

New Frontiers of SMART Education: From e-Learning and Beyond

### 29-Learning Korea 2012

# Open Educational Resources (OER): The Coming of Age of ICT in Education?

Sir John Daniel & Stamenka Uvalić-Trumbić Education Masters, DeTao Masters Academy, China





# Open Educational Resources (OER): The Coming of Age of ICT in Education?

Sir John Daniel & Stamenka Uvalić-Trumbić Education Masters, DeTao Masters Academy, China

#### In Principle:

ICT can improve education

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ICT can improve education

In Practice:

Results are disappointing

#### Improving Education?

ACCESS (wider)

QUALITY (higher)

COST (lower)

**ALL AT THE SAME TIME!** 

Potential of ICT

Potential of ICT

The Record

Potential of ICT

The Record

Weaknesses:

- 1. Planning
- 2. Training
- 3. Materials

Potential of ICT

The Record

Weaknesses:

- 1. Planning
- 2. Training
- 3. Materials OER

WHY do ICT inspire dreams transforming education

#### Teaching and Learning

Manipulation of symbols (Words, Numbers, Formulae, Images...)

# Contemporary ICT are KNOWLEDGE MEDIA

"knowledge is a dynamic process – a living thing"



Teachers cannot pour knowledge into students' heads!

# Contemporary ICT are KNOWLEDGE MEDIA

"knowledge is a dynamic process – a living thing"

"science is less a statement of truth than a running argument"

'essential reading for all involved in higher education'
TIMES HIGHER EDUCATION SUPPLEMENT

#### Mega-Universities & Knowledge Media

Technology Strategies for Higher Education

John S Daniel

"ICT will become an increasingly powerful asset to education as its capacities for interactivity and data-linking continue expand"

#### The Practice of Education

"the Internet is an extraordinary vehicle for the wide distribution of information, knowledge and educational material at low cost."



## A World Leader in applications of ICT

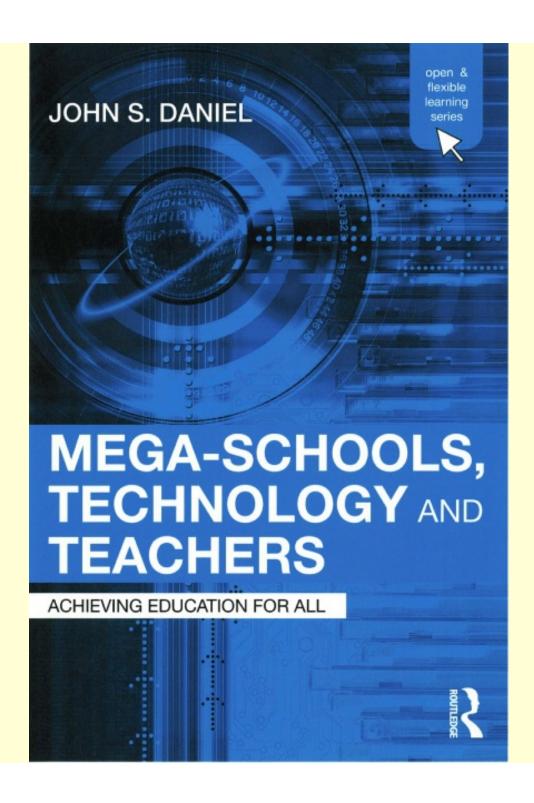
#### BUT...

# ICT has not yet fulfilled this potential

'there are no technology shortcuts to good education. For primary and secondary schools that are underperforming... efforts to improve education should focus... on better teachers and stronger administrations.

Technology has a huge opportunity cost (compared to) more effective non-technology interventions.'

