**Final Report for Hewlett Foundation Grant # 2009-4796, 2010-2011 African Health OER Network**
University of Michigan and Partners, November 16, 2009 – November 16, 2012

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Executive Summary
The objective of the African Health Open Educational Resources (OER) Network ("the Network") is to strengthen the intellectual and policy infrastructures within and between African health training programs through gathering existing openly licensed materials, adapting and creating new materials, distributing those materials worldwide, and facilitating dialogue around health education. Founding partner organizations of the Network include University of Michigan (U-M), the OER Africa (OERA) initiative of the South African Institute for Distance Education (Saide), Kwame Nkrumah University of Science and Technology (KNUST), University of Ghana (UG), University of Cape Town (UCT), and University of the Western Cape (UWC).
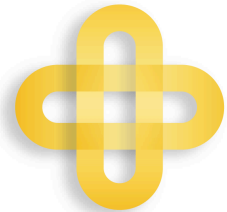
Since 2009, we have developed and refined models of collaboration and sustainable OER use and adaptation that can be adapted in other regions of the world. Through joint training, co-authorship of learning materials, and the integration of simple free or low-cost technologies, the African health institutions have successfully created multimedia-rich learning materials that were lower cost and more contextually relevant than previously available educational resources. We have already seen numerous examples of OER developed that has been used, translated, or otherwise adapted by students and instructors at institutions in other countries.[2] Lastly, we have strategically expanded the Network to include additional African institutions.

Since 2010, at least three of the African partners universities have enacted practices and polices to try to incorporate OER into the activities of the respective universities. At one institution, OER has been incorporated into regular job duties for three multimedia specialists. Another institution is able to keep salary costs low by pairing OER authors and media specialists with student volunteers and national service, who provide multimedia support as part of class projects. Several institutions have included or plan to integrate an open license clause in future health education grants that include materials development.

Following the grant end, U-M and Saide have committed to maintain the two African Health OER Network websites, the quarterly newsletter, and the three interest groups related to OER (senior health leadership, technology and multimedia support staff, and student engagement and copyright).

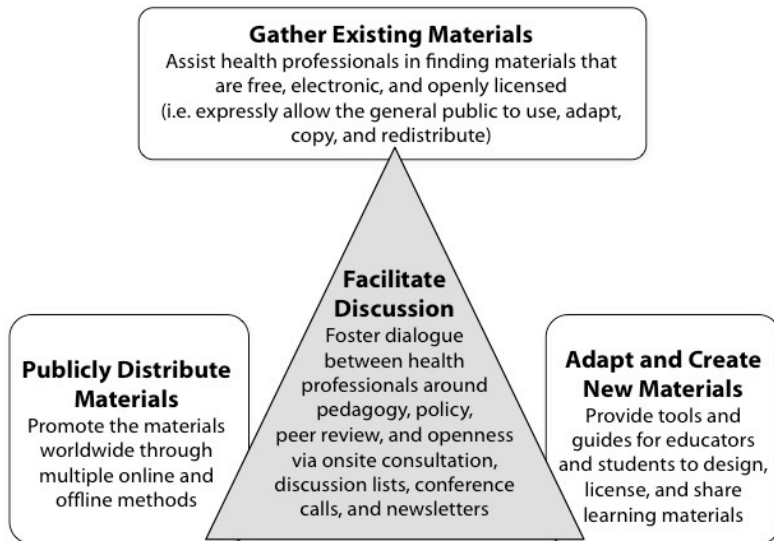Featured outputs from the Network include:
- Primary Network website: http://www.oerafrica.org/healthoer
- Learning materials: http://openmi.ch/healthoernetwork (U.S. server) or http://www.oerafrica.org/healthoer/FindOER/tabid/1862/Default.aspx (South Africa server)
- Video collection: http://openmi.ch/healthoernetwork-videos
- Search service for health OER: http://openmi.ch/request-health-OER
- How-to guides for creating OER: http://openmi.ch/healthoer-guides
- Quarterly newsletter: http://openmi.ch/healthoernetwork-newsletter
- Communities for health OER: http://openmi.ch/healthoernetwork-connect
- Services list: http://openmi.ch/healthoernetwork-services
- Publications, Evaluations, and Reports: http://openmi.ch/healthoernetwork-reports

