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Cultural Organization



COMMONWEALTH *of* LEARNING

**Taking OER beyond the OER Community:
Policy and Capacity Building for Developing Countries**

Cape Town, South Africa

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SUMMARY REPORT

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Report written by: *Mike Chiles, Cape Town, South Africa*

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ABBREVIATIONS

ACE	Advanced Certificate in Education
ACU	Association of Commonwealth Universities
AUQA	Australian Universities Qualifications Agency
COL	The Commonwealth of Learning
HE	Higher Education
HEAL	Health Education Assets Library
HEIs	Higher Education Institutions
ICT	Information and Communication Technologies
KNUST	Kwame Nkrumah University of Science and Technology
MERLOT	Multimedia Educational Resource for Learning and Online Teaching
MIT	Massachusetts Institute of Technology
OCW	OpenCourseWare
ODL	Open and Distance Learning
OECD	Organisation for Economic Co-operation and Development
OER	Open Educational Resources
PBL	Problem based learning
QA	Quality assurance
SAIDE	South African Institute for Distance Education
SIM	Self instructional module
UCT	University of Cape Town
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WCHE	World Conference on Higher Education

1. EXECUTIVE SUMMARY

At a workshop held on 28 April 2010 in Cape Town, South Africa with Executive Heads of Higher Education Institutions, the Commonwealth of Learning (COL) and the United Nations Educational, Scientific and Cultural Organisation (UNESCO) highlighted the potential benefits, and the need for policy formulation and quality assurance in respect of Open Education Resources (OER).

Changes in the licensing of teaching and learning materials and the rapid increase in the use of technologies have facilitated the development and distribution of and access to OER. Article 13 of a communiqué issued after the World Conference on Higher Education (WCHE) held in Paris in July 2009 suggests that the use of OER presents opportunities to widen access to quality education.

Across the world a growing number of higher education institutions are not only using OER but are actively involved in developing them. Use of OER specifically and technology in general has the potential to transform education – *“what the iPod has done to the music industry the iPad could potentially do to the publishing industry and education”* – and to restore the core values of education. The nature of higher education institutions may well change away from a provider of knowledge to organisations that provide effective support, intelligent assessment and critical feedback.

Aligned to the development of OER is the need for the establishment of a quality assurance process - not only at the institutional level but also externally between institutions. As there have been very few focused investigations on the benefits of OER, anecdotal evidence has shown that they may, amongst others, improve educational practices and instead of reducing costs may initially require additional funding.

Case studies of how OER were being used in an M.Ed. programme in Malaysia, a Health Sciences programme in Ghana, a Midwifery course in Malawi and an Agricultural Programme across 4 universities in Africa highlighted issues around why OER were considered, different approaches to the development and use of OER, the need for quality assurance, training and support of academics in the development of OER and the costs of the development of OER.

In a wide ranging discussion and notwithstanding the potential benefits of OER, a number of issues still need substantial discussion. These issues include quality assurance and peer review mechanisms; the role of the publishing industry; the need for university lecturers to be evaluated - not only on research output but also on materials development; the need for collaboration and partnerships in the development of materials in order to benefit from economies of scale; licencing, specifically in relation to attribution; access to technology, specifically in respect of Internet access in poorer communities; issues around the funding of OER and the incentivising of academics; and the need for policy at both institutional and government level.

It is clear that OER can broaden access to higher education, can improve quality not only of the resources being used but also of teaching practices, and could potentially lower overall costs. OER can facilitate intellectual exchanges that are genuinely multi-directional and multi-national, and they are coming “ready or not” so higher education institutions need to adapt their policies and practices.

2. BACKGROUND

The Commonwealth of Learning (COL) and the United Nations Educational, Scientific and Cultural Organisation (UNESCO) hosted an Open Educational Resources (OER) workshop on 28 April 2010 in Cape Town, South Africa. The workshop followed the Association of Commonwealth Universities (ACU) Conference of Executive Heads that took place from 25-27 April 2010.

The intent of the workshop was to alert university leaders to the potential of OER to facilitate the expansion of quality higher education and to receive feedback from them on policy issues relating to the use of OER in universities. In addition the initiative aimed to expand the understanding of OER by educational decision makers in order to promote their wider use.