Toyama (2011)





#### The OLPC XO-1 laptop

One Laptop Per Child

#### The Economist

#### **Education in Peru**

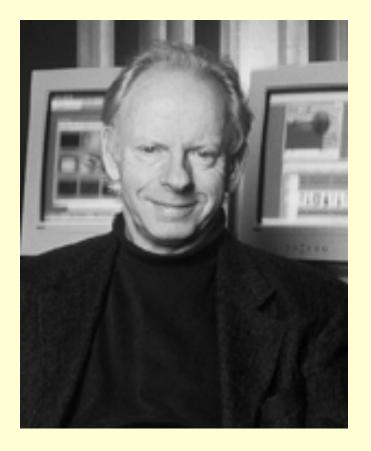
#### **Error message**

#### A disappointing return from an investment in computing

Apr 7th 2012 | LIMA | from the print edition







Professor Tony Bates
"2011 Outlook for Online Learning and
Distance Education"

(www.contactnorth.ca)

#### SADLY...

- goals for eLearning are unambitious
- costs are rising
- no evidence of better learning outcomes
- failure to meet quality standards

#### Why are ICT underperforming?

#### Why are ICT underperforming?



Politicians dazzled by the headlights of oncoming technology

#### THREE VITAL PRELIMINARY STEPS

Objectives: to achieve what?



Bangkok

#### THREE VITAL PRELIMINARY STEPS

- Objectives: to achieve what?
- Trained teachers



ICT Competency Framework for Teachers



Commonwealth Certificate for Teacher ICT Integration

#### THREE VITAL PRELIMINARY STEPS

Objectives: to achieve what?

Trained teachers

ICT-rich Learning Material

Open Educational Resources

#### **Sharing Learning Materials**

Super in principle!

Tough in practice!

#### **Sharing Learning Materials**

Adaptation = rekeying

Third party copyright

#### **Sharing Learning Materials**

Adaptation = rekeying

Third party copyright

#### **OPEN EDUCATIONAL RESOURCES (OER)**

educational materials that may be freely accessed, reused, modified and shared.

#### THE TREND TOWARDS OPENNESS

- Open Source Software



- Open Access to Research



- Open Educational Resources



## Collaborative Development of OER

#### **COL & Hewlett Foundation**





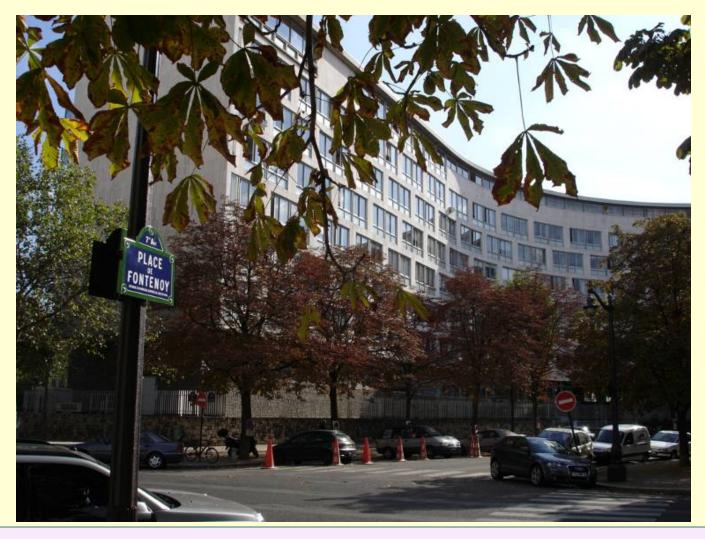








20 sets of self-instructional materials in the secondary curriculum (each is a complete syllabus for one grade 10 or 12 subject)



