
Original Paper

The Impact of Open Educational Resources on Students' Performance: The Case of Open Resources for English Language Teaching in Kenya

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Abstract

Kenya has witnessed a technological and digital transformation whose impact has been felt in all sectors of society. In education, this technological revolution has been harnessed to transform teaching and learning especially in basic and secondary education. The adoption and use of Open Education Resources (OERs) in Kenyan secondary schools to play transformative role in terms of content delivery, learning activities and teacher/learner exposure represents an important aspect of the digital and technological transformation in Kenya's education system. This paper reports the findings of a pilot study conducted in selected Kenyan secondary schools with a view to determining whether the use of Open Resources for English Language Teaching (ORELT) would have a positive impact on student performance in English language examinations. Teachers of English from the four secondary schools (N=22) were invited for a four day ORELT in-service induction workshop at the Kenyatta University Conference Centre. The teachers were then given ORELT materials in form of CDs and textbooks for use in teaching English in their schools. They were also registered on the online ORELT platform and each given log in credentials to enable them freely access the materials and freely interact with fellow teachers throughout the commonwealth. The study reports that the adoption of ORELT materials contributed in an improvement in the performance of students in various English language skills and in the overall performance. It however points to a need to refocus on the skills that in many cases registered a drop in performance such as cloze test and oral literature.

Keywords: ORELT, ESL, English Language Skills, ELT, Kenya

1. Introduction and Background

In a rapidly transforming world characterized by among others, a rapidly expanding technological and digital revolution, an unpredictable and unstable economic environment and emergence of pandemics such as COVID-19, there is need for education systems and governments to quickly respond to these challenges. This need is exacerbated by the fact that most of the digital, technological and scientific advancements are almost exclusively confined to the global north, with very little happening in the global south, yet at the same time the world is metamorphosing into a global village. Within the educational sector, this paradoxical situation calls for innovative approaches that ensure equity, access, and quality of education programmes in the global south in order to ensure that the north-south gap does not get any wider. As a way of responding to these global challenges The Education Commission (2016) report observes that governments need to institute reforms that support students to learn and gain the skills they need to become productive and successful adults. To achieve the Learning Generation vision, the Commission identified four education transformations national and international decision-makers needs to undertake:

- a) [Performance](#) –To succeed, the first priority for any reform effort is to put in place the proven building blocks of delivery, strengthen the performance of the education system, and put results first.
- b) [Innovation](#) – Successful education systems must develop new and creative approaches to achieving results in order to meet the education challenges ahead.

c) [Inclusion](#) – Successful education systems must reach everyone, including the most disadvantaged and marginalized. While the first two transformations will help create more effective learning systems, they will not close the learning gap unless leaders also take additional steps to include and support those at greatest risk of not learning – the poor, the discriminated against, girls, and those facing multiple disadvantages.

d) [Finance](#) – Successful education systems will require more and better investment. This investment must be based upon the primary responsibility of national governments to ensure that every child has access to free quality education from preprimary to secondary levels. It must be supported by the resources and leadership of international partners, prioritizing their investment in countries that demonstrate a commitment to invest and reform.

The present study directly addresses the first of these transformations, namely performance. It however, also touches on the other three given that OERs are a type of educational innovation partly aimed at achieving inclusion and reducing educational costs (finance).

But what are The Open Educational Resources? This question is answered in depth in the rest of this paper, but for now, we can simply say that (OERs) are any type of educational materials that are open to the public. This implies that these materials can be legally accessed, copied, used and re-shared by anyone. They range from OERs range from textbooks to curricula, syllabi, lecture notes, assignments, tests, audio, video, animations and even entire online courses and assessments (de los Arcos, 2013; Kanwar, Uvalić-Trumbić and Butcher, 2011; UNESCO, 2015). Their origins can be traced to “the open source community”, which focused on broadening access to information through the use of free, open content (Bliss and Smith, 2017). This was within the context of the developments in open and distance learning with its attendant pedagogical philosophies of [open knowledge](#), [open source](#), free sharing and peer collaboration, which emerged in the late 20th century (Atkins, Brown and Hammond, 2007). In Kenya, the use adoption and use of OERs is a recent phenomenon which can be said to be still at its infancy (Orwenjo, and Erastus, 2018). To date, it appears that most of the Kenya government initiatives in OER have been undertaken through collaborative engagements with the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Commonwealth of Learning (COL) and local players such as Kenya Education Network (KENET). one of the flagship projects of the government is the schools’ laptop project which seeks to provide laptops as teaching and learning tools for pupils entering standard one (first grade). The adoption of OERs in Kenya’s education system is attributable to the fact that ICT is revolutionizing society in a unique manner, therefore calling the need of changing the teaching styles in schools. Consequently, teachers are increasingly willing to experiment new ways to ensure they are in line with the changing times by adopting digital literacy using OERs in their classrooms, although as Orwenjo, and Erastus (2021) observe, challenges still abound.