The workshop brought together Vice-Chancellors from higher education institutions (HEIs) in both developing and developed countries to:

- understand OER and acknowledge them as a legitimate and promising option for Higher Education;
- discuss how OER could blend local and global inputs in creating graduates with the skills, knowledge and competences that the times require;
- contribute to the policy debate relating to the use of OER in universities; and
- discuss quality assurance issues related to OER.

3. ORGANISATION OF THE WORKSHOP

After the opening and welcome, a number of invited keynote speakers made presentations. These presentations focused on understanding what OER are, and the benefits, opportunities and quality challenges they present to HEIs. Speakers from four developed and developing countries also presented case studies of how OER were being used in support of a range of different disciplines. The workshop participants then participated in a round table discussion on the opportunities and challenges presented by OER.

4. OPENING AND WELCOME (Sir John Daniel – Commonwealth of Learning; Ms Stamenka Uvalić-Trumbić – UNESCO)

In his opening remarks Sir John Daniel highlighted the potential that OER could have to broaden access to higher education and to improve the quality of curricula and teaching. He stressed that the use of OER had the potential to achieve these goals and at a lower cost. He furthermore argued that OER are consistent with the best academic traditions and are *“not a fancy form of plagiarism”*. He reflected on the contrast between how academics conduct research and how they prepare for teaching, and how the work done by Ernie Boyer had changed the way *“that academics are evaluated for promotion and tenure from an almost exclusive focus on published research towards a more holistic conception of their work”*.

The sharing of teaching and learning resources had been an ideal in the Open and Distance Learning (ODL) community but many obstacles had prevented this from happening. Sir Daniel highlighted that OER have in effect removed some of these obstacles by allowing for the development and distribution of OER in digital format and through changes to licencing which allows for OER to be shared and legally distributed.

After clarifying some of the terms, Ms Stamenka Uvalić-Trumbić presented a brief overview of the World Conference on Higher Education (WCHE) held in Paris in July 2009. She shared the three most significant concerns that emerged from the conference and the relevance that these had for the OER workshop. The significant areas were (1) an increasing demand for access to higher education; (2) the role of technology in providing opportunities to expand access to quality learning and to facilitate the tasks of teachers; and (3) the internationalisation of quality assurance. Article 13 of the 2009 WCHE Communiqué emphasises that *“ODL approaches and ICTs present opportunities to widen access to quality education, particularly when Open Educational Resources are readily shared by many countries and higher education institutions”*.

Ms Uvalić-Trumbić concluded by stating that there would need to be an improvement in infrastructure, bandwidth and access to technology and that it is vital to include OER in quality assurance processes.

5. SUMMARY OF KEYNOTE AND INVITED PRESENTATIONS

5.1 Understand OER in Higher Education – OER Dossier (Mr Neil Butcher – OER Africa/SAIDE, South Africa)

Mr Neil Butcher clarified the concept of OER and gave an overview of the different types of Open Licences. He gave an overview of the OER landscape by providing information on the more significant OER initiatives at higher education level. These initiatives included the work being done by, amongst others, the OCW Consortium, MERLOT, CORE, Jorum, HEAL (Health Education Assets Library), MIT’s OCW, the UK Open University’s OpenLearn, UCT’s OpenContent and others.

Mr Butcher continued by arguing that the use of OER held an economic value proposition that had the potential to transform education. The music industry had changed radically since the introduction of electronic devices (such as iPods) and there is no reason why the same should not happen in respect of education (with the introduction of technology such as the iPad). He went on to state that *“the wave of free sharing of content is building”* and that *“for universities to succeed economically they will do so predominantly by understanding that their real potential educational value lies in their ability to provide effective support to students and in their ability to provide intelligent assessment and critical feedback to students on their performance.”*

After dispelling some myths linked to OER Mr Butcher suggested that OER have the potential to reduce costs, to change the role of learners into active participants in their learning, and to build capacity in institutions and amongst academics. With the vast quantities of OER that represent common intellectual capital already available there is a need to unlock them in order to drive and support education. OER have the *“potential to restore core values of building and sharing knowledge that underpin good education and systematically encourage us to work with and learn from each other.”*

In closing Mr Butcher highlighted some of the challenges that will emerge and proposed some solutions on how these might be resolved.

