

The Flat World Swung Open: How Web Technology Is Revolutionizing Education

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The Ten Forces that Flattened the World

Triple Convergence: (1) new economic players, (2) playing fields, and (3) processes.

1. 11/9/89: Berlin Wall came down
2. 8/9/95: Netscape went public
3. Work Flow Software (e.g., PayPal and eBay)
4. Open-Sourcing (Self organ collab communities; Mosaic, Apache, Wikipedia, Linux, Mozilla)
5. Outsourcing (Y2K)
6. Offshoring (e.g., China, Mexico, Thailand)
7. Supply-Chaining (e.g., Walmart)
8. Insourcing (UPS fixing Toshiba laptops)
9. In-forming (e.g., Google, Yahoo!, MSN Web Search)
10. The Steroids: Digital, Mobile, Personal, and Virtual (wireless, file sharing, VoIP, video camera in phone)



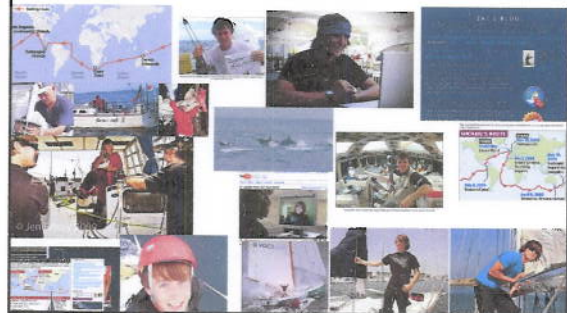
Oregon Scientific Smartglobe 2008



UCLA Summer Digs Program Dig in, archaeology fans! UCLA blogs to offer front-row seat at archaeology digs, Meg Sullivan, 6/25/2008



Michael Perham & Zac Sunderland, Summer 2009 (each age 17, youngest person to sail solo around the world..and blog on it, use Skype, YouTube, take videos, post pictures)



David Thomas, Archeologist, La Trobe University, Australia (Discovery News)

Grandpa George (Goronja) (West Allis, Wisconsin, built tractors 40+ years)

Charles Wedemeyer Learning at the Back Door (1981) Nontraditional Learning

WE-ALL-LEARN: Ten Forces that Opened the Learning World

- **W**eb Searching in the World of e-Books (i.e., Darwin)
- **E**-Learning and Blended Learning
- **A**vailability of Open Source and Free Software (e.g., Moodle)
- **L**everaged Resources and OpenCourseWare (e.g., MIT)
- **L**earning Object Repositories and Portals (i.e., shared content)
- **L**earner Participation in Open Info Communities (YouTube)
- **E**lectronic Collaboration and Interaction (sync and async)
- **A**lternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)
- **R**ead-Time Mobility and Portability (e.g., iPhone)
- **N**etworks of Personalized Learning (Blogs, RSS)

Audience Participation!

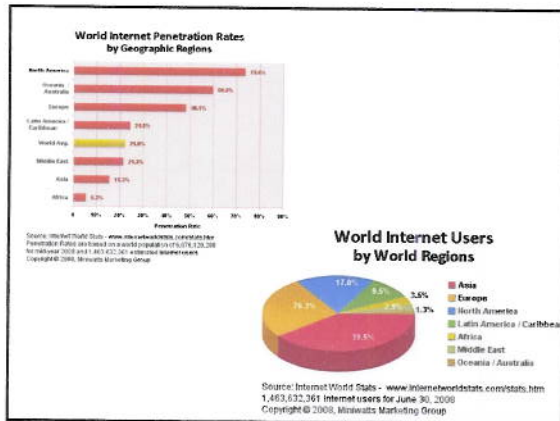
1. WE

2. ALL

3. LEARN!!!

Triple Learning Technology Convergence of "WE-ALL-LEARN"

1. **Pipes:** The availability of tools and infrastructure for learning.
2. **Pages:** The availability of free educational content and resources (OER—Open Educational Resources).
3. **Participatory Learning Culture:** A move towards a culture of open access to information, international collaboration, and global sharing.



