Information and Communication Technology (ICT) has become a critical component of effective teaching and learning in contemporary education systems. This study examined the competence of English language teachers in integrating ICT in secondary school teaching in Kenya with a view to enhancing the achievement of curriculum goals. The study was conducted in Kimilili Sub-county, Bungoma County, Kenya, and adopted a descriptive phenomenological cross-sectional research design within a mixed-methods approach. The target population comprised 272 teachers of English and approximately 6,800 Form Three learners drawn from 34 public secondary schools. Data were collected using questionnaires, focus group discussions, and face-to-face interviews and analysed descriptively according to emerging themes. The findings revealed that teachers acquired ICT competence through pre-service teacher training, in-service courses, workshops, seminars, and peer interactions. Workshops and seminars were reported by 80% of the teachers as the primary avenues for ICT skills acquisition. Despite the availability of ICT resources such as mobile phones, laptops, desktop computers, projectors, and tablets in most schools, only a small proportion of teachers demonstrated adequate competence in integrating ICT into classroom pedagogy. Many teachers reported limited confidence in using ICT and perceived ICT integration as difficult and time-consuming. Inadequate infrastructure, limited technical support, insufficient training opportunities, unreliable internet connectivity, and inadequate institutional support further constrained effective ICT integration. Conversely, learners generally expressed positive attitudes towards ICT-supported learning activities. The study concludes that teachers' competence significantly influences the successful integration of ICT in English language teaching. It recommends continuous professional development programmes, improved ICT infrastructure, enhanced technical support services, and increased investment in teacher capacity building to promote effective and sustainable ICT integration in secondary school education.

**Keywords:** English Language Teaching, ICT Integration, Teacher Competence, Secondary Schools, Kenya

## INTRODUCTION

Information and Communication Technology (ICT) has undergone tremendous innovation and transformed society in ways that have changed thinking, working, and daily life. Schools and other educational institutions that are expected to prepare learners for participation in a knowledge society are therefore at the centre of ICT integration in the curriculum. Teachers are viewed as key players in the integration of ICT in classrooms because ICT provides a dynamic and interactive teaching-learning environment. This paper analyses findings on how teachers of English in secondary schools in Kimilili Sub-county integrate ICT in their teaching by examining the tools teachers use in integrating ICT in English language teaching.

## Background Of the Study

The integration of ICT in teaching and learning has become increasingly important in modern education systems (Gray, Thomas & Lewis, 2010). Teachers are expected to adopt innovative teaching approaches that

sustain effective learning. One of the defining features of educational innovation is the ability of teachers to integrate ICT into classroom instruction. ICT broadly refers to scientific, technological, and engineering tools used in the storage, processing, and communication of information with optimal time and space utilization. ICT includes communication devices and applications such as computers, mobile phones, television, projectors, and satellite systems. These tools can enhance teaching and make learning more engaging and effective. Education is one of the public sectors most influenced by technological development (Koehler & Mishra, 2009). Educational institutions are increasingly expected to integrate ICT into the curriculum in order to equip learners with 21st-century skills and competencies.

Consequently, schools continue to restructure curriculum delivery and classroom practices to bridge the existing technological gap (Turel & Johnson, 2012). Language teaching is one area where technological application has become increasingly visible. The use of videos, projectors, smartphones, communication platforms, e-mails, and discussion boards has become common in language classrooms. These technological tools provide opportunities for learners to engage in enjoyable and meaningful learning activities (Varol, 2013). Teachers are central agents in curriculum implementation and educational innovation. English language teachers are particularly important because English serves both as a subject and as a medium of instruction in many educational systems. In Kenya, English enjoys official language status and is widely used in educational and administrative contexts. Teachers' beliefs, attitudes, and competence in ICT integration therefore significantly influence the effectiveness of ICT use in language teaching.

Recent studies indicate that teacher preparedness and technological competence remain critical determinants of successful ICT integration in education systems worldwide. As schools increasingly embrace digital learning environments, teachers are expected to possess not only basic technological skills but also the pedagogical knowledge necessary to integrate technology effectively into classroom instruction. Research has shown that teachers who are adequately prepared and supported demonstrate greater confidence and willingness to adopt technology-enhanced teaching practices (Howard et al., 2021). Similarly, UNESCO (2023) emphasizes that successful technology integration requires a combination of teacher competence, adequate infrastructure, supportive institutional policies, and continuous professional development. Consequently, teacher competence remains a central factor in determining the effectiveness of ICT integration in English language teaching.

