Asia-Pacific
Economic Cooperation

2006/HRDWG/SYM/002
Agenda Item: 1

The Promise of Open Educational Resources

Purpose: Information
Submitted by: USA

APEC Symposium on Open Source and Open Course for E-Learning
Ha Noi, Viet Nam
4 - 6 December 2006

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The Promise of Open Educational Resources

APEC Symposium on Open Source and Open Course for e-Learning
Hanoi, Vietnam – December 4, 2006

Marshall S. Smith, Catherine M. Casserly
The William and Flora Hewlett Foundation

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Slide 1

JD33 Program has different title:

"History and potential future for open educational resources"
John Dehlin, 11/29/2006

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Opening the World to Knowledge and Education

"He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me."

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Thomas Jefferson

Photo by TikkunGer via Flickr, cc license

"If you have knowledge, let others light their candles with it."

Sir Winston Churchill

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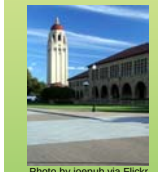
A Challenge: Too Many on the Outside, Looking In



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The Promise

The Progress

The Obstacles

The Future

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What is OER?

- High quality educational content and tools
- Open on the Web
- All languages
- Usable and re-usable
- Available on any device

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The Vision:

- Equalize access to knowledge
- Dramatically improve learning

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Types of OERs

Open…

CourseWare…courses…books…
journals… images…video lectures…
textbooks…podcasts…lesson plans…
encyclopedias

Efforts in…

Vietnam, China, India, Europe,
Africa, United States, Canada, Brazil

Universities, K-12, libraries, publishing

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Three great strengths of OER

- Open (Free) for all on the web
- Open for downloading, using and reusing:
  - Personalization, cooperation, cultural and linguistic appropriateness
- These strengths are particularly useful for enhancing collaboration and fostering creativity for teaching and learning.

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Slide 9

JD4 include
John Dehlin, 11/29/2006

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The Progress:

Public Sector

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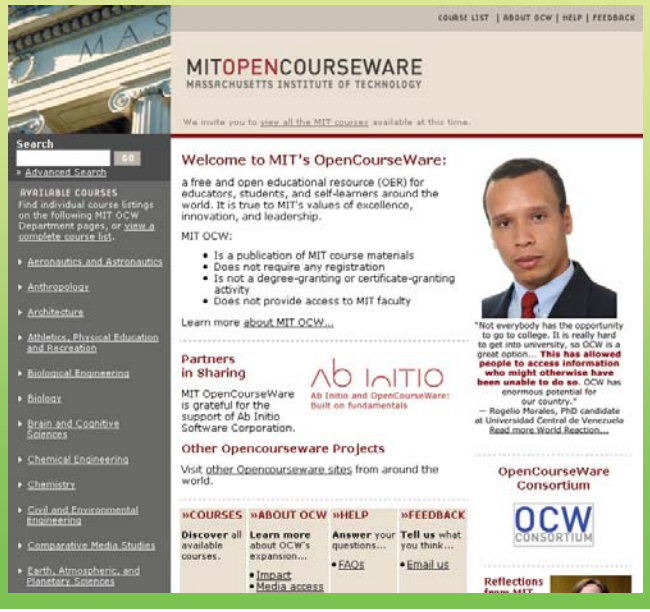

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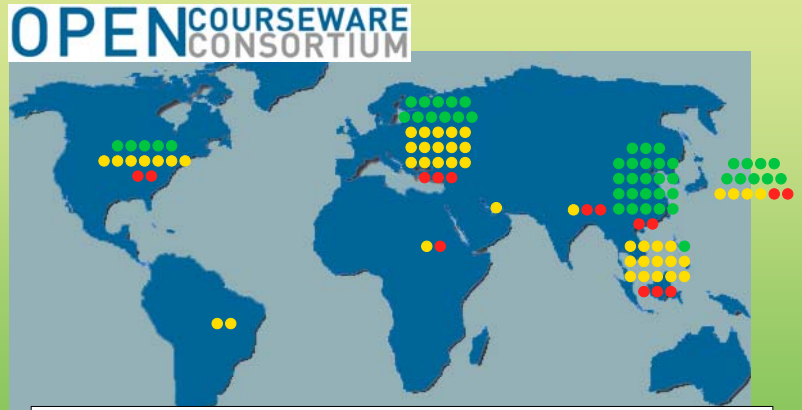

- 109 universities around the world
- 3,000 courses, 380 translated into 9 languages
- 1.2 million visits/month

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Slide 14

JD80 This is the OCW slide
John Dehlin, 11/29/2006

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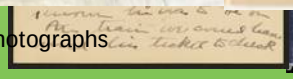
Harvard Library Open Collections

Industrial Life Photographs

Trade Catalogs



Manuscripts

Books

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Journals: Public Library of Science

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University Lectures

ndation

RSS Feeds, Podcasts

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CONNEXIONS
CNX.ORG

global OER repository:
high-quality materials available
free to anyone, anywhere, at any time

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open to contributions from authors worldwide

XML technology enables **remix** into customized web courses and inexpensive print textbooks

peer review for **quality control**

Creative Commons attribution license enables commercial use and **sustainability**

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The Progress: Commercial Sector

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YAHOO!

