Emerging perspectives in librarianship

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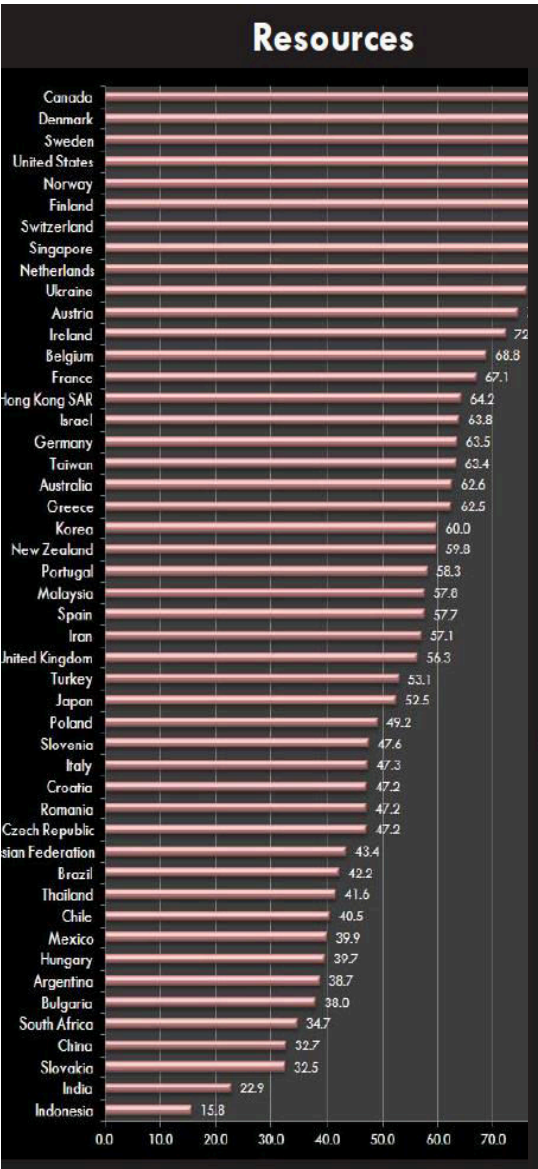
Librarian, Indian Institute of Management Ahmedabad

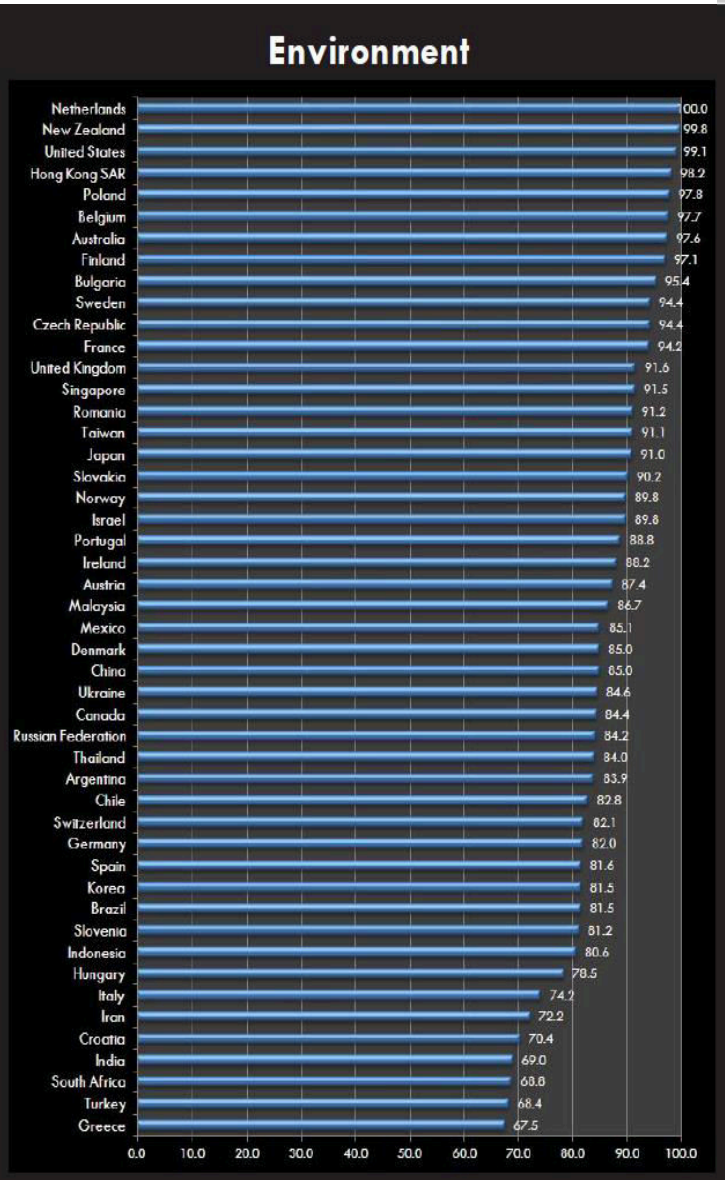
August 10, 2013

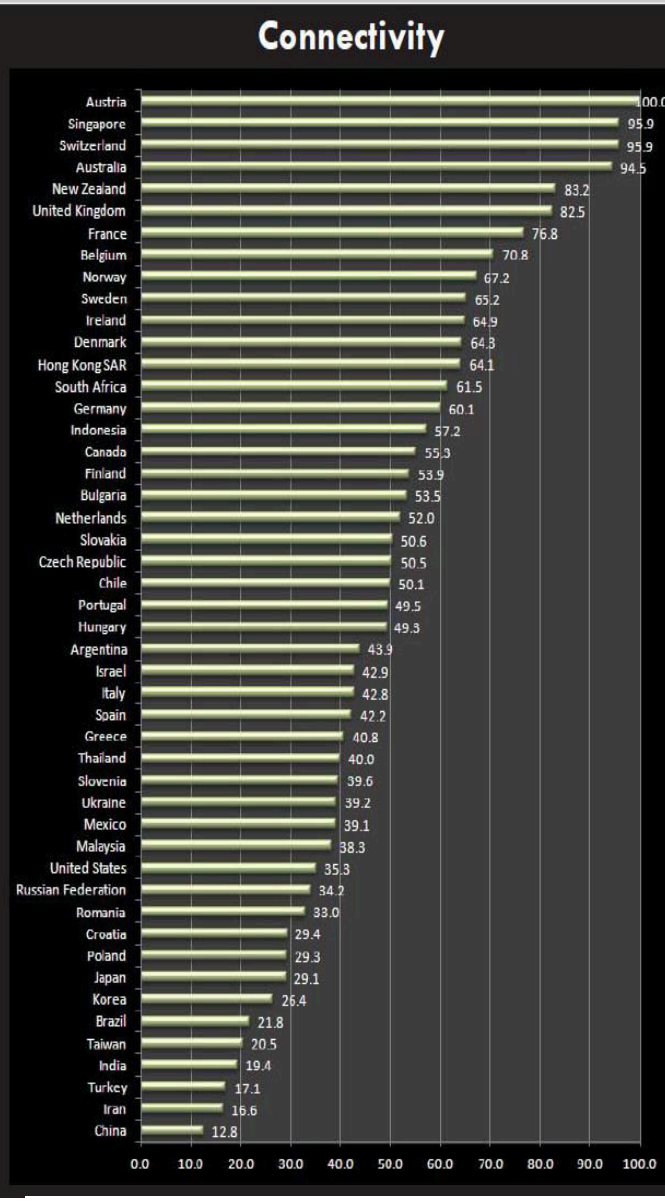
U21 Ranking of National Higher Education Systems