Hussein (2013) emphasises that teachers play a critical role in implementing technological innovations such as ICT in teaching. Teachers' skills and attitudes are therefore essential determinants of successful curriculum innovation. Lau and Sim (2008) argue that teachers' attitudes and competencies influence curriculum renewal more than changes in content and methods. The use of ICT in language classrooms transforms teaching from teacher-dominated approaches to more learner-centred approaches. ICT integration enhances learner participation, motivation, creativity, communication skills, and problem-solving abilities (Richards, 2007). However, the mere presence of ICT infrastructure in schools does not necessarily translate into effective classroom integration (Acevedo, 2019).

Many countries have invested heavily in ICT integration within education systems. In Kenya, the Kenya ICT Trust Fund established in 2004 has contributed to the provision of ICT infrastructure in public schools. Despite these efforts, effective integration of ICT in English language teaching remains limited in many schools.

### **Statement Of the Problem**

The integration of ICT in curriculum delivery is influenced by several factors including teachers' skills, attitudes, and beliefs. Limited research has been conducted on ICT integration in English language teaching in Kimilili Sub-county, Kenya. Furthermore, the declining performance in English language in national examinations may be linked to teachers' continued reliance on traditional teaching approaches and limited use of ICT.

### **Objective Of the Study**

The main objective of this paper was to establish English language teachers' skills, attitudes, and beliefs and

how these factors influenced their use of ICT in teaching.

## METHODOLOGY

The study adopted a descriptive phenomenological cross-sectional research design. The design enabled the researcher to describe the characteristics of the study population and examine the prevalence of ICT use in English language teaching. The study further employed a mixed-methods research approach. According to Creswell and Creswell (2023), mixed-methods research combines the strengths of qualitative and quantitative approaches, enabling comprehensive examination of research problems. This approach allowed the researcher to collect both qualitative and quantitative data. The study was conducted in secondary schools in Kimilili Sub-county, Bungoma County, Kenya. The target population comprised teachers of English and Form Three learners from public secondary schools. The population included approximately 272 teachers of English and 6,800 Form Three learners from 34 public secondary schools. Sampling techniques included stratified sampling, purposive sampling, and random sampling. Schools were categorised into national, extra-county, county, and sub-county schools. One stream of Form Three learners was randomly selected from each participating school, while teachers teaching the selected classes were purposively selected. Data collection instruments included questionnaires, focus group discussions, and interviews. Data collected were analysed descriptively according to emerging themes related to ICT integration.

## DISCUSSION

The demographics equally revealed a fair mix of youthful and aging members of the English language teaching force. The very youthful teachers were less than 30 years old. Of the 20 participants, 6(30%) belonged to this cohort, the medium aged who were between 31 years and 49 years of age were the majority at 9(45%). The old teachers who were more than 49 years were 5(25%). Chronological age determines one's teaching regime. ICT is mostly associated with the young and it was possible that age was a factor that related well with the teachers' competency and use of ICT.

The selected schools had some form of ICT materials relevant for integration into the teaching of English. The commonly found materials included mobile phones, television, radios, desktop, computers, laptops and tablets. The least found resources were computer laboratories.

The availability of these materials could be attributed to various factors primary of which is personal use. This explains why nearly all teachers had mobile phones which could also be used as a teaching and learning resources. Other resources that could be attributed to personal use were laptops and tablets. Only selected secondary schools had computer laboratory. Of the 10 schools seven had computer laboratories. This could be attributed to the government's policy of providing schools with ICT infrastructure to boost ICT uptake. These items attracted a strongly agree response and agree response from a likert scale of 1-5 in which 1 represented strongly disagree meaning absence and 5 strongly agree which meant the resource was available.