#### **UNESCO HQ Paris**

2002 Forum on the Impact of Open CourseWare for Higher Education in Developing Countries



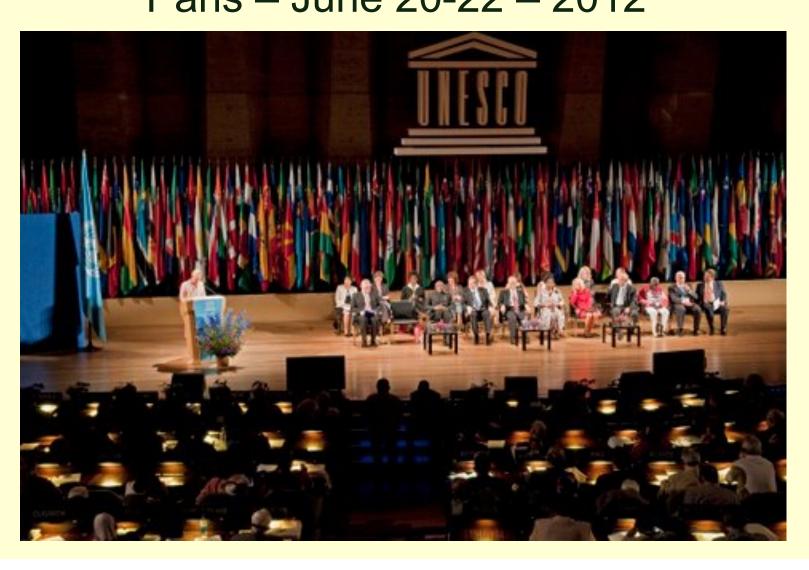
# 2002 FORUM on the Impact of Open CourseWare for Higher Education in Developing Countries

#### **Declaration:**

#### Participants expressed:

"their satisfaction and their wish to develop together a universal educational resource for the whole of humanity, to be referred to henceforth as **Open Educational Resources**"

