Promoting Open Educational Resources (OER)

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with acknowledgement to colleagues from Saide
Outline

• The global educational context: some challenges
• Exploring OER
  – Definition and examples
  – Increasing visibility of the OER ‘movement’
• Why all the fuss?
• OER – a *part* of the education process
• Huge potential in resource-based learning
• New demands on the educator
Some challenges in the global education context

1. Moving from elite to mass provision
   - Education For All: great progress in achieving participation targets but *quality* a serious concern
   - Secondary: serious under-funding
   - Higher: globally, participation rates grown from 19% in 2000 to 26% in 2007, usually *without* concomitant rise in resources. Average masks ‘highs’ of nearly 80% in some countries and ‘lows’ of under 6% in most African countries
Some challenges in the global education context

2. Increasing impact of the internet on the developing world

‘Experience has shown, time and again, that when the internet comes along and disrupts an industry, it doesn’t go away. From music to books to newspapers, the internet changes how we work, how we think, how we see the world'.

Martin Bean, VC UK Open University
Here at last - nearly!
Some challenges in the global education context

3. Shift towards the global knowledge economy which demands higher order cognitive skills
Practicing 21st Century Skills

Skills for the 21st Century

Seven “survival skills” for college and career readiness

1. critical thinking
2. collaboration
3. effective oral and written communication
4. agility and adaptability
5. initiative and entrepreneurialism
6. accessing and analyzing information
7. curiosity and imagination

Tony Wagner: The Global Achievement Gap
So-called 21st Century skills

• **Ways of thinking**: Creativity, critical thinking, problem-solving, decision-making and self-directed learning

• **Ways of working**: Communication and collaboration

• **Tools for working**: Information and communications technology (ICT) and information literacy

• **Skills for living in the world**: Citizenship, life and career, and personal and social responsibility
In this changing world, the underlying challenge we face as educators...

....to create access and success to hundreds of thousands of learners to help create the inspired generation so desperately needed by our countries.

'We need..... citizens who have, and seize, the opportunity to learn and relearn throughout their lives. We need citizens who are ready and able to take their knowledge of the best that has been thought and said and done and apply it to the problems of the present and the future'.

• Preface to The Avalanche is Coming (2013)
What then are OER?

Sharing learning materials is not new

but

the licensing and technologies to support the sharing are
The OER concept

Open educational resources

• are *any* educational materials that are in the public domain or have an open license.

• are freely available for use by educators and learners, without an accompanying need to pay royalties or licence fees.
Common *mis*conception about OER

.....is that ‘openly licensed’ content is now in the *public domain* and that the author gives up all of his or her rights to this material.
Rather OER licences....

established to protect the author’s rights in environments where content (particularly when digitized) can so easily be copied and shared on the Internet without asking permission.
What does the OER concept imply?

As an educator, if you locate a useful OER (depending on the licence), you can

• Re-use it – Use the work verbatim, just exactly as you found it

• Rework it – Alter or transform the work so that it better meets your needs

• Remix it – Combine the (verbatim or altered) work with other works to better meet your needs

• Redistribute it – Share the verbatim work, the reworked work, or the remixed work with others

(Wiley 2008)
What does the OER concept imply?

Or,

• you can create your own educational resources which

• you can, in turn, *share* as an OER - keeping the copyright but licensing others to use it, ideally to adapt and share it again
The OER concept

OER is *not* synonymous with online learning or e-learning;

Within a developing context, it is anticipated that many of the resources produced – while shareable in a digital format (both online and via offline formats such as CD-ROM) – will be printable.
Licences under-pinning the concept

- **Attribution.** You let others copy, distribute, display, and perform your copyrighted work — *and derivative* works based upon it — but only if they give credit the way you request. (CC-BY)

- **Share Alike.** You allow others to distribute derivative works only under a license identical to the license that governs your work.

- **Attribution Share Alike.** You let others remix, tweak, and build upon your work even for commercial reasons, as long as they credit you and license their new creations under the identical terms.
Licences under-pinning the concept

• **No Derivative Works.** You let others copy, distribute, display, and perform only verbatim copies of your work, not derivative works based upon it.

• **Noncommercial.** You let others copy, distribute, display, and perform your work — and derivative works based upon it — but for noncommercial purposes only.
Some wonderful examples of adoption of the OER concept in Africa

• TESSA — Teacher Education in Sub-Saharan Africa

• African Virtual University - Maths and Science Teacher Materials

• OER Africa

• Health OER

• AgShare

• Siyavula textbooks in Maths and Science

• Open UCT
Health OER e.g. - Kwame Nkrumah University of Science and Technology (KNUST)

Courses Under Obstetrics and Gynaecology

Examination of the Pregnant Patient
This principle of this course would discuss the guidelines for the obstetric examination, components of the obstetric history and a summary of terminology to describe the feto-maternal relationship. The videos demonstrate covers the general physical examination of the patient, the examination of the chest and the examination of the pregnant abdomen. Tests are included for you to assess yo...