5.2 Quality in Higher Education: The Opportunities and Challenges of OER (Dr Antony Stella - Australian Universities Quality Agency (AUQA), Australia)

In her opening remarks, Dr Anthony Stella indicated that the increasing use of ICT has opened up not only research findings and research methodologies, but also that more and more educational materials are becoming freely available and that numbers of higher education institutions are starting to offer online courses using OER. From the list of benefits, incentives, risks and barriers for both individuals and institutions as identified in an OECD report, Dr Stella argued that those linked to the “public good” needed most attention.

She opines that the availability of high quality teaching and learning materials will equalise access and open institutions of higher learning to larger numbers of learners. She continued by stating that *“Educators, including those in less advantaged areas where resources are at a premium, can capitalise on such materials to enhance their courses and improve their teaching, benefiting many students at a time”*.

There is an implicit requirement for OER to be and to be seen to be of high quality. This leads to the need for the OER materials to be quality assured at both an internal institutional level as well as at an external level and a need for shared responsibilities between these levels. She highlighted a number of higher education institutions/organisations using OER and how they quality assure their teaching and learning materials.

Dr Stella concluded her presentation by posing a number of questions (such as *“Does free mean second grade?”* and *“Does ‘no certification’ mean ‘no quality’?”*) and raising some of the challenges that external quality assurers will face when evaluating OER and the higher education institutions that use them.

5.3 Benefits and Challenges of OER for Higher Education Institutions (Prof Cheryl Hodgkinson-Williams - Centre for Educational Technology and Centre for Higher Education Development, University of Cape Town, South Africa)

In her presentation Prof Cheryl Hodgkinson-Williams argued that the emergence of OER in higher education is part of a much larger social movement towards openness that includes Open Source Software, Open Access and the Open Society. Furthermore, where previously OER referred mainly to teaching and learning materials they now also include the underlying pedagogical practices.

After establishing the underlying conceptual theory and methodological framework, Prof Hodgkinson-Williams moved on to highlight some of the potential and realised general benefits which were drawn from OECD and OCW reports. Many potential benefits of OER have been proffered over the last ten years, but which of these are being ‘realised’ in practice is only now starting to emerge as there are relatively few comprehensive evaluation studies to draw upon. Evaluation studies by MIT reveal that academics do seem willing to share their knowledge and that MIT has enhanced its public image and attracted a number of self learners from a range of countries. However, there is less direct evidence for the anticipated improvement in the quality of teaching and learning materials as very few studies have deliberately focused on this as yet.

In respect of specific benefits attributed to the use of OER, Prof Hodgkinson-Williams reported on responses that she had received on questions posed in a survey to a number of OER champions from

around the world. Anecdotal evidence suggests that OER may improve educational practices, coherence across courses, technical quality and research into pedagogy; facilitate technical improvements and the development of high quality and shareable images; and improve mechanisms for accreditation and external endorsement. Survey responses suggest that OER do not reduce materials development costs directly, but instead is still requiring additional funding. However, OER may (1) indirectly increase the number of registrations thereby decreasing tuition fees or keeping them stable; (2) lower some of the marketing costs; and (3) enable a new business model through the offering of services around OER.

While a range of quality assurance strategies have been suggested in the literature, comments from the survey revealed that quality assurance strategies are clustered primarily around the “*pride-of-authorship*” and the institutional quality assurance models, with some adopting user rating models. The most versatile quality assurance mechanism identified is the Connexions project’s ‘lens’ system which enables organisations and individuals to give their stamp of approval to content on an OER site. In terms of ensuring the financial sustainability of their OER initiatives institutions are adopting a mix of strategies, but are increasingly inclining towards institutional support and exploring additional strategies as seed-funding from donor foundations ceases to be the main income stream.

While it is essential to consider the quality assurance and financial sustainability issues, it is important not to lose sight of the heart of OER – the contributors and the users. These quality assurance and financial sustainability issues need support and encourage educators’ willingness to pay the opportunity cost entailed in developing existing or creating and sharing ‘*born-open OER*’ and acknowledge the OER contributions by academics as valued academic outputs.

6. CASE STUDIES (Panel chaired by Prof Cheryl Hodgkinson-Williams)

Prof Cheryl Hodgkinson-Williams facilitated a session during which four case studies of organisations using or actively involved in the development of OER were presented.