A project sponsored by *Universitas 21*

University of Melbourne, May 2012







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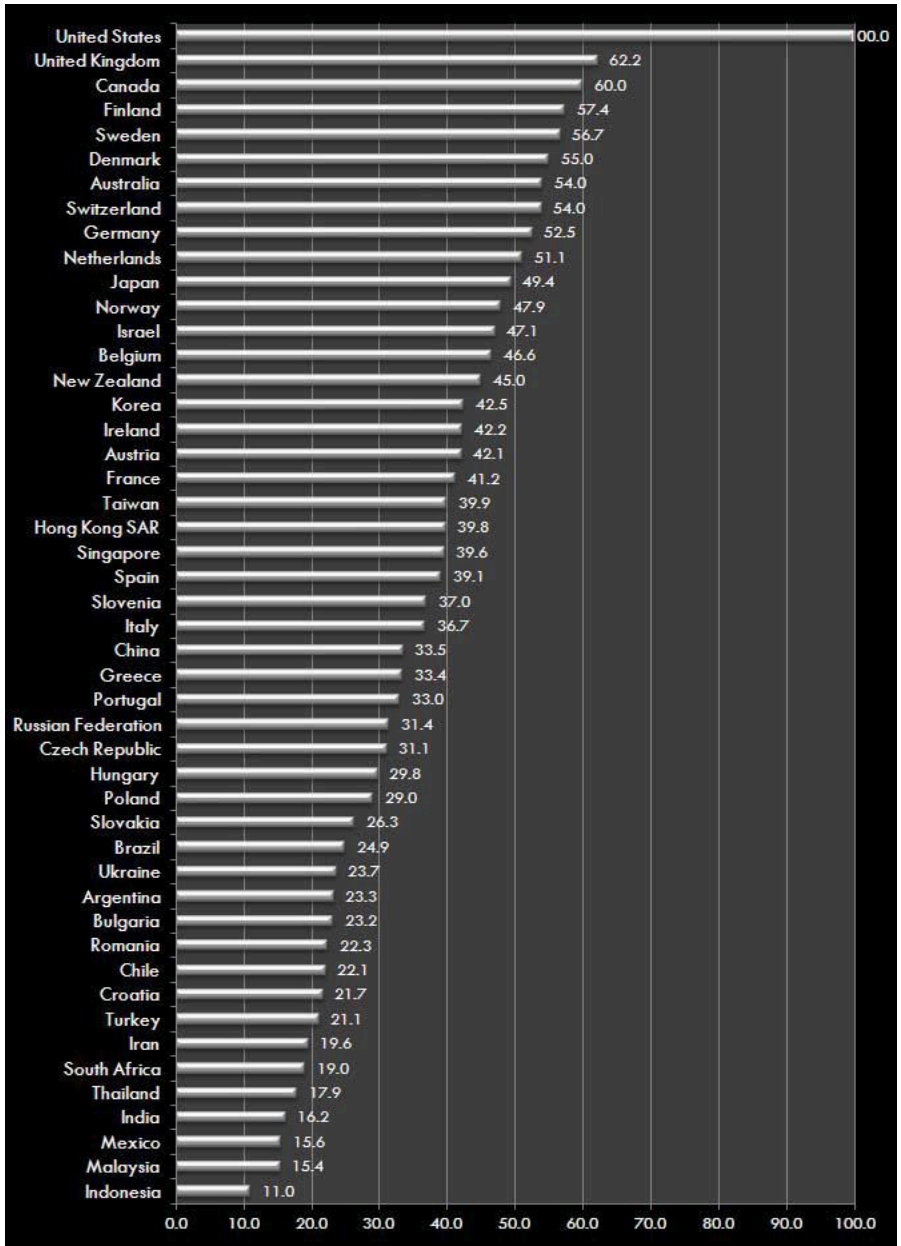
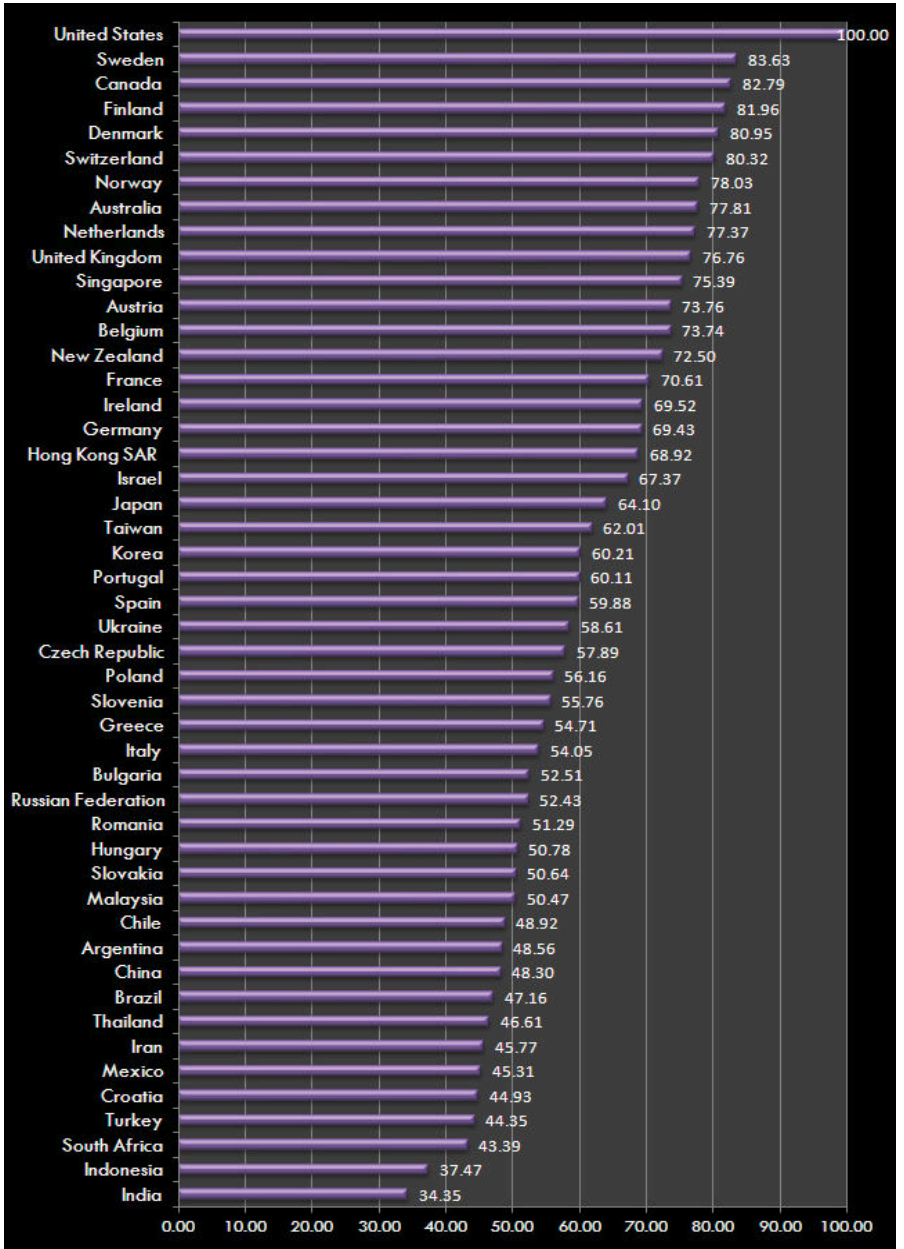


Overall Ranking



Universities, ours and theirs

Krishna Kumar (*in The Hindu, August 9, 2012)*

- Recruitment of faculty
- Concept of teaching (periods)
- Concept of knowledge – research

- **Library**

- The ***fourth* critical difference** lies in the library. In the West, even in the most ordinary universities, the library forms the centre of life, both for teachers and students. Librarians enjoy a high status as their contribution to academic life cuts across academic disciplines…..

Emerging Landscape of Higher Education

- The abundance of resources and relationships made easily accessible via **the Internet** is increasingly challenging us to revisit our roles as educators.
- Both **formal and informal** learning experiences are becoming increasingly important as college graduates continue to face a highly competitive workforce.
- Education paradigms are shifting to include **online** learning, **hybrid** learning and **collaborative** models.
- Massively open online courses are proliferating.
- **Open** is a key trend in future education and publication, specifically in terms of open content, open educational resources, massively open online courses, and open access.

Johnson et al : The *NMC Horizon Report: 2013 Higher Education Edition*

- The abundance of resources and relationships
- easily accessible via the Internet
- revisit our roles as educators

- Institutions must consider the unique value that each adds to a world in which information is everywhere. In such a world, sense-making and the ability to assess the credibility of information are paramount.

- Universities have always been seen as the gold standard for educational credentialing, but emerging certification programs from other sources are eroding the value of that mission daily.

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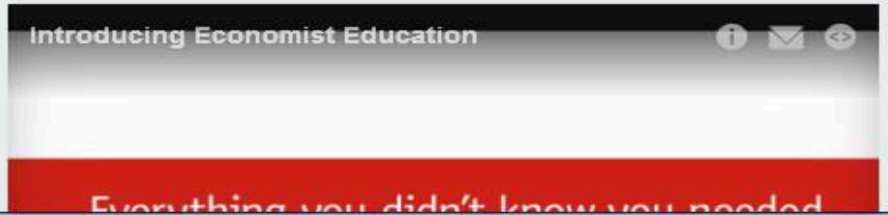

Course directory

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A comprehensive programme that provides the essential knowledge, skills and tools to thrive in emerging markets.