Caesarean Section
The video lessons demonstrate the procedures in preparing a patient for caesarean section, that is, inducing anaesthesia, cleansing and draping. It continues with the abdominal incision to the delivery of the baby and placenta. The demonstration ends with the cleaning of the uterine cavity and the closing of uterine incision and the abdomen. In addition to the video lessons are interactiv...

Total Abdominal Hysterectomy
The interactive educational resources cover the procedure in a total abdominal hysterectomy. There are some review cases provided to give some background information about abdominal
KNUST – Resources which reflect the context

Examination of the Pregnant Patient

Click here for instructions

Videos and text files (size can be adjusted by enlarging the window)
1. Learning Objectives
2. Basic guidelines for the obstetric exam
3. Components of the obstetric history
4. The general physical examination (2:39)
5. Examination of the chest (2:53)
6. Examination of the pregnant abdomen (3:55)
7. Test your observational skill
8. Summary of the terminology

Self-assessment quiz (note: the new window may open behind this one in some browsers)
OER Africa e.g. - Kamuzu College of Nursing

Problem based learning

- Read the problem (or scenario) carefully.
- Identify the key issues.
- Make sure you understand the main thrust of the problem (what you are being asked to do).

What do you already know that is relevant to this problem? (Prior knowledge).

What do you need to find out in order to solve this problem? (New knowledge).

What resources are you going to consult? Resources can take many forms, including books, articles, reports, web sites, people with particular expertise.

How are you going to assess the quality or reliability of those resources?

What do you think is the best solution to this problem? Why?

Remember that there is no "correct" solution to real life problems - all solutions will have their advantages and disadvantages.
Expensive and erratic internet so CD ROM more appropriate.
Now countless examples of OER
A few examples of open textbooks

- Siyavula
- Flatworld Knowledge
- Open Culture
- cK-12
- Curriki
- Worldwide Center of Mathematics
- CLRN
- Community College Consortium for Open Educational Resources
And an extraordinary array of online open content
This rise has been exponential

• Only 11 years ago Unesco launched the term
• Cape Town Declaration in 2006
• 2009 Unesco World Conference on Higher Education
• Unesco 2012 Declaration
• Hewlett Foundation
Unesco Declaration 2012 on OER: Recommendations

Policy
Country & Inst

Improving ‘discoverability’

Versioning for contexts

Awareness and use

Strategic alliances

Capacity building

Use of open licences

Research / Evidence

Public funds

Ubiquitous access to ICT
Most far-reaching clauses from the Declaration?

1. Encourage the open licensing of all educational materials produced with public funds

Governments/competent authorities can create substantial benefits for their citizens by ensuring that educational materials developed with public funds be made available under open licenses (with any restrictions they deem necessary) in order to maximize the impact of the investment.
Most far-reaching clauses from the Declaration?

2. Facilitate enabling environments for use of Information and Communications Technologies

Bridge the digital divide by developing adequate infrastructure, in particular, affordable broadband connectivity, widespread mobile technology and reliable electrical power supply. Improve media and information literacy and encourage the development and use of OER in open standard digital formats.
Key organisations

- Unesco
- Commonwealth of Learning
- Creative Commons
- Hewlett Foundation
Hewlett Foundation

The OER Ecosystem

Pillars:
- High-quality OER supply
- Supportive OER policies
- Implementable OER standards
- Field building
- Influential research
- Opportunistic innovation

Goals:
- Mainstream adoption of OER sustainably increases educational capacity
- OER increase learning gains by delivering personalized educational experiences and reduced costs
Why all the fuss?

Some overstate –

‘OER will save the educational world’

and do a disservice
Different ways in which OER can be used

1. Supplementary

2. As a core component in the traditional mode
   • textbooks, largely cost benefit
   • storybooks

3. Outside of the traditional face-to-face mode: resource-based learning, including ODL
1. OER as supplementary learning material

Just two examples:

• 40% of teachers in California use OER
• Faculties of Health in sub-Saharan Africa use the resources of the Health OER Initiative, as shown above
2a. OER as a core component in the traditional mode: Textbooks

What are Open Textbooks?

“Open textbooks” are free, online, open-access textbooks. The content of open textbooks is licensed to allow anyone to use, download, customize, or print without expressed permission from the author.

Campaign Coordinator: Nicole Allen

Examples of Free, Open Textbooks

http://www.maketextbooksaffordable.org
Why do we Need Open Textbooks?

- According to a 2005 GAO report, College textbook prices have risen at twice the rate of annual inflation over the last two decades.