Activities and Outputs
In 2009, our grant proposal centered focused on seven themes: network building, advocacy, institutional

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[2] http://openmi.ch/blog-ahon-remixes

Gather Existing Materials
Assist health professionals in finding materials that are free, electronic, and openly licensed (i.e. expressly allow the general public to use, adapt, copy, and redistribute)

Facilitate Discussion
Foster dialogue between health professionals around pedagogy, policy, peer review, and openness via onsite consultation, discussion lists, conference calls, and newsletters

Publicly Distribute Materials
Promote the materials worldwide through multiple online and offline methods

Adapt and Create New Materials
Provide tools and guides for educators and students to design, license, and share learning materials

engagement, dScribe process refinement, dScribe services, search and discovery, and evaluation and impact analysis. During implementation, we realized that our activities could be grouped into four broad categories (see figure 1). For consistency with previous interim reports, this report is structured according to the seven activity themes.

Figure 1 Programmatic Approach for the Network

Network Building
  a. U-M and OERA responded to requests from individual African institutions for workshops consultation, and joint OER creation and adaptation projects, including University of Malawi (UNIMA) Kamuzu College of Nursing, Muni University School of Nursing (Uganda), St. Paul Hospital Millennium Medical College (Ethiopia), the Ethiopia Federal Ministry of Health, and Haramaya University Colleges of Health and Medical Sciences (Ethiopia).
  b. U-M and OERA engaged several existing health associations to expand the Network community. The most successful outreach has been with the East Africa Higher Educational Alliance for Leadership through Health (HEALTH Alliance), which consists of seven Schools of Public Health. The HEALTH Alliance is working towards developing a standardized curriculum for a Master of Public Health (MPH) across the member institution. Our engagement to date has included: three policy and content development workshops, published modules for disaster management[3] and health leadership,[4] OER modules underway in three courses (research methods, epidemiology, and health promotion), and a proposal for process of sharing and funding required to complete the MPH and its packaging as OER. Additionally, U-M and OERA have conducted OER presentations and workshops with the U.S. National Institutes of Health Medical Education Partnership Initiative (MEPI) and OERA supported the creation of a website for the African Medical Schools Association.[5]
  c. U-M and OERA facilitate multiple communities to share expertise between institutions, including interest groups for senior health professionals, technology support staff, and students. This includes three mailing lists and corresponding periodic community calls: a Health OER Tech forum to connect individuals involved in technology and multimedia support for OER,[6] a Partners Forum to engage senior health leadership,[7] and a dScribe forum to discuss copyright clearance and student engagement.[8] U-M facilitated annual in-person workshops to bring together the Health OER Tech group, one in 2011 to bring together 13 technologists in Ghana[9] and a follow-up in 2012 that

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[3] http://openmi.ch/disaster-mgmt
[4] http://openmi.ch/health-leadership
[5] http://www.amsaafrica.org/
[6] http://groups.google.com/group/oer-tech/
[7] http://lists.nbaserver.co.za/cgi-bin/mailman/listinfo/healthpartnersforum
[8] http://groups.google.com/group/oer-dScribe/
[9] http://www.slideshare.net/tag/oerghana

included 22 individuals from 12 institutions across six countries.[10] The October 2012 Health OER Tech Africa workshop was the Network's first multi-country gathering of technology support staff for health OER, and we have already seen continued dialogue and reflections from participants.[11] OERA was also able to coordinate a face-to-face meeting of a subset of the Partners Forum in May 2011 as part of the OER Africa Convening in Nairobi, Kenya.[12]

    d. OERA and U-M co-author a quarterly newsletter,[13] which is distributed to 1036 subscribers. The newsletter regularly features guest articles from Network participants.

    e. Since January 2011, U-M and OERA have received and responded to 16 requests through the Health OER Request and Search service.[14]

    f. U-M and OERA authored case studies about OER at UNIMA, KNUST, UG, and UCT.[15]