6.1 Using Web Resources for the Master of Education Programme at Asia eUniversity (Prof John Phillips - School of Education and Cognitive Science, Asia eUniversity, Malaysia)

Prof John Phillips reported on the design and development of the Master of Education (M.Ed) programme using OER and non-OER through hyperlinking. He highlighted that the legal issues of hyperlinking have yet to be resolved with some sources arguing that hyperlinking infringes copyright. However, designers of the programme have observed a set of guidelines for hyperlinking and among the guidelines is to seek permission of the owner of the website linked and acknowledge accordingly.

For each course, a self-instructional module (SIM) is developed which stipulates the ‘must know’ body of content. The SIM controls the selection of pedagogically driven web resources to be hyperlinked and which are based on the learning outcomes and learning activities developed. Several examples of OER and non-OER used in the M.Ed programme were presented focussing on the learning outcomes to be achieved by each of the resources hyperlinked.

Five challenges were discussed which may curtail the use of web resources for teaching and learning. These include (1) identifying, evaluating and authenticating their appropriateness for teaching and learning; (2) monitoring of hyperlinks and the replacement of “dead-links” with equivalent

alternative links; (3) the practice of hyperlinking, specifically deep linking; (4) the paucity of materials written by scholars and practitioners in developing countries; and (5) the need for more powerful and intelligent web search engines to facilitate the finding of information.

6.2 Health OER: Lessons from Kwame Nkrumah University of Science and Technology (Prof Peter Donkor – College of Health Sciences, Kwame Nkrumah University of Science and Technology, Ghana)

After sketching the background to OER and the Kwame Nkrumah University of Science and Technology (KNUST), Prof Peter Donkor looked at KNUST's experiences with the use of OER in health education. In his presentation he outlined the processes employed in the development and use of OER, its potential role in enhancing teaching and learning in a developing country, the costs and benefits as well as the way forward. The concept of a dScribe – someone who checks the material for possible copyright issues among other things and then clears it before the ICT team publishes it - was introduced.

OER was introduced to the faculty of the College of Health Sciences in 2009 through sensitisation, policy, and production workshops. A limited number of productions have been made (including aspects of Internal Medicine, Microbiology, Obstetrics and Gynaecology, Behavioural Sciences). Initial reports suggest that students find them very helpful. Unfortunately following the initial enthusiasm which saw 12 faculty members out of the 16 volunteering to produce material, there has been a sharp decline in those actively producing OER. This has been attributed to a lack of administrative, technical and infrastructural support for faculty as well as other incentives such as the non-release of academics from regular commitments to make time for the development of OER.

The inadequate ICT infrastructure and the lack of an OER policy limit the accessibility of OER material in the University's repository. This can be seen as a temporary hitch as a policy document is currently being considered for adoption by KNUST. Once implemented, the policy will pave the way for the necessary investments to be made to systematically produce and publish OER throughout the whole University.

OER is seen as an innovative means of improving teaching and learning at KNUST by promoting a more learner-centred approach to teaching and learning and more quality contact between faculty and students. The limited available evidence suggests that students find OER a useful aid to learning tool, though student-teacher interactions are still necessary. Current efforts are patchy and heavily dependent on individual faculty commitment, costing on average 35 man-hours per production. More investment is required to improve the efficiency of production as well as increase the accessibility of published OER material. For this to happen a more systematic cost-benefit analysis is required. In spite of the challenges, OER has been fully embraced at KNUST and is expected to flourish with time.

6.3 OER Basic Competencies in Midwifery (Ms Rebecca Ngalande - Kamuzu College of Nursing, University of Malawi, Malawi)

In her presentation Ms Rebecca Ngalande highlighted the challenges that they face specifically around the high demand for nursing and midwifery and the lack of many of the resources, including human, technology infrastructure and libraries. Current copyrighted textbooks are difficult to obtain

and are very expensive. These challenges highlighted the need to move to a new approach that included the use of OER.

The OER initiative at the Kamuzu College of Nursing which commenced in January 2009 has the full support of the Vice Chancellor of the University of Malawi. The initiative had three goals, viz. (1) increasing the understanding of OER; (2) building capacity in the OER champions; and (3) developing digital materials to support the teaching of the Certificate Course in Midwifery.

