

Opportunities and Challenges for Open Educational Resources and Massive Open Online Courses: The Case of Nigeria.

Babatunde Ipaye, and Christiana Bamidele Ipaye
Educo-Health Project, Ilorin, Kwara Nigeria

Abstract:

The last few decades have seen a phenomenal increase in the provision of higher education in almost all parts of Africa. Higher Educational Institutions, HEI, have been on an upward progression. Besides publicly funded HEI, private-sector participation in the provision of HE has increased and this includes for-profit and not-for-profit organizations, public-private partnerships, international and intergovernmental agencies. In Nigeria, for example, the number of universities has increased from 41 in 1998/1999 academic year to 125 in the 2011/2012 academic year. Private universities rose from three in 1999 to 50 in 2012 and the NUC has decided to license more private universities in 2013. In addition, some individuals within the country are already planning to float a completely on-line HEI, hoping to take advantage of the rapidly increasing access to the Internet, World Wide Web and whole range of fast and intelligent ICTs. Many of such would-be providers hinge their hope for study materials on the fact that educators, academics etc are now prepared to share their life experiences and knowledge, with others, through a variety of social media, Wiki educator and particularly the Open Educational Resources, OER. In fact, some are planning to latch on to the Open Educational Resources University, OERu. This paper examines the opportunities as well as the challenges of OER in relation to higher education in a developing country like Nigeria, a country where for the past two decades, the conventional universities have not been able to absorb more than 12% of the qualified applicants each year. In doing so, this paper investigates the extent of awareness and use of, as well as willingness to adopt OER in the country. It also tries to find out if there are any OER policies at the governmental and institutional levels and what such policies are focused on. The paper also looks at the most recent development in on-line education, i.e. the Massive Open Online Materials, MOOCs and what it means for higher education in Nigeria. It ends with some recommendations, not only for Nigeria but also for developing nations generally.

Keywords: open educational resources, distance education, higher education, MOOC, internet, social media.

List of Acronyms/Abbreviations

COL	Commonwealth of Learning
HEI	higher education institution(s)
ICDE	International Council for Open and Distance Education
ICT	information and communication technology/technologies
MOOCs	massive open online courses MIT Massachusetts institute of technolog
NOUN	National Open University of Nigeria
NPC	National Population Commission
NUC	National Universities Commission
OCW	open courseware (can also refer to OpenCourseWare at MIT)
OECD	organisation for Economic co-operation and developmen
OER	open educational resource(s)
OERTen	OER Tertiary Education Network
OERu	OER university
OLCOS	Open e-Learning Content Observatory Services
RETRIDAL	Regional Institute for Training and Research in Open and Distance Learning

Introduction.

As of February 2013, there were 128 universities in Nigeria. 40 of these are Federal, 38 are State and 50 are Private universities. The growth of universities, especially private universities, in Nigeria is very dynamic as it keeps increasing by the day. With the addition of three Federal universities early in 2013, every State of the Federation now has a Federal university and there is the probability that increases in this area may now stop. This is because the Federal government's policy is to have only one Federal university in each State, except where there are Federal specialized universities - such as universities of Agriculture, universities of Technology or open universities. Again, the increase of State universities may now slow; there are 36 States in the Federation, though a few States already have two or more universities. However, the National Universities Commission, NUC, the regulatory body for the growth and development of universities in Nigeria, has promised to license more private universities in the future; hence we should expect more private universities.

It is quite obvious that 128 universities is still too small a number for a country with a population of 150 million or more, 78.2% of which fall below the age of 35, indicating a rather youthful population. (NPC, 1997)[1] This argument is supported by the fact that for more than a decade now, the conventional universities all together have not been able to absorb more than a maximum, each year, of 15% of the total qualified candidates applying for enrolment in the universities. The simple reason for this has been that brick and mortar universities have limited carrying capacities. Yet there is a well-founded and widespread suspicion, if not fear, of distance education in the country - based on recent experiences with outreach campuses and part-time degree programmes.

Nigeria, through her higher education institutions, particularly the universities, wants to become a knowledge economy as well as a learning society. Becoming a successful knowledge economy is intertwined with the ability to become a learning society. A precursor to both, however, is a quality assured- based higher education system, as well as sustainability for the university as an academic community.

