

THE WILLIAM AND FLORA  
**HEWLETT**  
FOUNDATION



**Open Educational Resources Initiative**

# THE WILLIAM AND FLORA HEWLETT FOUNDATION

*In a refugee settlement in northern Uganda, a humanitarian health worker hovers over her laptop, reviewing free, open coursework on international nutrition.*

*A physics instructor in a remote part of Guatemala is now able to supplement her lesson on particle wavelengths using an open online simulation and course materials translated into Spanish from MIT.*



*In a small town in rural Kentucky, a high school senior is taking an online Advanced Placement physics course not offered at her high school so she can prepare for the AP test on her own.*

### **Innovate**

For the past four years, the William and Flora Hewlett Foundation has been the leading grant-maker in the field of “open educational resources” — high-quality digitized educational materials offered freely and openly for anyone with access to the Internet. These materials are available for use as is, or for re-use as appropriate. Hewlett’s commitment to advancing this exciting field is grounded in the belief that knowledge and education are common goods — and that limited resources and geography should not be barriers to an individual’s passion to learn.

### **Invest**

Since 2001, the Hewlett Foundation has made grants in excess of \$40 million to support institutions and organizations that develop and provide online access to open educational content. For example, the Foundation is funding:

- MIT OpenCourseWare – to publish course materials from virtually all MIT courses
- Carnegie Mellon University’s Open Learning Initiative – a portfolio of highly interactive multi-media courses
- African Virtual University – to provide free digital and printable materials to train teachers in Sub-Saharan Africa
- Creative Commons – to offer innovative copyright solutions that allow for more “open access” of creative work and scholarly materials online
- Widernet eGranary – to improve digital access in developing countries

## Open Educational Resources Initiative: What's Our Goal?

The Foundation has funded over 50 OER initiatives with the goal of leveraging information technology to equalize educational opportunities across the world.

### 1. Sponsor High-Quality Open Academic Content

The Open Educational Resources movement began in 2001 when the Hewlett and the Andrew W. Mellon foundations jointly funded MIT OpenCourseWare (OCW), the first institution committed to making all of its course materials freely available.

Since then, more than 60 additional institutions have launched OpenCourseWare Web sites. In total, materials for more than 2,000 courses are now published openly, drawing almost a million visits per month. Hewlett also supports many other types of open education content including full courses, modules and library collections.

### 2. Break Down Barriers to Open Educational Content

Make it possible: Hewlett supports efforts to secure intellectual property rights for open content as well as open source learning management systems, content authoring tools, supportive learning environments and resource sharing.

Make it accessible: To make it easier for people to find Open Educational Resources online, the Foundation has funded the development of two searchable portals. Development Gateway is an online destination for people worldwide working on international development. The OER Exchange Portal, expected to launch in 2006, will provide users with tools that will help them search and evaluate the quality of existing open educational content. Both portals will regularly scour the Web to harvest high-quality OER and organize them in a central location.



### 3. Encourage People Worldwide to Use Open Educational Resources

Increase regional distribution: To broaden opportunities for people in developing nations who might make use of OER, Hewlett is forging partnerships with extensive networks and institutional partners in China, Africa and other targeted regions around the globe.

Strengthen partnerships: The Hewlett Foundation is developing relationships with the World Bank and other institutions, including UNESCO and the Commonwealth of Learning, to expand the opportunities for all people to use Open Education Resources. Hewlett is also exploring private sectors partnerships with Sun Microsystems, IBM and Google.

#### About the William and Flora Hewlett Foundation

The William and Flora Hewlett Foundation ([www.hewlett.org](http://www.hewlett.org)) has been making grants since 1966 to help solve social and environmental problems at home and around the world. The Foundation concentrates its resources on activities in education, environment, global development, performing arts, philanthropy, population, and makes grants to support disadvantaged communities in the San Francisco Bay Area. A full list of all the Hewlett Foundation's grants can be found at [www.hewlett.org/grants](http://www.hewlett.org/grants).