The pilot project was based on a participatory model designed to help the organisation assess and improve their teaching practices. In addition students were introduced to electronic media, including images. The materials were based on a different approach to teaching midwifery using problem-based learning (PBL). In the implementation phase of the project they needed to source appropriate materials and were assisted by the International Association for Digital Publications (IADP) and OER Africa.

A number of workshops were held during which participants were introduced to OER, how to adapt and refine OER, how the course was to be structured and which team members were to take responsibility for which sections of the work. A decision was also taken that the materials should be released on CD-ROM as this made them more accessible to the students.

The outcome of the pilot was that they were able to integrate materials, to produce cost-effective resources and to train core-team members. The major problem that they still face is that they do not have the technical capacity. Although not yet implemented the development of OER has generated a lot of interest and other departments have started to request OER for their courses.

6.4 OER Africa Projects (Mr Neil Butcher - OER Africa, South Africa)

Mr Neil Butcher provided some detail on the AgShare initiative which is partly funded by the Gates Foundation in partnership with Michigan State University. One of the goals was to shift a project that had its beginnings in the developed world to one that can be owned and driven by African educational partners.

An engagement with four universities around an initial proof-of-concept has been held. These universities are to take a very specific area of the curriculum in which they either don't have existing material or where the materials are inadequate. In addition a requirement was that students be actively involved in the development of the materials. In Ethiopia the research activity of post-graduate students is being harnessed.

All development is needs driven. The process is the same, i.e. define curriculum objectives; look for what is available (ask people for content; check repositories, etc.); adapt materials and produce some new materials which are combined into a coherent whole. In parallel with this they engage with faculty and management on policy development around the development of OER which is an important aspect of getting OER into higher education.

He suggested an approach in which there should not be any new OER content development projects but rather that work should be done within already funded projects where the OER element was missing. This would reduce the funding required for the development of OER as with only a slight increase or re-allocation they could leverage the already available funding.

The significant amounts of funding already being spent in Africa should be released as common intellectual capital rather than being ring-fenced and protected in the traditional way. OER Africa have found some difficulty in this approach but in their opinion they believe that funding that is being spent on the “public good” should become available as common intellectual capital.

6.5 Discussion following panel presentations

During the group discussions following the presentations the following comments/questions were posed by participants and generally discussed:

- The development of high quality and relevant materials needs to be informed by current literature/practices.
- There is a need to develop skills on how to use OER.
- Does OER not kill the natural inquisitiveness in students generated by the PBL pedagogy and how do we balance PBL and OER?
- In what areas can OER be used?
- How many OER does one need in a specific programme of study?
- What is the role of the publisher in the development of OER? Does their role become that of a quality assurer?
- The quality assurance office within each of the higher education institutions must lay down minimum criteria in respect of the development of OER.
- If we expect lecturers to develop OER and they currently derive an income stream from royalties do we need to have different structures/incentives for rewarding lecturers?
- In many countries the tenure of university lecturers still depends on research and publishing – does this model need to be changed so that development of teaching and learning materials also plays a role?
- How do OER meet the needs of very diverse learners?
- There is a need to separate out the issues that are explicit to OER from those that are not. For example does a university consider investment in curriculum design and development of high quality learning environments without any licencing implications an important part of its mission? If so then internal policies need to change to enable a greater percentage of funding to go into this enterprise where open licencing has been shown to be more effective than closed licencing.
- OER are not going to solve the problem in those universities that are already operating below the actual budget they require. There is a need for political commitment to ensuring larger scale investment in universities.
- We try to use concepts like OER to get around the fact that there are institutional dysfunctionalities. Once again there is a need to separate out the OER issues from other non-OER issues.
- Collaboration and partnerships are an important part of the development of OER. Working together provides economies of scale producing materials of much higher quality.
- OER can be used as a catalyst, ‘*a disruptive force*’, as it asks uncomfortable questions around the funding processes, structures, policies, support structures, etc. in the universities.
- Research funding should be top-sliced to be used to develop teaching materials and to provide some input into the social engagement area.

