Role of ICT in Enabling High Quality OERs for Teacher Education and Training in Dadaab Refugee Settlement in Kenya

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Abstract: ICT and OER have the potential for uplifting the quality of refugee education across the world. Sustainable education in refugee camps/settlements is difficult to achieve in many countries that host refugees. This is because most international agencies that come to aid of the refugees are mostly concerned with basic humanitarian assistance like health, food and shelter. Quality education is a key determinant of students' participation rates and achievement levels. It also remains an important ingredient towards attainment of social justice in terms of equity in educational quality for students. One contributing factor to quality education is availability of ICT infrastructure and quality OERs to create equity for many refugee learners in their camps. This paper describes how ICT and OER initiatives are appropriate tools for improving access, equity, and quality training and education of refugees in Dadaab refugee settlement schools in north eastern part of Kenya.
Keywords: OER; ICT; Quality education and training.

1. Introduction

Refugees all over the world face almost the same challenges. As many countries are beginning to embrace Sustainable Development Goals (SDG), most refugees have not been able to even get Education for All (EFA) that formed the just concluded MDGs. There is even struggle within the refugee circles to achieve 'teacher quality for all', in the refugee settlements in Kenya. Yet teacher quality is one of the key factors determining the participation rates of children in schooling and the quality of their education (Hanushek, 2005; OECD, 2005; Verspoor, 2004). Though indicators of teacher quality are contentious and the methodological problems in comparing their significance considerable (Vignoles *et al.*, 2000) there is broad consensus that it is the single most important school variable influencing student achievement (Darling-Hammond, 2000; Rivkin *et al.*, 2005; UNESCO Institute for Statistics, 2006). It is also an important element in promoting social justice in terms of educational quality in rural and remote areas, where teachers tend to be less qualified than their urban peers and less well-resourced and supported. In recognition of its importance, support for teachers' quality education and training is receiving more attention in the discourse of international and national agencies, for example:

Hammarberg (Commissioner for Human Rights, Council of Europe) while addressing World Teachers Conference during World Teachers' Day, on 5th October 2006 said that in our fast-changing world, teachers must be engaged in life-long learning to be able to meet new challenges. It is a grave political contradiction that so much emphasis is being given to the importance of education while so little is being done to give teachers status, support and reward. The professional status of teachers should be recognised as one of the most important in society. It is the responsibility of policy-makers and school management to support and empower the teachers in this important role, and to work toward raising their professional status. This paper explores the role that ICT plays in enhancing high quality OER for teacher education and training. The aim here is to uplift the status of refugee teachers.

2. Role of ICT and OERs in Working towards the Future

One of the most decisive innovation in the provision of quality education and training in the Dadaab settlement is the start of Borderless Higher Education for Refugees (BHER). Consortium of universities (Moi University, Kenyatta University, University of British Colombia and York University) has come together. Their work is to offer education and training to the refugees and certify the many volunteer teachers who are untrained.

The transferability of BHER certificates, diplomas and degrees will offer refugees the options that has eluded them this far. These certifications will be fully accredited and universally accepted. This will allow them to continue to pursue admission to post-graduate education should they so desire. For those hoping to resettle elsewhere, this foundation may also make them more attractive as privately sponsored refugee applicants.

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For many of the young Somalian, Ethiopian and South Sudanese refugees in Dadaab, education is deeply embedded within their hope for return to their homeland. "One of the things when we talk to people here is that they really live in the most profound hope for return. I mean, people who were born here (in Dadaab) are looking forward to the day when they will be able to return to their motherland. They are all imagining that they're preparing themselves for the day when they're able to return," intimates Dippo. In an interview with BHER, head of Dadaab Campus Misoy of Windle Trust, he puts it succinctly that education is the only thing the refugees can take back home with them and that it will only be fair enough to give them the very best.