A majority of the respondents were non-committal when asked whether the resources were sufficient. Only two teachers felt that the resources were sufficient whereas 1 participant pointed out that the resources were insufficient. It was reported that learners did not possess their own devices. All participants either disagreed or strongly disagreed when asked to rate whether the learners possessed their own devices. This is true of most schools since the provision of teaching resources; ICT included is the mandate of schools and not learners. Consequently, most schools adopt the policy of sharing resources among learners or merely using them for particular purposes. These practices do not support learners having their own individual resources. Similarly, it may not be possible to supply individual learners with their own resources.

Participants were asked to identify three ICT resources which they felt were sufficiently supplied. Since this was an open question several ICT items were identified. These included projects 14 (70%), mobile phones 10(100%) and laptops (90%). Laptops and mobile phones are gadgets that are mostly possessed by teachers for their own personal use, hence they can be sufficient.

Finally, the participants were asked to list ICT devices that were relevant or appropriate to teaching the five major area of the English language curriculum namely: listening, speaking, reading, writing and grammar. The commonly listed devices were mobile phones, laptops and desktop computers. Others were projectors and tablets. These were shown as being relevant across the five areas that were covered in English language syllabus. This means that the devices were flexible and could not be appropriate to a single skill area.

The third part of the questionnaire for teachers contained research items that sought to determine the competence of level of teachers in using ICT in teaching. This was done through items that interrogated a variety of elements that defined competence such as pre-service training, inservice training, continuous training, ICT abilities, school policy, pedagogical skills for ICT integration and other available mentorship programmes.

Teachers gained ICT skills through various avenues. For example 4 teachers (20%) reported that ICT was part of their training. This could be attributed to the fact many teacher education programmes in Kenya currently embrace ICT so that it becomes part of their qualification. In nearly all teacher preparation programmes there is always a foundational ICT studies course. Many teachers did not gain ICT skills during teacher preparation. Most may have trained before ICT became the buzz word. Most teacher preparation programmes are not supported with ICT skills. This shaped their attitude to positively embrace ICT. The pre-service training provided sufficient knowledge of ICT making it possible for the teachers to use ICT tools and devices in teaching and learning.

Similarly, the participants identified in servicing and regular workshops as avenues through which they gained knowledge on ICT use. These forms of training provided basic knowledge and were tailored towards specific pedagogical realities such as integration towards specific subject areas. Workshops alone accounted 80% of the avenues through which teachers granted competency in the use of ICT. This means that even those teachers who had been trained as part of their teacher preparation programmes attended workshops. This explains why it attracted more agreement than ICT as being part of the teachers' training. Similarly, in serving of which workshops are part of was identified as a favourable means through which competency in the use of ICT in teaching. It reported a high degree of agreement ranging from agree to strongly agree at 17 teachers which reflected 85% of the respondents.

Despite the forms of sensitization very few respondents demonstrated sufficient mastery of use ICT in teaching. This is demonstrated by low level of agreement on ICT use for pedagogy only four (20%) either supported or strongly supported the view that the language department supported use of ICT in teaching English. This is equally demonstrated by the limited technical support which teachers can provide. Only five teachers or (25%) can operate ICT devices. Similarly, a very small number of teachers can repair ICT devices. This stood at four teachers who represented 20% of the respondents. These low levels in these two areas could be attributed to the fact the skills are technical and are not relevant to pedagogy.

Supporting other teachers in using technology is a relevant pedagogical skill. Only six teachers (30%) had attained a level where they could train other teachers in using ICT devices. The capacity to train is an extremely high level of attainment. Being a trainer of trainers means one had basic knowledge and skills, they could easily infuse ICT in their classes and had expert knowledge. The workshops, to in service programmes along with school organized sensitization programmes cannot be strong grounds on which develop expertise in ICT use. Most teacher preparation and professional development programmes only focus on literacy skills rather than the adoption of ICT skills.

Finally, since most teachers reported that ICT was not a requirement for recruitment, demonstrating competency in using ICT in teaching may not be a priority to teachers. As reported 17 teachers, representing 85% either strongly disagreed or rarely disagreed with the fact recruitment of new teachers emphasized the possession of ICT skills.

Qualitatively, teaching effectively using ICT, researching for information which the teachers did not know of, improving pronunciation and listening to talks were some of the competencies which the participants freely

listed as skills they possessed. These could pass as extremely basic activities which could lead to one having them as part of their teaching regime.