The penetration and adoption of OER in Kenya’s education institutions has not been uniform. The use of OER has been more widespread in Kenya’s Technical and Vocational Education Training and Education (TVET) Institutions in Kenya. The Commonwealth of Learning (COL), in partnership with a number of Kenyan TVET institutions, developed various non-formal community training courses through the Innovation in Vocational Education and Skills Training (INVEST Africa) Program of COL’s Technical and Vocational Skills Development (TVSD) Initiative (COL website). Course authors from a number of TVET institutions developed various courses on-formal community training courses on Basic Manicure and Pedicure Skills, Poultry Keeping, Mobile Cell Phone Repair and Maintenance, and Production of Interlocking Stabilized Soil Blocks all of which are published at COL website and downloadable from Open Access Institutional Repository. Within the basic education sector, the use of OERs has been witnessed in the Laptops for Schools Project spearheaded by the Kenyan government through the Ministry of Education (Orwenjo, and Erastus, 2018). This project, though very ambitious, has been bedeviled with a myriad of challenges such as lack of trained teachers, intermittent power supplies and thousands of malnourished children who would rather receive food than laptops. Within the higher education sector, the uptake of OERs in Kenya has been slow with nothing much to talk about except for Open and Distance Learning programmes in some universities. This situation is not unique to Kenya as evidenced in studies by Torres, Boaron and Kowalski (2017) and Ehlers (2011). They observe that although OERs are high on the agenda of social and inclusion policies, and are supported by many stakeholders in the educational sphere, their use in higher education has not yet reached a critical

threshold. This state of affairs could however change, with the establishment of the Open University of Kenya in 2023. In the secondary school sector, the first real attempt at introducing OERs was seen in the piloting of ORELТ materials developed by COL in selected secondary schools.

The Open Resources for English Language Teaching is a project meant to improve the teaching and learning of English in the commonwealth. It is implemented through a portal intended to support the classroom activities of teachers of junior secondary schools (JSS) with the twin aims of providing a bank of 'open content' multi-media resources in on-line and traditional text formats intended to support school based education and training for teachers in junior secondary schools; and providing 'open content' support resources for teacher educators who prepare teachers for junior secondary schools. To achieve these aims a Situation analysis of English language teaching (ELT) in selected Commonwealth nations was undertaken to determine strengths, gaps and challenges of teaching English in Africa and Asia. This formed the basis for developing appropriate materials that address the needs and realities of JSS teachers. The ORELТ website portal provides access to these 'open content' resources and provides teachers and other stakeholders a platform for sharing other resources and a place to engage in online discussions.

Before the inception of the project, COL conducted a baseline survey and a situation analysis of English language teaching (ELT) in selected Commonwealth nations to determine strengths, gaps and challenges of teaching English in Africa and Asia. This formed the basis for developing appropriate materials that address the needs and realities of JSS teachers. The next phase was to invite experts drawn from several African and Asian countries who had either taught at the JSS level or were trainers of JSS teachers to develop six activity based modules focusing on listening skills, speaking skills, reading skills, writing skills, communicative grammar and literary appreciation. Each module had five units containing a range of case studies, activities and resources which teachers can easily adapt and use in their classrooms. Appropriate audio, video and graphic materials aimed at making the content more comprehensible were built into the modules. COL collaborated with teachers in schools and teacher educators in teacher education institutions to: build an ORELТ Consortium, in order to maximize take-up and utilization by schools and teacher education institutions; provide support to schools and teacher education institutions to adapt and use ORELТ; and support and encourage teacher educators and teacher training institutions to integrate ORELТ into a wide range of other support resources (online, text, radio) for use by teacher educators as school-based ELТ teacher resources.