2. *Advocacy*

    a. Network participants promoted open licenses through international conferences, organizational websites, mailing lists, publications, policy reviews, and invited presentations. In 2012, Network representatives presented at the Information and Communication Technologies and Development conference[16] and the World OER Congress and two of its corresponding regional forums.[17]

3. *Institutional Engagement*

    a. U-M and OERA provided ongoing mentorship on OER production, advocacy, and policy to KNUST, UG, UWC, and UCT through site visits, guides, email, and conference calls.

    b. KNUST, UG, and UCT have strong health OER initiatives with processes and some part-time and full-time staff in place. UWC School of Public Health is in the process of a curriculum review, of which OER is a core component, and is liaising with the central eLearning Development and Support Unit for technology support for health OER.

    c. UCT,[18] KNUST,[19] and UWC[20] have institutional OER websites. UG has an OER intranet site, which they plan to make public in 2013.

    d. KNUST passed a landmark institutional OER policy in August 2010 and finalized the text for it in May 2011.[21] UG experienced a change in vice chancellor, which stalled the OER policy initiated in 2009. The UG draft policy is currently at the third and final stage of review with the academic board. OERA and U-M consulted on both policies.

    e. To date, participating institutions have collectively developed 147 Creative Commons licensed learning modules: 59 in medicine, 33 in public and community health, 22 in pharmacology, 13 in informatics, 5 in research design, 4 in heath services administration, 3 in dentistry, 2 in behavioral sciences, 2 in ethics, 2 in nursing, 1 in pharmaceutics, and 1 physiotherapy. This includes 24 open textbooks and over 175 videos. Most of the resources are in English, but there are currently three multilingual modules: a gynecology surgery guide in Portuguese and English,[22] an occupational therapy module in English and Spanish,[23] and an occupational health module in English, Afrikaans, and Xhosa.[24]

[10] http://openmi.ch/oertechafrica2012notes

[11] http://blogs.uct.ac.za/blog/education-development-unit-fhs/2012/10/11/oer-humidity-and-making-new-friends

[12] http://www.oerafrica.org/OEREvents/OERAfricaConvening/tabid/1853/Default.aspx

[13] http://openmi.ch/healthoernetwork-newsletter

[14] http://openmi.ch/request-health-OER

[15] http://open.umich.edu/category/keywords/health-oer-case-study

[16] http://ictd2012.org/opensessions/306

[17] http://oercongress.weebly.com

[18] http://opencontent.uct.ac.za/

[19] http://oer.knust.edu.gh

[20] http://freecourseware.uwc.ac.za/

[21] https://creativecommons.org/weblog/entry/27355

[22] http://open.umich.edu/education/med/oernetwork/med/ob-gyn/vvf/2011

[23] http://blogs.uct.ac.za/blog/oer-uct/2010/11/12/from-uct-opencontent-to-a-journal-article

[24] http://open.umich.edu/education/med/oernetwork/med/family/clinical-skills-exam/2011

4.   *dScribe Process Development*

      a.   U-M has led multiple training workshops for OERA, KNUST, UG, UCT, and UWC in the dScribe model.[25] dScribe, a process created by U-M, is a participatory and collaborative model for creating open content. dScribes, short for digital and distributed scribes, are students, faculty, and other staff who work together to create content that is openly licensed and made freely available for other people to use. By distributing OER development tasks across a community of students, faculty, and other staff, costs are reduced as the effort and time required to develop and share OER are carried by a group of people.

      b.   U-M developed a paper-based activity to simplify the process of training others in how to legally and efficiently address copyright, privacy, and product endorsement issues in learning materials before making them publicly available.[26] This matching game has been used successfully with groups at two international workshops and two workshops at U-M.

      c.   U-M partnered with Peer to Peer University (P2PU) to adapt some training materials from dScribe process for new courses on the School of Open website. Three courses have been completed and have registered participants.[27] A fourth is in progress.[28]

5.   *dScribe Services*

      a.   U-M refined its training and pricing model for copyright clearance services based on continued experience of hiring and training bachelors and masters students as paid dScribes for large-scale publishing projects.