- At 2-year public institutions, the average cost of books and supplies per first-time, full-time student ('03-'04) was $886 = almost 75% of the cost of tuition and fees
  - $898 at 4-year public institutions, about 26% of the cost of tuition and fees

Open textbooks

• Can be freely accessed online
• Can be printed on demand for the material and labour costs – often less than ¼ the price
2b. OER as a core component in the traditional mode: Open storybooks

- Few or no storybooks in Africa
- No reading
- No demand for books
- Not cost effective to produce books
The African Storybook Project
An Initiative of Saide

Project Leader
Tessa Welch - tessaw@saide.org.za

Kenya
Dorcas Wepukhulu Nafula - dnweppy@gmail.com

South Africa
Sheila Drew - sheilad@saide.org.za
Lorato Trok - loratot@saide.org.za

Uganda
Juliet Tembe - tembehirome02@gmail.com
African Storybook project will make available many books in a variety of local languages.
African Storybook: a project of partners

E.g. Pratham Books from India whose books are available as OER
We are constructing a website where you will be able to:

- **Find** enjoyable stories for children to read
- **Translate/version** them into a local language or dialect
- **Adapt** them for the reading level you need
- **Read** them on a variety of devices
- **Download** and print them
- **Create** your own story in one of our templates
Our hope is

......that the digital availability as OER of a range of African stories for early reading, and the facility to version/translate these stories into familiar languages at no cost, will contribute to increased reading by children, teachers, parents and other community members.
3. OER outside of the traditional face-to-face mode

Before we move to my third category above, let’s reflect a little on the changes that the internet is bringing about in traditional face-to-face education
Changing nature of face-to-face education
Bates’ 2013 prediction

Move to hybrid learning will accelerate so that in North America

• *in one year, hybrid will be 20-40%*;
• *in three years: 40-60%*;
• *in five years: 70-90%*. 
Changing nature of face-to-face

And so Bates asks of traditional face-to-face providers to think seriously about

- **What can the university or college offer that will make the morning commute for students worthwhile (not to mention faculty)?**

- **How can institutions leverage more fully the benefits of the campus when students can do much of their learning more conveniently, and often more effectively, online or remotely?**
Continuum of educational provision

*From purely face-to-face tuition through to education purely at a distance*
Adding a second continuum

No digital support  Digitally supported  Internet-supported  Internet-dependent  Fully online
Use the two continua to create a grid

- Fully Online
- Internet Dependent
- Internet Supported
- Digitally Supported
- Fully Offline
- Campus-based
- Remote
3. OER outside of traditional face-to-face

• Predict that in the foreseeable future, the main mode of provision will no longer be traditional face-to-face,

• So the role of OER outside of traditional face-to-face is of paramount importance.
Congratulations....

to CoL on establishing a category of prize for well designed courses largely using OER, and to Wawasan University for being awarded the prize last evening.

This is indeed the way of the future.
Another good example

Prof Arul Phillips describes a framework for selection of OER, and links to non-OER, in the construction of a course.
Figure 11.2: Framework guiding selection and use of OERs and non-OERs

**Learning Outcomes**

Illustrations
- OERs & Non-OERs
  - Cartoons
  - Clip art
  - Diagrams
  - Pictures
  - PowerPoint slides

Multimedia Resources
- OERs & Non-OERs
  - Audio clips
  - Video clips
  - Animations

Tactic Knowledge
- OERs & Non-OERs
  - Blogs
  - Twitter

Learning Principles Guiding Content Selection
- Self-Instructional Module
  - Topic 1 to Topic 10
  - Significant learning outcomes:
    - foundational knowledge
    - application
    - integration
    - human dimensions
    - attitudes
    - learning how to learn

Learning Activities

Text & Print Materials
- Resources from AeU's Digital Library (Non-OER)
  - Research articles
  - Case studies
  - E-books
  - Theses/Dissertations

Open Access Journals and E-Books (OER)
- Research articles
- Case studies
- E-books

OERs & Non-OERs
- Tests, exercises & tutorials
- Online calculators
- Simulations

OERs & Non-OERs
- Glossaries
- Dictionaries
- Thesauruses
- Translators
As we move forward

As open and distance learning practitioners, we will
• select – wherever possible - excellent OER rather than developing from scratch
• adapt and integrate them into a well-designed course or programme
• be able to pay greater attention to *proper engagement* with our students, including formative and summative assessment
Necessary skills for educators

- Curriculum design
- Programme and course design
- Searching, evaluating, and selecting OER, checking on their licences
- Adapting OER for purpose and context
- Knitting together the educational resources into a coherent course with appropriate learning pathways
Educators are not alone

A Circle of Knowledge Building and Sharing

Create
- Support teachers in creating representations of pedagogical knowledge

Open Knowledge Exchange Zone
- Provide venues for teachers to share pedagogical knowledge to improve practice

Use
- Encourage teachers to review, critique, and learn from peers’ represented knowledge

Re-mix
- Enable teachers to integrate others’ knowledge into their knowledge

Promote these organically, & sustainably.

http://www.slideshare.net/cgreen/developing-a-culture-of-sharing-and-receiving-open-educational-resources
There is however much to be done – a multi-faceted OER agenda......
OER Agenda

- Discoverability
- Awareness
- Diversity Communities
- Policy
- Curriculum and course design
- Research
- Increased connectivity
OER not an end in themselves but a wonderful tool...

To ensure we have....’citizens who are ready and able to take their knowledge of the best that has been thought and said and done and apply it to the problems of the present and the future'.

and

That we advance the capabilities of all to exercise real choice in being and doing