2. Review of Related Literature

Open Education Resources are to date the most researched and most visible aspect of the Open Education Movement to the extent that some scholars such as Torres, Boaron and Kowalski (2017) have suggested that the two have been taken to be perfect synonyms. This is hardly surprising if one considers the fact that OERs are the basic media through which Open Education is conceptualized, delivered and assessed, thus the two basically contract a relationship of complementary distribution. According to Santos (2012: 72), "there is a consensus on academy that there is no single definition of open education". This is due to the fact that the concept of open education has mutated over time and is now recognizable only through key aspects such as: access to content, the platform used, access without geographical or financial barriers, among others. With regard to access to content, open education is characterized by free, unhindered access to educational content by teachers and learners; the platform used may vary but is almost always digital or electronic, and rarely traditional textbooks; while access without geographical or financial barriers refers to the fact that one need not have money or be in a particular location or country to access content. Another key ingredient of open education is learner autonomy. Students are free to express their opinions, exchange knowledge and ideas, to investigate, collaborate, co-create, and innovate without any encumbrances. Such a learning environment, paradoxically, encourages collaborative learning between the students and the teachers. As Boaron & Torres (2016: 17) point out:

Through open education, students are given autonomy to work on their own knowledge construction and the professor, as mediator and partner of the teaching and learning process, monitors the development and progress of the student, valuing the process and not the product, encouraging him to follow in front. In addition, because they are open spaces, the whole process is visible to other students, so that everyone can collaborate in the creation of contents, talking, working together, exposing ideas, altering, improving and sharing, being essential the learning of the group focusing on the meaningful knowledge production.

Finally, open education is characterized by pedagogical independence which is evidenced learning practices that encourage freedom and autonomy for the student to decide where, how and what to study, according to their lifestyle and rhythm.

With regard to OERs, as already mentioned, they are the principal medium through which Open Education is realized. In terms of their nature, OERs are learning materials, including textbooks, that are openly licensed and that permit no-cost access, use, adaptation, and redistribution with no or limited restrictions (Hewlett Foundation, 2020). Accordingly, open educational resources include the following

Open courseware and content.

- Open software tools (e.g. learning management systems).
- Open material for e-learning capacity building of faculty staff.
- Repositories of learning objects.
- Free educational courses.

Their adoption and use has been reported to facilitate the 5Rs permissions (the right to retain, reuse, revise, remix, and redistribute the resources) to enable flexible and creative applications of these resources in instruction (Wiley, 2014). According to Wiley and Hilton (2018) OER enabled pedagogy is “the set of teaching and learning practices that are only possible or practical in the context of the 5R permissions which are characteristic of OER” (p. 135). Since their emergence, OERs have attracted immense research interest from academics and researchers who have sought to understand their cost, use, perceptions of users towards them. Most of these studies have been based on a framework known as COUP (“cost,” “outcomes,” “use,” and “perceptions”) framework, (Bliss et al., 2013b; Hilton et al., 2016a).

The present study adopts this framework, but limits itself to the “outcomes” element by examining the impact of OERs on students’ performance. “Outcomes” in this study is measured based on student grades after the adoption of the OER materials as compared to their grades before the adoption. A number of studies that have focused on outcomes component of the framework such as those of Pawlyshyn et al., (2013) and Winitzky-Stephens and Pickavance, (2017) have adopted similar measures. These studies, like the present study, have examined how students, who are using traditional texts, have compared with students using open textbooks in terms of student performance measures such as overall course grades and final examination scores (Bowen et al., 2012; Hilton et al., 2016a). A number of these studies have found no significant difference between these measures in grades between students in classes that used a traditional textbook and those in classes using OER (Allen et al., 2015; Choi and Carpenter, 2017; Croteau, 2017; Hendricks et al., 2017; Fialkowski et al., 2020). While Cheung, et. al. (2023) have reported that Students who used OER materials in their courses had better grades, lower failure rates, and better attendance records compared to those using traditional textbooks. At the other extreme is Grimaldi et.al. (2019) who posit that “as it currently stands, the question of whether OER affects student learning remains unanswered” (p.12).

With specific regard to language teaching, studies have reported that the use of OERs has had tremendous positive effect on both the learning and teaching. For instance, they have been known to encourage learner autonomy Holec (1981) and allow learners to be exposed to authentic input. Altunay (2013:100) has this to say:

OERs allow learners to be exposed to authentic input. Learners can access authentic materials and become involved in real life situations. Using e-learning technologies, learners can read authentic texts, and watch and listen to authentic programs.