Saint et al (2004)[2] had indicated that Nigeria was one of the many developing countries that "have neither articulated a development strategy linking knowledge to economic growth nor built up their capacity to do so". Talking of taking advantages of the use and utilization of Open Educational Resources, OER, it could equally be said that Nigeria is one of the developing countries that had not yet started to fully explore the advantages of this movement for the development of higher education. MOOCs is a newcomer to the online scene yet it is making a rapid and forceful entry into the scene. What opportunities are there for Nigeria if she wants to take advantage of the OER movement as well as the rapidly growing clientele of MOOCs, and what are the challenges that may be faced in appropriating those opportunities? This paper tries to answer the question.

Open Educational Resources

The application of technology to education and the adoption of e-learning platforms is becoming increasingly prominent in tertiary education globally and Nigeria is not left out. However, most e-learning platforms and learning management systems available for educators and students are for commercial purposes. Many others are under proprietary systems. Many others still are under copyright. The implications of these restrictions are many, including among others: to use commercial materials you have to pay or subscribe to them; to use proprietary materials you need to obtain passwords to uncode or unlock them; and to use copyrighted materials you need to obtain express permission from the authors. Combined together, these dictate that although the materials are available on the web, they are not free, hence not every one can access or even use them. However, when Wayne Hodgins came up with the term, “learning objects” in 1994, little did any one know that he was starting a revolution in education -- as educators, instructional designers and others quickly picked up the term. Soon, the idea arose that digital materials could be so designed to make it easily re-usable in a number of teaching and learning situations. Soon after this, in 1998, David Wiley introduced another term, “open content,” which almost immediately became popular amongst internet users because of its importance and relevance in the introduction of the open publication license which was further improved upon with the introduction of the Creative Commons, CC.

This was followed almost immediately the same year, 2001, by the MIT OpenCourseWare, OCW, initiative, when MIT decided to put virtually all its courses for free public access *and* for noncommercial use.

All these developments between 1994 and 2001 impacted in various ways on the emergence of Open Educational Resources, OER, and in fact set the stage for a rapid expansion and ready acceptance of the OER movement.

These developments fascinated the UNESCO, which in 2002, held a global forum comprising those of like-mind with the desire to jointly develop “a universal educational resource available for the whole of humanity.” They chose the term “open educational resource” to describe their efforts and defined it as:

Open Educational Resources are defined as “technology-enabled, open provision of educational resources for consultation, use and adaptation by a community of users for non-commercial purposes”. They are typically made freely available over the Web or the Internet. Their principal use is by teachers and educational institutions to support course development, but they can also be used directly by students. Open Educational Resources include learning objects such as lecture material, references and readings, simulations, experiments and demonstrations, as well as syllabi, curricula and teachers’ guides. (see Wiley, 2006;[3] D’Antoni & Savage, 2009[4])

Open Educational Resources (OER) are digital materials that can be re-used or re-

purpose for teaching, learning, and research. They are made available free through open licenses. OER include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge. is one of the growing movements in education.

OER Practice in Nigerian universities.

In a three -day workshop hosted by RETRIDAL with support from COL at the National Open University of Nigeria in November 2012, the 30 participants drawn from about 10 universities including the National Open University of Nigeria, responded to a Questionnaire on OER. (see Ipaye, 2012) [5] Their responses, which formed the focus of another paper, indicated that less than 10% of the respondents had ever heard of OER. All participants indicated that there were no official references to OER in their universities, there was no OER policy and no funding was provided for the development of OER. This revelation about the current status of OER in Nigerian universities may be shocking, yet it could be said that 10 out of 128 may be too small a sample size. This notwithstanding, two Nigerian universities, University of Ibadan and University of Jos, were listed on the OER Africa website as members of the Partnership for Higher Education in Africa Education Technology initiative (PHEA ETI). It was in fact indicated that there had been some workshops on OER at the university of Ibadan in September 2010 run by SAIDE, the initiator of OER Africa.