7. GROUP DISCUSSION (Facilitated by Ms Zeynep Varoglu – UNESCO)

The OER project is aimed at bringing OER to a broader community. The intention is to mainstream OER in higher education, governments and quality assurance bodies. The Cape Town and Windhoek workshops will be followed by moderated online forums on key topics. These discussion forums will aim to distil two or three points that will highlight how OER can better be integrated into higher education institutions.

During a brain-storming session the following issues were raised for further discussion in the online forums

- Role of the publishing industry.
- Role of research.
- Differentiating factors w.r.t. OER – what makes them unique?
- How can attribution with the Creative Commons licencing be guaranteed?
- Process of OER publishing/incentives/parallel publishing process.
- How does one incentivise academics so that they become involved in the development of OER?
- Using OER as supplement to existing resources.
- Peer review mechanisms for OER; quantitative measures for determining quality.
- Which subjects/courses does one begin with? Does one focus on specialist areas as there is possibly less material available for these. The need to develop criteria to determine which subjects/courses might be first to be made available as OER.
- Capacity building for the whole OER process, including development sourcing, advocacy in the institutions, etc.
- Criteria on adaptation of OER.
- There are different models for the use of OER, some might want to use the material as it is while others might adapt and yet others use it for bench-marking. Consider the development of quantitative measures for bench-marking.
- Bandwidth support for Internet-based OER.
- How to mainstream/institutionalise/embed OER in all the processes within higher education. There should a shared view of how OER will be implemented in higher education.
- Funding issues – can we afford to institutionalise OER? Do we institutionalise investment in curriculum design and materials development as a key strategy for improving teaching and learning? If one does prioritise such a strategy can one afford not to use the “open approach”?
- How do OER maximally benefit higher education?

8. CLOSING AND THE WAY FORWARD (Sir John Daniel)

In his summary Sir John Daniel highlighted the following:

- OER are coming whether we are *'ready or not'* and higher education institutions need to adapt to their imminent arrival.
- OER are not e-learning or just learning material but they are a particular form of legal licence that will make learning materials more readily accessible.

- OER are throwing up a number of issues that universities will have to face as they move into the 21st century. OER are a surrogate for the much broader question that universities place on their teaching function and how they go about it. There might well be a trend as the teaching function goes into the background and they move towards examinations as there is so much content available.
- The need for certification requirements.
- OER force institutions to think about the nature of academic work. The use of students in the development of learning materials might contribute more directly to their own learning.
- The workshop did not explore the changing nature of student behaviour – in some countries students are attending fewer and fewer lectures and so universities are adapting to this by making their materials available in different ways.
- The urgent need and importance of policy at institutional/government level.
- The concrete examples of OER that have moved from the “south” to the “north” and the need to develop/adapt OER in areas of need.
- The discussion around OER and the imminent changing face of the publishing industry.
- The need to sensitise and encourage various stakeholders so as to provide a forum where issues can be discussed.

9. APPENDICES

The following papers presented at the workshop can be found at

<http://oerworkshop.weebly.com/workshop-documents-and-papers.html>

1. Welcome and Introductory Remarks (Sir John Daniel of the Commonwealth of Learning and Ms Stamenka Uvalić-Trumbić of UNESCO)
2. Open Educational Resources and Higher Education (Neil Butcher – OER Africa/SAIDE, South Africa)
3. Quality and Quality Assurance in Higher Education: The Opportunities and Challenges of Open Educational Resources (Dr Antony Stella - Australian Universities Quality Agency (AUQA), Australia)
4. Benefits and Challenges of OER for Higher Education Institutions (Prof Cheryl Hodgkinson-Williams - Centre for Educational Technology and Centre for Higher Education Development, University of Cape Town, South Africa)
5. Using Web Resources for the Master of Education Programme at Asia eUniversity (Prof John Phillips - School of Education and Cognitive Science, Asia eUniversity, Malaysia)
6. Health OER: Lessons from Kwame Nkrumah University of Science and Technology (Prof Peter Donkor and Nadia Tagoe – College of Health Sciences, Kwame Nkrumah University of Science and Technology, Ghana)
7. OER Basic Competencies in Midwifery (Ms Rebecca Ngalande - Kamuzu College of Nursing, University of Malawi, Malawi)
8. OER Africa (Neil Butcher - OER Africa, South Africa – and Ms Jenny Glennie – SAIDE, South Africa)