XEROX

Adobe

A Pro dation

OPEN Content Alliance

HOME | CONTRIBUTORS | PARTICIPATE | NEXT STEPS

Building a digital archive of global content for universal access.

HP Labs
Advanced Research at HP

msn

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Google Print

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Google

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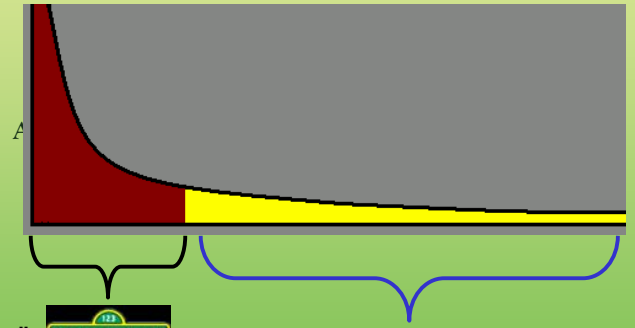
Sustainability: Leveraging the “Long Tail”



“Big Hits”

SESAME STREET

What are the “non-hits” in your archives?

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Slide 24

JD78 keep long tail. examples not quite right

What are web sites in the early box. ping luke chu.
John Dehlin, 11/29/2006

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The Obstacles

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Some of The Obstacles

- Intellectual Property
- Localization and Translation
- Interoperability
- Sustainability

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JD70 we do want a barriers slide, focus on sustainability and IP (focus). highlight it or something

John Dehlin, 11/29/2006

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Intellectual Property: Creative Commons

- **Offers open or semi-open copyright licenses.**
- **Adopted in 41 countries and growing.**
- **Yahoo, Google and Flickr all have Creative Commons search pages**

and I

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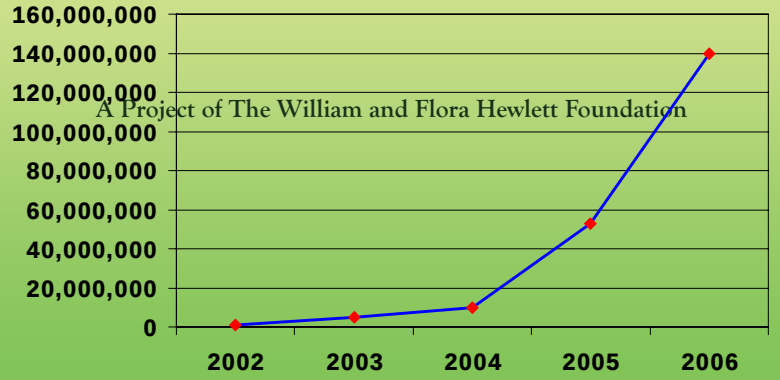
Creative Commons Licenses - Growing Adoption



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JD79 keep
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Translation: CORE, OOPS and Universia

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The Future

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A Revolution in Learning

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New Economy Requires Old + New Basics

- Facts & skills based
- Teacher controlled
- Work alone
- Avoid failure
- Discipline based

- Deeper understanding
- Student controlled pace
- Creative by creating
- Work in groups
- Synthesize and analyze
- Try, fail and try again

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JD76 Pull this in

John Dehlin, 11/29/2006

JD77

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NOW is the TIME. A first Major change in what we know about learning:

- cognitive science
- pedagogy
- possibilities from brain research

ndation

are leading to new applications of technology in education

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JD77 Bring this in for now
John Dehlin, 11/29/2006

JD65

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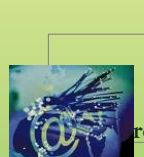
More bandwidth, increasing processing power, ubiquitous connectivity, rapid growth of mobile devices, decreasing costs…



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Increase capacity to access, collaborate, personalize, and create