The finding however supported the finding by Okonkwo (2012) [6] who, in a study to assess “the needs, readiness, and willingness of ODL professionals from two dual-mode universities in Nigeria to deploy OER in teaching and learning” found that “educators have not really embedded OER in teaching and learning, but they are very eager to be trained in the rudiments of OER and wish to employ them thereafter”. Both studies, Okonkwo’s (2012) and Ipaye (2012) were clear indications that Nigerian universities do not yet know much about OER and thus the opportunities that could accrue from its use.

How can Nigerian universities benefit by harnessing OER?

There has been the dire need to improve the quality of education and make university education more effective and efficient in Nigeria. The OER community has argued that OER has the potential to contribute to improving the quality and effectiveness of education. Also, as a web-based material, and with the current role of ICT in education globally, OER is most likely to help tackle the problem of access to higher education.

One of the ways of improving quality and effectiveness of education is development of quality teaching and learning materials, thus leading to the provision of an improved academic environment, which will in turn contribute to more productive staff and students. The current teaching style in the universities is mostly that of a sage on the stage whereas with the use of OER, students could become active participants in educational processes, thus boosting their learning by doing and creating, rather than passively reading and absorbing. According to COL, (2011) [7] “Content licenses that encourage activity and creation by students through re-use and adaptation of that content can make a significant contribution to creating more effective learning environments”. OER could also help in the development of capacity of academic staff in study materials

development, course design, and research, thus helping them to acquire the habit of collaboration and building on common intellectual capital, rather than duplicating similar efforts". While it has been argued that the effectiveness of OER depends on the procedures put in place by the institution, it has equally been suggested that OER can transform the educational system and practices by:

1. Improving the quality of learning materials through peer review processes;
2. Reaping the benefits of contextualization, personalization and localization;
3. Emphasizing openness and quality improvement;
4. Building capacity for the creation and use of OER as part of the professional development of academic staff;
5. Serving the needs of particular student populations such as those with special needs;
6. Optimizing the deployment of institutional staff and budgets;
7. Serving students in local languages;
8. Involving students in the selection and adaptation of OER in order to engage them more actively in the learning process; and
9. Using locally developed materials with due acknowledgement.

The transformative potential of OER also includes the benefits of sharing and collaborating among institutions and countries, and the creatively disruptive role of OER in opening up new educational models.

(see COL, 2011, [7] Kanwar and Uvalic'-Trumbic, 2011, [8])

CC-BY-SA (share alike with attribution) <http://creativecommons.org/licenses/by-sa/3.0>

Opportunities for Nigerian universities:

The OER literature contains myriad opportunities and potentials afforded by the OER movement for different stake holders - both for the conventional face-to-face teaching and learning situation and for those involved in distance education, including open and distance learning. (OECD, 2007; [9],

For Nigeria, we shall mention just a few without discussing them in any details.

The OER movement can help Nigerian universities and other higher education institutions keep up with most recent developments and practices in HE globally, especially since globalization and technology will continue to shape the growth and development of education across the world in the foreseeable future.(OECD, 2007).[9] Nigerian universities need to bite into this.

For both teachers and learners, and other stakeholders, OER will help make educational resources more available and accessible. Nigeria already has an IT policy but she needs to link OER to this for the advantage of her universities and HEIs. Many of the private universities recently licensed are finding it difficult to build and equip robust libraries as well as acquire learning resources. The various approaches by the OER-movement - like the MIT-OCW and others - could be used to support teaching and learning activities in our HEIs especially where there is reported shortage of academic staff.

A recent report by a 10 man committee set up by the Federal Government indicated as of November 2012 that a

“study of 61 universities out of the existing entire 74 public universities in the country unequivocally determined that there is a shortage of lecturers with Ph.Ds, as only 43 per cent of lecturers nationwide hold the qualification, instead of the expected 100 per cent”. (*Wale Shokunbi, The Sun Newspaper, November 12, 2012*). OER may stand in the gap. OER can also get Nigerian universities to appreciate more the value of collaboration, resource sharing, redistribution and re-mixing.

