

Teachers' Perceptions of Open Educational Resources: The Case of Open Resources for English Language Teaching (ORELT) in Kenya

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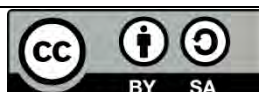
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Abstract: The use of Open Educational Resources (OERs) in the teaching and learning of various subjects is a relatively new innovation in the Kenyan school system. With the advent and subsequent liberalisation of ICT, material developers are subsequently shifting away from the traditional modes of material development in the form of textbooks and other “canonical” formats which require the teacher to use them as they are handed down without any input or modification. The Open Resources for English Language Teaching (ORELT) is one such educational innovation. This paper reports the findings of a baseline survey conducted in Kenya with a view to finding out the views and perceptions of Kenyan Junior Secondary School Teachers with regard to the adoption of open resources for the teaching of English language in Kenyan secondary schools. Sixty (60) JSS teachers of English from rural and urban schools and of mixed gender 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 the 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 to access the materials and freely interact with fellow teachers throughout the Commonwealth. The study reports that whereas teachers are ready to embrace the use of open resources, they have varying perceptions on the suitability and potential efficacy of open resources in Kenyan classrooms. It also emerges that such differing perceptions are constrained by institutional, cultural, pedagogical and personal factors. Accordingly, the study recommends a more structured, inclusive bottom-up approach to any educational innovation as a means of ensuring success.

Keywords: ORELT, perceptions, ESL, education innovation, teacher education, Kenya.

Introduction

In a rapidly changing and globalising world, many initiatives to modernise education and to optimise student learning have been launched in schools around the world. Language teaching in general, and second-language teaching in particular, has been a fertile ground for such modernisation and optimisation initiatives. In English as a Second Language (ESL) contexts such as Sub-Saharan Africa (SSA) where language teaching occurs in multilingual contexts, with a dearth of a clear nexus between existing language in education policy and actual classroom practice, the need to constantly innovate and (re)train language teachers on such innovations has always been felt. The general goal of such educational innovations is the creation of powerful learning environments capable of realising the main goals of modern education, namely the acquisition of high-quality knowledge, problem-solving



skills, self-directed learning skills, and transferability of knowledge and skills (Konigs, Brand-Gruwel & van Merriënboer, 2007).

Because of the unique and pivotal position occupied by teachers in the teaching and learning process, investigating their perceptions on the potential of ORELТ materials in improving the teaching of English provides useful insights into the extent to which the materials have been successfully adopted, implemented and used as teaching resources. Additionally, they can provide information about the current state of the implementation and its agreement with the original design, thereby providing useful feedback to the designers of the innovation (in this case, the Commonwealth of Learning) on the feasibility or otherwise of the innovation. This paper, therefore, reports on the perceptions of Kenyan Junior Secondary School (henceforth, JSS) teachers with regard to the feasibility or otherwise of ORELТ materials in improving teaching of English in Kenyan schools.

The Open Resources for English Language Teaching (ORELТ) is a project by the Commonwealth of Learning, Canada, intended to support the classroom activities of teachers in JSSs. The aims of ORELТ are to provide a bank of 'open content' multi-media resources in online, offline and traditional text formats that will support school-based education and training for JSS teachers; provide 'open content' support resources for teacher educators who train teachers for JSS; and to provide a forum for the exchange of ideas and experiences and sharing of ELТ resources among teachers and teacher educators across the Commonwealth.

The Context of ELТ Teaching in the Kenyan School System

The Kenyan language in education policy prescribes English as the medium of instruction and a subject of study in all levels of learning from Grade 4 in primary schools except where other languages are taught as subjects. In the lower grades (1-3) the predominant language of the catchment area is used as the language of instruction while English is taught as a subject. The emphasis placed in learning English is borne out of the belief that successful mastery would open opportunities for employment to the learners later in life (Orwenjo, 2012).

The high premium placed on English in the school system would lead one to imagine that a lot of resources would be channeled by the government and other stakeholders towards the ELТ curriculum, yet nothing could be further from the truth. A number of factors such as high student numbers caused by the introduction of free primary and secondary education (Muchiri, 2009; Glasson, 2009) and limited learning resources (Muthwii & Kioko, 2004) have conspired to contribute to an environment where both teachers and learners are faced with a myriad of challenges within and outside the classroom. This has been compounded by a reluctance to and an aversion for uptake of new media and information communication and technology (ICT) in teacher pedagogical practice and professional development programmes via which such challenges could be ameliorated (Nyarigoti, 2017; Anyiendah, 2017). This is the context within which the ORELТ study was carried out.

Objectives of the Study

The objective of the study was to assess the attitudes of Kenyan JSS teachers towards the ORELТ materials. These materials had been piloted in a baseline survey in which the teachers took part as key respondents.

Theoretical Issues

A theoretical issue that emerges with regard to innovation relates to its adoption or acceptance. An innovation has to be adopted before it can really be considered as one. The present study uses the Technology Acceptance Model (TAM) (Davis, 1989) as a framework to explain the perceptions of ORELТ resources by the teachers and its subsequent adoption or otherwise by them. TAM considers external factors such as system design characteristics to critically contribute to an individual's perceptions of how easy to use and how useful a new technology is considered. These perceptions in turn inform the intention to use the technology, and finally determine the actual usage. This information is presented in Figure 1 below.