On a more immediate level, however, BHER is concerned with contributing to efforts to improve the overall quality of life in the camps. As Dippo states, "you may be returning, but it's not going to be tomorrow." It is hoped that short of return, BHER can help to restructure the camps in significant ways. As Giles points out, "It's a small, well, not so small city". "So how do you run a city?" she asks. "Humanitarian agencies are not really experienced in running cities. So what we're doing will hopefully help in that regard. It will contribute to imagining a better space for people to live in. There are lots of aspects of living there that can be re-envisioned.

From the start of this paper, BHER's effort is about widening of access to education that will ultimately contribute to individual development, sustainable wealth generation and narrowing of the gap between refugees and their hosting nations and regions. There seems to be "Digital Divide" between the refugees in developing world and the rest of the world, especially the developed nations. This assertion refers to the gap or the negative consequences of the gap between those that have computers and are connected to the internet and those that do not and are not. The problem is that although BHER programme is intentioned to the widening of access to educational opportunities to help combat the difference between refugees and the rest of the world, the delivery of this education is envisioned to increasingly dependent on ICT infrastructure, which is increasingly based on digital technology that may be too costly for developing societies. Making matters worse is that in developing societies the majority of the most disadvantaged communities like the over half a million refugees live in a remote rural settlement area in Dadaab in north eastern Kenyas, where ICT infrastructure is either non-existent or struggling to cope.

Over the month of August, 2015, staffs from the BHER's consortium were in Dadaab for face to face teaching with the students. The internet connectivity was so poor that the staff could hardly do their work comfortably and they had to 'migrate' looking for better service sites. At some point Professor Dopp will joke that there were six office points depending on network connectivity. This brings to focus the assertion that in Sub-Saharan Africa where the gross enrolment ratio for tertiary education is below 4% (compared with some 80% in highly industrialized nations like the US and Canada) the need for education is acute, but 60% of the population resides in rural areas where telecommunications are virtually non-existent. It seems like an insurmountable problem. Yet, there are ways in which these challenges can be tackled, and some of the solutions may even paradoxically utilize the power of digital ICTs.

In 2000 the World Bank claimed that the "divide" between low- and high-income countries is growing. This is attested by some statistics that were provided by the World Bank then. First, television sets: at then, the number of television sets per 1,000 inhabitants ranged from less than one in Eritrea, to 5.5 in Ethiopia and 64 in Ivory Coast, as compared to 322 in Trinidad and Tobago, 469 in the Czech Republic and 805 in the United States. Next, personal computers: the number of these personal computers per 1,000 inhabitants ranged from less than 1 in Burkina Faso, 27 in South Africa and 38 in Chile to 172 in Singapore and 348 in Switzerland. At this time (2000), the internet use as per the World Bank found an average of one user per 5,000 persons in African countries as compared to 1 user per 6 persons in Europe and North America. With respect to internet usage in different regions of the world, CNN recently reported that 63% of North Americans had access while almost one per cent of Africans have access, with Asia, the Middle East, Latin America, Eastern Europe somewhere in between. In 2000 the statistics looked very similar. Estimates for now follow the same pattern, with 181 million North Americans (64% of the population) and only 9.1 million Africans (2% of the population) coming online.

It then seems the picture of connectivity through telecommunications and, especially, online looks very bleak. With respect to phones, 2/3 of the world's children have never made a phone call. Of the world's six billion people, three billion live on less than two dollars a day.

Many developing countries even lack the basic infrastructure for the information revolution: mainly phone connectivity and electricity. Not only do they lack the technology, but even if they had it, they would find it a challenge to use it. The reason — they lack basic ICT literacy skills as well. The critical question is whether this is a substantive reason to disregard the potential that ICTs may hold for individual development, wealth creation and distance learning. But is this gap perceived or actual between the developed and developing nations?