OER could help in improving the research abilities and capacities as well as increasing the research output of Nigerian academics. A Government Task Force found that in 1995, Nigeria's number of scientific publications was 711 – significantly less than its output of 1,062 scientific publications in 1981 by a comparatively much smaller university system (TASK FORCE 2000).[12]. In contrast, scientific publications were 3,413 for South Africa, 14,883 for India, 310 for Indonesia, and 5,440 for Brazil (TASK FORCE 2000). The country's low research output probably reflects the low priority accorded to research and development, not only by government decision-makers, but also by university administrators. For example, Nigeria's federal university system spends only 1.3% of its budget on research (HARTNETT 2000) [13]. OER is likely to change this trend for better

We can link these with aspects of the definition of OER. To fully comprehend our discussions of the opportunities available for the use of OER in a country like Nigeria, we need to further look at Downe's explanations of the definition of OER. Downe (2008) [14] argued that 'access' is the most important component of the definition of OER because “ Fundamental to a resource being open, ... is the ability of anyone to access it...”. “Use” is equally important because we need to be able to use the resource; we need also to be able to 'modify' and 'remix' the resource and then the freedom "to share copies of the original content, your revisions, or your remixes with others."

The opportunity to 'access', 'use', 'modify' and 'share' is quite an immense one. For access and to access, OERs are typically stored in databases, or repositories. Each institution that creates OERs usually also stores their materials in their own database, sometimes called a "learning object repository". Making OERs accessible to indexing engines like the COL Knowledge Finder, ...is critical to enabling educators to quickly find and download resources. (*Karen Speirs, 2006*).

The purpose of the word 'freely' in the definition is intended to stipulate that the resource may be accessed without conditions. This, by the definition, means without payment. (Downe, 2008)

For use and to use, OER is available to 'anybody', and as Downe (2008) argued, “Though typically omitted from accounts of OERs, the reference to 'anybody' is important. “Anybody” here refers not only to education providers, not only to teachers, not only to enrolled students, but to *anybody*, the entire population of humans”. D'Antoni and Savage, (2009) had added the point that “OER is in fact the nexus of a range of efforts that address the need to 'unlock knowledge' and open access to knowledge for all”.

For both access and use, “Computers, bandwidth, tools and implementation resources are critical to this development because they allow open content to be accessed and used. For example, teachers have to be able to search for potentially useful resources, and these

resources need to be in formats that enable them to be adapted and reused. The Creative Commons license ... makes resources legally available for adaptation and reuse.

(*Speirs, 2006*)

Nigerian universities, like all others globally have the opportunity to modify OER materials, remix, re-use and adapt for their lectures, research and other academic purposes. Equally important is the opportunity to share both among themselves, as well as with their students who through OER, can have free access to courses from some of the world's best universities. OER can also offer students huge cost savings as alternatives to expensive 'handouts' and textbooks.

To further appropriate these opportunities, Nigerian universities should take a deeper look at the suggestion by COL(COL, 2011, Kanwar and Uvalic'-Trumbic, 2011) on the need for institutions to make some policy reviews. These reviews pertain to setting clear policies on intellectual property rights, IPR, "policy guidelines regarding whether or not the creation of certain kinds of work (e.g. learning resources) constitutes part of the job description for staff and what the implications are for development, performance management, remuneration, and promotion purposes"; enabling the staff access to and use of the internet and required technologies; and guidelines for development, selection, as well as copyright clearance of their work. The policy must also contain clear guidelines and steps for rewarding staff involved in creation and development of OER. Equally interesting but important are the guidelines suggested in the same document (COL, 2011).

Challenges to the development and use of OER in Nigerian universities.

For most universities in developing nations especially Nigeria, the introduction of OER and related technological practices creates a number of challenges. These challenges are attitudinal, technological, financial, pedagogical , advocacy and cultural.

Attitudinally, it is obvious that many Nigerian academics would want to know more about OER before launching out to embrace it. Lack of awareness of OER by Nigerian academics, therefore, could be a major challenge. There is the issue of ignorance, - Ignorance of OER by many Professors and young academics, and yet the unwillingness of many of the elderly Professors, (60 and above) to want to learn . It is difficult getting the elderly Professors to develop a mindset towards the application and adoption of OER, though interestingly, many of them are willing to submit their publications and academic work to be used as OER. In fact there was the case of an old Science Professor who was willing to get the publishers of his work to relinquish the copyright so they could in for OER.