# World Congress on Open Educational Resources Paris – June 20-22 – 2012



## The World Conference on Higher Education Paris - July 2009: *New Dynamics of HE*





United Nations Educational, Scientific and Cultural Organization

# Taking OER beyond the OER Community: Policy & Capacity for Developing Countries

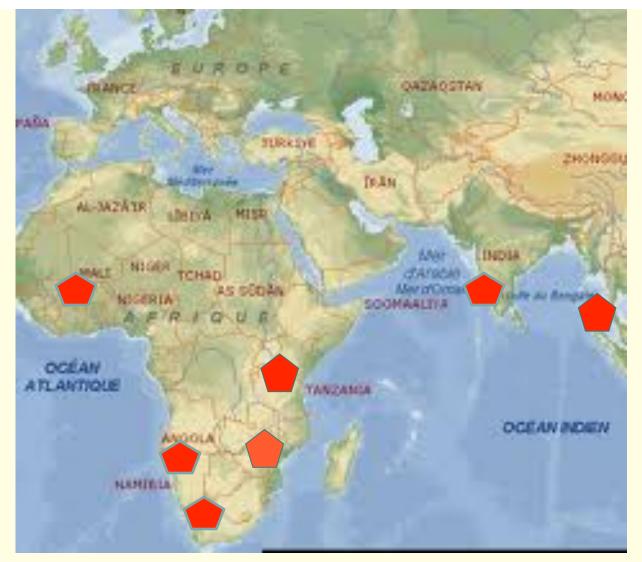




Zeynep Varoglu



Trudi van Wyk



#### Workshops

South Africa

Namibia

Malaysia

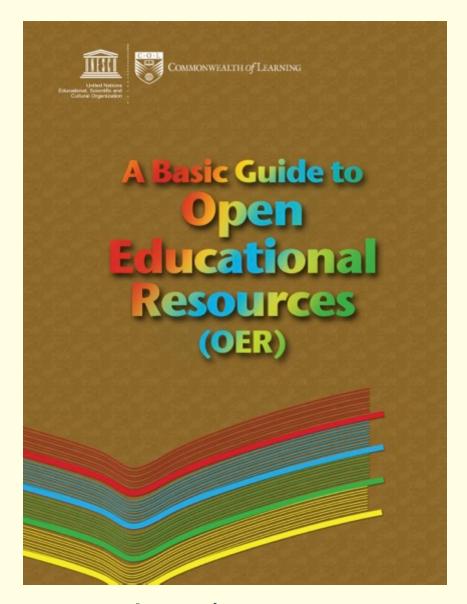
Mali

India

Tanzania

Mozambique

Plus three online forums



col.org/resources



**Neil Butcher** 



Stamenka Uvalić-Trumbić



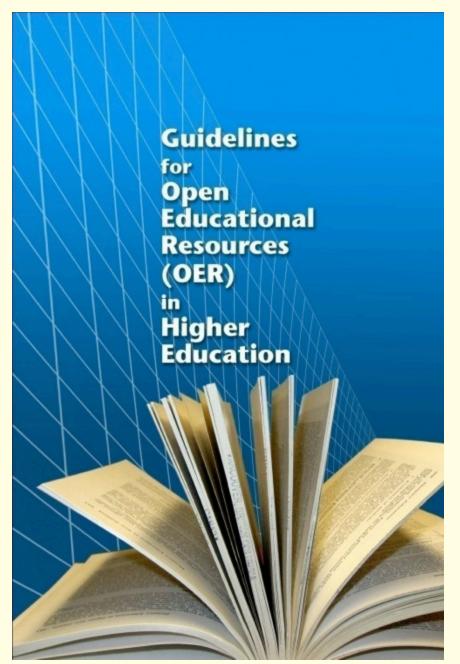
Asha Kanwar



United Nations Educational, Scientific and Cultural Organization



Zeynep Varoglu



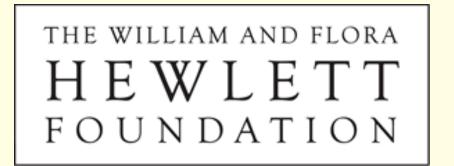




Trudi van Wyk

## Fostering Governmental Support for Open Educational Resources Internationally





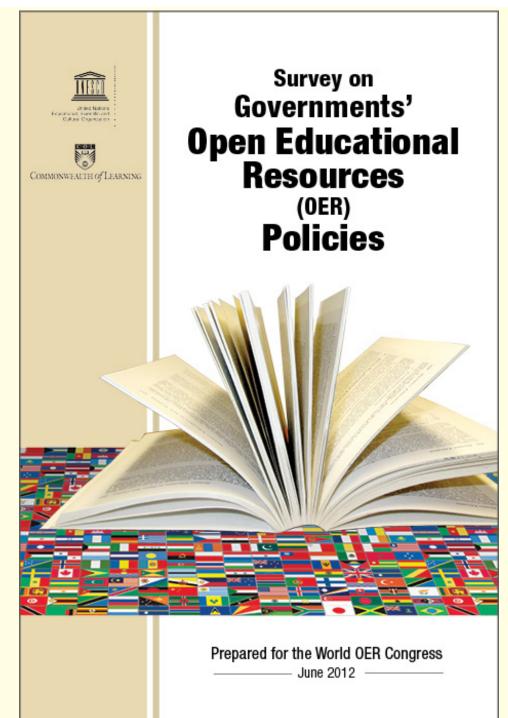


#### **QUESTIONNAIRE SURVEY**

Responses from ~ 100 countries



Sarah Hoosen



"There appears to be great interest in OER across all regions of the world, with several countries embarking on notable OER initiatives. Indeed, the survey itself raised interest and awareness of OER in countries that may not have had much prior exposure to the concept."

Hoosen Report

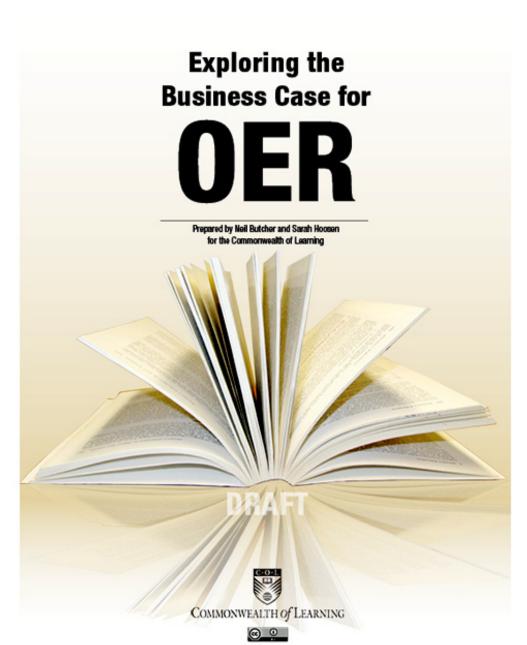
## WHY OER?

Idealism

Economics



Neil Butcher





Sarah Hoosen

#### The Business Case for OER

Resource-based learning

OER reduce costs

Better approaches to textbooks

...there appears to be some confusion regarding understanding of the concept and potential of OER.