3. Effort of Developing Nations on ICT

In spite of the mentioned challenges, there is a determined effort by developing countries governments to narrow the gap between these worlds. For example, the government of Kenya has set 2015 as the year that every primary school in the country will be connected to the electricity national grid. This is seen as an appropriate platform for launching an ambitious project by the government to provide laptops to all schools in the country. Presently the connection stands at over 80%. It is true that all must encourage the use of information technology in education, so as to link far-flung places and institutions of learning, to bridge the gap between urban and rural areas, to enable African children to advance scientifically so as to compete on an equal footing with the rest of the world. This echoes assertions of a former South African President Thabo Mbeki. He is quoted saying, "Our youths as

successor generations has a particular challenge to understand, develop and master this technology, not just for boasting, but to be able to use it to overcome the problems of poverty, marginalization and underdevelopment …We must continue the fight against poverty, underdevelopment and marginalization and ICT is critically important to that struggle" (Mbeki, cited by This Day, All Africa Global (*allAfrica.com*).

Closely related to the pervasive advances of digital ICTs are the opportunities and threats associated with globalization. In this regard, developing government leaders are also stressing the importance for these nations to play an active participatory role in finding their own appropriate solutions to the problems. For example, the just retired President of Tanzania stressed that, universities in Africa need to produce men and women willing to fight an intellectual battle for self-confidence and self-assertion as equal players in the emerging globalized world. This attests to what Massingue earlier argued about the African case that "You cannot be part of the global village by sitting and waiting to be 'globalized' … We want to be the globalizers" (cited in Useem (1999)).

The important message regarding the perceived digital differences in Africa and the rest of the world is that developing countries must themselves take the ingenuity/creativity/initiative in generating their own solutions using a learn-by-doing approach. It is unlikely that the industrialized nations will focus specifically on developing technological solutions for the developing society problems, because they are not faced with the same problems. Note that most industrialized countries do not have to focus on finding technology solutions regarding the problems of communicating in remote regions where basic telecommunication infrastructure is non-existent. For sure, there are technological solutions that can be adapted from global best practice for local contexts, but the resolution of pressing problems will have to be resolved through indigenous innovation.

4. ICT and OERs at Dadaab Settlement

ICTs could help to equalise the distribution of high quality educational opportunities.

The key aspiration is that any learner anywhere in the world is able to study any distance teaching programme available from any bona fide college or university. That promise was ahead of its time in 1987 but is now being fulfilled. An important way to expand access to education of better quality at lower cost is through materials that may be freely accessed, reused, modified and shared by anyone.

The term Open Educational Resources was coined for such materials at a meeting on Higher Education in Developing Countries held at UNESCO in 2002. Since then an increasingly vigorous Open Educational Resources (OER) movement has developed in countries all over the world. Because opening up education, training and learning is vital, there is a strong commitment to the development, sharing and repurposing of OER. Let me cite a few examples, first, the programme called Teacher Education in Sub-Saharan Africa (TESSA), has engaged 700 African academic teacher educators from universities in a dozen countries in authoring and adapting study units for primary teachers. These open educational resources have been adapted to ten country contexts and are available in Arabic, English, French and Kiswahili on the TESSA website.

All TESSA study units contain a series of activities that participating teachers can carry out in their classrooms. In 2010, 400,000 teachers on 19 teacher education programmes benefitted from TESSA resources and lessons with a positive impact on learning of the millions of children in their classrooms.

Second, in order to improve quality and access at senior secondary level, a complete senior secondary school curriculum six countries: Botswana, Lesotho, Namibia, Seychelles, Trinidad & and Zambia has been created with teachers as OER. Since these are Open Educational Resources they can be taken off the website freely and adapted for use anywhere in the world.

Third, back in 2000 the ministers of education of the Commonwealth's 32 small states decided that they would work together to implement eLearning in their countries since none of them had the critical mass to go it alone. They called this collaborative network the Virtual University for Small States of the Commonwealth. Since then they have worked together to create eLearning materials, as OER, in a range of practical areas like sustainable agriculture, disaster management, fisheries, port management and entrepreneurship. Again, these materials are freely available for anyone, anywhere to take and adapt. These examples show that OER are already being created and used in most countries.