Technological challenges could be in various forms. There are those who lack digital literacy, there is the huge degree of digital divide within the university system, there is the group who do not have or can not own computers and laptops. Related to this is the issue of those who lack OER skills for the production and use of OER and those who

because of digital illiteracy could not search for OER on the web. Further, there is a general ICT infrastructural problem in the country. The cost of computers is still high, there are broadband issues and the non-availability of internet connectivity. Though many universities are making efforts to provide Professors with computers and laptops, yet the problem of connectivity may persist longer than we can see. Electrical power is a major problem in Nigeria and this has implications for technology use.

Financial challenges relate to the inability to source funds for the production of OER materials. Universities in Nigeria have not started funding the production of OER and academic staff said they are not rich enough to raise personal funds for such exercise. No Nigerian university as of now has an official policy on OER and the Research committees of many of our universities do not know about OER, let alone allotting funds for research in that area.

Pedagogical challenges relate to the unwillingness of Professors and young academics to use OER. This is understandable since many of them do not know about OER. No academic staff claimed to be researching on OER, none claimed to have referred his or her student to any OER material

Cultural challenges relate to the culture of teaching and learning in Nigerian universities. Lecturers in most cases dictate their lecture notes which the student often than not memorize. In many universities, a rather sad development in the last two decades or so is the problem of “handouts”. The dearth, scarcity and high cost of text books experienced in the country has led to the emergence of “handouts”, i.e. the summarized or condensed form of the lecturer’s lecture notes collated in print form and compulsorily sold to all students registered for the course. This had taken the place of textbooks to the extent that if a student claimed to have a textbook for the course, the lecturer will still expect the student to buy the ‘handout’.

Advocacy is a challenge in the sense that few universities if any are providing information, training and exposure to OER. But more important is the role of the regulatory body and government in providing advocacy. The National Universities Commission, NUC, for example is at the verge of organizing workshops on OER for staff of Federal universities and dual-mode universities. (Ramon-Yusuf, personal telephone discussions, February, 2013). The problem of ignorance apart, there is also a general lack of deeper understanding as to what the real advantages and potential of OER can contribute to teaching and learning in the university and in fact to the whole higher educational eco-system.

Massive Open Online Courses (MOOCs).

MOOCs is the acronym used to describe “Massive Open Online Courses.” It came onboard the on-line learning hemisphere in 2012 (see Daniel, 2012 [16] and since then it had been making waves as many people, university teachers, students, and even people far removed from the actual work of teaching or learning at the university have developed some obsession for it.

Massive open online courses are attempts to create open-access online courses that provide no constraints on class size. They run over a defined period of time, are self-managed by groups of learners and teachers, there are no formal entry requirements. MOOCs are open to all, and some offerings take the form of free courses based on existing university teaching materials freely available online, with computer marked assessment and certificates of completion. MOOCs has no regard for class size as some courses have engaged over one hundred thousand participants. MOOCs can be purely informal offerings, or opportunities for independent learning aligned to a formal course, or semi-formal courses offered by an institution for informal certification. (see Sharples et al, 2012) [17]

Writing in the February 18, 2013 edition of the *Online Colleges, Open Academic*, Rooney [18] said,

“The **big news** in online higher education last week was the American Council on Education (ACE) announcement that five massive open online courses (MOOCs) offered by Coursera should be accepted for credit by colleges and universities. The courses were created by Duke University, the University of California at Irvine and the University of Pennsylvania; all are basic or introductory courses in math and science”. (<http://www.onlinecolleges.net/2013/02/18/the-pros-and-cons-of-moocs-for-credit/>)

The point here is that MOOCs are rapidly becoming a force within education, and no country can afford to be left out in appropriating the benefits. Supporters of virtual learning argue that it is the wave of the future, destined to broaden access to higher education for millions of people across the world. They point out some specific benefits:

- **Unlike many education reforms aimed at reducing costs for students, MOOCs really do lower costs.** They are generally “free” in the sense that students do not need to pay Coursera or the other big MOOC providers to take the course. However, if a student needs to prove course completion, for example for employment, they need to pay for a certificate of completion. Now that ACE has deemed certain courses credit-worthy, students can also take a fee-based proctored exam that will allow them to transfer the Coursera credits to any colleges and universities that will accept MOOC credits.
- **Quality has improved.** In terms of quality, it was observed that the approved courses are created by thoroughly qualified scholars. She spoke with the director of open-course initiatives at the University of Pennsylvania about his faculty, and he said of one professor’s course, “Once [Ghris] has prepared a Coursera course, he doesn’t go back to teaching calculus the same way.” A student named Amy confirmed this in a [comment](#) on *The New York Times* “The Choice” blog that in

one course she took “the science was not dumbed down. The instructor clearly loves teaching, and the class was fascinating. I found the material challenging (and I have a BS in chemistry) and the class engaging. I got more out of it than some of my classes at brick-and-mortar schools.” (see Landry, 2012) [19]

Opportunities for Nigerian universities to use MOOCs

Though all Nigerian university students could be said to be internet migrants today, and in spite of the various technological challenges, Nigerian university students are becoming much more familiar and at home with technology and the computer. There is virtually no university student without a cell phone, and the majority of them have cell phone that can browse. Also, many have laptops. Nigerian university teachers therefore need to stop seeing students interacting with the computer and using the internet as a threat, but try to turn such a behaviour into an asset. This could be done by assigning their students online course work, introducing them to MOOCs, getting them to share information online, getting them to do collaborative reading and work on MOOCs, helping them identify relevant MOOCs which they can use to enhance their class work. Credit transfer between universities in Nigeria is not yet standard practice, but students can gain from MOOCs while completing their assignments and projects etc. Professors and young academics too can benefit from browsing through some MOOCs and using materials there to improve their lectures and course delivery.

Conclusions:

The view expressed in this paper is that Nigerian universities have lots of opportunities to apprise, use and even join in the creation of OER materials and that both staff and students can benefit from the rapidly developing system of MOOCs. Though we mentioned a few challenges, we could not go into the discussions of how to tackle those challenges. It is worth mentioning however that there is need for lots of capacity development in the creation and use of OER and there is also need for copious advocacy in the use of both OER and MOOCs. MOOCs with its no class-size limits may in fact be one of the ways to go in handling large classes in Nigerian universities.

Ipaye (2012) had suggested a number of things that could be done to promote OER and in fact MOOCs in Nigerian universities. He referred to them as “the future of OER in Nigeria”. Some of his suggestions are briefly mentioned below.

- Publicity, Awareness and Advocacy: He suggested the need for an aggressive publicity and advocacy to create awareness of OER amongst universities and their academic staff.
- Using OER: Staff should be encouraged to use OER both in the development of lecture notes, in teaching and in their research. They should also be encouraged to refer their students to OER materials as further resource materials.

Training: to be able to use OER and get their students to do so, academic staff need to be trained on how to create OER materials, how to find OER materials and how to use OER generally.

- Research : OER could be a very useful research source for staff and students especially in the areas of literature review, methodology adopted by earlier researchers on the topic and in fact the aspects of analysis
- Getting colleagues to use: Academic staff who already know about and can use OER should be encouraged to motivate their colleagues to do so and in fact help to train their colleagues
- Getting our students to use: Once staff know about and can use OER, they should be encouraged to get their students to find, use and adopt OER materials. Further, they should encourage and motivate their student to submit their assignments, projects etc for OER uploading in the university's database or website.
- Motivation and incentives: Universities should motivate staff to develop interest in the use and creation of OER by providing some incentives either in terms of funding such work or crediting such work based on agreed parameter, to the promotion of staff.
- Institutional policy: there is need for universities to develop policies on OER spelling out the benefits and procedures etc. Further, universities should spell out what is accepted practice in terms of using MOOCs. Since credit transfer is not yet a popular practice among Nigerian universities, policy on MOOCs may for a start just allow staff and student to use such materials to further boost their study materials and resources for further reading.
- Getting Regulatory bodies interested: Regulatory bodies of HEIs in Nigeria should develop keen interest in OER as well as in MOOCs and device means of motivating universities and other HEIs to know more about and be willing to use and contribute to OER. A simple policy pronouncement from the regulatory bodies would go a long way in motivating universities and other HEIs to advert interest in that direction.
- Finally, he suggested that steps in promoting OER in individual universities could include creating OER group among staff and students, establishing OER movement cells, raising OER research groups and university management including OER as part of funded research.