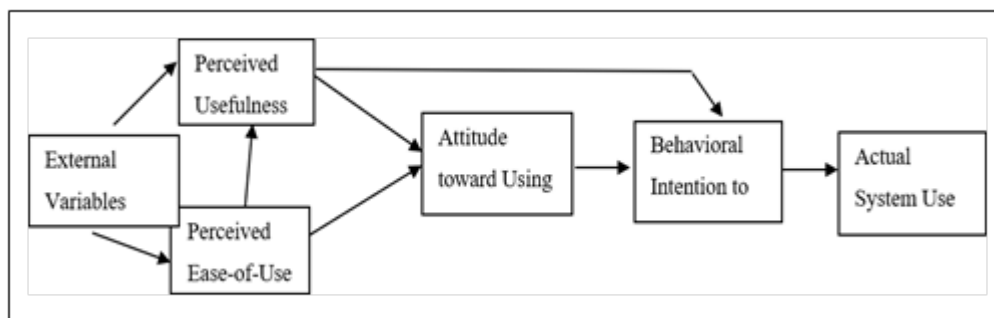


Figure 1: Technology Acceptance Model (TAM) (Davis, 1989)

The present study considers this model suitable because the ORELТ materials are essentially an instance of technological innovation in ELТ in Kenya. Critical to the understanding of the perceptions of teachers is the perceived ease of use, which in turn is determined by self-efficacy (Legris, Ingham, & Collette, 2003), which in turn is grounded on the idea self-beliefs affect motivation and cognition (Bandura, 1982). Therefore, self-efficacy examines perceptions toward the ability to do a given task (in this instance, to adopt and use ORELТ materials). This personal belief is closely related to the construct of perceived ease of use. Similarly, outcome expectations or judgments as identified by Bandura (1982) align well with perceived usefulness in determining if adopting the technology has value.

The second theoretical issue regards the nature of perception as applied to this study. Here, we are concerned with the perceptions of the JSS teachers on the potential of ORELТ materials in improving the learning of English in Kenyan secondary schools. Perception can be defined as the way in which something is regarded, understood, or interpreted. Perception has mostly been viewed from the psychological and philosophical perspectives where, in the former, it is considered to be basically equivalent to cognition and, in the latter, a logical process. Such theories include indirect realism (Russell, 1997; Broad, 1923; Jackson, 1977; Robinson, 1994), critical realism (Coates, 2007), intentionalism (see, among others, Harman, 1990; Tye, 1992, 1995; Byrne, 2001) and naïve realism (Martin 2001, 2002, 2004, 2006, 2010; Campbell, 2002; Brewer, 2007, 2011, 2017; Fish, 2009). However, it appears that these theories of perception emphasise a more analytical or concrete look at the issue, whereas perception may be a more qualitative or abstract construct based upon teachers' willingness or goal-oriented behaviours in adopting the ORELТ materials. This paper views perception as a more affective and motivation-related or goal-driven action on the part of the teachers in using the ORELТ

materials in the English language lessons. Moreover, most of the studies on perception of Open Educational Resources such as those of Rowell (2015) and Hendricks, Reinsberg and Rieger (2007) have tended to focus on the students, perhaps understandably so because the students are the ultimate beneficiaries of the open resources. An understanding of the perceptions of teachers, who are the main implementers of the curriculum, would go a long way to providing insights into the efficacy or otherwise of OERs, hence, the present study.

The study adopted the COUP Framework, the Open Education Group's approach to studying the impact of Open Educational Resources (like open textbooks) and open pedagogy in secondary and post-secondary education to unravel the attitudes of JSS to ORELТ materials. COUP stands for:

- Cost
- Outcomes
- Usage
- Perceptions

If educational costs are reduced, and the OER ensure an up-to-date and immediate access to materials by both students and teachers, then the likelihood that this will positively impact student outcomes remains tremendously high. Outcomes could also be affected by how teachers and students use OER in ways that differ from how they use traditional materials. Finally, teacher perceptions of OER have the potential to shed light on conflicting use patterns and outcomes. For these and other reasons, the use of a framework such as COUP provides a minimal basis for future comparative research on OER. It is for these reasons that the COUP framework was adopted to assess the perceptions of the Kenyan JSS teachers' perceptions of the potential of ORELТ to improve the quality of ESL teaching in Kenya.

Methods

Research Design

The study employed a cross-sectional survey research design which sought to describe the attitudes, opinions, behaviours or characteristics of JSS teachers with regard to ORELТ materials. After two months of trying out the ORELТ materials in their schools, the facilitators visited the teachers in their schools, observed the lessons and interviewed them on their perceptions on the efficacy of the materials in line with the COUP framework discussed above. These visits provided observational data which was triangulated with the survey data, apart from acting as a monitoring and evaluation mechanism.

Study Population and Sample

The study population consisted of 2,680 teachers spread over 180 schools. Sixty (60) JSS teachers (30 males and 30 females) were randomly selected from 60 schools for the present study.

Data Collection

A baseline survey was conducted by way of determining the initial attitudes, beliefs and practices of the teachers with regard to the use of OER. The participants were then introduced to the six ORELТ modules and the ORELТ online platform by three workshop facilitators. 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 breakout groups and later presented in plenary.

Research Instruments

Two instruments, namely a pre-workshop and a post-workshop questionnaire were administered to the teachers. For this questionnaire Bliss et al's (2013) survey questions provided the basis for survey development and were modified and expanded to fit the purpose and scope of this study. To ensure instrument validity, survey questions were reviewed by multiple experts in the field of open resources and open learning. The survey instrument was then modified based on expert feedback and delivered to the teachers via the ORELТ platform and their individual emails.

Findings

Based on the descriptive statistics arising from the quantitative and thematic analysis of the qualitative data, this section, therefore, presents the findings related to cost, outcome, use, perception of quality and accessibility.

Cost

Cost saving is one of the most important factors that contribute to making a decision to adopt open resources or not. This is especially so in developing countries like Kenya, where the resources are always scarce and the budgetary allocation for the education sector is ever dwindling and always in need of support from donors and other development partners. The adoption of Open Educational Resources can impact a range of financial and cost metrics not only for students and institutions but also for the government at large, and thereby have hugely significant budgetary implications. Proponents of OER have posited that the use of these resources instead of traditional publisher textbooks or digital materials have a net impact of saving costs across the board.

As compared to rural teachers (87%), only eight (13%) urban teachers felt that the ORELТ materials were expensive as compared to the traditional textbooks. This information is presented in Figure 2 below.