Opener #1. Web Searching (e.g., Google, MSN, Yahoo!) in the World of e-Books (i.e., Darwin, Shakespeare, etc.)

The Learning World is Open

Trend #1. Web Searching in the World of e-Books. What happens then?

WE

ALL

LEARN!!!

This Could Be the Year of e-Textbooks

Many titles are available, but students are wary.
 Jeffrey Young, September 7, 2009

September 7, 2009
 This Could Be the Year of e-Textbooks
 Many titles are available, but students are wary

Sign of the times: At the San Diego State U. bookstore, a poster exhorts students to "Buy This Textbook as an eTextbook."

E-books: 4 choices (Paperback, Kindle, iPhone, or iPod listening)

Reading Dickens Four Ways

Web Annotations

Blio: Kurzweil Reinvents the Book

Charlie Sorrel, Dec 29, 2009, Wired
<http://www.wired.com/gadqetlab/2009/12/blio-kurzweil-reinvents-the-book/>

- Blio is a free platform...run on any device.
- Blio is in color.
- Blio lays pages seen on paper, with typography and illustrations; uses video.
- More than a million library of titles.
- The end of the book?

Free Online Books

(Terry Anderson and Fathi Elloumi, eds. *Theory and Practice of Online Learning*; Canada: Athabasca University, 2004),
http://cde.athabascau.ca/online_book/, 55,000 downloads in first year)

Read, Listen, etc. to online books (e.g., "An International Episode" by Henry James)

Opener #2. E-Learning and Blended Learning

The Learning World is Open

Trend #2. E-Learning and Blended Learning.

What happens then?

WE
ALL
LEARN!!!

Capella Tower

225 South Sixth Street, Minneapolis
 Formerly, the "Halo"

Indiana University High School

(4,000 students and 1,400 enrolled in diploma programs)

Adora Svitak, age 11, World's Youngest Teacher



iSMART: Integration of Science, Mathematics, and Reflective Teaching (iSMART) is a FREE 2-year online graduate program for middle school science and mathematics teachers in Texas, University of Houston

<http://www.coe.uh.edu/mycoe/CUIN/math/iSMART%20flyer4.pdf>
<http://www.coe.uh.edu/mycoe/CUIN/math/iSMART.cfm>

You see the big picture. You find the connections.
 Make it official - become iSMART.



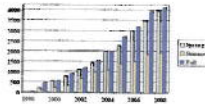
Total and Online Enrollment in Postsecondary Institutions Fall 2002 through Fall 2006

Source: Higher Learning Institute

| | Total Enrollment | Annual Growth Rate: Total Enrollment | Students Taking at Least One Online Course | Annual Growth Rate: Online Enrollment | Online Enrollment as Percent of Total Enrollment |
|-----------|------------------|--------------------------------------|--|---------------------------------------|--|
| Fall 2002 | 16,811,710 | NA | 1,302,970 | NA | 0.7% |
| Fall 2003 | 16,903,478 | 1.7% | 1,371,387 | 23.0% | 11.7% |
| Fall 2004 | 17,272,645 | 2.2% | 2,322,783 | 18.2% | 13.2% |
| Fall 2005 | 17,428,900 | 0.9% | 3,183,050 | 36.5% | 18.2% |
| Fall 2006 | 17,047,720 | 1.2% | 3,488,981 | 9.7% | 19.8% |

SOURCE: Institute for the Study of Learning and Assessment (ISLA)

UIS Online & Blended Enrollment



Open Teaching

(Tom Reeves Evaluation Course at Georgia; David Wiley's Web 2.0 courses at BYU; Connectivism from George Siemens and Stephen Downes, 24 enrolled, 2,000+ sitting in)



A Grain of Rice: A Bloomington man's computer vocab game feeding the world



Opener #3. Availability of Open Source and Free Software (e.g., Linux, Apache, Moodle, Sakai)



Trend #3. Availability of Open Source and Free Software.
What happens then?