So far, however, this has been largely a grassroots movement of teachers and institutions which believe that knowledge is the common wealth of humankind and that we should share it widely rather than lock it away under copyright. UNESCO and Commonwealth of Learning (COL) have written to all governments to alert them to the importance of OER for expanding quality education and, where they have not already done so, to adopt policies that encourage the production and use of OER.

Some governments across the globe already insist that the data and results from research conducted with public funds should be made openly accessible so that they can be useful to everyone. Similar benefits could be achieved if all educationally useful material prepared with public funds were made available under open licences.

Open licences are not an alternative to or an abandonment of copyright. They are legal tools that make use of existing copyright laws and enable the copyright holder to allow the material to be used in various ways.

There is a range of such open licences of which Creative Commons is the most widespread. The COL encourages governments to require that material developed with public funds be made available under the most open licence possible so that it can benefit as many people as possible.

COL and other progressive nations believe that the Open Educational Resources movement has a huge potential to improve education, training and learning all over the world and there is every need to alert all authorities to its importance and to review their policies for making educational materials available.

There are very innovative ventures of solving through practical means what works at the largest refugee camp in the world, Dadaab in Kenya. This is in regard to ICT, OERs and how it can transform this often neglected populace in terms of higher education.

To be able to execute their mandate with ease, the delivery of the said programmes follows this quotation from Noam (1995) that in the past, people came to the information, and the information was at the university. In the future, the information will come to the people, wherever they are. To this could be added, in the past people also came to the teaching while in the future, the teaching also will come to the people, wherever they are. There has been an advert in the media in Kenya recently of someone haggling on the fare to the nearest shopping centre to watch news only to be told that he needed not travel because the information could come to them wherever they are by simply dialling some number.

This information above could be true because information could go to Dadaab and the enablers here are ICT and OERs. As earlier mentioned, the phase one programmes at Dadaab are those on ICT and research methods. The issue is that learners at some point will be required to attend classes online from UBC and York University in Canada while at Dadaab. For this to succeed, the students must not only be proficient in computer use but are seen to be competent on searching and using information on the internet. For the students also, the lack of qualified personnel to teach the offered courses locally makes it imperative that they be ICT compliant. As earlier mentioned, the security challenges, cost of setting up infrastructure and other logistical concerns makes training of teachers and provision of higher education of other forms prohibitive at Dadaab settlement. The only option out of this scenario is the approach taken by the consortium of the universities mentioned earlier. As long as the students are proficient on technology, the concept as envisioned by the BHER team will work. There are concepts that students need to know and understand how they work for them to benefit most from online courses when they take effect. These are OERs and of course benefits of internet use. But, what then are these OERs?

4.1. Open Educational Resources

Open Educational Resources (OERs) are teaching and learning materials that are freely available online for everyone to use, whether you are an instructor, student or self-learner. They are educational materials that are in the public domain or introduced with an open license. They are released with an intellectual property license that allows for free use, adaptation, and distribution. The nature of these open materials means that anyone can legally and freely copy, use, adapt and re-share them. OERs range from textbooks to curricula, syllabi, lecture notes, assignments, tests, projects, audio, video and animation.

UNESCO believes that universal access to high quality education is the key to building of peace, sustainable social and economic development, and intercultural dialogue. OER provides a strategic opportunity to improve the quality of education as well as facilitate policy dialogue, knowledge sharing and capacity building.

In 2001, the Massachusetts Institute of Technology (MIT), in an unprecedented move, announced the release of nearly all its courses on the internet for free access. Therefore, if one is interested in learning about aeronautical engineering from a science whiz at the MIT, they can check out lecture notes and videos from MIT courses.