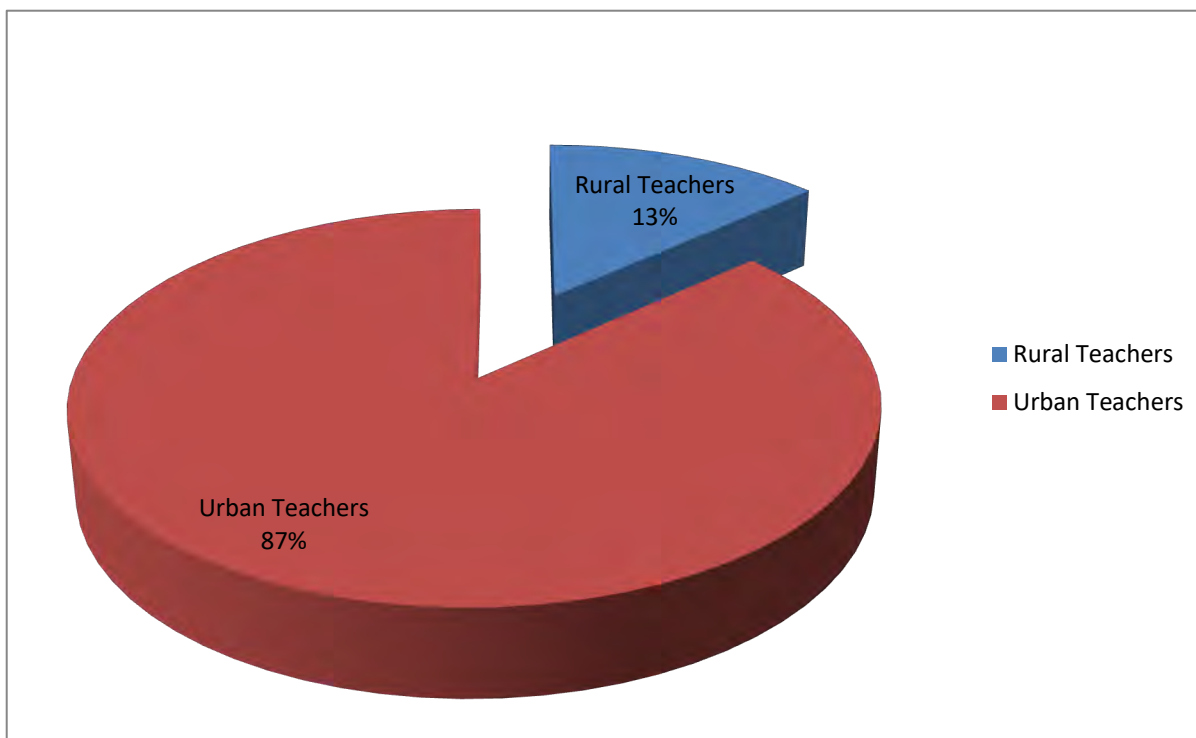


Figure 2: Perceptions of teachers on the relative cost of ORELТ materials as compared to traditional textbooks

On further probing, it emerged that the teachers who felt that the materials were more expensive also considered the costs of the initial installation of the hardware, such as computers and projectors; the software, cost of electricity; hiring and training of personnel; and the physical infrastructure. In most of the rural schools visited, there was hardly any physical infrastructure that would support the introduction of ORELТ materials. Indeed, in many of the rural schools, they would have to begin by establishing a source of power due to lack of access to electricity. In considering the costs, therefore, it appears that most rural teachers were making consideration of the fact that it would be cheaper to buy the textbooks than to put up from scratch the initial infrastructure that would support the introduction and use of ORELТ materials in the respective schools. Most of the urban schools on the other hand, already had relatively well-established ICT infrastructure, such as computer laboratories, Internet connectivity and overhead projectors. Consequently, a majority of them needed only ways of accessing the open resources for them to introduce ORELТ materials in their schools.

All the teachers interviewed averred that the use of ORELТ materials also reduced cost of learning due to their nature of being almost entirely support-free models. Unlike other digital and technological learning resources that required constant and periodic user support, the ORELТ materials, due to their flexible and adaptable nature, were largely support free and the end users could easily make required modifications and adaptations on their own.

Outcomes

Critics of OER such as Bates (2001) have often argued that their use will negatively impact learning as compared to the use of traditional textbooks. Proponents of OER, on the other hand, have argued that using these resources instead of traditional publisher textbooks or digital materials increases student

access to critical learning materials and expands teachers’ academic freedom, consequently improving student learning outcomes. The outcomes strand of the present study provides empirical evidence about the magnitude and direction of the learning impacts of OER adoption:

- Improvements in overall student performance
- Changes in pedagogical practice
- More preparation time.

We explored how the adoption of ORELТ materials impacted students and teachers in several meaningful ways. Teachers were asked questions relating to three aspects of the impact of ORELТ materials: teacher preparation time, pedagogical change and student preparation. More than half of the teachers reported spending more time preparing for their lessons compared to when they had taught the course in the past. They said that they needed more time to study and familiarise themselves with the ORELТ materials, and even more to set up the necessary equipment in class. A number of teachers also noted that they spent more time in evaluating the assignments and tasks that the students performed using the ORELТ materials as opposed to the previous case, where tasks in the traditional textbooks were assessed by simply marking the students’ workbooks. This information is presented graphically in the Figure 3 below.