Elsewhere, Comas-Quinn and Fitzgerald (2013) report on two OER projects whose implementation had an impact on the skills and professional development of language teaching professionals, and language learners through the enhancement in the quality and variety of resources.

In Africa, not much has been researched on OER although several works such as those of Bateman (2007), Orwenjo and Erastus, (2018, 2021) that have indicated the potential OER holds for Africa. For instance, Percy & Belle, (2012) report that there has been little research around the use of OER in the

African context, while Andrad et al., (2011), on the other hand argue that a majority of existing OER studies focus on the development and publication of OER repositories as well as on the integration of policies in various institutions at the expense of their adoption and use. However, there are few studies that focus on use such as Tagoe et.al. (2010) which focuses on introduction of open educational resources (OER) in two Ghanaian universities through a grant-funded project and Orwenjo and Erastus (2018) which investigates the challenges of adopting Open Resources for English Language Teaching in Kenya, Orwenjo and Erastus (2021) which looks at the perceptions of teachers regarding the adoption and use of Open Resources for English Language Teaching in Kenya and Abdellah et.al. (2020) which reports on the experience of Cadi Ayyad University in Marrakech, Morocco (UCA) in launching a MOOC for its learners. In general, two common threads emerge when one looks at literature on OER in Africa the majority of the research efforts regarding OERs in Africa has mainly focused on teacher education and/or higher education and secondary school education, with little attention being paid to basic/ primary education. This could be indicative of the fact that little has been done in implementing OERs at this level. Secondly, even at the tertiary/higher education and secondary school levels, focus has mainly been on the development and publication of repositories with little attention being paid to implementation and outcomes of such implementation. It is within this context that the present study was carried out.

3. Methods

The present study was part of larger study which aimed at introducing ORELТ materials in Kenyan secondary school system view to determining whether their adoption and use would have a positive impact on student performance in English language examinations. Data reported here relates to the third phase of the study which involved four schools. In the first phase, fifty (60) secondary school teachers drawn from a mix of urban/periurban and rural schools (30 each) and balanced in terms of gender were invited for a five-day ORELТ induction workshop. They were purposively sampled as teachers of English at the JSS level (Form One and Two). Where two or more teachers were teaching at this level, one was randomly selected. The schools were also purposively selected from the five counties where the project was being piloted, namely, Machakos, Kiambu, Nairobi, Meru and Tharaka-Nithi. During the workshop, the participants were initially introduced to the concepts of Open Educational Resources (OERs), their history, use and justification in educational settings, especially in developing countries, the history, and the rationale and development of ORELТ materials. Additionally, the participants were inducted to the principles, theories and practices of task-based and learner centered approaches to learning, upon which the ORELТ materials are based. They were then introduced to the six ORELТ modules and the ORELТ online platform by three workshop facilitators over a period of five residential workshop days. For each module, the facilitators took the participants through its content, learning activities and learning resources. The participants were then assigned discussion tasks on each module which they performed in breakaway groups and later presented in plenary. Before the workshops, each of the teachers filled in a pre-workshop evaluation questionnaire. This questionnaire sought to elicit the responses of the teachers with respect to their pedagogical knowledge of, and interest and skills in, the content of the ORELТ materials, which were broken down into five modules namely:

- a) Module 1: Better Listening
- b) Module 2: Speaking for Better Communication
- c) Module 3: Success in Reading
- d) Module 4: Effective Writing
- e) Module 5: Language through Literature
- f) Module 6: Communicative Grammar

Additionally, it sought to establish the teachers' knowledge of, and skills in, activity based learner centered approaches; their frequency of using activity-based, learner-centered approaches in their classrooms before the workshop; and the frequency of using collaborative, team-teaching approaches before the workshop. A post-workshop evaluation questionnaire issued to them at the end of the

workshop was aimed at capturing any changes in each of these indices as a result of the workshop. Having ascertained the preparedness of the teachers to pilot the materials based on an end-line evaluation after the five-day residential workshop, the teachers returned to their respective stations where in the second phase of the project, they immediately began piloting the materials. Each teacher was given a set of six hardcover ORELТ modules and an online training manual depending on the self-declared enrollment in their classrooms, a DVD version of the same, and password-secured access to the ORELТ online platform where they could, in addition to accessing the modules, have interactive sessions with other teachers.