Many projects are geared to allowing online access to digitized educational content, but the materials themselves do not appear to be explicitly stated as OER.

Where licences are open, the Creative Commons framework appears to be the most widely used licensing framework, but licensing options varies between countries.

Hoosen Report

## Open Licensing

#### **AUTHORS**

OER within copyright legislation

#### **USERS**

Assurances & restrictions

## Open Licensing

No consensus on 'non- commercial' restriction

## Regional Policy Forums

 Dialogue between governments and practitioners

Promote World OER Congress

Consult on Paris Declaration

#### The Paris Declaration

- Principles and aims not implementation
- Focus on OER not open source/access
- Avoid technical language

## Regional Policy Forums

- Caribbean January
- Africa February
- Latin America March
- Europe April
- Asia & Pacific April
- Arab States May

## 10 Caribbean jurisdictions reported on the status of OER

Antigua & Barbuda

**The Bahamas** 

**Belize** 

Grenada

Guyana

**Jamaica** 

St. Vincent & the Grenadines

St. Kitts & Nevis

Trinidad & Tobago

Cayman Islands

#### **Barbados, January 2012**



ICT in Education Leadership
Forum in the Caribbean
&
Caribbean OER Policy Forum





#### Professor Mandla Makhanya

Principal & VC







Building African education capacity through openness

HOME E

UNDERSTANDING OER

FINDING OER

**OER IN ACTION** 

**USING TECH** 

Home > OER in Action > Health Project Home > Participating Institutions > KNUST



#### Kwame Nkrumah University of Science and Technology

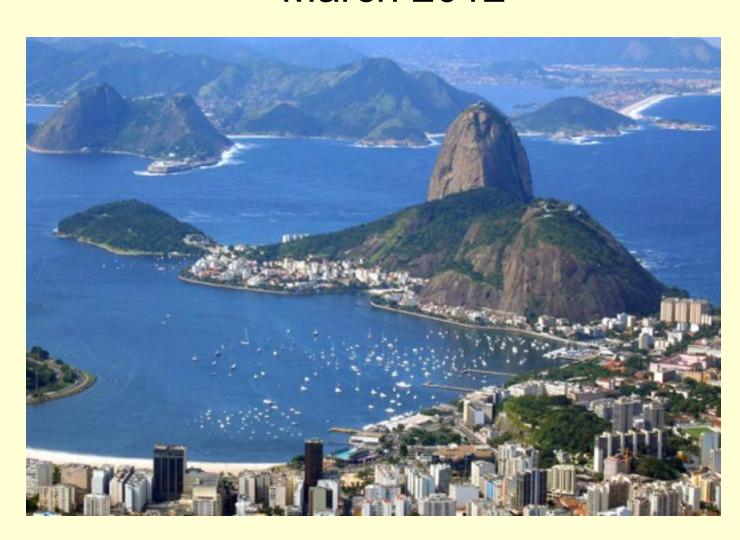
The University of Science and Technology succeeded the Kumasi College of Technology which was established by a Government Ordinance on 6th October, 1961. Following the report of a University Commission which came out early 1961, Government decided to establish two independent Universities in Kumasi at Legon near Accra. The Kumasi College of Technology was thus transformed into a full-fledged University Kwame Nkrumah University of Science Technology by an Act of Parliament on 22nd August, 1961. By another act of Parliament, Act 559 of 1998, the University has been renamed Kwame Nkrumah University of Science and Technology, Kumasi.

#### Africa Policy Forum Pretoria (February 2012)



- Connectivity/electricity
- Sharing OER across languages
- Research on OER
- New business models to include industry