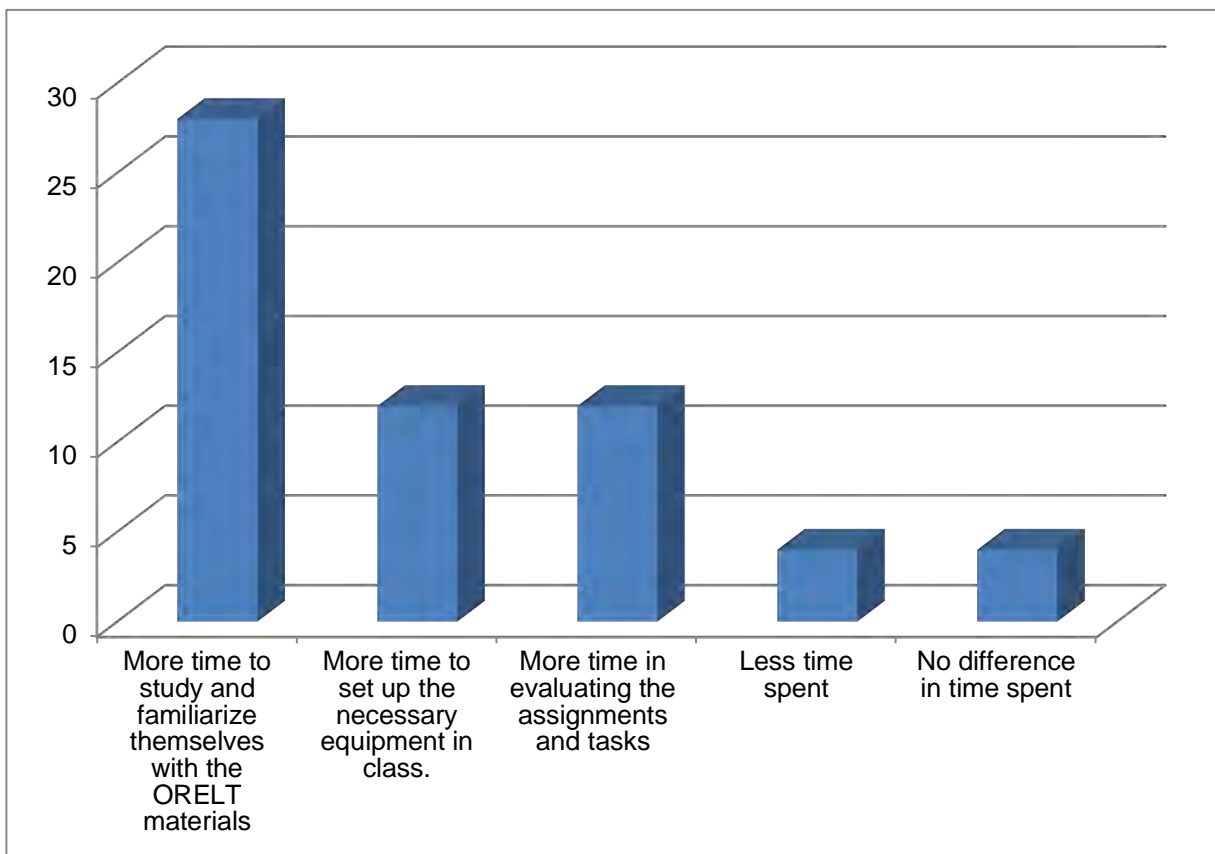


Figure 3: Perceptions of teachers on the time spent in using ORELТ materials as compared to traditional textbooks

In Figure 3 above, it emerges that, as already stated, more than half of the teachers felt that they had to spend more time in using the ORELТ materials as opposed to the traditional textbooks. They had varied reasons to account for this, with the majority stating that it took them more time to familiarise themselves with the ORELТ materials.

We also looked at how the flexibility and adaptability inherent in OER affected teachers' pedagogical practice. Seventy-five percent of teachers reported some change in instructional practice when they used the ORELТ materials. Some reported changes were a direct result of the digital nature of many of the texts and other changes were an indirect effect resulting from the impact of the materials on students. In the first case, many teachers reported increasing their effective use of technology in the classroom, while a handful reported technology getting in the way of teaching and learning. In the second case, teachers reported that their students were more engaged and interested in the ORELТ resources. A number of teachers also reported that ORELТ materials enabled positive changes in their instruction. For instance, several teachers indicated that they had started employing student-centered instruction, such as collaborative and active learning strategies, as well as implementing flipped classroom methods. These instructional approaches, in turn, helped the faculty members employ different types of assessments, and enabled displaying/referring to the open textbook during class, or facilitated the use of applied examples. Teachers also commented that the ability to customise the textbook enhanced the relevance of the content to the student. These teachers, in turn, felt more latitude to give more assignments and assessments, as well as cover more content. This information is presented in the Figure 4 below.