Courses include:

- Entering and expanding in emerging markets ABOUT
- Managing teams across borders ABOUT
- Innovating in emerging markets ABOUT
- Managing risk in emerging markets ABOUT

Course directory

This suite of online educational courses provides international business managers a comprehensive base of knowledge, skills and tools to thrive in emerging markets.

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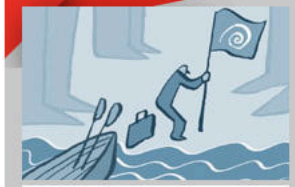

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The business world has changed dramatically over the past several decades, with much of the opportunity for growth now existing outside of the United States and other developed markets. The first five Economist Education courses provide people who work across borders a comprehensive base of knowledge, skills and tools to thrive in emerging markets.

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- Safaricom
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Emerging markets essentials programme includes the following courses:

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- Managing risk in emerging markets
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With knowledge comes benefits. Enrollment includes:

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- The EIU's Global Forecasting Service

ENTREPRENEURSHIP

The Glorious End of Higher Education's Monopoly on Credibility

By Michael Ellsberg | July 12, 2012 | 25 Comments

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The times they are a changin', and in this essay, I'd like to suggest they are changing in a way that has massive implications for education: sources of credibility—once the domain of expensive degrees–are becoming democratized, decentralized, and diversified.

In the past, there was pretty much one way to gain credibility: get some letters after your name, from as fancy an institution as possible.

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Now, in 2012, I've seen dozens of young people who don't even have college degrees use the following tools as sources of credibility in the business world:

- A track record of having started one or two successful businesses, even if they were small.
- Industry-related blogs with well-written, lively, detailed posts, which receive many comments and tweets/likes /shares per post.
- An impressive About page on a well-designed personal

- **Michael Ellsberg**
- The author of *The Education of Millionaires: It's Not What You Think and It's Not Too Late*.
- He spent two years interviewing the nation's most successful people who didn't graduate college, and who instead majored in street smarts

Read more: http://business.time.com/2012/07/12/the-glorious-end-of-higher-educations-monopoly-on-credibility/#ixzz2D8AMYSQt

Academically Adrift: Limited Learning on College Campuses
by
Richard Arum and Josipa Roksa

- in short supply — is learning that is academic rather than consumerist or market-driven.

- a majority of students surveyed said "that they had not taken a single course . . . that required more than twenty pages of writing, and one third had not taken one that required even forty pages of reading per week"

Learning and education

- **Formal methods**
  - Classroom training
  - Laboratory training
  - On the job or apprenticeship
- **Non-formal methods**
  - Self-study and Reading
  - Watching, seeing and trying
- **Sources**
  - Institutes / schools / industries / employers
  - Libraries and laboratories
  - Internet

Why go beyond formal methods?

- **The 95 Percent Solution: *School is not where most Americans learn most of their science by* John H. Falk and Lynn D. Dierking**

- **Recent findings challenge the longstanding belief that the place for science knowledge acquisition is the classroom.**

- **International comparisons of trends in science knowledge over lifetimes suggests that much if not most science knowledge is acquired outside of school.**

American Scientist: v. 98 (Nov-Dec), 2010

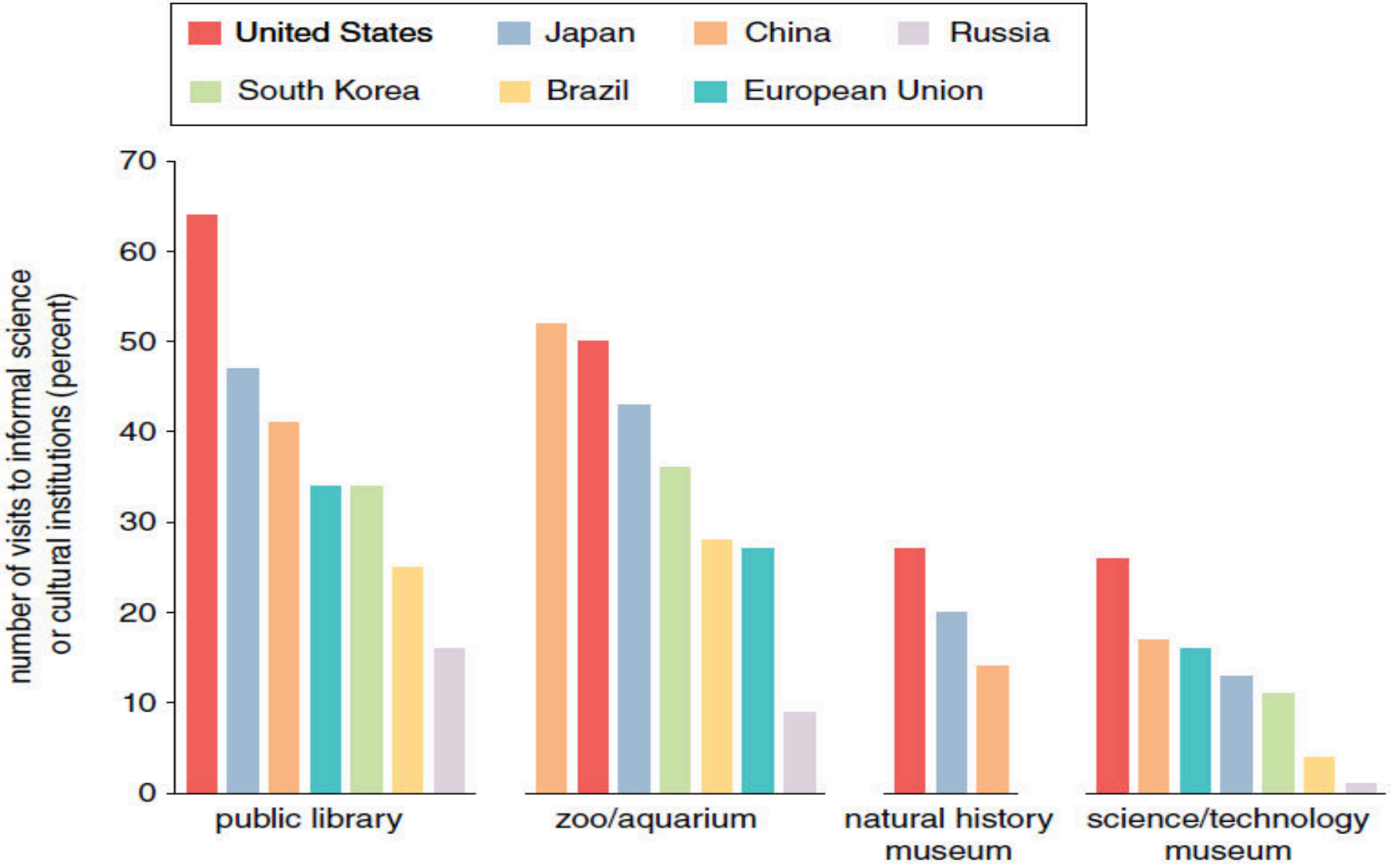

Figure 4. The U.S. public has a lush endowment of free-choice opportunites to learn science, which it uses extensively. The relative patronage of science-oriented institutions shown above may explain why the disappointing gap in science proficiency of U.S. youngsters compared to their most advanced peers worldwide disappears as the youngsters become adults.

Hole in the wall

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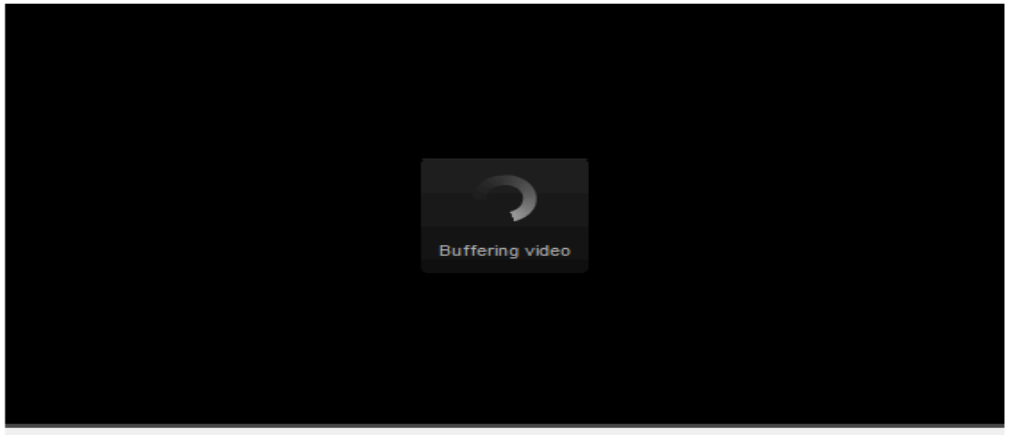
Sugata Mitra shows how kids teach themselves

FILMED FEB 2007 • POSTED AUG 2008 • LIFT 2007

Self-Organized Learning Environments (SOLEs)



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687,073 Views Like 4.7k

Speaking at LIFT 2007, Sugata Mitra talks about his Hole in the Wall project. Young kids in this project figured out how to use a PC on their own -- and then taught other kids. He asks, what else can children teach themselves?