# Regional Policy Forum for Latin America March 2012



## 10 Latin American Nations reported on their Status of OER

**Argentina Brazil** Chile Colombia El Guatemala **Salvador Mexico Paraguay** Peru **Uruguay** 



## Regional Policy Forum for Latin America March 2012



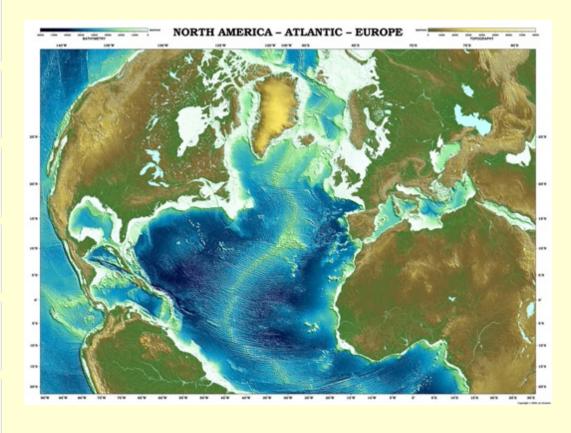
- Preamble: Internationally agreed statements
- Clarify and simplify
- Strategic alliances
- "Appropriate legal frameworks"
- Open licences "with restrictions as judged necessary"

## Europe Regional Policy Forum Cambridge, UK – April 2012



### 18 countries reported on their OER policies/intentions

Armenia	Austria	Azerbaijan
Belgium	Bulgaria	Canada
Cyprus	Finland	Hungary
Italy	Latvia	Lithuania
Malta	Monaco	Netherlands
Poland	Slovenia	USA



## Europe Regional Policy Forum Cambridge, UK – April 2012



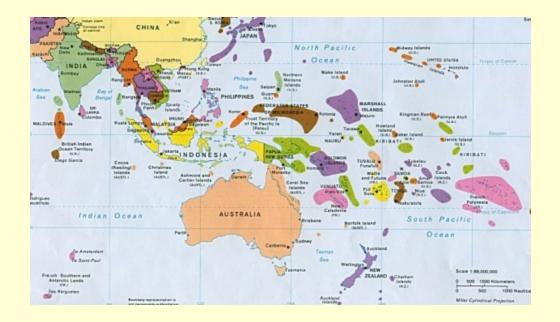
- Longer definition of OER (earlier formulation)
- Encourage private sector and NGOs to participate

#### Asia – Pacific Regional Policy Forum Bangkok – April 2012



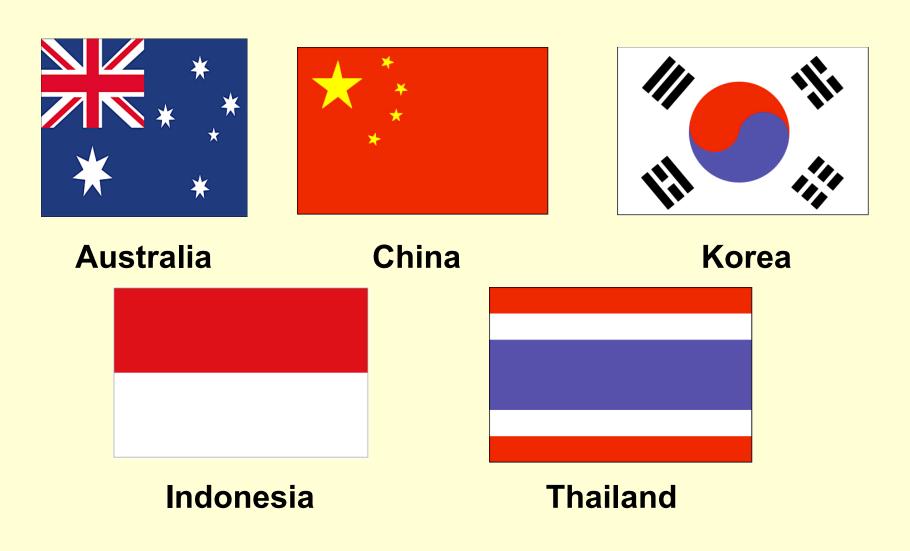
### 19 countries reported on their OER policies/intentions

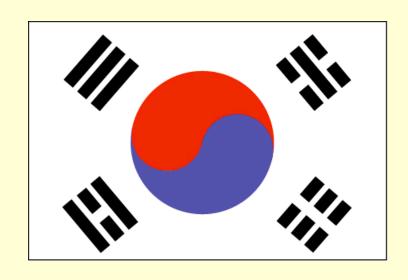
Australia	Brunei	China
Fiji	Indonesia	Iran
Kazakhstan	Korea	Malaysia
Mongolia	New Zealand	Pakistan
Philippines	Samoa	Sri Lanka
Thailand	Uzbekistan	Vanuatu
	Vietnam	