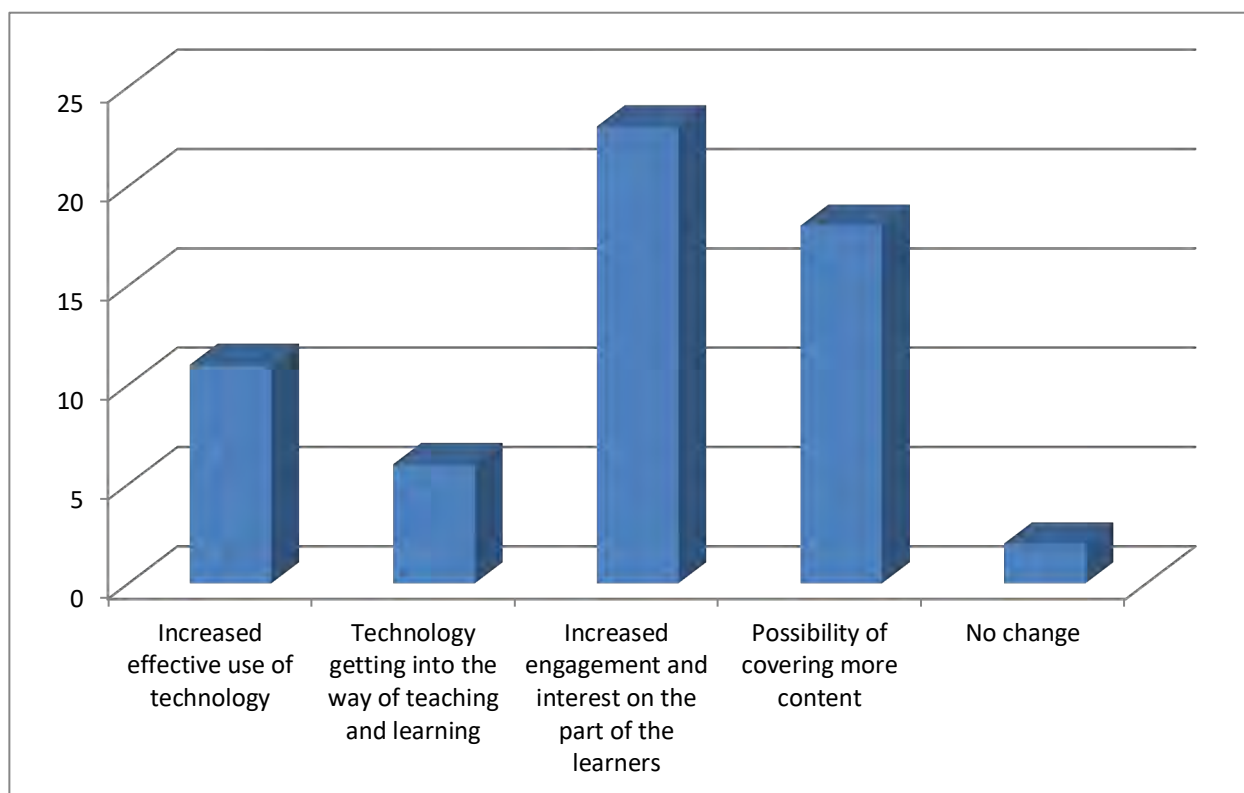


Figure 4: Perceptions of teachers on the effect of ORELТ materials on their pedagogical practice

Over 20 percent of teachers described the advantages of OER in terms of student access to materials at the very beginning of the course. For example, one teacher wrote, "Having the book immediately available online helps the class progress faster." And another teacher described how his students "are prepared from the beginning of class." A few teachers discussed other advantages of continuous online access to materials, including more student interest and engagement. One teacher described this advantage, saying, "Students are better prepared as they have access to the reading materials at little or no cost. Students are more engaged and have more interesting questions." Another teacher explained how better access to resources affected her class instruction: "I am able to refer to material knowing that all students will have access to the same material." Nearly a quarter of teachers reported no change in their teaching practice as a result of using the OER textbook. For example, one teacher said that her practice changed "remarkably little...the text provides much of the same content as a commercial text."

Use

We examined how teachers use ORELТ materials, the teachers' perceptions of the likelihood of their students continuing to use the materials and the teachers' future intentions to continue using ORELТ materials. Of the faculty members in the study, 25% provided their students with links to download or read the textbooks on mobile devices or in web browsers. In addition, 82% of the faculty members reported that they adapted, modified, and/or improved the open textbooks, indicating that they made the time and effort necessary to tailor the open textbook for optimal use in their particular courses (see Figure 5).

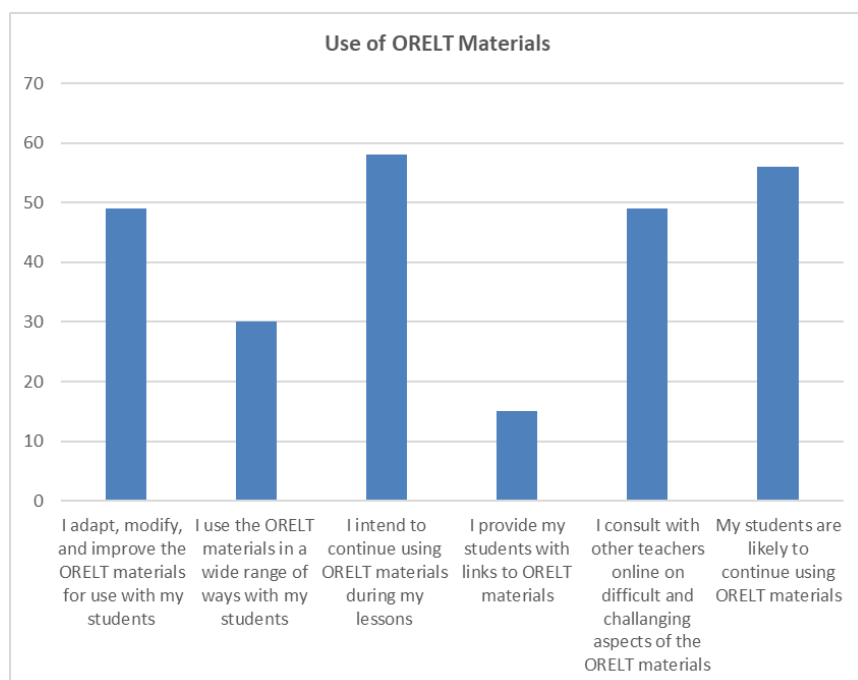


Figure 5: Use of ORELT materials

In addition, the analysis revealed a strong intention by the teachers with regard to continued use of the ORELT materials with 97% reporting that they will likely continue using them in the future. Ninety-three percent of the teachers reported that their students were also likely to continue using the materials. Neither teachers nor students reported meaningful increases in student use of ORELT materials compared to use of traditional texts. Similarly, there was no significant improvement in the teachers' use of the materials or, conversely, a reduction in their use of the traditional textbooks. This could be attributable to two factors: the materials were still relatively new to both the teachers and their students and they were therefore still in the process of familiarising themselves with the materials. Secondly, the exam-oriented nature of the Kenyan educational system rarely gives teachers the opportunity to venture out of the prescribed textbooks due to the belief that the examinations will be drawn from these texts. Therefore, although the teachers adopted the ORELT resources, they still reported more use of the traditional prescribed textbooks.