WE

ALL

LEARN!!!

Moodle (620,000 registered users in 204 countries speaking 78 languages, 2/10/2009)

Opener #4. Leveraged Resources and OpenCourseWare (OCW) (e.g., free courses from MIT, Utah State, CORE, OOPS)

The Learning World is Open

Open Educational Resources (OER) Post Courses in YouTube and iTunes (e.g., Berkeley)

OpenCourseWare (OCW) Cute Kitten or Transformation?

Opensource Opencourseware Prototype System (OOPS) funded by, the Foundation of Fantasy, Lucifer Chu, Chairman and Janitor of OOPS, Taipei)

The Biggest OCW Localization Volunteer Group in the World

Sample OpenCourseWare Projects (Tufts, Johns Hopkins)

The image shows a screenshot of the Tufts OpenCourseWare website. The main heading is 'Tufts OpenCourseWare'. Below it, there is a navigation menu with options like 'Courses', 'Subjects', 'Catalog', 'Search', 'Help', 'Feedback', and 'Contact'. The featured course is 'IDP200 Pathophysiology of Infectious Diseases, Fall 2004/2005'. There is a large image of a red tick on a human skin. To the right, there is a search bar and a section titled 'JHSPH COURSEWARE' with a sub-heading '123,000,000 Population: Climate and Public Health'.

Indian Institutes of Technology (IIT)

The image shows a screenshot of a YouTube channel page for Indian Institutes of Technology (IIT). The main video is titled 'Lecture 1: Structural Analysis' and features a man in a blue shirt speaking. The channel has 1,153 views and 11 subscribers. There is a map of India in the top right corner and several images of IIT buildings and campuses.

National Repository for Online Courses (NROC) Commons

The image shows a screenshot of the National Repository for Online Courses (NROC) Commons website. The header includes the NROC Commons logo and the text 'WELCOME TO A WORLDWIDE LEARNING NETWORK'. Below the header, there is a search bar and a list of courses. A prominent section is titled '123,000,000 Population: Climate and Public Health'.

Cape Town Open Education Declaration, Dec 2007

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

The image shows a screenshot of the Cape Town Open Education Declaration website. The main heading is 'THE CAPE TOWN OPEN EDUCATION DECLARATION'. Below it, there is a section titled 'Read the Declaration' and a large image of a cartoon character holding a sign that says 'Declaration, July 4th 1776'.

Peer2Peer University and University of the People (free!)

Neeru Paharia is behind Peer2Peer University, Fast Company, September 2009, How Web-Savvy Edupunks Are Transforming American Higher Education

Israeli Entrepreneur Plans a Free Global University That Will Be Online Only

The image is a collage of news articles and photos. On the left, there is a photo of Neeru Paharia. In the center, there is a photo of a man in a suit. On the right, there is a photo of a man in a white shirt. The text includes 'Peer2Peer University, Fast Company, September 2009, How Web-Savvy Edupunks Are Transforming American Higher Education' and 'Israeli Entrepreneur Plans a Free Global University That Will Be Online Only'.

Opener #5. Online Learning Object Repositories and Portals (shared content)

The Learning World is Open

The image shows a screenshot of a SparkNotes website. The main heading is 'SPARKNOTES'. Below it, there is a navigation menu with options like 'Home', 'About', 'Contact', 'Privacy', 'Terms', 'Help', and 'Feedback'. The featured content is 'Shakespeare Study Guides' and '40 MILLION' badge.

Academic Earth

<http://academicearth.org/>

Thousands of video lectures from the world's top scholars.