The study adopted a one group pretest-posttest quasi-experimental research design (01X02) as outlined by Harris et.al. (2006). Quasi-experiments are studies aim to demonstrate causality between an intervention and an outcome. They are however adopted when the goal is to evaluate such interventions without the use of randomization. They are normally employed when it is not logistically feasible or ethical to conduct a randomized control trial. In this study, it would have been logistically impossible to have a control group because the teachers implemented the study in the course of their regular normal teaching and assessment, following the laid down syllabus. Separating the classes into control and experimental group would have thus presented an ethical dilemma and attracted resistance from school administration and parents. The present study used both pre-intervention and post-intervention measurements as well as non-randomly selected control groups. The first stage of implementation phase involved the teachers conducting a baseline survey of their students' competencies in six key language learning skill areas covered by the ORELТ materials and the Kenya Secondary Schools English language syllabus developed by the Kenya Institute of Curriculum Development, (KICD) namely Functional Writing, Cloze Test, Comprehension, Oral Skills, Oral Literature and English Grammar. This was done by way of assessment tests which were graded, the students were then exposed to the ORELТ materials by their teachers for one school term (three months) at the end of which they were subjected to end term assessment examination. During piloting phase, the tests were subjected to parallel or alternate reliability by creating two forms of the same test by varying the items slightly and then administering them as Test 1 and Test 2 and then obtaining a correlation between the two scores. Similarly, the two tests were subjected to content and construct validity. The tests were then administered and constituted the third phase of the study and were corrected and graded by the teachers. Their performance in these tests was then compared to how they had performed in the various competency areas before the intervention of ORELТ materials. To mitigate against the threats to internal and external validity in quasi-experimental studies, the four step strategy proposed by Handley et. al. (2018) was adopted.

4. Findings

In order to assess the impact of ORELТ on learners' performance, two tests were administered to the students, one prior to the teachers attending ORELТ and another after. The findings on their performance is presented and discussed below. For ethical reasons, the names of the schools that participated in the study have been anonymized and any direct reference to the schools in the data is by way of alphabetical letters. The results are presented in table 4.1 below:

4.1. Overall Performance

The first step of analysis was to compute the overall performance in English language in the four schools before and after the ORELТ intervention. The results are presented in Table 1 below:

Table 1. Overall Performance in English Pre and Post-ORELТ

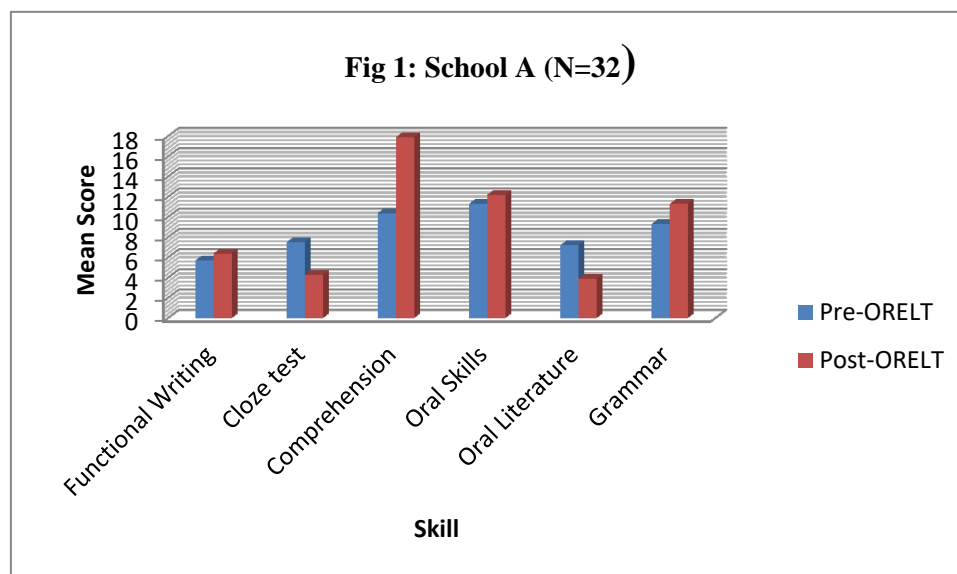
School	Period	Mean	Std Dev.	Min. Score	Max. Score
School A					
Form Two	Pre-ORELТ	43.6	13.1	23.0	64.0
	Post-ORELТ	47.0	15.1	30.0	70.0