Perceptions on Quality

We sought to find out the perceptions of the teachers of the quality of ORELT materials based on the constructs outlined in the work of Bliss et al (2013). This included questions on their judgement of the quality of the ORELT materials relative to traditional textbooks, their rigour and coverage and their perceptions about the ease of use of their formats, structures and other design features. Seventy-two percent of teachers thought that the ORELT materials were better in quality than the traditional textbooks, 17% perceived them to be of the same quality as traditional textbooks, 5% to be worse than that of traditional textbooks while 13% did not know. This information is summarised in Figure 6 below.

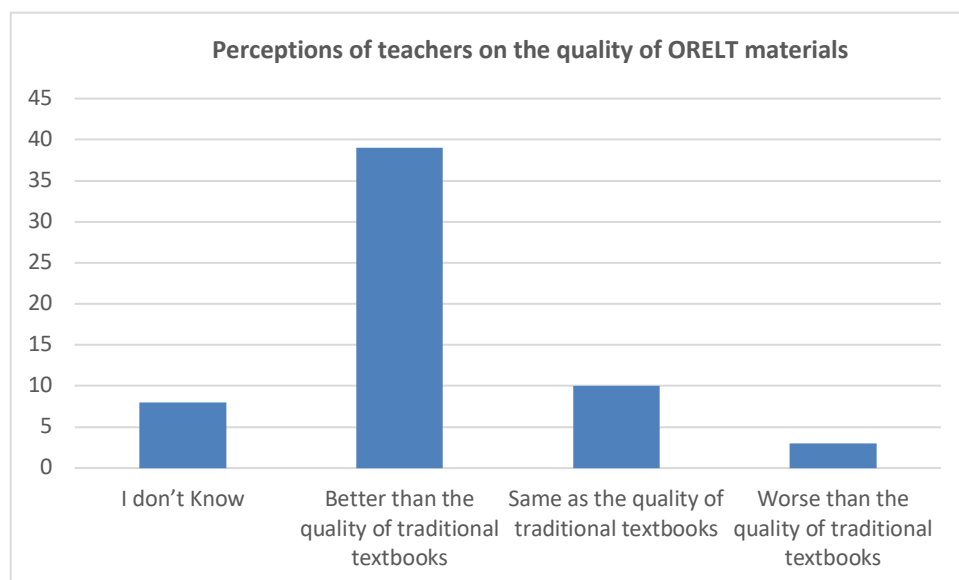


Figure 6: Perceptions of teachers on the quality of ORELТ materials

A deeper thematic analysis was conducted in order to identify the respondents' general perceptions of the quality of open textbooks as well as the rationale for these perceptions (see Table 1). In all cases where the quality was perceived to be worse than those of traditional textbooks, teachers cited technology problems or general poor text quality as reasons for giving a low rating. The teachers who mentioned technology issues did not provide much detail but it appears that student access to the Internet and perceived student preference for printed textbooks was at the heart of what made the ORELТ materials worse for these teachers. For example, one of the teachers wrote, "Students have limited access and prefer print sources [because] that is what they are used to."

Table 1: Thematic analysis of teachers' perceptions of the ORELТ materials

Quality	Themes	Illustrative Data
Better	Design Interactivity Readability Navigation Supplementary materials Quality of content The ability to customise Modernity User-friendliness Clear explanations Updated content Portable/accessible/responsive design Examples and exercises	<p>ORELT materials have the advantage of being available in multiple formats such as hardcopy, online and CD-ROM. This makes them easy to adapt and customise. The supplementary materials for ORELТ materials also come from diverse sources and different formats thus making them more interactive</p> <p>Because they are being constantly updated, ORELТ materials are more modern than traditional textbooks which take long to revise</p> <p>The existence of the ORELТ materials in many formats make them portable and accessible.</p>
Same	Same level of quality Same content Objectives Similar organization Similar visuals/media Reputable authors Peer reviewed Readability Similar mistakes between published and open textbooks Same learning objectives Same publishing process	<p>I do not see any much difference anyway so long as the ORELТ materials and the traditional textbooks stick to the syllabus</p> <p>For me, there is not much difference</p> <p>What matters is whether students pass the exams or not, the type of materials they use is not important.</p> <p>There is not much difference because the ORELТ materials are just the traditional textbooks in a different format</p>
Worse	Lack essential materials Outdated research/teaching methods Poor editorial quality Poor figures/illustrations Lack of supplemental materials Lack of multimedia materials Alignment between the content and user's need	<p>The ORELТ materials lack professional editing. The examples and case studies in the ORELТ materials are from other countries and have no relevance to local context.</p> <p>The ORELТ materials are not aligned to the Kenyan syllabus and exams</p> <p>The content in the ORELТ materials cannot be adequately covered within the lessons as time tabled in the Kenyan system</p> <p>Those materials can only work in developed countries with stable electricity and reliable Internet</p>

The other teachers who thought the ORELТ texts were worse than the traditional textbooks focused on various aspects of quality in general. One teacher explained that in her text the "information is

disconnected [and] the images and diagrams are poor," another teacher mentioned that, "the layout is hard to read," and a third teacher described the coverage of her textbook as "not as thorough" as her previous book. Another issue with regard to quality had to do with the relevance of the materials to the local Kenyan situation. To this end, the teachers pointed out that some of the learning activities and resources were far removed from the local context and, therefore, needed to be adapted to the local situations so that the students could easily identify with them.

Perception of Quality and Student Performance

We sought to establish the perceptions of the teachers with regard to whether the quality of ORELТ materials would have any impact on student performance. We posed the question: "In your opinion how would the quality of ORELТ materials impact on the student performance in English?" Sixty-seven percent of the teachers believed that the quality of ORELТ materials positively impacted student performance, while 23% believed that it negatively affected student performance and 7% believed that quality did not impact student performance. Three percent of the teachers responded that they did not know how the quality of the materials impacted on student performance. This information is presented in Figure 7 below.