As the number of institutions offering free or open courseware increased, UNESCO organized the First Global OER Forum in 2002 where the term OER was adopted. With the support of the Hewlett Foundation, UNESCO created a global OER Community Wiki in 2005 to share information and work collaboratively on issues surrounding the production and use of OERs.

UNESCO is at an advanced stage of developing a new, innovative OER Platform which will offer selected UNESCO publications as OERs and allow communities of practice including teachers, learners, and education professionals to freely copy, adapt, and share their resources.

In partnership with key European institutions, UNESCO is a member of the Open Educational Quality (OPAL) Initiative to develop a Framework of OER Practices that improves quality and innovation in education.

Another example is the Vision for a Health OER Network in Africa. This is an OER initiative started by experts in health science institutions across Africa to openly share health education materials. These materials are used by health professionals in Africa to enhance their knowledge and training, as well as by students and educators around the world.

Another OER started by the Delft University of Technology in the Netherlands includes courses on clean water technology for developing countries. These resources have been updated by universities in South Africa, Singapore, the Antilles and Indonesia to include information on water treatment processes from their regions, making a collaborative resource on drinking water engineering available online to anyone who wishes to learn more.

Educational materials are an important input in the learning process. OER maximize the power of the internet to improve teaching and learning, and increase access to education. They are teaching, learning, and research resources released under an open license that permits their free use and repurposing by others. OER can be full courses, course materials, lesson plans, open textbooks, learning objects, videos, games, tests, software, or any other tool, material, or technique that supports access to knowledge. These resources are broadly considered to meet the "5Rs Framework," meaning that users are free to:

- **Retain:** Users have the right to make, archive, and "own" copies of the content

- **Reuse:** Content can be reused in its unaltered form
- **Revise**: Content can be adapted, adjusted, modified or altered
- **Remix**: The original or revised content can be combined with other content to create something new
- **Redistribute**: Copies of the content can be shared with others in its original, revised or remixed form.

(http://www.sparc.arl.org/issues/open-education#sthash.lvH5HKAg.dpuf)

Internet enables us to teach, learn and develop knowledge faster and on a wider scale than ever before. Learners can find information instantly on virtually any topic, and connect with peers across the globe. Teachers can share their knowledge with students on another continent almost as easily as in their own classroom. And educational resources such as books can be disseminated to a worldwide audience at virtually no marginal cost.

Information technology systems for communicating knowledge are still adapting to current digital environment, and educational resources often have legal or technical barriers that curtail many of their potential benefits. Many digital materials, especially textbooks, employ Digital Rights Management (DRM) controls that actively prevent sharing and contribute to high prices. Even if a resource is available online, it may not necessarily be fully usable because the default terms of Copyright require users to obtain permission from the author.

OERs provide a new model for disseminating knowledge that is designed to take full advantage of the digital environment. OER are distributed freely online under an open license that grants blanket permission for full reuse rights to the public. Users are free to share, copy, paste, edit, adapt and interact with the content — in short, everything that internet enables. Students can access OER online for zero cost, download and keep a copy, and print as many pages as they wish. Teachers can collect and tailor OER to perfectly suit their curriculum, and share their innovations with other educators. Entrepreneurs can build businesses around OER by offering products that add value, such as assessments, software or enhanced formats. Authors can disseminate their work to a worldwide audience while still receiving attribution. OER can maximise the full benefits of internet to improve teaching, learning and access to education. The power of the OERs can be utilised to the maximum in rural areas that are deficient of staff such as Dadaab settlement where due to security concerns, very few professionals are willing to risk their lives by going to live and offer their expertise to students there. If this place's internet connectivity is enhanced, OER has the potential to improve learning of students.

4.2. OER Categories

This is comprised of four main categories:

1) **Open Course Ware (OCW):** Open Course Ware is the digital publication of high quality educational materials that are freely and openly licensed, and are available online to anyone, anytime. They frequently include course planning and evaluation tools along with thematic content. Open Course Ware initiatives range in scope from mirroring traditional classroom sized endeavours, to the emerging Massive Open Online Courses (MOOC) model, which enables large-scale participation by anyone with internet access.