#### Government policies in place

'open licensing of materials'





Korea

### Open Courseware Information Strategy Plan

ISP for National OER Repository

### AUSGOA

Australian Governments Open Access and Licensing Framework

Overview

ginal (in particular it)

ne creative contribut

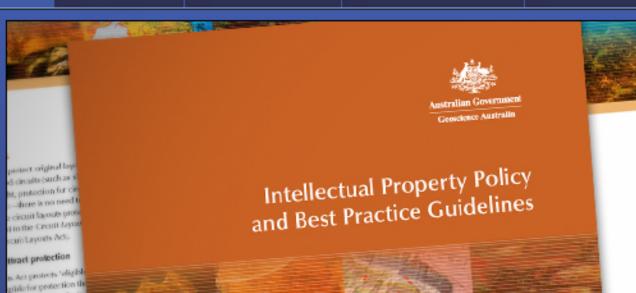
Open Access

Using AusGOAL

data.x.gov.au

Research

Inr



### BEST PRACTICE GUIDELINES

This section addresses typical Georgianes Australia activises, relationships er transaction types in which iP is shalt with.

IP transactions or activities differ according to:

- whom Geoscience Australia is disaling with (je stakeholden)
- what \footnotes subject water is incolved in the dealing.
- when in its life cycle it is to be dealt with
- whether Geoscience Australia is involved in that activity or transaction.
- opportunities and tide that arise from the

Geoscience Australia incorporates AusGOAL into IP Policy... more

unless a waive with questions employee IP's with their sup

#### Study

Where the er area oi profe own IP in ar study purpor Where carp Geoscience Geosciesco ofprovidin the employ anangem

Secondo





China

### Video Open Courseware Project

Open Digital Learning
Resources for Continuing
Education

### Asia – Pacific Regional Policy Forum Bangkok – April 2012



- Add CONFINTEA in preamble
- Open licencing does not affect authorship
- Capacity building; incentives, indigenous knowledge
- Action verbs instead of statements

### Arab States Regional Policy Forum Muscat, Oman – May 2012



#### 11 countries reported on their OER policies/intentions

Algeria

Bahrain

Iraq

Jordan

Lebanon

Morocco

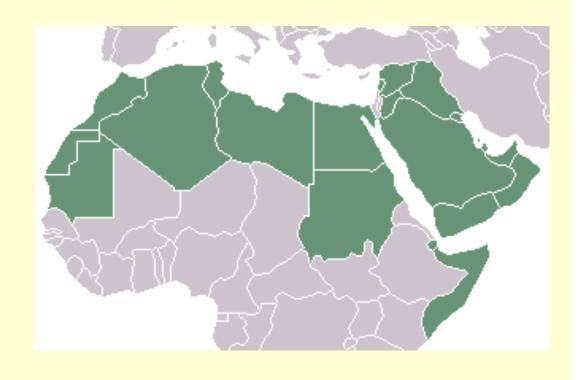
Oman

Qatar

Sudan

Tunisia

Yemen



### No countries have explicit policies on OER

#### but

five countries have strategies relating to eEducation, eLearning or ICTs that could be extended to OER











Morocco



In Morocco the Ministry of Education has created a National Laboratory of Digital Resources, which is in charge of the production and labeling of digital educational resources. Some resources were produced as OER.

In addition, an official ICT website of the Ministry, with a management platform for open source content "DRUPAL", has been created.

### UNESCO supports development of OER in Morocco



Within the framework of UNESCO's programme to promote Open Educational Resources, the UNESCO Rabat Office is organizing a workshop at the Morocco-Korean Training Centre on ICT in Education in Rabat from 3 to 6 October. The workshop will focus on the use of Scenari-Opale, an editorial chain under the FOSS licence,

which allows teachers to easily produce, manage and publish educational resources in various formats.