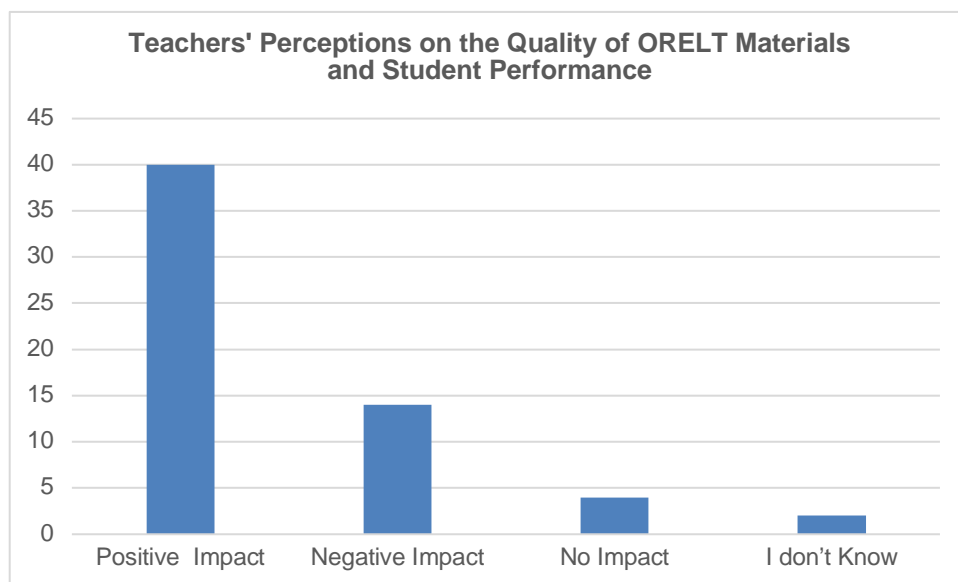


Figure 7: Perceptions of teachers on the quality of ORELТ materials and student performance

Since the entire effort of producing open learning materials such as the ORELТ materials is, in essence, geared towards improving learning and, ultimately, the students' school outcomes, it was felt that merely gauging the teachers' perception on the quality of these materials, without endeavoring to find out how such perceived quality would impact on student performance, would not serve the purpose of having the materials. This is what informed the decision to examine the impact of the quality of the ORELТ materials on student performance.

Perception of Quality and Adoption Intentions

Finally, we examined whether or not the quality of ORELТ materials would determine whether teachers would adopt the materials in their teaching even after the final phase was done out of the realisation of the central importance of quality of any teaching and learning resources. Moreover, the teachers had rated the quality of these materials as being far above that of the traditional textbooks (see Figure 7), and as likely to have a positive impact on the students' performance (see Figure 8). It was therefore imperative to find out whether the very positive perceptions on quality would influence adoption of the ORELТ materials. This is because the overall goal of the development of the ORELТ materials was to have them adopted as instructional materials in the entire Commonwealth. Quality was operationalised in terms of Jung, Bauer and Heaps' (2017) conceptualisation of the quality of open textbooks which focuses on content, affordability, accessibility, physical presentation and authorship reputation. Figure 8 below shows the responses of the teachers regarding the quality of ORELТ materials and their adoption intentions. As can be seen, a majority of the teachers reported that their adoption intentions were conditional on the quality of the materials being better than those of the traditional textbooks which they were already using, while none reported having the intention of never adopting the materials. This shows that overall, the teachers had the intention of adopting the materials, albeit in varying degrees and circumstances.

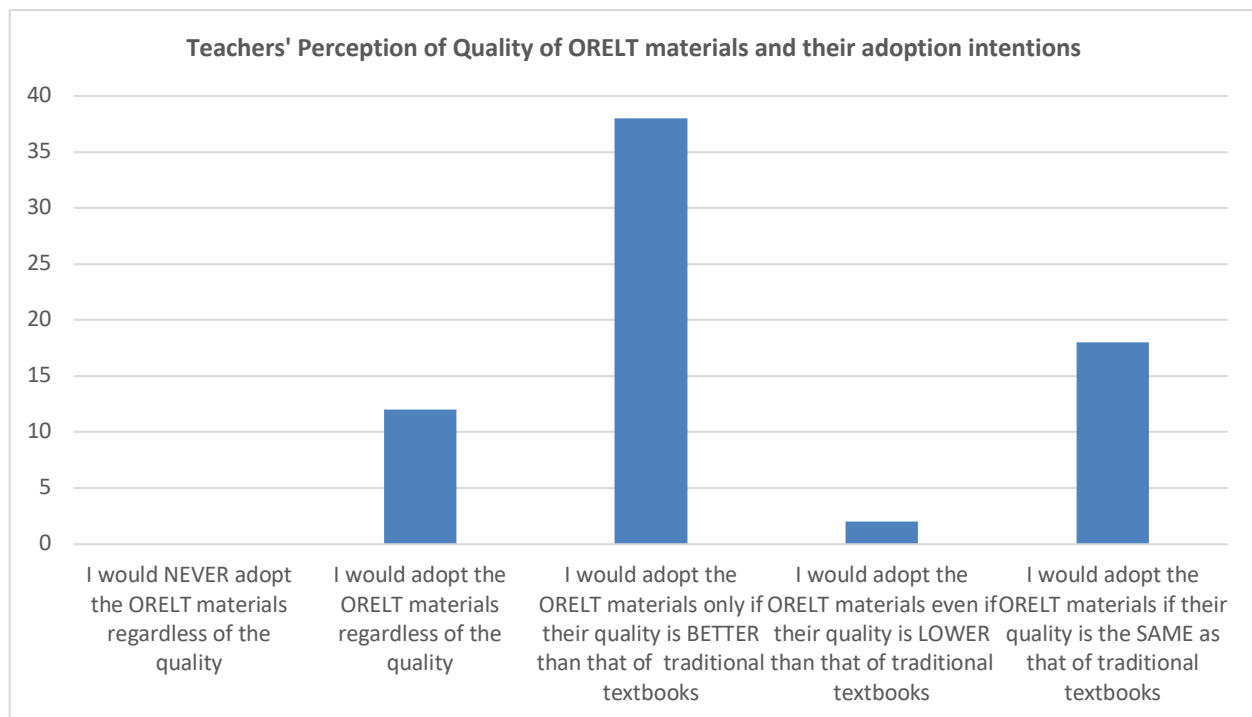


Figure 8: Teachers' perceptions of the quality of ORELТ materials and their adoption intentions