      b.   In 2012, U-M continued to provide part-time, paid dScribe support to the Ghana Emergency Medicine Collaborative[29] and volunteered dScribe Services for two HEALTH Alliance modules.[30]

6.   *Search and Discovery*

      a.   In 2011-2, OERA and U-M partnered with the U-M Library, Creative Commons, OER Commons, the Learning Registry, MERLOT, the GLOBE Alliance, and others to improve the OER and to investigate ways to improve search and discovery of health OER. OERA and U-M are currently sharing Network metadata with OER Commons, the GLOBE Alliance, and MERLOT.

      b.   The OER produced through the Network is distributed through multiple offline and online methods by the authoring institution, OERA, and U-M.[31] Depending on the license and content type, the resources may be hosted on the institutional website, an OERA server in South Africa,[32] the Open.Michigan server at U-M,[33] YouTube, Blip.tv, Internet Archive, Slideshare, iTunes U, and MedEdPORTAL. In 2012, the OERA Network website receives a monthly average of 7,000 visits, 19,489 page views, and 12,783 file downloads. The Network content on the U-M servers receives 1500 visits/month, which is 15% of the Open.Michigan site visits.

      c.   In October 2012, the African Health OER Network videos on YouTube surpassed 2.5 million views,[34] with visitors from nearly every country worldwide. An analysis of the over 1,720 ratings and over 360 comments and an average rating of 4.38 out of 5 reveals that viewers are finding the videos helpful.[35]

      d.   U-M has packaged some OER created by Network participants for offline distribution. U-M has shared over 530 sampler DVDs of Network content, 300 of which were distributed during two annual PEPFAR meetings. In 2011, U-M and UG converted and piloted an OER module for offline

[25] http://open.umich.edu/dScribe

[26] http://openmi.ch/dScribe_game_slides, http://openmi.ch/dScribe_game_labels

[27] http://open.umich.edu/share/practice

[28] http://p2pu.org/en/groups/dscribe-peer-produced-open-educational-resources/

[29] http://openmi.ch/gemc

[30] http://openmi.ch/disaster-mgmt, http://openmi.ch/health-leadership

[31] http://openmi.ch/AHON-distrib

[32] http://www.oerafrica.org/healthoer

[33] http://openmi.ch/healthoernetwork

[34] http://openmi.ch/healthoernetwork-videos

[35] http://open.umich.edu/education/si/resources/datadive/winter2012, http://openmi.ch/datajam-ahon-youtube

mobile distribution.[36] U-M is currently building on the sampler DVD concept to integrate a full collection of Network content with existing offline digital collections, such as eGranary[37] and the Rachel Server.[38]

    e. Several open textbooks from South Africa, Malawi, and Mozambique have been added to the University of Michigan Espresso Book Machine catalogue.[39] As a print-on-demand service, the Espresso Book Machine can be used to print, bind, and trim Creative Commons-licensed or public domain books in approximately 7 minutes, which can be purchased at marginal cost.

7. *Evaluation and Impact Analysis*

    a. Professor Ken Harley of the University of KwaZulu-Natal, the external evaluator, completed his 2010 report, from which a paper was published in August 2011 in a special issue of *Distance Education.*[40] In early 2011, a discussion of metrics for the impact evaluation was initiated.[41] By December 2011, OERA and U-M developed an impact research plan to reflect a revised understanding of how to promote OER to support health education in Africa, and how to demonstrate the impact of OER on the health sector, and when to expect various outcomes. Professor Harley's impact research report was completed in May 2012.[42]

    b. In 2012, U-M, KNUST, and UG published a joint analysis of the motivations and practices for OER production from scratch at KNUST and UG in a Commonwealth of Learning Book titled *Open Educational Resources and Change in Higher Education: Reflections from Practice.*[43]

    c. UCT and UCT co-authored a paper "Towards a Sustainable Inter-Institutional Collaborative Framework for Open Educational Resources" in book edited by Athabasca University titled *OER Knowledge Cloud*, due out in 2013.

    d. U-M has authored a paper titled "Lessons Learned about Coordinating International Inter-University Education Partnerships from the African Health Open Educational Resources Network," which is currently under review for a health sciences journal.