Sugata Mitra's "Hole in the Wall" experiments have shown that, in the absence of supervision or formal teaching, children can teach themselves and each other, if they're motivated by curiosity and peer interest. Full bio »

See how Goldman Sachs is helping Human Genome Sciences reach new milestones.
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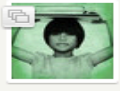

Re-imagining school
Curated by TED

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WHAT TO WATCH NEXT

Ken Robinson says schools kill creativity
19:24 Posted: Jun 2006
Views **13,797,393** | Comments **2760**

Technology Advantages

- Learn at your own pace and interest
- Supplement learning in the classroom
- Less dependency on formal support
- Explore new ways of learning
- Variety and wide range of topics

Management of Libraries

Focus

Understand and service the needs of users – faculty, students and researchers

Resources

Users **Collection** **Staff** **Technology**

Managing Users Needs

- Faculty, researchers and students
  - Identifying and seeking continuously
  - Designing, delivering and managing services
  - Matching or facilitating access
  - Continuous Interaction

Managing Collection

- **Collection**
  - Identify and Seek
  - Capture, Acquire and Access
  - Retrieve and Communicate
  - Manage and Monitor

FOCUS ON USER NEEDS

Collection

- **Traditional Resources**
  - **Books**
  - **Periodicals**
  - **Annual reports**
  - **Newspapers**
- **Digital formats**
  - **CDs, DVDs, Blu ray disks**
  - **Databases**
  - **Online resources**
- **Institutional knowledge**
  - **Working papers**
  - **Thesis**
  - **Conference proceedings**
  - **Conference / seminar speeches, talks, etc**

NMC horizon Report 2012

New modes of scholarship are presenting significant challenges for libraries and university collections, how scholarship is documented, and the business models to support these activities.

While the university library has traditionally housed collections of scholarly resources, **social networks and new publishing paradigms, such as open content, are challenging the library's role as curator.** Students and educators are increasingly able to access important, historic research in web browsers on devices of their choosing. As such, libraries are under tremendous pressure to evolve new ways of supporting and curating scholarship.

Looking Beyond Traditional Libraries

- Integration with curriculum and pedagogy
- Proactive in nature – topical displays, recommended readings, public lists, etc
- Look at the future needs and offer services
- Going beyond books – scholarly information, innovative services, etc
- A balance of best sellers, text books and must have books
- Facilitate a “good library experience” – user focus

Libraries: Gateways to Managing Internal sources

- Student Projects
- Syllabus and course design
- Technical Notes
- Course Materials
- Student made Tools/Materials / Models
- News Paper Clippings (Jobs/Courses)
- Question papers

Libraries: Gateways to External sources

- Commercial
  - Books
  - Videos / CDs
  - Online resources
- Open Access
  - Books
  - Journals
  - Educational Videos
  - Educational courseware

Managing Staff

- Understand their academic work
- Identify and Seek
- Recruit and train
- Facilitate, Manage and Understand
- Interact

VALUE TO THE USER

Managing Technology

- Library automation packages: Proprietary to OSS
- Storage: Devices to Cloud
- Identification: Barcode, Tattle-tape, RFID, Biometric, etc
- Information capture: Key board, Scanner, Digital Cameras, Mobiles
- Network: Client-server, P2P, Internet
- Databases: Books, articles, reports, aggregators /publishers, IRs

Technologies in Libraries

- Information retrieval
  - Simple OPAC to Federated searches to Discovery
  - Seamless integration of various sources/formats
  - Remote login / VPN
- User need not worry where the information is located
- Online Usage statistics
- User customized displays
- User Identification is simpler and secure

The *NMC Horizon Reports: 2012 and 2013*

2012

Near-term Horizon (within 12 months)

Mobile apps and Tablets

Mid-term Horizon (2-3 years)

Game-based learning and Learning analytics

Far-term Horizon (4-5 years)

Gesture-based computing

Internet of Things

2013

Near-term Horizon (within 12 months)

Massively Open Online Courses

Tablet Computing

Mid-term Horizon (2-3 years)

Big Data and Learning Analytics

Game Based Learning

Far-term Horizon (4-5 years)

3D Printing

Wearable Technology

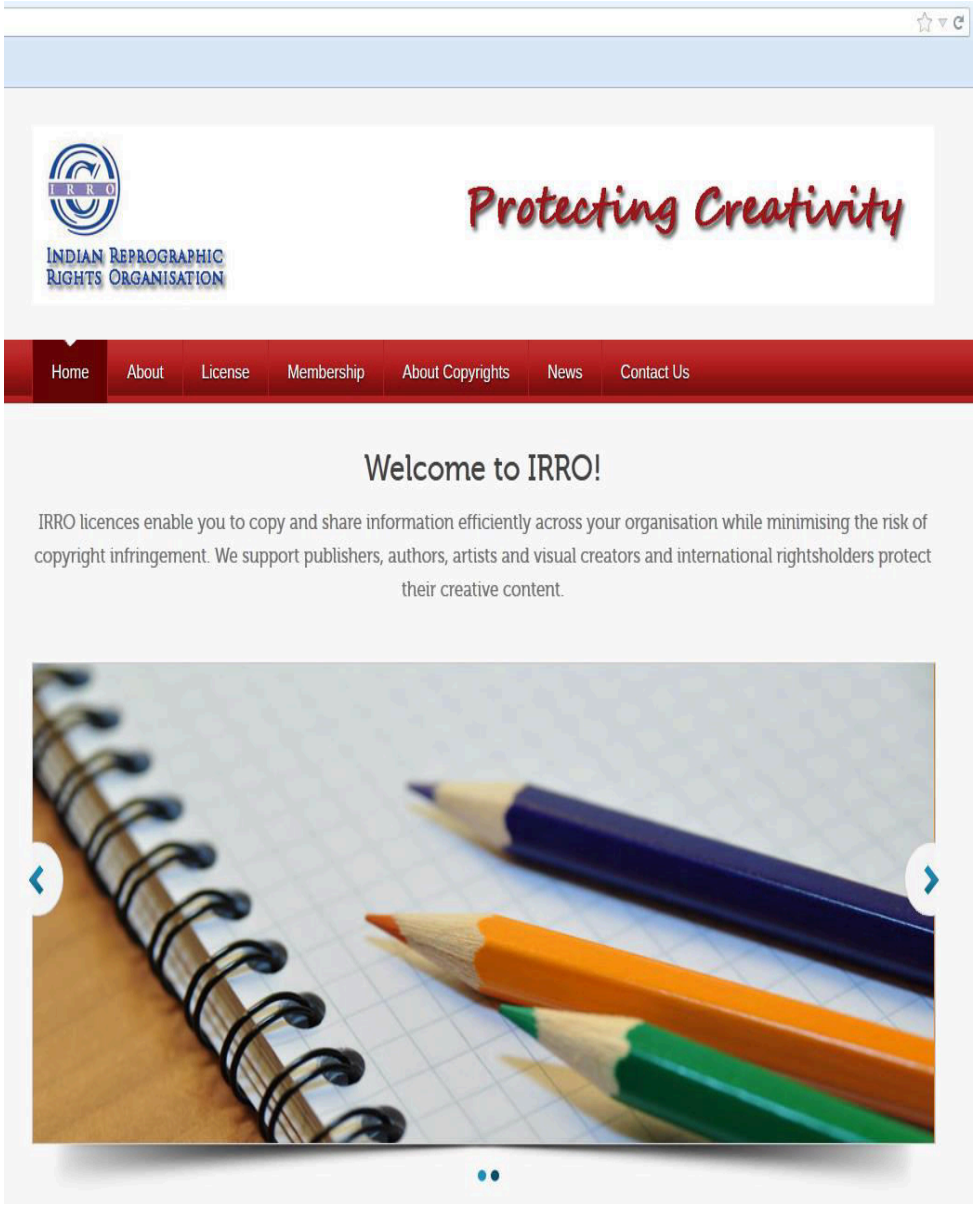
Key Issues and opportunities

- Staffing
  - Research Assistance, Database mining, IL, etc
  - Resource / product understanding
  - Professional managers
- Information Literacy
- Archiving Institutional Knowledge - Institutional Repositories
- Lib 2.0; Long Tail
- Open Access; Legal Issues
- Space – digital and physical - Reading Space