Despite their training background, the participants were aware of the centrality of ICT in teaching. This is because only four participants who represented 20% of the participants seem to be unaware of the role of ICT in teaching whereas 14 participants (70%) are aware that ICT is valuable to teaching. Only two respondents were neutral. Just like in the first research item in which the respondents viewed teachers positively even in the presence of ICT, the participants were aware that ICT could not replace teachers.

Few teachers were aware of the capacity of ICT to manipulate content. These were only five (25%) and are most likely the teachers whose training had ICT as a critical component. This thinking is reflected in other factors of the teachers' perceptions which the study investigated. For example a majority of the respondents were phobic of ICT use. This is because a majority think ICT is hard to use 15(75%). 14 respondents (70%) made no effort to improve their skills and only four participants (20%) felt comfortable using ICT. This scenario is reflected in the number of those who gave learners practical activities on ICT. These were only 5 participants representing 25%.

Most participants also rated ICT lowly as a pedagogical intervention. This hugely impacted on learning. Only four teachers viewed ICT as motivating learners. The scenario was similar on other aspects such as suiting learners' abilities, the use outside the classroom, making learning enjoyable, as a time saving endeavour. The unfavorable view that most participants had on ICT sprang from their little knowledge and exposure to training. The numbers of those who favoured ICT was consistent with the number of those who had had some form of ICT training whereas those who viewed ICT unfavourable had not been exposed globally on the potential benefits of ICT as a teaching and learning tool.

A teacher's competency in using ICT has been cited as one of the pre-requisite for the acceptance and use of ICT tools. Competency denotes both knowledge of and use of ICT tools teaching and learning. Knowledge and skills are a function of learning, practice and experience. Rodgers (2003) argues that a teacher's decision to accept and use a new technology is related to the knowledge and skills they possess regarding how to use the said technology appropriately. ICT competence equally affects one's attitude towards its use.

The competence of the participants was determined by among other factors their training, teaching experience and other courses attended in the course of their working life. Despite the fact all the participants had trained as teachers, their competence in the use of ICT varied. Four teachers (20%) had been trained in ICT as part of their preparation. These were competent enough and regularly fused ICT into their classes. Similarly, they regaled in giving their learners to experience language through ICT devices and had a positive belief of ICT in teaching and learning. An equally small number of respondents had been in-serviced and had attended workshops but the exposure was not sufficient to enable confidently and regularly apply ICT in teaching. The current findings are in tandem with what scholars have reported variously in their studies. Dudeney (2010) found moderate correlation between teachers' ICT competence with the level of usage. The positive relationship revealed that teachers with a higher level competency in ICT demonstrated a high level of ICT application. Similarly, Hero (2020) posited that teachers who were more competent in using ICT had a favourable perception towards the acceptance and ICT use in schools in Malaysia. Since most of the participants had not had sufficient training they were unable to operate ICT devices and could similarly not find them as relevant tools in teaching and learning tools in teaching and learning English. Most importantly, none of the respondents was able to design an ICT product for English language teaching. Even those trained in ICT as teachers of English only used the devices to support their teaching but not as tools in their absence. The low competency demonstrated by most participants explains the unfavourable attitude the teachers had towards ICT. It also explains why most teachers did not use ICT devices in teaching. This finding resonates with the findings of Frankline (2007) and Varol (2013) who found that teachers ICT competency is the principal determinant that influences teachers' effective use in their classrooms.

The participants' perception was a critical element to the study. Among teacher participants, there were questionnaire items that sought to determine their beliefs whereas during the Focus Group Discussions, the

learners' views on a number of factors were used to describe their attitude. Regardless of the school type of ICT was viewed to be exciting and relevant to the learners' needs. They mostly liked the assignments they were sent online during the holidays. On their part the teacher participants generally demonstrated unfavourable perception of ICT use. None of the participants through ICT was more powerful than the teachers. Most of them (16 out of 20 or 80%) did not rate ICT as being more effective than books, their rating of ICT as curriculum materials and generally influencing learning was negative. 16 out of 20 participants (80%) considered ICT as time consuming and considered it hand use. Palak and Walls (2019) asserted that the attitude of teachers towards ICT affected their use of ICT resources. This could lead to the perception that to computers are not motivating and hard to use leading to negative attitude towards its use. This finding is supported by Mafuraga et al.,(2017) who found that teachers with high self-efficacy regularly used computers more than those with low self-efficacy. Unfavourable attitude could be the result of teachers' insufficient knowledge about the use of ICT for classroom instruction. The use of ICT technology in teaching is associated with the teachers' competence along with the perceived relative advantage.