Progress toward intermediate and ultimate outcomes

The grant proposal outlined seven key outcomes envisaged from the project. The following progress has been made in achieving these outcomes:

1) *Reduced policy barriers to OER development and use* – The founding partner universities have made good progress enabling policies for OER: KNUST has adopted its OER policy; UG's policy is in the process of being endorsed; UCT is working on developing a specific OER policy, and its existing Intellectual Property Policy supports the release of research and materials under a Creative Commons license; and UWC has a free content/courseware policy endorsed by its senate in 2005.

2) *Trained community of health OER developers and implementers* – As detailed in the case studies, KNUST, UG, UCT and UNIMA have developed core teams of OER developers and implementers. UWC also has a core team of developers and implementers. At UCT, postgraduate students support OER development processes, and they have developed their own OER. Over 200 individuals have been trained in open licenses and materials development through workshops offered by U-M and Saide, with many more trained through workshops led by OER support staff at the partner institutions.

3) *Developed, shared and used portfolio of OER health education learning materials* - The Network participants have developed 147 new resources in different disciplines. These have been disseminated to other institutions through the websites, newsletter, sampler DVDs, and request facility.

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[36] http://openmi.ch/zwX75R

[37] http://www.widernet.org/egranary

[38] http://www.worldpossible.org/index.php?option=com_content&view=article&id=70&Itemid=89

[39] http://openmi.ch/ebm-openmichigan-collection, http://open.umich.edu/category/keywords/open-textbooks

[40] http://www.tandfonline.com/doi/abs/10.1080/01587919.2011.584848

[41] http://openmi.ch/ahon-impact-plan-draft

[42] http://www.oerafrica.org/healthoer/Home/FindOER/ResourceResults/tabid/1864/mctl/Details/id/39270/Default.aspx

[43] http://www.col.org/psoer

4) *Implemented visible and accessible engagement processes in health OER* - Several processes have been set up for engagement including invitations to participate in the three interest groups, to contribute guest articles to the newsletter, and to respond to requests submitted through the Request Facility. The case studies also provide models for replication and adaptation at other institutions.
5) *Understood the contribution OER makes to faculty productivity and student learning outcomes* – The impact research concluded that perceptions at the five core institutions are that OER is improving teaching and learning. Faculty members have embraced the opportunity to improve their teaching by developing their own teaching resources. Comments on YouTube by users of the video resources, most of them students, have indicated that the video resources are enhancing conceptual understanding of the topics presented.
6) *Understood and implemented best practices for inter-institutional collaboration in OER development and use* – Inadvertently, the focus was on firmly establishing OER activities within institutions and to this end, there has been significant intra-institutional collaboration between units at some of the institutions. However, inter-institutional collaboration has been weaker than hoped and it is hoped that institutional successes will encourage more inter-institutional collaboration through some of the emerging networks we have supported. The socio-technical collaboration research by U-M and UCT will direct us on how to strengthen inter-institutional collaboration going forward. The Health Alliance MPH core curricula project will also provide lessons on this model of inter-institutional collaboration.
7) *Refined an evidence-based, long-term logic model for Health OER* – The Impact Research plan developed by Saide and U-M provides detailed anticipated Network outcomes for the next 15 years classified according to stakeholders.

Lessons Learned

The major lessons learned were documented in evaluations and papers available on the Network website.[44]