References:

1. Nigerian Population Commission, NPC (1997) Information data on recent population.
2. Saint, Wiliam, Teresa A. Hartnett and Erich Strassner: (2004) Higher Education in Nigeria: A Status Report World Education News and Report Vol 17 Issue 5.
3. Wiley, David (2006): The Current State of Open Educational Resources Organisation for Economic Co-operation and Development Centre for Educational Research and Innovation Expert Meeting on Open Educational Resources
4. D'Antoni , Susan and Catriona Savage (eds) (2009): Open Educational Resources Conversations in CyberSpace
5. Ipaye, Babatunde (2012) Open Educational Resources in Higher Education in Nigeria.
A three day workshop on OER in HEI in Nigeria facilitated by Ipaye and hosted by RETRIDAL/COL, at the National Open University of Nigeria, Lagos. Nov 5 – 7, 2012
6. Okonkwo, Charity Akuadi (2012): A needs assessment of ODL educators to determine their effective use of open educational resources . IRRODL Volume 13, Number 4, pp 293 - 312
7. COL (2011): Guidelines for Open Educational Resources (OER) in Higher Education. Commonwealth of Learning.
CC-BY-SA (share alike with attribution) <http://creativecommons.org/licenses/by-sa/3.0>
8. Asha Kanwar and Stamenka Uvalic´-Trumbic´ (2011) A Basic Guide to Open Educational Resources (OER) Prepared by Neil Butcher for the Commonwealth of Learning & UNESCO
9. OECD, (2007): Giving Knowledge for Free. The Emergence Of Open Educational Resources Centre For Educational Research And Innovation 12. Task Force on Higher Education and Society. (2000). *Higher education in developing countries: peril and promise*. Washington, D.C.: The World Bank. 135 pages.
13. Hartnett, Teresa. (2000). *Financing trends and expenditure patterns in Nigerian federal universities: an update*. Unpublished report. Washington, D.C.: The World Bank. 85 pages.
14. Stephen Downes, (2008): Open Educational Resources: A Definition.
15. Speirs, Karen (2006) What are Open Educational Resources? (October 2006)
16. Daniel, Sir John (2012): making sense of MOOCs: Musings in a Maze of Myth, Paradox and Possibility. Essay submitted for Education – De Tau Masters Academy, China.

17. Sharples, Mike Patrick McAndrew, Martin Weller, Rebecca Ferguson, Elizabeth FitzGerald, Tony Hirst, Yishay Mor, Mark Gaved, Denise Whitelock (2012) *Innovating Pedagogy 2012: Exploring new forms of teaching, learning and assessment, to guide educators and policy makers*

18. Rooney, Jill (2012): *The Pros And Cons Of MOOCs For Credit*

19. Lauren Landry (2012): *The Side of Online Education No One's Talking About: The Downside* *Posted in Coursera, EdX, Khan Academy, Len Schlesinger, Online Learning, Udacity.. July 29th, 2012 by*

Rossini, Carolina(2010): Access to Knowledge as a Foundation for an Open World

EDUCAUSE Review, vol. 45, no. 4 (July/August 2010): 60–68
(<http://creativecommons.org/licenses/by/3.0/>)

Rowenhorst , Terri (2009): *Practical Applications of Open Educational Resources - Terri Rowenhorst*

D'Antoni , Susan (2012): *A world map of Open Educational Resources initiatives: Can the global OER community design and build it together?*
DRAFT Summary report of an international conversation: 12 – 30 November 2012

Ekundayo, Moyosore Samuel , & John Moyo Ekundayo (2009): *Capacity constraints in developing countries: A need for more e-learning space? The case of Nigeria* *Proceedings ascilite Auckland 2009: Ascillite, Auckland*
<http://www.ascilite.org.au/conferences/auckland09/procs/ekundayo.pdf>

Vaidhyanathan, Siva (2012): *What's the Matter With MOOCs?*
July 6, 2012, 1:50 pm