THE WILLIAM AND FLORA  
**HEWLETT**  
FOUNDATION

## Open Educational Resources - Sample Initiatives

### Open Educational Resources – Sample Initiatives

First adopted at a meeting sponsored by the William and Flora Hewlett Foundation at UNESCO in 2002, the term “Open Educational Resources” refers to digitized materials offered freely and openly for educators, students and self-learners to use and re-use for teaching, learning and research. Open Educational Resources (OER) include:

- **Learning Content:** Full courses, courseware, content modules, learning objects, collections and journals.
- **Tools:** Software to support the development, use, re-use and delivery of learning content including searching and organization of content, content and learning management systems, content development tools, and online learning communities.
- **Implementation Resources:** Intellectual property licenses to promote open publishing of materials, design principles of best practice, and localization of content.

Below is a selection of Open Educational Resources offered freely on the Web for use by anyone, anywhere.

### OPENCOURSEWARE (OCW) AND TRANSLATIONS

OCW sites present university course content on the Web, free for use and re-use. The content includes course descriptions and purpose, syllabi, problem exercises, calendars, tests, lecture notes and occasionally video lectures, simulations, and other materials.

#### Massachusetts Institute of Technology (MIT) OpenCourseWare\*

Provides free, searchable access to MIT’s course materials for educators, students, and self-learners around the world.  
<http://ocw.mit.edu/index.html>

#### China Quality OpenCourseWare

Promotes closer interaction and open sharing of educational resources between Chinese and international universities.  
[http://www.core.org.cn/cn/jpkc/index\\_en.html](http://www.core.org.cn/cn/jpkc/index_en.html)

#### Foothill-De Anza Community College District, Sharing Of Free Intellectual Assets (Sofia)\*

Publishes community college-level course content and makes it freely accessible on the Web to support teaching and learning.  
<http://sofia.fhda.edu/>

#### Japan OpenCourseWare Alliance

Provides a wide range of free and open educational resources via the Internet to any individual interested in higher education.  
<http://www.jocw.jp/>

#### Johns Hopkins Bloomberg School of Public Health (JHSPH) OpenCourseWare\*

Provides free, searchable, access to JHSPH’s course materials for educators, students, and self-learners around the world.  
<http://ocw.jhsphe.edu/>

#### Tufts University OpenCourseWare\*

Supports and advances education by making high-quality content freely available on the Web for learners and faculty across the nation and the world.  
<http://ocw.tufts.edu/>

#### Utah State University OpenCourseWare\*

A free and open educational resource for faculty, students, and self-learners throughout Utah and around the world.  
[http://ocw.usu.edu/Index/ECIndex\\_view](http://ocw.usu.edu/Index/ECIndex_view)

#### ● Translations:

#### Chinese Open Resources for Education\*

Translations from English to Chinese and Chinese to English.  
<http://www.core.org.cn/>

#### Opensource OpenCourseWare Prototype System

Translates MIT OCW into traditional Chinese.  
<http://www.twocw.net>  
Translates MIT OCW into simplified Chinese.  
<http://www.cocw.net>

#### Universia

English to Spanish and English to Portuguese translations.  
<http://www.universia.net/>

### OPENCOURSEWARE SETUP TOOLS

#### MIT OpenCourseWare How-To Site\*

Helps institutions interested in creating their own OpenCourseWare initiatives get started. Also offers implementation tools, including resources and materials from MIT’s experience.  
<http://ocw.mit.edu/OcwWeb/HowTo/index.htm>

\* Project or initiative funded by the William and Flora Hewlett Foundation (updated as of November 1, 2005).

## eduCommons\*

A project of the Center for Open and Sustainable Learning. Its open source software allows institutions to easily publish OCW content via a ready-made platform designed for efficient production of course materials.

<http://cosl.usu.edu/projects/educommons>

## COURSES & LEARNING OBJECTS

### Carnegie Mellon University, Open Learning Initiative (OLI)\*

A collection of “cognitively informed,” openly available and free online courses and course materials that enact instruction for an entire course in an online format.

<http://www.cmu.edu/oli/>

### Monterey Institute for Technology, Online Advanced Placement (AP) courses\*

Allows high school students to learn AP course content even if their school doesn't offer AP classes.

[http://www.archive.org/details/ap\\_courses](http://www.archive.org/details/ap_courses)

### Rice University, Connexions\*

A space for collaboratively developing, freely sharing, and rapidly publishing scholarly content on the Web to provide educational materials for everyone — from children to college students to professionals.