Peer-Reviewed Publications

- Adanu, R.A. et al. (2010) Electronic Learning and Open Educational Resources in the Health Sciences in Ghana. *Ghana Medical Journal, 44*(4). Retrieved from http://www.ghanamedj.org/pastjournal.php?JID=25.
- Harley K. (2011) Insights from the Health OER Inter-Institutional Project. *Distance Education.* Volume 32, Issue 2. Retrieved from http://www.tandfonline.com/toc/cdie20/32/2.
- Hoosen, S. and KL Omollo (2010). The African Health OER Network: Advancing Health Education In Africa Through Open Educational Resources. *African Journal of Health Professions Education*, Vol. 2, No. 2, 2010. Retrieved from http://www.ajhpe.org.za/index.php/ajhpe/issue/view/3. License: CC BY-NC 3.0.
- Luo, A, Ng'ambi, D. and T. Hanss. (2010) Towards Building a Productive, Scalable and Sustainable Collaboration Model for Open Educational Resources. *Proceedings of the ACM 2010 International Conference on Supporting Group Work*. Retrieved from http://dx.doi.org/10.1145/1880071.1880117.
- Omollo, KL, Rahman, A. and C. Yebuah. (2012) Producing Open Educational Resources From Scratch: The Case Of Health Sciences At University Of Ghana And Kwame Nkrumah University Of Science And Technology. *PERSPECTIVES ON OPEN AND DISTANCE LEARNING: Open Educational Resources and Change in Higher Education: Reflections from Practice*. Commonwealth of Learning. Retrieved from http://www.col.org/psoer. License: CC BY 3.0.
- Ng'ambi, D. and A. Luo. (2013) Towards a Sustainable Inter-Institutional Collaborative Framework for Open Educational Resources. *OER Knowledge Cloud*. Athabasca University. Publication pending.
- Tagoe, N. et al. (2010) Beyond the first steps: Sustaining Health OER Initiatives in Ghana. *Open Ed 2010 Conference*. Retrieved from http://openaccess.uoc.edu/webapps/o2/handle/10609/4849. License: CC BY-NC-ND 3.0.

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[44] http://openmi.ch/healthoernetwork-reports

External Evaluations
- Harley, K. (2010) Health OER Inter-Institutional Project Formative Evaluation of Health OER Design Phase. Retrieved from http://open.umich.edu/education/med/oernetwork/reports/formative-evaluation/2009. License: CC BY 3.0.
- Harley, K. (2011) Phase 2 Evaluation of the African Health OER Network: Consolidation and Sustainability. Retrieved from http://open.umich.edu/education/med/oernetwork/reports/phase-2-health-oer-eval/2011/. License: CC BY 3.0.
- Harley, K. (2012) African Health OER Network Impact Study. Retrieved from http://open.umich.edu/education/med/oernetwork/reports/ahon-impact-study/2012. License: CC BY 3.0.

Other Papers and Reports
- Donkor, P. (2011) Developing and using Open Educational Resources at KNUST. *Digital Learning Resources*, *May 2011*. Retrieved from https://edutechdebate.org/digital-learning-resources/developing-and-using-open-educational-resources-at-knust/. License: CC BY-NC-SA 3.0.
- Luo, A. and KL Omollo. (2012) Lessons Learned about Coordinating International Inter-University Education Partnerships from the African Health Open Educational Resources Network. Publication pending.
- Luo, A., Ng'ambi, D. and T. Hanss. (2010) Fostering Cross-institutional Collaboration for Open Educational Resources Production. Retrieved from http://open.umich.edu/education/med/oernetwork/reports/oer-collab-report/2010. License: CC BY 3.0.
- Omollo, KL. (2011) Reflections on the past two and a half years of a collaborative African health OER project. Open CourseWare Consortium. http://open.umich.edu/education/med/oernetwork/reports/reflections-collaboration/2011. License: CC BY 3.0.
- Omollo, KL. (2011) Growing an Institutional Health OER Initiative: A Case Study of the Kwame Nkrumah University of Science and Technology. Retrieved from http://open.umich.edu/education/med/oernetwork/reports/case-study-knust/2011. License: CC BY 3.0.
- Omollo, KL. (2011) Growing an Institutional Health OER Initiative: A Case Study of the University of Ghana. Retrieved from http://open.umich.edu/education/med/oernetwork/reports/case-study-ug/2011. License: CC BY 3.0.
- Mawoyo, M. (2012) Growing an Institutional Health OER Initiative: A Case Study of the University of Cape Town. Retrieved from http://open.umich.edu/education/med/oernetwork/reports/case-study-uct/2012. License: CC BY 3.0.
- Mawoyo, M. and N. Butcher. (2011) OER and Health Education: the Potential of Openly Licensed Digital Content. Retrieved from http://open.umich.edu/education/med/oernetwork/reports/oer-and-health-edu/2012. License: CC BY 3.0.
- Mawoyo, M., Omollo, KL, and N. Butcher. (2012). Examples of Educational Impact from the African Health OER Network. Retrieved from http://open.umich.edu/education/med/oernetwork/reports/ahon-edu-impact/2012. License: CC BY 3.0.
- Mays, T., Butcher, N. and C. Ngugi. (2009) Supporting Collaboration and Harnessing of OER Within the Policy Framework of KNUST. Retrieved from http://open.umich.edu/education/med/oernetwork/reports/knust-policy-review/2009. License CC BY 3.0.
- Moore, A. and D. Preston. (2010). The Use of Open Education Resources at the University of Malawi. Retrieved from http://open.umich.edu/education/med/oernetwork/reports/case-study-unima/2010. License CC BY 3.0.