The screenshot shows the Academic Earth website interface. At the top, there is a search bar and navigation links for Home, Home Page, About Us, Contact Us, and Privacy Policy. Below the search bar, the text reads "Thousands of video lectures from the world's top scholars." There are three featured video lecture thumbnails: "The History of Chemistry", "Philosophy of Life and Death", and "World Peace". At the bottom, there is a "Mission Statement" section with a small image of a person.

Tracking Live Internet Thawing: A Colossal of an Idea

This block contains a collage of images. The top left shows a person in a white lab coat working with a large, complex piece of equipment, possibly a cryostat. The top right shows a person in a blue lab coat holding a small, white, cylindrical object. The middle left shows a group of people in white lab coats standing around a large, blue, cylindrical object. The middle right shows a person in a blue lab coat holding a small, white, cylindrical object. The bottom left shows a person in a white lab coat working with a large, complex piece of equipment. The bottom right shows a person in a white lab coat holding a small, white, cylindrical object.

Ida (a transitional species) 47-Million-Year-Old *Darwinius Masillae* Fossil the Missing Link? (wowOwow, May 20, 2009)

The screenshot shows a news article from wowOwow.com. The main headline is "Ida (a transitional species) 47-Million-Year-Old *Darwinius Masillae* Fossil the Missing Link?". Below the headline, there are several images: a fossil of a small insect, a diagram of a fossil, and a photograph of a person. The article text is partially visible, mentioning "horizons blog" and "The missing link between the two worlds: Darwinius Masillae".

The Complete Works of Charles Darwin

The screenshot shows the website for "The Complete Works of Charles Darwin Online". The website has a yellow background and features a portrait of Charles Darwin. The text on the page includes "Contributors and Acknowledgments" and lists several contributors, including "Director of the Darwin Project" and "Research Assistant".

The Carlyle Letters Exploring Victorian World Through Letters and The Diary of Samuel Pepys (Great Plague, Great Fire, Charles Dickens, Erasmus Darwin, Mary Wollstonecraft Shelley, Robert Browning, John Stuart Mill, Ralph Waldo Emerson, Elizabeth Barrett Browning, and Alfred Tennyson)

The screenshot shows a website with a portrait of Samuel Pepys in the center. To the left, there is a book cover titled "The Carlyle Letters". To the right, there is a list of names: "Great Plague, Great Fire, Charles Dickens, Erasmus Darwin, Mary Wollstonecraft Shelley, Robert Browning, John Stuart Mill, Ralph Waldo Emerson, Elizabeth Barrett Browning, and Alfred Tennyson". Below the portrait, there is a small image of a person sitting at a desk with a laptop.

The Royal Society 350th anniversary celebrations puts historic papers online (Captain Cook, Sir Isaac Newton and Benjamin Franklin), BBC, Nov 30, 2009

<http://news.bbc.co.uk/2/hi/science/nature/8381425.stm>

Audio slideshow: 350 years of discovery

The world's oldest scientific institution, The Royal Society, is marking its 350th anniversary by making 500 years' worth of scientific papers available online for the first time.

This block contains a collage of images. The top left shows a book cover titled "ACCOMPT OF THE RESEARCHES OF BENJAMIN FRANKLIN". The top right shows a screenshot of a BBC news article titled "The Royal Society puts historic papers online". The middle left shows a portrait of a man in a suit. The middle right shows a portrait of a man in a suit. The bottom left shows a portrait of a man in a suit. The bottom right shows a portrait of a man in a suit.

Human Brain Dissected Today in a Live Webcast, Chronicle of Higher Education,

December 02, 2009, 01:00 PM ET
http://chronicle.com/blogPost/Human-Brain-Dissected-Today-in-1905317/sid=pm&utm_source=pm&utm_medium=en

THE CHRONICLE
of Higher Education

December 2, 2009

Home News Opinion & Ideas Facts & Figures Topics

Faculty Administration Technology Community Colleges International Special Reports

Tweed
Home News Tweed

December 02, 2009 11:00 AM EDT

Human Brain Dissected Today in a Live Webcast

In 1905, Henry Gustav Molaison agreed to undergo experimental brain surgery in hopes of stopping the epileptic seizures and blackouts that had plagued him since age six. The neurosurgeon William Wustley Penfield, at Mather Hospital in Connecticut, scooped out part of Molaison's hippocampus.