Key Issues and opportunities

- Outsourcing
  - IT: ILS, Hardware, Software, SaaS to PaaS
  - Manpower
    - Routine jobs
    - IT staff
- OSS, Remote login and Discovery services, RFID, Ebooks, Ebook readers, etc
- Online purchase of books
- Legal hosting of resources like videos
- Classroom use of library materials: videos, cases, etc
- Photocopying

www.irro.org.in



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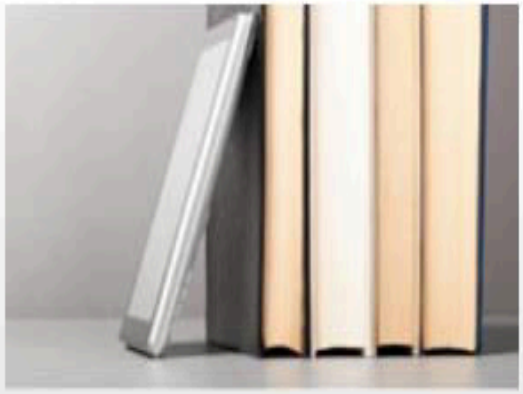

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Library Value in the Developing World

htt://www.sagepub.co.uk/librarians/dw

For developing country librarians

- Going beyond content provision and availability to address usage and awareness of available resources
- Engaging with faculty to find new ways of delivering support, training and advice
- Creating campus advocates by cultivating relationships with those willing to support the library
- Ensuring the library is up to date with the digital environment and tools
- Endeavouring to obtain more developing country voices in international debates on availability, access and use of research
- Promoting advocacy of the library through strong relationships with senior managers, participation in joint research projects, and getting a voice for the library 'at the top table', to ensure the library's concerns and needs are echoed within university strategy documents
- Measuring and demonstrating the value of the library's collection and services
- Using publisher support to create awareness and usage of services and resources
- Utilizing the library website as a tool to engage and provide information to faculty

For developing country universities

- Investing in libraries to ensure the sustainability of research and learning
- Investing in the professional development of librarians to ensure that the university makes the greatest use of the potential offered by information and technology
- Encouraging faculty doing research to make better use of the resources and technologies available to them through the library
- Raising the status and recognition of librarians and the value they add to the work of academic colleagues and campus administrators

For publishers

- Understanding the needs and specifics of developing country libraries and their work
- Adapting online resource sites to enable greater access in developing countries
- Undertaking further research into different marketing channels to create awareness and usage of accessible products
- Working with individual libraries to create bespoke materials to satisfy needs
- Creating a full marketing toolbox for librarians to market their resources and services

FROM TOM LEONARD, THE KENNETH AND DOROTHY HILL UNIVERSITY LIBRARIAN

Under a New Lens

This summer faculty members completed a year of close study—not in the Library, but of the Library. Representing fields with such different needs as art history, statistics, and soil science, they concluded that *"the centrality of the Library to the range of learning and research at Berkeley warrants a serious strategy of major reinvestment."* The Commission on the Future of the UC Berkeley Library was charged by the Provost and by the Chair of the Academic Senate; its report is surely one of the most thoughtful pictures of Berkeley on the desk of new Chancellor Nicholas Dirks.

Research libraries everywhere can learn from the Commission because it listened to a far-reaching library community, including our Library Advisory Board, as well as many experts from peer libraries and Silicon Valley. The report sums up what was learned and answers the question: What is to be done . . . at Berkeley now?

For those of us in the Library who worked with the Commission these many months, the philosophy of co-chairs Carla Hesse (History) and Jim Midgley (Social Welfare) seemed to be: Assume Nothing. We

Executive Summary

1. **The Library is central to the University's mission**. Nearly seven in 10 users say they rely on the Library a great deal or fair amount to help accomplish their academic, professional, and/or intellectual goals.
2. **User populations differ significantly** in how they use, rely on, and view UC Berkeley's Libraries. For the most part, there is no *single* campus community when it comes to libraries.
3. There is, however, **widespread agreement that high-quality library collections are essential** for users' research. This sentiment is evident across academic disciplines, whether the users are from Arts and Humanities, Science and Engineering or the Social Sciences.
4. **Maintaining high-quality collections is the number-one priority** among key user populations, including graduate students, faculty members, library staff, and undergraduates who rely heavily on the Library. These same user groups **oppose spending substantially less money on collections to maintain all current locations and existing services.**
5. **Undergraduates who rely less on the Library, however,** rate maintaining the current number of **locations and service points** as a higher priority.
6. **Librarians are highly valued for the important roles they play,** especially as "Selectors," "Cataloging and Archiving," "Reference," and "Instruction." Users from the Arts and Humanities are especially likely to ascribe importance to librarians.
7. **"Hub and Cluster" is the preferred service model** among undergraduates and grad students, **but faculty members are divided 50/50** between "Hub and Cluster" and "Full-Service Libraries" model. Library staff prefer the "Full-Service Libraries" model.
8. **Users largely accept the premise that** budget cuts and staffing reductions have had consequences all over campus, and that in the long run **a new library service model will benefit the campus.**
9. Many Library users **prefer self-sufficiency**, but most want **the option to receive personalized service** when needed.
10. **Accessing library resources and services digitally is popular**, with about one in four users preferring to *always* go the digital route.
11. **The call for at least five-day/24-hour access to library space is clearly evident,** with more than one in four undergraduates preferring to access the library in-person between midnight and 6:00 am Monday through Thursday.

Attitudes Toward Re-Envisioning The UC Berkeley Library

An Online Survey Of The UC Campus Community

Conducted By Hart Research Associates

July 2012

Statewide Strategic Plan

For the Future of Libraries in New Jersey

July 2013

Executive Summary

This strategic plan to guide the future of New Jersey's 2000+ public, school, academic and special libraries was developed through a process of public engagement by representatives of the library community and stakeholders during 2012-2013. The plan is a collaborative effort between the membership of LibraryLinkNJ (LLNJ), The New Jersey Library Cooperative and the New Jersey State Library (NJSL).

Our vision

We envision every library in New Jersey as a thriving, vibrant hub of its community. We envision the people of libraries—librarians, staff, boards, customers and all library stakeholders—as happy, fulfilled and collaborating productively to realize our shared goals.