<http://cnx.rice.edu/>

## DISCIPLINE-SPECIFIC COLLECTIONS

### ● History:

#### Library of Congress, American Memory

<http://lcweb2.loc.gov/amhome.html>

#### Digital History: American History

<http://www.digitalhistory.uh.edu>

#### Harvard University Library Open Collections Program\*

<http://ocp.hul.harvard.edu/>

#### History Matters\*

<http://www.historymatters.gmu.edu>

#### Internet Modern History Sourcebook

<http://www.fordham.edu/halsall/mod/modsbook.html>

#### University of California, American West Collection\*

<http://www.cdlib.org/inside/projects/amwest/>

#### World History Sources

<http://chnm.gmu.edu/whm/whmfinding.php>

### ● Health:

#### Johns Hopkins Center for Public Health Preparedness

<http://www.jhsph.edu/preparedness/index.html>

### ● Math:

#### Drexel University, Math Forum

<http://mathforum.org/>

#### Eisenhower National Clearinghouse

<http://web.archive.org/web/20041013043116/www.enc.org/?ls=bc>

### ● Philosophy:

#### Stanford University, Encyclopedia of Philosophy\*

<http://plato.stanford.edu>

### ● Science:

#### Access Excellence

<http://www.accessexcellence.org/AE/>

#### Carnegie Mellon University, Chemistry Collective

<http://www.chemcollective.org/>

#### University of Washington, High School Human Genome Program

<http://hshgp.genome.washington.edu/>

#### National Human Genome Research Institute

<http://www.genome.gov/Education/>

#### National Science Digital Library

<http://www.nsdlib.org>

#### University of Colorado, Physics Education Technology\*

<http://www.colorado.edu/physics/phet/>

#### National Science Teachers Association, Science Teachers' Grab Bag

<http://www.nsta.org/resourcesgrabbag>

## ARCHIVES & ENCYCLOPEDIA

### Internet Archive\*

An 'Internet library,' that offers permanent access for researchers, historians, and scholars to historical collections that exist in digital format.

<http://www.archive.org/>

### Wikipedia

Free online encyclopedia to which anyone can make edits or additions.

<http://www.wikipedia.org/>

\* Project or initiative funded by the William and Flora Hewlett Foundation (updated as of November 1, 2005).

## COUNTRY OR REGION-SPECIFIC INITIATIVES

This is a short list of other institutions and projects around the world that are working on making high-quality education content available for free on the Web.

### **African Virtual University\***

Works with over 57 learning centers in 27 African countries to support economic development by leveraging the power of modern telecommunications technology.  
<http://www.avu.org/>

### **Commonwealth of Learning, Learning Object Repository (Worldwide)**

An online database of learning content compiled by searching across a number of open content repositories.  
<http://www.col.org/lor>

### **Discovery Channel, Global Education Partnership (Sub-Saharan Africa & Latin America)**

Brings the world into under-resourced classrooms and communities with the help of television, video, satellite and cable technology.  
<http://www.discoveryglobaled.org/>

### **European Union, EducaNext**

Provides a place to exchange learning resources and distribute educational activities and content.  
<http://www.educanext.org>

### **National Institute for Multimedia Education (NIME) (Japan)**

Manages higher educational information portals, develops and distributes educational contents, and operates educational networks.  
<http://www.nime.ac.jp/>

### **New Partnership for Africa's Development (NEPAD) eSchools (Africa)**

Aims to provide every African school leaver with the basic technological skills required to function in an information society, to make learners health literate and to bridge the 'digital divide' within the next 10 to 15 years.  
<http://www.schoolnet africa.net/index.php?id=864>

## OPEN REPOSITORIES & PORTALS

### **BBC**

Provides a variety of education materials in many disciplines.  
<http://www.bbc.co.uk/>

### **Commonwealth of Learning's Knowledge Finder**

Indexes nearly 1 million documents from around the world on education and development from selected Web sites.  
<http://www.colfinder.org/public/index.jsp>

### **Development Gateway Foundation, OER Topic Page\***

Helps improve people's lives in developing countries by building partnerships and information systems that provide access to shared knowledge.  
<http://www.developmentgateway.org>

### **Discovery Channel, Global Education Partnership**

Provides tools and training necessary to extend the power of technology and information to under-resourced communities around the world.  
<http://www.discoveryglobaled.org/index.html>

### **DSpace**

A digital repository system that captures, stores, indexes, preserves and redistributes an organization's research material in digital formats.  
<http://www.dspace.org/>