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Slide 34

JD65 Put it in

nice introduction

at bottom add remix, reuse, etc.
John Dehlin, 11/29/2006

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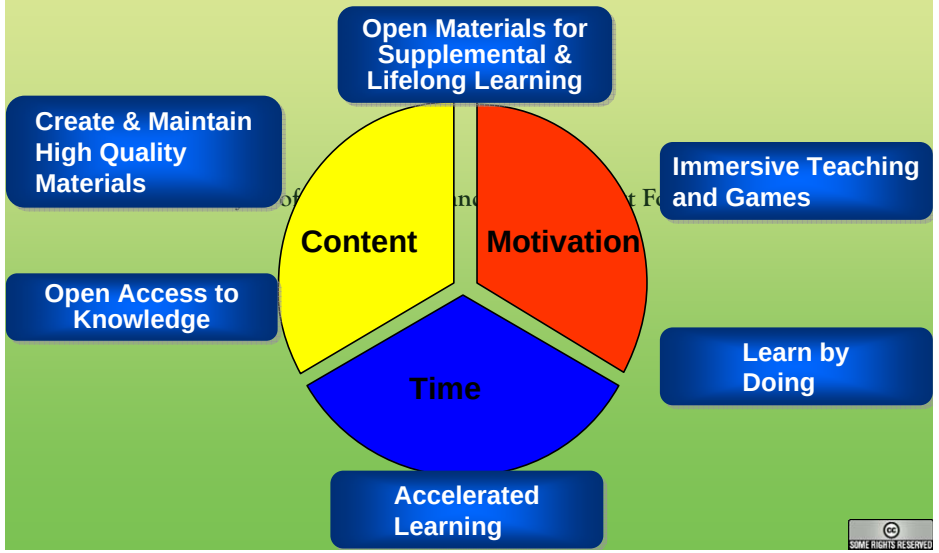
Learning = f(Content, Motivation, Time) x Technology



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Universal Open World Library

Content

- **Books** in millions: Google and other digitization projects
- **Library collections** worldwide: U.S., France, UK
- **Journals**: Public Library of Science
- **Videos** of documentaries and lectures: BBC, Public Broadcasting System

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Content

Create, Maintain and Share High Quality Materials

Fast feedback loops that engage rapid cycles of improvement of teaching materials

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JD66 John Dehlin, 11/29/2006

JD67 include
John Dehlin, 11/29/2006

JD57

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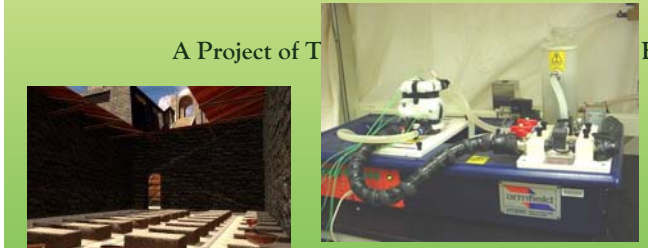
Learn by Doing

To become a scientist, architect, or computer programmer…must learn to think and practice like one



MIT iLabs

Discover Babylon

Surgery Simulator

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JD57 Keep it.
John Dehlin, 11/29/2006

JD42

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Accelerated Learning:
Cognitively Informed Web- based Instruction

Carnegie Mellon
open learning initiative

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JD42 Use this photo, and superimpose CMU stuff, split slide. Might be on other PPT
John Dehlin, 11/29/2006

JD56

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Open Materials for Supplemental & Lifelong Learning

Give choices and control over when, where, and how to learn

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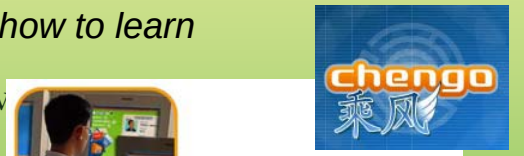

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JD56 keep

not quite right. too focused on game.

lifelong learning/adults

John Dehlin, 11/29/2006

JD58

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Immersive Teaching and Games

Learn through structured play

William a

UN World Food Program: *Food Force*

Federation of American Scientists: *Immune Attack*

PEACEMAKER

Carnegie Mellon: *PeaceMaker*

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Slide 41

JD58 Keep

Enlarge it or something.

John Dehlin, 11/29/2006

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Learning = f(Content, Motivation, Time) x Technology

- Open access to a massive library of knowledge for all
- Learn structured education material anytime, anywhere, and on any device
- User-centric improvement of education materials
- Accelerate learning -- learn 2 – 3 times faster

- Motivate students by learning to be professionals
- Promote creativity, problem solving, control of learning through games, immersive environments

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These ideas are just the beginning. What might we do?

1. Invest in development of cognitive tutors, games, simulations and better education materials
2. R&D on more complex immersive environments to support learning by doing
3. Change incentives in the system:
   - Reward creative uses of technology
   - Give course credit without seat time
   - Change tests to assess creativity

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Iterate toward excellence

"Players watch one another's videos, record their own – multiplies the channels by which musical innovation circulates" – NY Times

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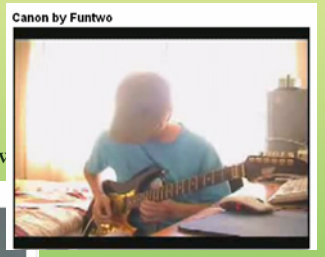

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JD81 we may want to end on this

generation of remix

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