Our future role

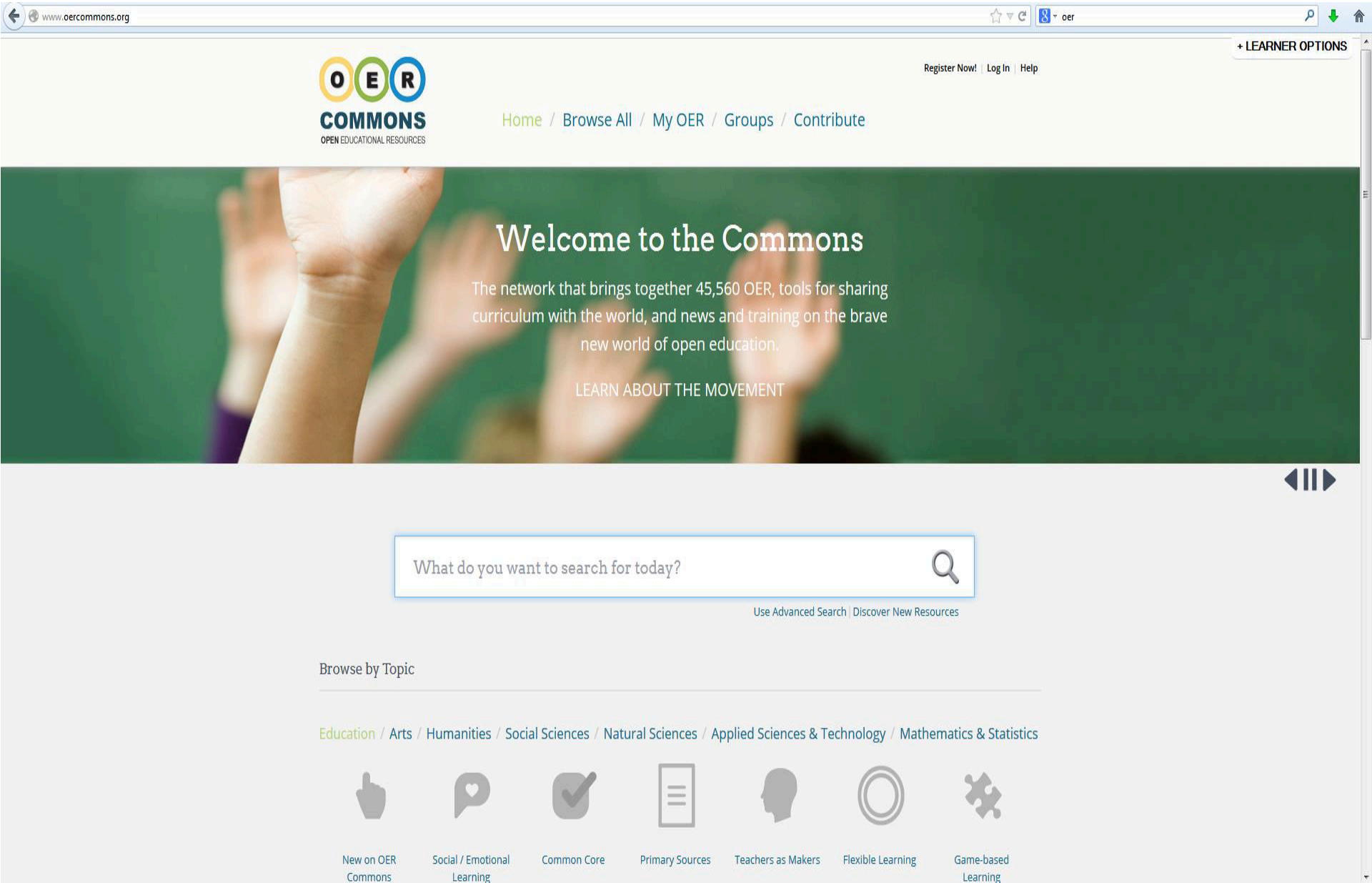
In a world of growing complexity, uncertainty and change, libraries and librarians have much to offer the communities we serve. We see our roles as:

Libraries as the heart of our communities: Libraries play an increasing role as a place for people to collaborate and exchange ideas and to gain access to information, knowledge, tools and methods. In a partnership with our customers we will help build more robust, vibrant communities, incubate new businesses, develop new skills for 21st century work and life and be a safe haven in times of crisis.

Librarians as wise knowledge facilitators: Librarians will increasingly help people make sense of and navigate a world that is ever more complex, rapidly changing and uncertain. We will become role models for how to bridge and leverage new knowledge spaces in a multiplicity of roles: trusted, responsive partners, guides and content curators and publishers, teachers, advocates and cross-boundary facilitators.

Open / Free resources

oercommons.org



http://www.ocwconsortium.org/

http://www.open.edu/openlearn/

requently asked questions on OpenLearn

Hide summary

o you have a question that you'd like to ask the OpenLearn team? The chances are that we ay have already answered! Check out the frequently asked questions below.

r: The OpenLearn team (Programme and web teams, The Open University)

uration 15 mins
troductory Level

Published on: Monday 29th October 2012
Posted under: Get Started

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sing OpenLearn for the first time

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Shining a light on the elements

From the big bang to neon signs, the elements of the periodic table are all around us. Find out how they impact our bodies and the world around us.

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Hide summary

Duration 5 mins
Introductory Level

Published on: Monday 19th October 2009
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History & The Arts	Start Writing Fiction	Continuing Classical Latin	Voice-leading Analysis of Music: The Foreground
Languages	Beginners Chinese: Introducing Yourself	Intermediate Italian: La Famiglia	Learning a Second Language
Money & Management	The Importance of Interpersonal Skills	How to Frame a Business Case	Understanding Opeations Management

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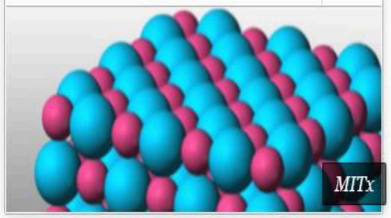
3.091x Introduction to Solid State Chemistry



CS50x Introduction to Computer Science I

CS169.1x Software as a Service

6.002x Circuits and Electronics

PH207x Health in Numbers: Quantitative Methods in Clinical & Public Health Research

CS188.1x Introduction to Artificial Intelligence

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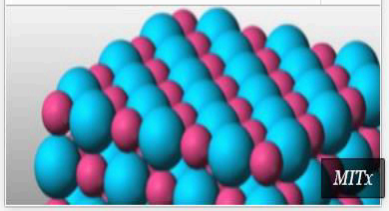
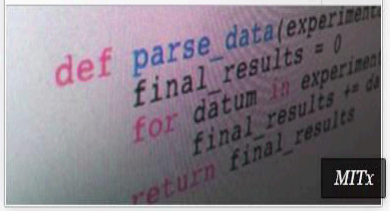


6.002x Circuits and Electronics

6.002x teaches the fundamentals of circuit and electronic analysis.

MITx | Sep 05, 2012

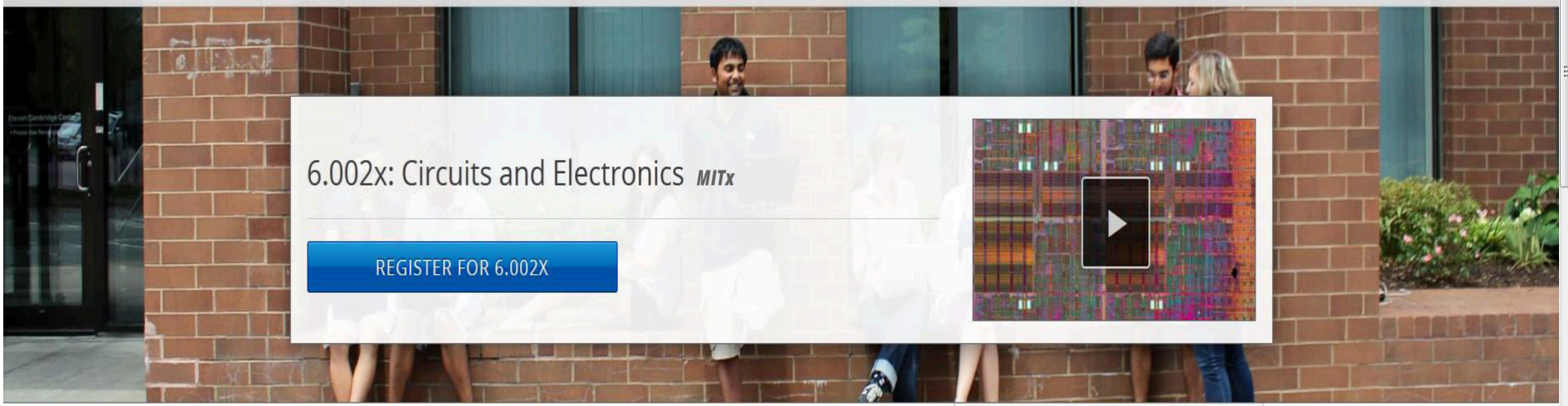
6.00x Introduction to Computer Science and Programming



The Massachusetts Institute of Technology – a coeducational, privately endowed research university founded in 1861 – is dedicated to advancing knowledge and educating students in science, technology, and other areas of scholarship that will best serve the nation and the world in the 21st century. The Institute has close to

included the first chemical synthesis of penicillin and vitamin A, the development of inertial guidance systems, modern technologies for artificial limbs, and the magnetic core memory that made possible the development of digital computers. 78 alumni, faculty, researchers and staff have won Nobel Prizes.

https://www.edx.org/courses/MITx/6.002x/2012_Fall/about



6.002x: Circuits and Electronics *MITx*

REGISTER FOR 6.002X

overview

ABOUT THIS COURSE

The course introduces engineering in the context of the lumped circuit abstraction. Topics covered include: resistive elements and networks; independent and dependent sources; switches and MOS transistors; digital abstraction; amplifiers; energy storage elements; dynamics of first- and second-order networks; design in the time and frequency domains; and analog and digital circuits and applications. Design and lab exercises are also significant components of the course.