Form One	Pre-ORELT	34.9	6.1	25.0	45.0
	Post-ORELT	37.4	9.0	20.0	60.0
School B					
Form One	Pre-ORELT	69.4	6.6	47.0	83.0
	Post-ORELT	71.8	6.8	50.0	86.0
Form Two	Pre-ORELT	57.8	9.1	30.0	76.0
	Post-ORELT	64.7	9.3	37.0	86.0
School C					
Form One	Pre-ORELT	43.3	11.0	20.0	60.0
	Post-ORELT	41.3	9.8	21.0	58.0
Form Two	Pre-ORELT	24.0	58.0	44.5	82.5
School D					
Form One	Post-ORELT	54.3	7.3	42.0	72.0
	Pre-ORELT	52.1	6.5	42.0	69.0
Form Two	Post-ORELT	55.9	5.7	44.0	66.5
	Pre-ORELT	52.4	15.4	18.0	80.0

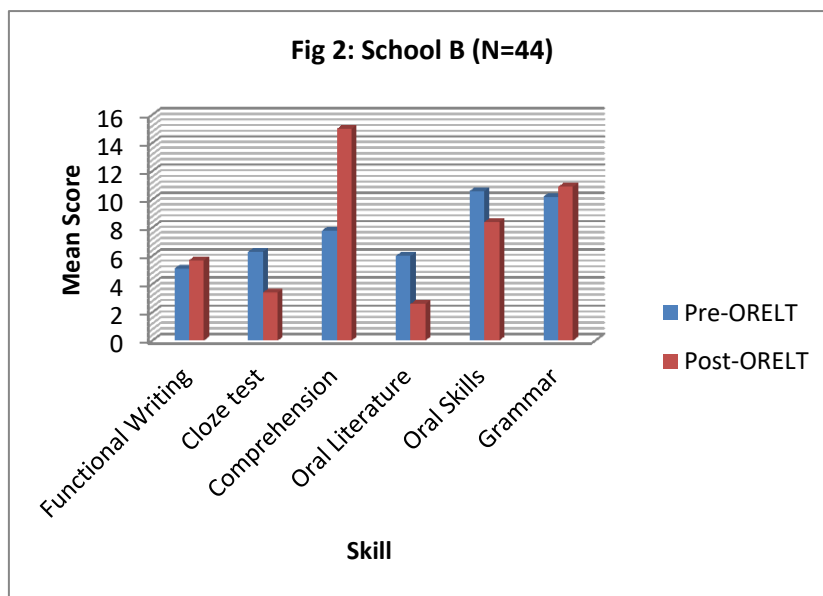
According to the comparative performance presented in Table 1, there was an improvement in the overall performance in English in all of the schools and classes after the teachers attended the ORELT workshop. It is also interesting to note that in almost all cases the minimum and maximum scores in overall performance improved. This means that the exposure obtained by the teachers during the workshop had a positive influence on the learning and teaching of English Language.

4.2. Performance of Students in Various Skills Pre and Post ORELT

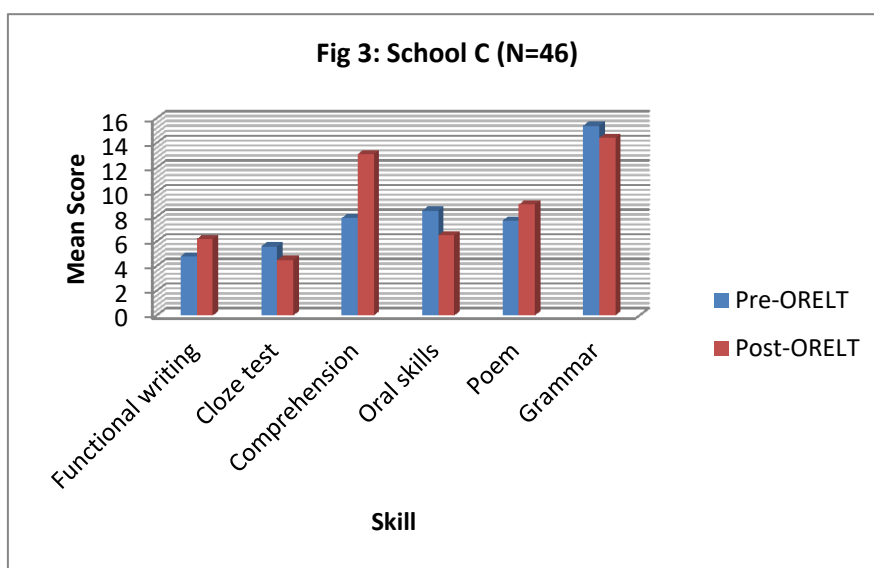
Further analysis involved a comparison of performance by the students in the four schools in the various skills of the English language subject as per the syllabus. The disaggregated data for result of the analysis is presented in the figures below.