The findings further revealed that teacher competence alone is insufficient to guarantee effective ICT integration in English language teaching. Several institutional and infrastructural challenges continue to limit the adoption and sustained use of ICT in secondary schools. Although most schools possessed basic ICT resources such as mobile phones, laptops, desktop computers, projectors, televisions, and tablets, the adequacy and accessibility of these resources varied considerably across institutions. In many schools, computer laboratories were either unavailable or inadequately equipped to support regular classroom integration of technology. Furthermore, limited internet connectivity, inadequate funding for acquisition and maintenance of ICT infrastructure, and insufficient technical support personnel constrained teachers' ability to utilise ICT effectively. School administrative support also emerged as a significant factor influencing ICT integration. Where school leadership prioritised technology use through policy implementation, resource allocation, and professional support, teachers demonstrated greater willingness to incorporate ICT into instruction. Conversely, schools lacking clear ICT policies and institutional support recorded lower levels of technology integration. These findings suggest that successful ICT integration requires a comprehensive approach that combines teacher competence development with adequate infrastructure, reliable internet connectivity, sufficient funding, technical support services, and strong institutional commitment. Such measures would create an enabling environment for teachers to effectively utilise ICT in enhancing the teaching and learning of English language in secondary schools.

## FINDINGS

The study established that all participating teachers were professionally trained teachers of English. However, their levels of ICT competence varied considerably. Some teachers had received ICT training during teacher preparation programmes, while others acquired ICT skills through workshops, seminars, and in-service training programmes.

The findings revealed that schools possessed various ICT resources including mobile phones, laptops, desktop computers, projectors, radios, televisions, and tablets. However, the availability and adequacy of these resources varied across schools. Computer laboratories were only available in selected schools. Most teachers reported that workshops and seminars were the major sources of ICT training. Despite exposure to training opportunities, only a few teachers demonstrated sufficient competence in integrating ICT into pedagogy. A small number of teachers could effectively operate ICT devices, while even fewer could train colleagues or troubleshoot technical problems.

The study also revealed that many teachers possessed negative attitudes towards ICT integration. Some teachers considered ICT difficult to use and time-consuming. Limited exposure and insufficient training contributed significantly to teachers' lack of confidence in using ICT. Learners, however, generally demonstrated positive attitudes towards ICT integration. They viewed ICT-supported learning activities as exciting, motivating, and relevant to their educational needs.

The findings agree with Dudeney (2010), who established a positive relationship between teachers' ICT competence and effective classroom integration. Similarly, Hero (2020) observed that teachers with higher ICT competence demonstrated more positive attitudes towards ICT integration.

## CONCLUSION AND RECOMMENDATIONS

The study established that teachers' competence significantly influences the integration of ICT in the teaching of English language in secondary schools. Although teachers demonstrated awareness of the importance of ICT in enhancing teaching and learning, many lacked adequate technical skills and pedagogical competence to integrate ICT effectively. Limited training opportunities, inadequate ICT resources, and negative perceptions towards ICT contributed to low levels of ICT integration in English language teaching.

The findings of this study reinforce international evidence demonstrating that teacher competence remains one of the most significant predictors of successful ICT integration in education. Teachers who possess adequate technological and pedagogical skills are more likely to utilise ICT resources effectively and create learner-centred learning environments. However, teacher competence alone cannot guarantee successful implementation without complementary institutional support, adequate infrastructure, and continuous professional development opportunities. These findings support global recommendations advocating sustained investment in teacher training and educational technology infrastructure to enhance the quality of teaching and learning in the digital era (Bond, 2022; UNESCO, 2023).

The study therefore recommends continuous professional development for teachers through workshops, seminars, and ICT-based training programmes. Schools and education stakeholders should also provide adequate ICT infrastructure and technical support to facilitate effective ICT integration in English language teaching.

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