The course is organized by weeks. To keep pace with the class, you are expected to complete all the work by the due dates indicated. Homeworks and labs must be completed by the Sunday of the week following the one in which they are posted. Weekly coursework includes interactive video sequences, readings from the textbook, homework, online laboratories, and optional tutorials. The course will also have a midterm exam and a final exam. Those who successfully earn enough points will receive an honor code certificate from MITx.

Course Number	6.002x
Classes Start	Sep 05, 2012
Classes End	Dec 20, 2012
Estimated Effort	12 hours/week
Prerequisites	Yes

PREREQUISITES

PREREQUISITES

In order to succeed in this course, you must have taken an AP level physics course in electricity and magnetism. You must know basic calculus and linear algebra and have some background in differential equations. Since more advanced mathematics will not show up until the second half of the course, the first half of the course will include an optional differential equations component for those who need it.

COURSE STAFF

Anant Agarwal

President of edX and Professor of Electrical Engineering and Computer Science at MIT. His research focus is in parallel computer architectures and cloud software systems, and he is a founder of several successful startups, including Tilera, a company that produces scalable multicore processors. Prof. Agarwal won MIT's Smullin and Jamieson prizes for teaching and co-authored the course textbook "Foundations of Analog and Digital Electronic Circuits."

Gerald Sussman

Professor of Electrical Engineering at MIT. He is a well known educator in the computer science community, perhaps best known as the author of Structure and Interpretation of Computer Programs, which is universally acknowledged as one of the top ten textbooks in computer science, and as the creator of Scheme, a popular teaching language. His research spans a range of topics, from artificial intelligence, to physics and chaotic systems, to supercomputer design.

Piotr Mitros

Chief Scientist of edX and Research Scientist at MIT. His research focus is in finding ways to apply techniques from control systems to optimizing the learning process. He has worked as an analog designer at Texas Instruments, Talking Lights, and most recently, designed the analog front end for a novel medical imaging modality for Rhythmia Medical.

Chris Terman

Senior Lecturer in the Department of Electrical Engineering and Computer Science at MIT. He has taught computer science courses in the department for many years and won many

FREQUENTLY ASKED QUESTIONS

What do I have to buy in order to participate in the course?

Nothing. All edX courses are free. The lectures, assignments, labs, and textbook are all available online. If you would like to buy a print copy of the textbook, a discounted version is available to enrolled students when the course starts

What textbook do I need for the course?

Elsevier Publishing is generously providing a free online-only and a 40% discount on print and downloadable versions of The Foundations of Analog and Digital Electronic Circuits by Agarwal and Lang for enrolled students. Once you enroll in the course, you will find information about these discounts in the course info page.

Will the text of the lectures be available?

Yes, transcripts of the course will be made available.

Do I need to watch the lectures live?

No. You can watch the lectures at your leisure.

What are the prerequisites?

You should have a mathematical background of working with Differential Equations and a physics background through AP level Electricity and Magnetism.

I don't have the prerequisites, Can I still take the course?

We do not check students for prerequisites, so you are certainly allowed to try. However, 6.002x does depend on previous experience with electricity and magnetism, and differential equations. If you do not know those subjects before taking the class, you will have to learn them over the semester, which can be an extremely difficult task.

When does the course start?

The course opens at noon GMT on September 5th, 2012, and you can start the course any time after that.

If you have any questions about 6.002x that are not answered in this FAQ, please email mit-6002x@edx.org.

Back to schools

IIT Bombay, established in 1958, has emerged as a leading Institute in India. It is globally recognized for its quality education and strong research programs. Admissions are made through national competitive entrance examinations, considered to be the toughest in India. Its residential campus is home to over 8000 students, 500 faculty members, 14 departments, 6 centres, and 3 inter-disciplinary programs.

The research program in Education Technology attempts to evolve the most effective learning-teaching processes. The Centre for Distance Engineering Education Program (C-DEEP), handles much of the outreach activities. Several national mission projects are handled by the Institute. Training is offered to teachers on a large scale – up to 10,000 teachers at a time - using a unique blended mode. Other activities include: creation of web/video courses, spoken tutorials, educational animations, design and development of educational robots, educational content and applications on low-cost Aakash tablets, learning environments in the field of design, and FOSSEE.

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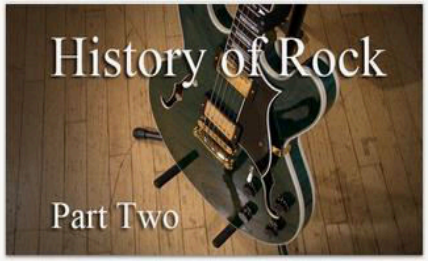
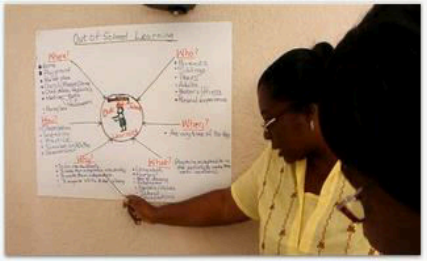
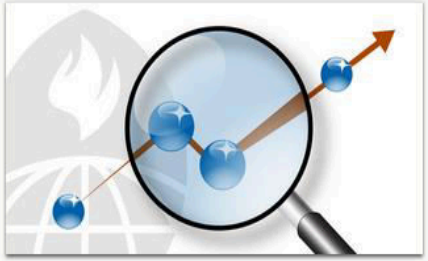


History of Rock, Part Two
University of Rochester, Jul 8th

Introductory Human Physiology
Duke University, Aug 5th



Foundations of Teaching for Learning 1: Introduction
Commonwealth Education Trust, Aug 5th



Case-Based Introduction to Biostatistics

Introduction to Music Production
Berklee College of Music, Jul 19th

Art and Inquiry: Museum Teaching Strategies For Your Classroom

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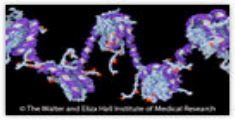
Stanford University

Algorithms: Design and Analysis, Part 1

with Tim Roughgarden

Jul 1st 2013
6 weeks long



University of Melbourne

Epigenetic Control of Gene Expression

with Marnie Blewitt

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Signature Track

Brown University

Coding the Matrix: Linear Algebra through Computer Science Applications

with Philip Klein

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Antimicrobial Stewardship: Optimization of Antibiotic Practices

with Stan Deresinski

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Ludwig-Maximilians-Universität München (LMU)