2) **OER Publishers:** The rapid rise in the cost of textbooks, combined with the high demand for affordable alternatives, has led to the emergence of new open publishing efforts for textbooks and other OER. This category also includes initiatives geared toward developing specific collections of OER, such as Khan Academy and Saylor Foundation.

3) **OER Repositories:** Digital repositories have evolved into a convenient place to find, share and remix OER from a variety of sources. They range in scope from portals and gateways that provide access to information on OER and aggregated content resources to institutional repositories with source content and tools to develop OER.

4) **Publicly-Funded Initiatives:** Increasingly, policymakers in some governments are developing policies that encourage the creation and adoption of OER. Approaches vary from directly funding the creation of OER to conditioning researches that require that any education resources produced as a result of that funding be made openly accessible to wide readership.

There are three main strategies that can be used to promote OERs:

1) **Supporting OER adoption -** OER are available in a wide variety of subjects and course levels, yet many educators are not aware of these resources or do not know where to find them. Students, professors, librarians, and administrators can help spread the word to other educators and advocate adoption of OER whenever appropriate.

2) **Supporting OER development** - Frameworks for creating, vetting and evaluating the efficacy of OER are evolving. Institutions, foundations and governments can support this process by offering funding and resources that can pay authors, reviewers and researchers. Educators, authors and other experts can consider writing or reviewing OER materials, either through an existing initiative or starting one of their own.

3) **Advocating effective policies** - At the presidency or other levels, policy makers should ensure that all educational resources created with public funds are openly licensed as OER, and that they are released in technical formats that enable use, editing, and compatibility with multiple technical platforms. At the local level, policymakers should incorporate OER into professional development programmes, reward OER creation and adoption, and remove policy barriers and provisions in vendor contracts that interfere with OER use.

During the past several years, Open Educational Resources have begun to be developed across a wide range of subjects, in an increasingly diverse set of educational settings. Researchers, scholars, students, educators and librarians are being called upon to participate in an environment that is evolving quickly, and that poses new challenges and opportunities for the creation, sharing, review, and use of educational resources.

Enabling the efficient creation and widespread adoption of OERs will play a key role in ensuring that the scholarly communication system evolves in a way that supports the needs of scholars and the academic enterprise as a whole.

4.3. Sharing OERs for Dadaab's case

OERs help improve education across the globe. They are important for developing countries, where many students may not be able to afford textbooks, where access to classrooms may be limited, and where teacher-training programmes may be lacking. They are also important in wealthy industrialized countries, where they can offer significant cost savings.

For students, OERs offer free access to some of the world's best courses and even degree programmes. They can also offer huge cost savings as alternatives to expensive textbooks. In Dadaab campus, the text books are not only scarce but the nature of the education dynamics is very complicated. The international agencies here are mainly concerned with the provision of basic needs and teacher education and other higher education undertakings are new and are not on the priority list.

For teachers, ministries of education and governments, OERs provide free and legal access to some of the world's best courses. Educators can then adapt them to local languages and cultures and use them as a basis for innovation. At Dadaab, the courses are envisioned to be fully online and therefore the ability of the centre to host reliable network connectivity is paramount. At present York University and UBC are providing on site courses coupled with online presentations. But once everything is up and running, there is significant reduction on the costs of education. All one will need is reliable internet connection to be able to access the OER materials. The various universities on site at Dadaab will also have reduced expenditure in terms of travel and accommodation at Dadaab campus. The security agencies will be relieved on some duties like offering security escort to staff from consortium universities and hence will be able to focus on other areas of need. Equally, families who are struggling to meet their daily needs will not be constrained to send their children far away to universities that are costly, they only require proper ICT tools. In any case this is seriously constrained by the restrictions that the refugees have in the hosting countries. They are not allowed to move out of the settlement without proper permit and documentation. These are facts that have made them to feel that they are profiled every time the governments swoop on them outside the camps of Dadaab.