"The seizure largely stopped," writes Scott Lefkowitz in the *New England Journal of Medicine*, "but at the old Molaison's ability to learn new memories, though he could recall parts of his life before the surgery, a condition called *anterograde amnesia*."

Referatory: MERLOT.org

(78,472 members, 21,690 learning materials, January 3, 2010)

MERLOT
Member of the International Association for Online Learning (IAOOL)

Search Content Advanced Search Search Help Sign Out

Communities

MERLOT has created a variety of Community Profiles (see below) to describe and organize world-wide projects with "open-licensed" content for a broad selection of resources related to online learning and teaching. Community Profiles provide MERLOT members with effective information about peer-reviewed teaching practices, professional associations, journals, conferences, and other resources for continuous professional development. MERLOT organizes Community Profiles as:

- DISCIPLINE COMMUNITIES**
Expand discipline and field-related content.
- WORKFORCE DEVELOPMENT COMMUNITIES**
Expand resources involving professional and applied learning.
- PARTNER COMMUNITIES**
Expand resources supporting MERLOT City Partner Communities and groups.

Connexions Growth

January 2009

>8,000 modules (3-5 pages)
 >425 collections (books and courses)
multiple languages
 engineering, computer science, nanotech, physics, statistics, math, history, music, bio-diversity, botany, bio-info, IP, BRIT, UNESCO, UN, Sigma Xi, ...
 from authors *worldwide*

Usage October 2008
 45 million hits
 2m page views
 1m unique users
 from 200 countries

Opener #6. Learner Participation in Open Information Communities (e.g., Slashdot, Digg, Wikipedia, YouTube)

A bit of me...

flatworld KNOWLEDGE

The Learning World is Open

Wikis: Wikipedia and Wikibooks

WIKIPEDIA

English The Free Encyclopedia
 Deutsch Die freie Enzyklopädie
 Français L'encyclopédie libre
 日本語 自由百科事典
 Nederlands De vrije encyclopedie
 Español La enciclopedia libre
 Polski Wolna encyklopedia
 Italiano L'enciclopedia libera
 Português A enciclopédia livre
 العربية العربية الحرة

Projects of the Wikimedia Foundation (read more...)

Conference to Conference

(You Ustreamed my Ustream: Now that's a Twitter of an Idea)

USTREAM

CURTIS BORN PRESENTATION AT SATEC - COOL

LEBOW-HADDRELL PRESENTATION

weblogged.tv

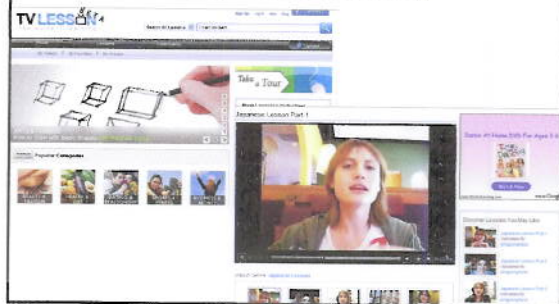
Shared Online Video (e.g., YouTube and the Royal Channel)



Individual Produced Videos (e.g., African School Dream in Current TV) http://current.com/items/77146082_african_school_dream



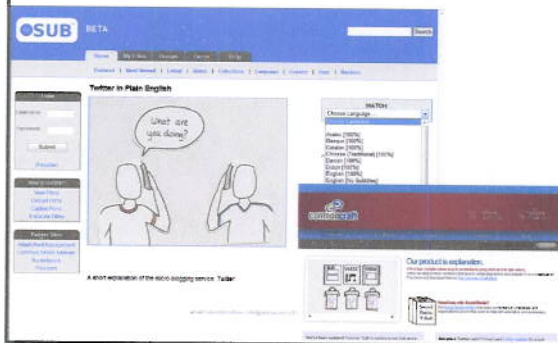
TV LESSON (How-to lessons from experts: 1,000's of instructional videos and articles; <http://www.tvlesson.com/>)