Program Chart

CATEGORY	INDICATORS	BASELINES	TARGETS AND TARGET DATES	PROGRESS
Activities/ Outputs				
♦ Advocacy	♦ Policy review workshops held ♦ Policy review reports shared ♦ Policy review strategies in place	♦ Policy reviews held by core institutions in 2009	♦ Policy review workshops and reports with at least 4 new institutions by Dec. 2011 ♦ Strategies to establish OER policies at 2 institutions by Dec. 2011.	♦ KNUST passed OER policy in Aug. 2010 ♦ UG OER policy is currently under review by the academic board, which is the third and final committee. ♦ OERA, U-M, and UCT presented at the World OER Congress & Regional Forums ♦ U-M facilitated discussions and workshops on OER awareness at St. Paul Hospital Millennium Medical College, Haramaya University, Ethiopia Federal Ministry of Health, and Addis Ababa University, ♦ OERA held discussions with Muni to develop OER strategy ♦ Provided feedback on UNESCO OER Guidelines for Higher Education
♦ Network building	♦ Number of registered participants ♦ Signatures on the Statement of Commitment ♦ Number of tagged and uploaded OERs ♦ User profile facility ♦ Peer feedback facility ♦ Global repository links ♦ 2nd annual meeting ♦ Metrics of web use ♦ Published toolkit ♦ Publications ♦ Faculty recruitment mechanisms	♦ Core institutions, guests at first annual meeting ♦ OER pilot materials created during design phase ♦ Websites: oerafrica.org/healthproject open.umich.edu ♦ First annual meeting	♦ Preliminary business case for potential donors by Jan. 2010 ♦ Two case studies by Dec. 2011. ♦ 300 participants by Dec. 2011 ♦ 150 individual and 10 faculties signed Declaration by Dec. 2011 ♦ 100 tagged OERs on OERA site by Dec. 2011. ♦ Apr. 2010: User profile registry ♦ Jul. 2010: Peer feedback facility ♦ Dec. 2011: Global repository integration ♦ Sept 2010: 2nd annual meeting ♦ Dec. 2010: Jointly submitted publications	♦ Launched Network website in April 2010. ♦ Distributed 10 quarterly newsletters to 1036 subscribers. ♦ Facilitated dedicated health session at OERA convening in May 2011. ♦ Conducted Health OER Tech multi-institutional workshops in 2011 and 2012 ♦ Facilitated 3 workshops with the East Africa HEALTH Alliance, resulting in 2 completed OER modules, 3 modules in progress, and an agreement and proposal on continued engagement ♦ Facilitated 3 interest groups with mailing lists and community conference calls ♦ Published joint papers co-authored by OERA, U-M UCT, UG, KNUST. ♦ Authored blog entries and pending publications on collaboration experience ♦ Developed institutional case studies about UG, KNUST, UCT, and UNIMA highlighting OER development challenges, successes and lessons learned