Whether one is a teacher or a student the importance of OERs is invaluable. Free information is a fundamental human right, and OERs make it possible for people of all ages and backgrounds to learn more about the world around them and access the tools they need to improve their lives and livelihoods. The education programmes at Dadaab makes it necessary for the students to be able to access OERs so that they are able to mitigate against the odds for the provision of quality education for refugees. Despite the challenges of access to education being a big issue of concern, OERs have been known to make immense contributions to humanity. Therefore, a few examples can serve to show that at Dadaab, some transformation to the community can accrue, thanks to OERs. One of the best examples of OERs is the MIT Open Course Ware (OCW) project, which makes the course materials from nearly all MIT courses free and available online.

Jean-Ronel Noel and Alex Georges, Entrepreneurs from Cité Soleil, Haiti, used OCW to develop solar-powered streetlights for some of Haiti's poorest communities. In their own words, "MIT Open Courseware was different because it explained things step by step. Using the Open Courseware saved us a lot of time and money."

Another good example is national legislation introduced by the government of Brazil to mandate that all educational materials produced with public funds be open-licensed. Dep. Paulo Teixeira, Brazil released the following statement about the decision: "I believe that the ones that receive all these amounts of public money have an obligation to the society to share the outcomes of their research and its development with the society who financed them, allowing the free use of such educational resources."

The World Bank has recently launched the Open Knowledge Repository, an online collection of World Bank publications released under Creative Commons licensing. Through the repository, their research and reports are published online for educators, researchers and students around the world. Rather than making their information only available to those who can afford to pay for it, now lecturers from any university need to incorporate reports and data from the World Bank into their classes. In addition, anyone with an interest in topics ranging from education reform in Africa like Kenya's FPE (Free Primary Education) to Afghanistan's opium economy challenges can now read the World Bank's reports on these topics online. This is purely due to OERs policy.

In the last several years, UNESCO has helped spur an international movement in support of OERs. The term Open Educational Resources (OER) was coined at a 2002 UNESCO Forum on the Impact of Open Courseware for Higher Education. UNESCO also hosts the *Open Training Platform*, a comprehensive database of more than 10,000 OERs designed to facilitate teaching, learning, and research. Developed by UNESCO's Communication and Information Sector, the Open Training Platform is searchable by subject and provides a central access point for capacity building in a wide variety of disciplines.

All of UNESCO's OER activities reflect our belief that universal access to high quality education is key to the building of peace, sustainable social and economic development, and intercultural dialogue. In short, there is belief that free access to information is a fundamental human right.

According to Asha and Stamenka (2015), the 2012 World Open Educational Resources (OER) Congress held in Paris brought together global governments, OER experts, NGOs, and educators to discuss and share the world's best examples of OER policies and initiatives. By leveraging the resources and knowledge of the international OER community, the Congress catalysed improvements in education across the globe. By forging new partnerships between major research universities, identifying new tools that will benefit learners in rural communities, and implementing OERs into national education policy. It was expected that the annual Congress would have significant impact far beyond Paris. Once national governments enforce OER availability to all, the greatest benefits will definitely go to the most deserving cases in the world and Dadaab of course is among the beneficiaries. The 2012 Congress that established the *Paris OER Declaration*, which called on governments to openly license educational materials produced with public funds sounds good news for Dadaab students if this was followed in letter and spirit. Students will be able to apply the 5Rs Framework (Retain, Reuse, Revise, Remix and Redistribute) for academic excellence at Dadaab and beyond.

5. Conclusion

During the last few decades technology has caused a lot of changes in our lives socially, politically and economically. What about in education, has education changed right along with the demands of the society?