Discussion

The literature on OER promotes a wide range of benefits of OER, such as encouraging lifelong learning (Joyce, 2006), improving teaching skills through resource development and adoption of learner-centred pedagogies (Carey & Hanley, 2008; Conole, 2012; Joyce, 2006; Rolfe, 2012), reducing

costs for students and faculties by reducing reliance on commercial textbooks (Joyce, 2006), improving collaboration between colleagues within and between institutions (Joyce, 2006; Rolfe, 2012), reducing barriers to translation of materials into other languages (Hilton & Wiley, 2012), improving accessibility for vision-impaired learners and keeping educational resources up-to-date by avoiding lengthy (and costly) publishing processes (Baraniuk & Burrus, 2008; Joyce, 2006). Some equate OER adoption with opportunity to improve teaching skills and methods, as well as the opportunity to connect, share and collaborate with colleagues (Baraniuk, 2008; Petrides, Nguyen, Kargaliani, & Jimes, 2008). The present study contributes to this debate on the perceived benefits and disadvantages of the OER movement. With regard to costs, the project appears to have been successful in demonstrating that Open Educational Resources can be used to lower the cost of ELT teaching in Kenya. Future research should focus on understanding how the shortcomings identified by the teachers involved in this pilot project can be addressed so that the materials are rolled out all over the country. While there was general agreement that the ORELТ materials reduced the cost of educational materials to students, many teachers reported that using them required more preparation time than using traditional materials. It is presumed that teachers spent more time preparing to teach either because they were adapting and revising existing ORELТ materials or they were calculating in the time spent developing the materials specific to this initiative. Either way, this finding has at least one important implication for future ORELТ initiatives: despite the many clear advantages of ORELТ, obtaining instructor buy-in could be hindered by the reality of increased preparation time. One approach to ameliorate this concern would be to get buy-in first from those willing to spend more time. The issue of infrastructure in terms of IT facilities, power source and qualified personnel also came up as a cost factor in the current study. This calls to attention the need to examine unique educational environments before making blanket statements on the cost factor in OER. This is due to the realisation that costs may vary not necessarily as a result of the OER but also as a factor of the infrastructural development of a country or a region.

Also recurrent in the literature is the issue of sustainability of the OER movement (Baraniuk, 2008; Barrett et al, 2009; Reed, 2012; Rolfe, 2012). Of major concern is the longevity of OER repositories that have been set up using significant financial investment. Baraniuk (2008) discusses how some repositories may move to fee-for-access. Reed (2012) also opines that “the success of the open content movement is reliant on wide participation and a critical mass of ‘open’ content”, (p. 1). He argues that without a critical mass of open content and participants, the whole idea of OER would be self-defeating since the perceived benefits would be encumbered and mitigated by lack of access, yet this is one of the underpinning principles behind OER. This idea of a ‘critical mass’ of content and participants engaged in OER relies on broad collaboration across academia; what Rolfe refers to as a “positive collegiate culture” (p. 1), which she argues needs to be supported at an institutional level (Rolfe, 2012). The findings of the present study throw new light on the sustainability debate with regard to OER. As reported in this paper, teachers expressed strong intentions about adopting the ORELТ materials and continuing to use them in their English classrooms. There is strong evidence of this intended continuity and adoption since in some schools within the urban areas, teachers had formed discussion blogs on Facebook and the ORELТ platform for the same purpose. Accordingly, it is our view that although the duration of the project is still too short for any definitive statement on sustainability, there are early indications that this could be achieved within the framework elucidated by Baraniuk, (2008); Barrett et al, (2009); Reed, (2012); Rolfe, (2012).

It has also emerged from this study that teachers have varying perceptions on the efficacy of ORELТ resources in improving the learning of English in Kenyan secondary schools and that such perceptions are constrained by institutional, cultural, pedagogical and personal factors. There is, therefore, a need for a more structured, inclusive bottom-up approach to any educational innovation as a means of ensuring success. One viable pathway in this direction is found in the concept of Open Education Practices (OEP). According to the Ehlers (2011), OEP is defined as the full set of practices around the creation, use and management of OER. This includes the tools that are used to support this process, the resources themselves and any enabling frameworks. OEP covers the full spectrum of policy, research and practice around OER and involves almost all stakeholders involved in supporting and managing learning provision in educational systems. OEP address the whole OER governance community: policy makers, managers/administrators of organisations, educational professionals and learners. Issues of access, equity and quality still continue to bedevil the entire spectrum of the Kenyan education system. One way of addressing these issues is the adoption of OER such as the ORELТ materials. Yet, for successful implementation and adoption of the ORELТ materials in the Kenyan school system, the concept of OEP needs to be adopted by policy makers, the government and other stakeholders in the education sector as a means of ensuring a structured rollout of the ORELТ innovation in the Kenyan school system without any of the encumbrances that may be occasioned by the institutional, individual and cultural diversity of the Kenyan nation.

Conclusion

We hold the view that the use of open resources in education in teaching and learning is an idea whose time has come. Especially in sub-Saharan countries where educational costs are exorbitantly high, their proper use can effectively increase access and quality. The emergent bottlenecks that are associated with costs and quality, as discussed in this paper can easily be addressed to further the use of open resources. This study has thrown some positive light on the issue of adoption of open resources in the Kenyan school system by pointing out the unanimous willingness of teachers to adopt these materials for their teaching. Since adoption of OER is not an end in itself but a means to an end, there is need for further studies which interrogate the impact of the use of these resources on student performance and school outcomes in general.

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