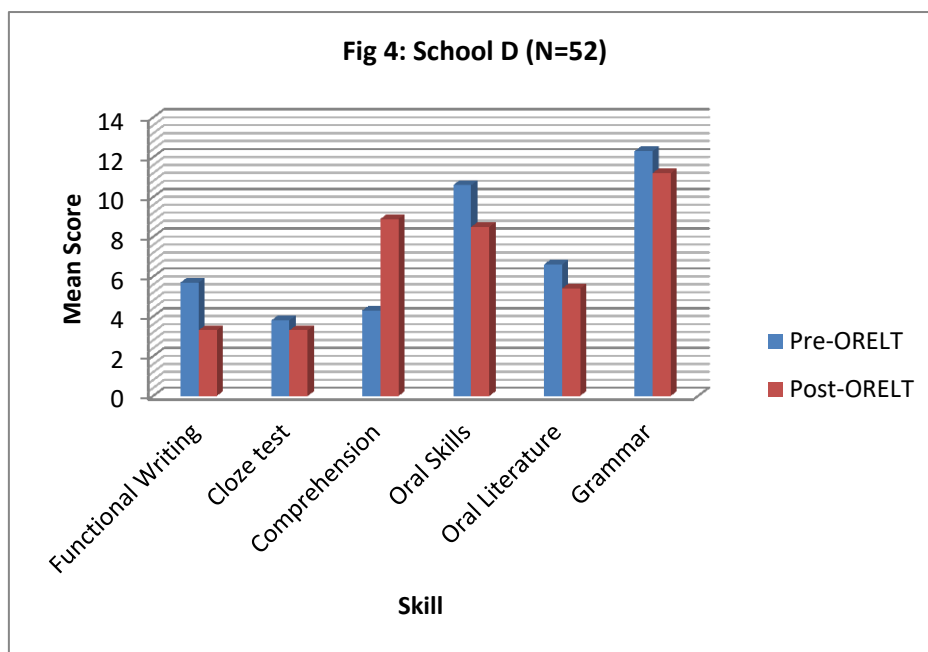
From Figures 1 above, it can be observed that there is a general improvement in mean scores in functional writing, comprehension, and grammar but a decline in cloze test, and oral literature after treatment (exposure to ORELT materials). This trend is replicated in figures 2 -4 below. When looked at in terms of individual skills, it is noticeable that the margin of improvement after treatment was highest in Comprehension and lowest in Functional Writing. Again this is replicated in figures 2-4 below. On the other hand, there was least improvement after treatment in functional writing. In general, therefore, we can conclude that the introduction of ORELT materials had a positive impact on the students' performance in in all the key skills tested except in Cloze Test and Oral Skills. We shall turn to this observation later, but in the following sections, we proceed to give an overview of the performance per each of the schools that formed part of the phase three of the study.



In Fig. 2, it can be seen that in school B with a population of 44 students, as already stated, there was a general improvement in performance across the skills with the exception of Oral Skills and Cloze Test. The highest improvement was recorded in Comprehension, followed by Grammar, while the highest drop in performance was recorded in Cloze test.



In Fig. 3 above, the same trend is replicated although there is a similar improvement margin in Grammar and Poetry.



In Fig.4 school D above there is a decline in performance after exposure to ORELT materials in all skills except in comprehension, where there is a marked improvement, with the highest decline being reported in functional writing. In general, these results indicate that participation of teachers in ORELT contributed in a improvement in the performance of students in various skills and in overall performance. However, there is need for a refocus on the skills that in many cases registered a drop in the post ORELT training, that is, cloze test and oral literature.