Morocco - Korean Training Centre on ICT in Education

### Arab States Regional Policy Forum Muscat, Oman – May 2012



- Add reference to Millennium Declaration in Preamble
- Add item on the need for policies and strategies
- Refer to "open standards digital formats"

## Importance of government involvement

 Governments make policy and steer education systems

 Governments pay for large amounts of educational material

# World Congress on Open Educational Resources Paris – June 20-22 – 2012



### The Paris Declaration





# 2012 World Open Educational Resources Congress Paris UNESCO Headquarters Paris, France

### Fostering Governmental Support for Open Educational Resources Internationally







# World Congress on Open Educational Resources Paris – June 20-22 – 2012



### The Paris Declaration

#### Paris Declaration on OER

- 1. Foster awareness and use of OER.
- 2. Facilitate enabling environments for the use of ICT.
- 3. Reinforce the development of policies and strategies on OER.
- 4. Promote the understanding and use of open licensing frameworks.

#### Paris Declaration on OER

- 5. Support capacity building for the sustainable development of quality learning materials.
- 6. Foster strategic alliances for OER.
- 7. Encourage the development and adaptation of OER in a variety of languages and cultural contexts.
- 8. Encourage research on OER.

### Paris Declaration on OER

9. Facilitate finding, retrieveing and sharing of OER.

10. Encourage open licensing of educational material produced with public funds.



### The Paris Declaration

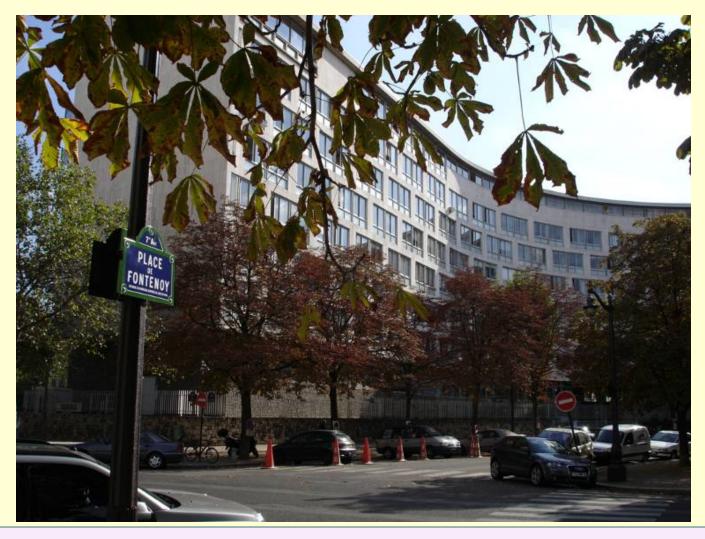
Is not legally binding but governments use such declarations as a guide to policy making and this is already happening with this Declaration on OER

### THE AIM

"to encourage governments to promote OER and the use of open licences...

(because)

...governments will be major beneficiaries thanks to the potential of OER to improve the cost-effectiveness of their large investments in education."



### **UNESCO HQ Paris**

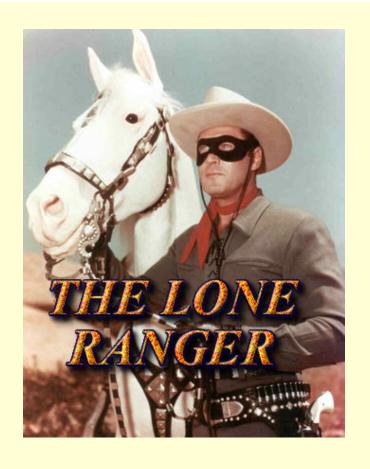
2002 Forum on the Impact of Open CourseWare for Higher Education in Developing Countries

### THREE VITAL PRELIMINARY STEPS

Objectives: to achieve what?

Trained teachers

ICT-rich Learning Material



# Better to work in teams!

### THREE VITAL PRELIMINARY STEPS

Objectives: to achieve what?

Trained teachers

ICT-rich Learning Material

Open Educational Resources



## A World Leader in applications of ICT





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# THANK YOU

For text and slides: www.sirjohn.ca