♦ Institutional Engagement and Nurturing	♦ Dedicated institutional staff (academic or support) in place ♦ Number of OERs created per institution ♦ Use of OERs within institutions ♦ New/revised OER policies	♦ Early adopter staff (and national service workers in Ghana) ♦ OER created during design phase ♦ Initial policy workshops and analysis	♦ Staff named by April 2010 ♦ At least 15 OERs published per institution each year ♦ OER in use by Dec. 2010 ♦ New/revised policies in place at four core institutions by Dec. 2011	♦ Dedicated part-time and full-time OER support staff in place, many of whom are over 50% internally funded ♦ New OER published annually from KNUST, UG, UCT, and UWC ♦ Developed and distributed guides for OER production ♦ Developed services list to profile OERA and U-M expertise and services to support OER
♦ dScribe Process Development	♦ Updated dScribe processes ♦ Number of people trained ♦ Installation of OERca outside U-M	♦ Current dScribe process ♦ Current dScribes ♦ OERca U-M instance	♦ Localized and updated dScribe processes by July 2011 ♦ 1+ dScribe trained per institution by Dec. 2011 ♦ 1+ African-based installation of OERca by Dec. 2011	♦ dScribe interest group with email list & conference call ♦ UCT, UWC, UG, KNUST, & OERA trained in dScribe. ♦ dScribe paper matching game to simply training ♦ Integration of dScribe training into new P2PU courses ♦ OERca code, documentation, and screencasts shared on SourceForge
♦ dScribe Services	♦ African sites offering dScribe services ♦ Sites subscribing to dScribe services ♦ Subscribing sites transitioned to self-sufficiency ♦ Fee-based services	♦ Current dScribe process	♦ 1+ African institution offering external dScribe services by July 2010 ♦ 3+ Network participants using dScribe service by Dec, 2010 ♦ 3+ Network participants transitioned to self-sufficiency by Dec. 2011 ♦ Business model for fee-based dScribe services by Dec. 2011	♦ Provided dScribe editing services to HEALTH Alliance and the Ghana Emergency Medicine Collaborative ♦ Experimented with dScribe training services by conducting an intensive one-week training exercise with a research assistant from Mt. Sinai School of Medicine

♦ Search and discovery	♦ Tagged OERs ♦ Health OER DiscoverEd instance ♦ Inbound searches	♦ None	♦ All OERs with metadata when published on OERA site ♦ Health OER DiscoverEd instance by Dec. 2010 ♦ Growth in search traffic measured	♦ 147 completed OER up on institutional, OERA, and U-M websites ♦ Website traffic monitored using Google Analytics. In 2012, the OERA Network website receives a monthly average of 7,000 visits, 19,489 page views, 12,783 file downloads. The Network content on the U-M servers receives 1500 visits/month alone. ♦ As of October 2012, over 2.5 million video views on YouTube OER promoted on Blip.Tv, YouTube, Internet Archive, OER Commons, GLOBE, and MERLOT, Slideshare, iTunesU, and U-M Espresso Book Machine ♦ A Request Facility and Search has been set up and to date has received and responded to16 requests for OER from Ministries of Health, hospitals, universities, and corporate organizations working with health education
♦ Evaluation and Impact analysis	♦ OERA selects evaluator from Africa ♦ Evaluator meets with grant participants to understand the long-term goals ♦ Metrics (qualitative and quantitative) are agreed upon that will measure the goals ♦ Studies of faculty, students, and patient care ♦ Addressing socio-technical issues related to intra- and inter-institutional collaboration	♦ Formative program evaluation done in 2009 ♦ Framework for research evaluation done in 2009 ♦ Pilot socio-technical collaboration analysis done in 2009	♦ Program evaluations done mid—project (by Dec.2010) and at completion (by Dec. 2011) ♦ Case studies from 2009 Design Phase published by Dec. 2010. ♦ Research-based evaluation of OER deployment studied in 2010 and submitted for publication by July 2011 ♦ Pilot socio-technical analysis published by July 2010 ♦ Broader sociotechnical analysis field work completed by July 2011 and submitted for publication by Dec. 2011	♦ Completed formative evaluation in 2010 ♦ Updated 2009 socio-technical analysis ♦ Completed 2010 – 2011 Phase 2 evaluation ♦ Completed impact research ♦ Published socio-technical analysis in 2010. ♦ Collaboration lessons learned paper pending publication in 2013.