5. Discussion

The findings of this study contribute significant insights into the effects of educational innovation on student performance in ELT within the Kenyan context. As the data reveals, there was a general improvement in the performance of the students in all but two skills after the introduction of ORELT materials. This finding is consistent with other studies relating to measures of student performance after use of OERs where several studies suggest that courses that have implemented OER result in higher student grades (Feldstein et al., 2012), higher pass rates (Fischer et al., 2015; Pawlyshyn et al., 2013), or lower failing and withdrawal rates (Feldstein et al., 2012) than courses that do not use OER materials. However, there are also other studies which do not report any significant difference in grades between OER adoption and traditional textbook use (Croteau, 2017; Feldstein et al., 2012; Lovett, Meyer, & Thille, 2008). The present study, therefore contributes to his debate regarding the effects of OERs on student performance by providing significant insights from ELT teaching within the Kenyan context. More specifically with respect to the ORELT materials, the study reports that there was improved performance in all the language skills except Cloze Test. Additionally, “Oral Skills” also recorded a reduced performance in all the schools except school A. It is, therefore, worth interrogating the reasons for these observed differences.

Cloze tests require students to select the best answer from possible options to fill in the blanks in a given passage to make a sentence semantically coherent and syntactically complete (Hao, 2011; Tabatabaei & Shakerin, 2013). To achieve this successfully, students are supposed to be equipped with certain fundamental prerequisite competencies in comprehension and logical thinking so that they are able to make several different parts of the passage logical, and use several comprehension clues that contribute to the meaningfulness of the whole passage. (Luo,2022). Several studies such as Katalin, (2000); Luo, (2022); Bachman & Palmer, (2010) Chou & Chen, (2009). They, for instance, report that the use of

contextual clues can be problematic for students, and a series of other difficulties may possibly co-occur that would result in poor performance and point out the to investigate factors contributing to this scenario. The findings of the present study are therefore in tandem with similar studies carried out in different contexts in as far as the impact of ORELТ resources on student performance are concerned. It is thus needful to for further studies to explore ways in which this situation can be palliated. Such studies should focus on ways of addressing the inherent challenges that make cloze tests to be difficult for students. One answer could reside in adoption of a combination of instructional strategies, such as vocabulary development, reading comprehension exercises, grammar practice, exposure to diverse texts, and explicit instruction on test-taking strategies specific to cloze tests. By understanding these factors, educators can better support students in overcoming difficulties associated with cloze tests and enhance their overall assessment literacy.

With regard to Oral Skills, as has been recorded, it was also observed that there was a drop in performance after the innovation in all the schools, except one. This could be partly attributable both to sociocultural factors and first language (L1) on second language (L2). Socio-cultural factors include dialect, cultural confrontation and differences in socio-economic background of the learners. Cultural confrontation has, for instance, been identified by Mohammed (1999) who opines that it is impossible to acquire proficiency in speaking a foreign language without studying the culture of its speakers, their customs, traditions and behaviors. Besides the influences of social-cultural factors, research has shown that (L1) plays a significant role in acquiring speaking skills in (L2). This effect is embodied in language transfer Yi Zhao, Yuyao Lu, Ke Tao and Yanhua.

6. Conclusion

The findings of the present study have far reaching implications that extend to educators, policymakers, and stakeholders who are tasked with advancing educational quality and equity through open educational practices. First, given the largely positive findings of the present study with regard to the impact of ORELТ resources on student performance, educators are encouraged to explore OERs as a viable alternative to traditional textbooks, leveraging their adaptability and relevance to create inclusive learning environments that cater to diverse student needs. Secondly, professional development programs in Kenya and other Sub-Saharan countries that still have low penetration of OERSs should prioritize training educators in OER adoption strategies, copyright considerations, and instructional design principles that enhance the integration of open educational practices into curriculum development and instructional delivery. Thirdly, there is an urgent need for governments in these regions to immediately channel investments in critical infrastructure that will facilitate the optimal utilizations of OERs. These include, but are not limited to ICT hardware and software such as computers, internet, programs and even classroom buildings. Finally, with regard to policy, policymakers play a pivotal role in promoting the widespread adoption and sustainability of OER initiatives through supportive policies, funding incentives, and institutional partnerships. Thus, there is need to align policy priorities with evidence-based research on OER effectiveness, policymakers can contribute to reducing educational costs, improving learning outcomes, and fostering educational equity on a global scale. In conclusion, the findings of this study underscore the transformative potential of educational innovations in enhancing student performance and improving educational outcomes. By embracing evidence-based practices and fostering a culture of innovation in education, stakeholders can collaboratively work towards creating inclusive learning environments that empower students to thrive in the 21st-century knowledge economy. Continued research and thoughtful implementation of educational innovations are essential to ensure equitable access to high-quality education and prepare students for future challenges and opportunities.

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