### **Gateway to Educational Materials**

Provides educators with quick and easy access to thousands of educational resources found on various federal, state, university, nonprofit, and commercial Internet sites.  
<http://thegateway.org/>

### **Sun Microsystems, Global Education Learning Community (GELC)**

Empowers teachers, students and parent with self-paced, web-based, free and open content (curriculum resources, assessment) combined with best practices for advancing student achievement.  
<https://edu-gelc.dev.java.net/nonav/index.html>

### **Internet Archive, Education\***

Provides a variety of content including materials on education and a Web search tool as it existed at different times over the past decade.  
<http://www.archive.org/details/education>

### **Smithsonian Institute**

Allows users to take advantage of its extensive collection of learning and teaching materials.  
<http://www.si.edu/>

## OPEN JOURNALS & BOOKS

### **Boston College, Third World Law Journal**

<http://www.bc.edu/schools/law/lawreviews/thirdworld/>

### **University of Chicago at Illinois Library, First Monday**

<http://www.firstmonday.org>

### **Project Gutenberg**

<http://www.gutenberg.org>

---

\* Project or initiative funded by the William and Flora Hewlett Foundation (as of November 1, 2005).

## University of Michigan School of Information, Internet Public Library

<http://www.ipl.org>

## University of Michigan and Cornell University, Making of America

<http://www.hti.umich.edu/m/moagrpf/>

## Public Library of Science

<http://www.plos.org>

## Tufts University, The Perseus Digital Library

<http://www.perseus.tufts.edu/>

### INTELLECTUAL PROPERTY

#### BBC Creative Archive License Group

Makes moving images, audio and stills available for download under the terms of a single, shared user license scheme.

<http://creativecommons.bbc.co.uk/>

#### Creative Commons\*

Offers creators a best-of-both-worlds way to protect their works while building a layer of reasonable, flexible copyright in the face of increasingly restrictive default rules.

<http://www.creativecommons.org/>

#### Creative Commons, Science Commons\*

Encourages stakeholders to create areas of free access and inquiry using standardized licenses and other means: a 'Science Commons' built out of voluntary private agreements.

<http://science.creativecommons.org/>

#### Harvard Law School, Berkman Center for Internet & Society

A research program founded to explore cyberspace, share in its study, and help pioneer its development.

<http://cyber.law.harvard.edu/home/>

### CONSORTIA AND VIRTUAL COMMUNITIES

#### Digital Library Federation

A consortium of libraries and related agencies that are pioneering the use of electronic information technologies to extend collections and services.

<http://www.diglib.org/>

#### International Network for the Availability of Scientific Publications

Works with partners and networks around the world to encourage the creation and production of information, to promote sustainable and equitable access to information, to foster collaboration and networking, and to strengthen local capacities to manage and use information and knowledge.

<http://www.inasp.info/>

#### OpenCourse

A free collaboration platform that hosts virtual communities developing, evaluating and using open, non-proprietary learning objects in their discipline.

<http://www.opencourse.org/>

#### Open Learning Support\*

An open source software designed to integrate with collections of open access educational materials and provide educational support services.

<http://ols.usu.edu>

#### UNESCO, International Institute for Educational Planning\*

Works to strengthen the capacity of countries to plan and manage their education systems through training planners and managers, supporting institutions and fostering an enabling environment through policy forums, international cooperation and networking.

<http://www.unesco.org/iiep>

### INNOVATIVE OPEN BUSINESS MODELS

#### OpenBusiness (UK)

A platform for sharing innovative entrepreneurial ideas which are built around openness, free services and free access.

<http://openbusiness.cc/?n=OpenBusiness.Home>

### ENABLING SOFTWARE & APPLICATIONS

#### Commonwealth of Learning, Learning Objects Repository Software

<http://www.col.org/lor>

#### Center for History and New Media, ECHO Tools Center

<http://echo.gmu.edu/toolcenter-wiki/index.php>

#### ETUDES-NG Alliance, Learning Management System\*

<http://foothillglobalaccess.org/etudes2/>

#### Moodle, Course Management System

<http://moodle.org/>

#### Sakai Project, Learning Management System\*

<http://www.sakaiproject.org/>

#### University of Iowa, WiderNet Project\*

<http://www.widernet.org/>

---

\* Project or initiative funded by the William and Flora Hewlett Foundation (updated as of November 1, 2005).