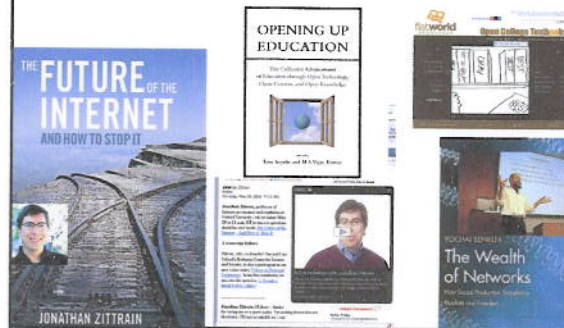
Link TV and Fora TV



dotSUB (subtitling video)



Participatory E-Books



Scribd: Documents on Web
<http://www.scribd.com/>; 21 million unique visitors per month, May 2008

Opener #7. Electronic Collaboration and Interaction
 (synchronous & asynchronous)

Synchronous Conferencing Presentations

Iran after the June Election
<http://www.cnn.com/video/#/video/world/2009/06/17/amanpour.uk.covering.iran.cnn>

The Next Generation of Videoconferencing
 Chronicle of HE, October 21, 2009

October 21, 2009
 The Next Generation of Videoconferencing

Footage courtesy of USC Institute for Creative Technologies

Researchers at the University of Southern California and the University of South Carolina at Chapel Hill are creating new tools that may soon let people attend videoconferences as

Voxopop (audio threaded conversations)
<http://www.voxopop.com/>

Adventure Learning, GeoThentic, GoNorth (National Geographic) (Aaron Doering, Univ of Minnesota)

Global SchoolNet

<http://www.globalschoolnet.org/index.cfm?section=Programs>

Ice Stories Project from Antarctica

1kg More Project for Rural China

<http://www.1kg.org/>

Mongolia teachers addressing H1N1 (Otgo Okhidoi, Nov 10, 2009)

Opener #8. Alternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)

Second Life (business, law, education, English, medicine)



University of Texas: 50 Islands in Second Life, Nov 2009 <http://archive.treet.tv/metanomics-campus-life>



Opener #9. Real-Time Mobility and Portability (e.g., iPhone, low cost wireless devices)



We Are Going Mobile!

40,000 new mobile subscribers a week in Rwanda; Rwanda Newtimes report, January 2009
Africa is the continent with the fastest growth, International Telecommunications Union (ITU), March 2009

India: In January, 2009, the number sky rocketed to 15.4M
 Globally: 60,000 new mobile subscriptions every hour!!

(per Paul Kim, Stanford, 2009); Nokia Research Lab
http://news.yahoo.com/s/afp/20090308/bi_afp/indiaconomytelecom

Terabyte thumb Drives and Magic Pens! (The Pulse from Livescribe, \$129-\$169)



TwitterPeek, WikiReader not worth the loot, USA Today, Edward Baig, November 5, 2009



TwitterPeek:
Restricted to Twitter.

WikiReader:
Updating can be a pain.

Mobile Learning in India with Paul Kim

<http://www.stanford.edu/~phkim/curt/india.pdf>

Mobile Learning

(April 21, 2009, USA Today)

'One Laptop Per Child' program collides with reality

GEOFFREY YORK, Toronto Globe and Mail, Oct 15, 2009
Bhutan, Khendum Gyabak (Univ. of Texas at El Paso)

Opener #10. Networks of Personalized Learning

(Blogs, Podcasts, MySpace, Flickr, and RSS)

September 30, 2009
the Samsung DualView TL225

Teaching With Twitter

Chronicle of HE, Jeffrey Young, November 22, 2009
Sugato Chakravarty, a professor of consumer sciences and retailing at Purdue University, has welcomed Twitter into the lecture hall, even though the service lets students engage in back-channel discussions. The questions submitted via Hotseat for the professor and guest speakers are projected for all the students to see.