With mobile technology, learning by the use of internet is seen to enhance quick acceptance and use of OERs. Presently information can be shared through twitter, skype, voxy, google earth, whatsapp, facebook and many other social media platforms. These platforms can easily be used in and outside of formal educational settings. Current location can be transformed into classroom.

We strongly believe that, if used appropriately and meaningfully and combined with effective teaching strategies, ICT helps learning to be active, engaging, and fun for the Dadaab students. Therefore, we should all be the facilitators of these opportunities so that our students can learn in a meaningful way and can self-actualize their dreams just like Lupita Nyongo said while accepting her Oscar win in the role she played in the film "twelve years a slave" that it does not matter where one comes from, all dreams are valid. If we do that, students will not only contribute to their future, but define and lead it as well. In this amazing BHER programme, the understanding of the importance of ICT that will provide students with training, education and access to digital learning tools like OERs will certainly have a distinct advantage over the others who disregard them. Therefore the common front for success relies on the 4As of ICT and even OERs: Availability (no matter where one is disadvantage is eliminated), Access (barriers removed as far as possible), Acceptability (relevant, current in content, equitable and fair), Adaptability (responds to the needs and best interest of users and even account for local variations). The use of ICT has the potential to distribute opportunities for learning more widely and equitably across the globe. It can also improve the quality and variety of the resources and support available to learners, opening up new avenues to individual development. If social justice is to be achieved however, in terms of equity of educational opportunity and services, the provision needs to be planned in ways that make it available, accessible, acceptable, and adaptable to all.

References

Asha, K. and Stamenka, U. T. (2015). *A basic guide to open educational resources (OER).* United Nations Educational, Scientific and Cultural Organization: Paris.

Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy 2000. *Education Policy Analysis Archives,* 8(1): http://epaa.asu.edu/epaa/v8n1/

Hanushek, E. A. (2005). Economic outcomes and school quality 2005. Paris and Brussels: The International Institute for Educational Planning (IIEP) and International Academy of Education (IAofE).

Noam, A. (1995). *Vision for the future. Information and computer technology implications. Consultant report.* Pretoria: Unisa.

OECD (2005). *Teachers Matter: Attracting, developing and retaining effective teachers.* Organisation for Economic Cooperation and Development: Paris.

Rivkin, S., Hanushek, E. and Kain, J. (2005). Teachers, schools, and academic achievement. *Econometrica,* 73(2): 417-58.

UNESCO Institute for Statistics (2006). *Teachers and Educational Quality: Monitoring global needs for 2015.* UNESCO, International Institute for Educational Planning: Montreal.

Useem, L. (1999). Computers in education in developing countries: Why and how? *Education and Technology Series,* 3(1): 1-14.

Verspoor, A. (2004). *The challenge of learning: Improving the quality of basic education in sub-Saharan Africa.* Association for the Development of Education in Africa (ADEA): Paris.

Vignoles, S., Levacic, H., Machin, G., Reynolds, B. and Walker, A. (2000). Technology acceptance and social networking in distance education. *Educational Communication &Technology,* 16(4): 60-71.

Appendix A: List of abbreviations and acronyms used
BHER –Borderless Higher Education for Refugees
CNN – Cable News Network
COL - Commonwealth of Learning
DRM - Digital Rights Management
DVD – Digital Video Disc
EFA – Education for All
InSTEP - Increased access and Skills for Tertiary Education
ICT – Information Communication and Technology
IPR - Intellectual Property Rights
MDG – Millennium Development Goals
MIT - Massachusetts Institute of Technology
NGOs – Non Governmental Organisations
NSN - New Scholars Network
OCW - Open Course Ware
OERs – Open educational Resources
SDG – Sustainable Development Goals
TESSA - Teacher Education in Sub-Saharan Africa
UBC – University of British Columbia
UNESCO – United Nations Education Scientific and Cultural Organisation
UNHCR – United Nations High Commissioner for Refugees
WUSC - World University Service of Canada