Facebook: The New Classroom Commons?

Chronicle of HE, Harriet L. Schwartz, Sept. 28, 2009

| Site | August '08 | August '09 |
|--------------|------------|------------|
| Facebook.com | 66.0% | 77% |

| Site | Unique visitors in August (in millions) |
|--------------------------------------|---|
| Facebook.com | 42.2 million |
| MySpace.com | 41.2 million |
| Twitter.com | 30.8 million |
| Diigo.com | 17.4 million |
| Classmate.com site | 13.9 million |
| Behavioral Psychology (partial list) | 12.1 million |
| My4u.com site | 11.4 million |
| Windows Live Profiles | 10.2 million |

Podcast Shows (subscribe to ShakespeareCast.com)

The image shows a screenshot of the ShakespeareCast.com website on the left, featuring a navigation menu and a 'TWIT LIVE' section. On the right is a 'Big Contact Feed Player - Window' displaying a list of audio content:

- HM3 - Your Father Lost a Father
- HM2 - A Documentary In Madness
- Hamlet's Head #001
- Intermission
- R&J Act 3 Scene 1
- Romeo and Juliet - Act 2
- MSND Act 1 Scene 1
- R&J Act 2 Scene 6
- R&J Act 2 Scene 3
- R&J Act 2 Scene 4
- R&J Act 2 Scene 3
- R&J Act 2 Scene 2

Learning Towns are Popping up!

The image shows a screenshot of a Ning social network page. It features a grid of user avatars, a video player showing a woman speaking, and a sidebar with a 'LEARNINGTOWN!' logo. A green line graph is visible in the bottom left corner of the screenshot.

The image shows a screenshot of the Livemocha website interface. It displays several language learning options with 'Sign Up Now!' buttons, including 'Learn Spanish on Your Terms!' and 'Learn Italian on Your Terms!'. It also shows user statistics: '243 free lessons & 7367 conversations. Take the first 2' and '36 free lessons & 474 conversations. Take the first 2'.

Livemocha (29 languages, 160 hours of lessons, over 2 million users, FREE!)

The image shows a screenshot of the Livemocha website homepage. It features a testimonial: "A powerful opportunity for people around the world to connect with language partners." and a quote from The New York Times. The main section is titled 'Social Language Learning - Online!' and includes a 'FREE!' badge and a 'Get started!' button. Below the main content, there are sections for 'Language Learning on Livemocha' and 'Livemocha Challenge'.

Predictions

1. Five Billion "Have-Nots" Have at It!
2. Emergence of Lifelong Super E-Mentors/Coaches
3. Quarter-Century Learning Clubs
4. Terabyte Learning Access Points
5. The Veneration of Learning
6. Personalization+ Portfolios
7. The Selection of Global Learning Partners
8. The Shared Learning Era
9. Teaching-Learning Perpetuities
10. Teachers, Teachers
11. The Rise of the Super Blends
12. Self-Determined Humans
13. Free Learning Zones
14. Authentic Learning Amalgamations
15. Alexandrian Aristotles

The image shows a list of 15 predictions for the future of learning. At the bottom right, there is a small image of a sign that says 'The Future' with an arrow pointing to the right.

Slides at: TrainingShare.com
Papers: PublicationShare.com
Book: <http://worldisopen.com/>
The World is Open.
What happens then?

WE ALL LEARN!!!

The image features a central text block with a collage of images below it. The images include a tractor, a person, a globe, and a building. The text 'WE ALL LEARN!!!' is prominently displayed in large, bold letters.