Competitive Strategy

with Tobias Kretschmer

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Stanford University

Practical tips to improve Asian American participation in cancer clinical trials

with Kim F. Rhoads

July 2013

Princeton University

Networks Illustrated: Principles without Calculus

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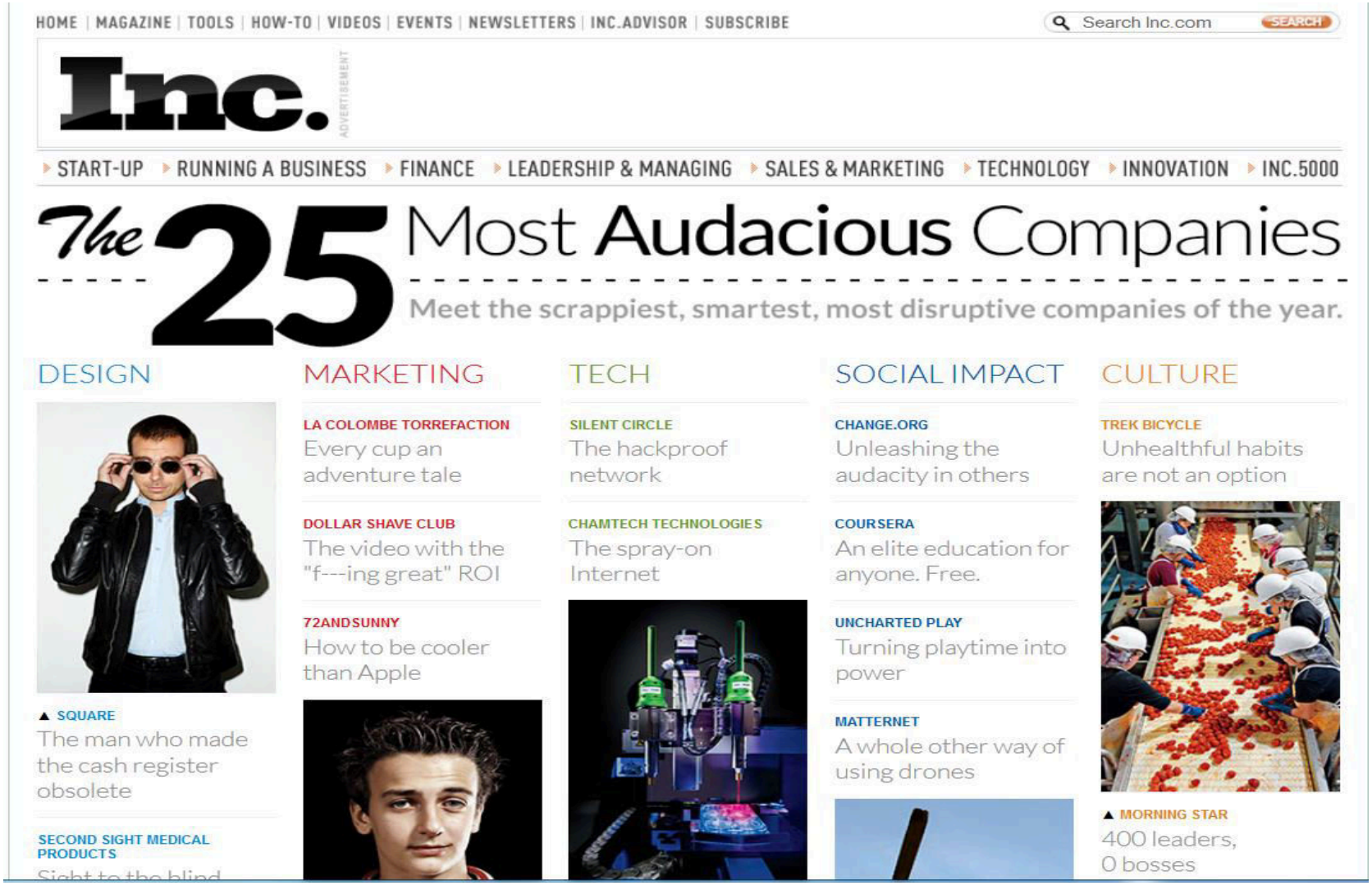

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Coursera leaps another online learning hurdle, partners with Chegg and 5 publishers to give students free textbooks

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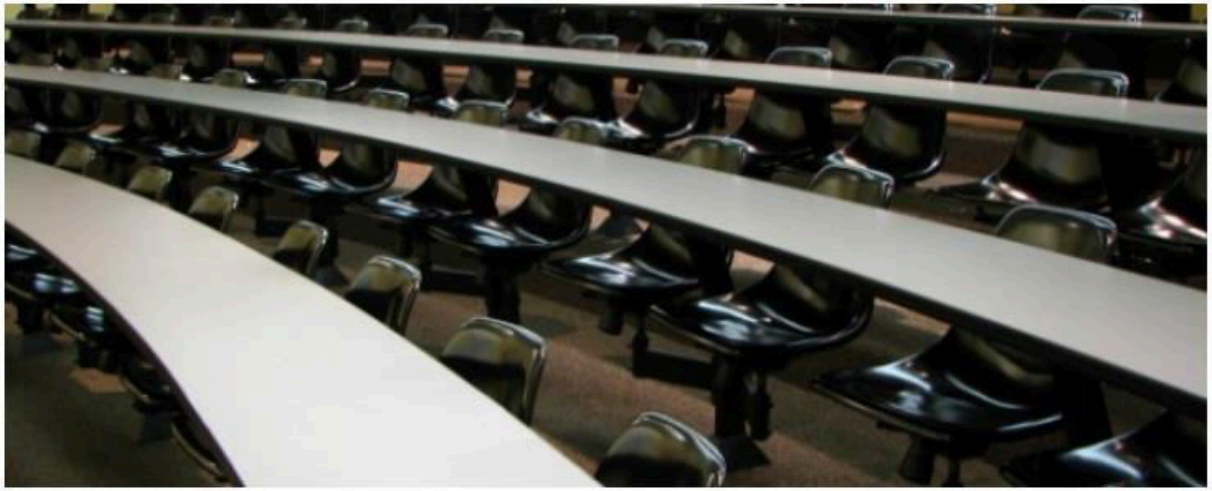

Online learning startup Coursera on Wednesday announced a partnership with Chegg, a student hub for various educational tools and materials, as well as five publishers to offer students free textbooks during their

Emil Protalinski
Contact Author

8 May 2013

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By JUSTIN POPE — May. 30 12:11 AM EDT

Home » Joe DiPietro » Higher ed systems in 10 states turn to Coursera

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The movement of "Massive Open Online Courses," which began with elite universities making their courses available online to the masses, is rapidly moving into the trenches of public higher education.

On Thursday, 10 large public university systems — including the giant state systems of New York, Tennessee, Colorado and the University of Houston — announce plans to incorporate MOOCs and platforms offered through for-profit Coursera into their own teaching.

The plans vary widely. Some institutions will focus on improving prep courses for students coming into the system, others on matriculated students both online and on-campus, and still others will be developing their own MOOCs to teach students at other institutions in their states. At least one system, Tennessee, plans a version of an experiment cropping up at schools around the country: having students take in-person and customized MOOC-like versions of the same course, and comparing results.

But overall, the announcement is the latest ramping up of higher education's MOOC experiment, which launched in earnest barely a year ago as a way to sample elite college courses. But it is now tangibly affecting the large public institutions that do much of the heavy lifting of American higher education. The latest batch of partners also includes the Universities of Georgia, Kentucky, Nebraska, New Mexico and West

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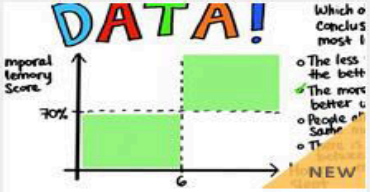

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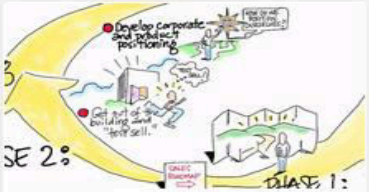

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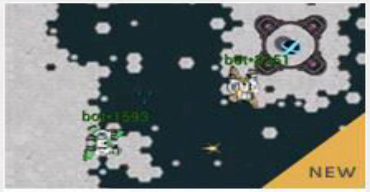
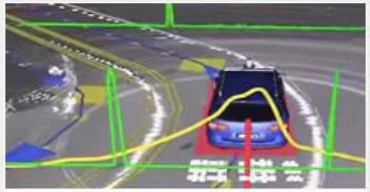


HTML5 Game Development



Intro to Artificial Intelligence

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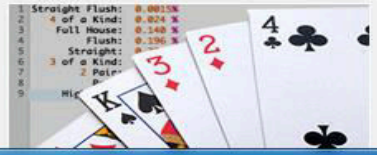

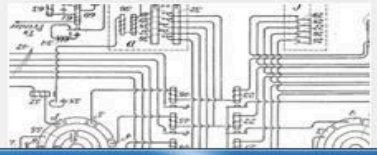

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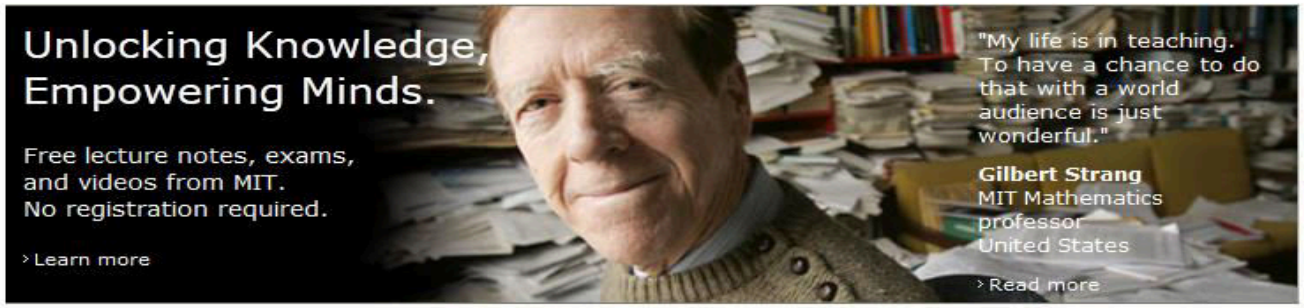

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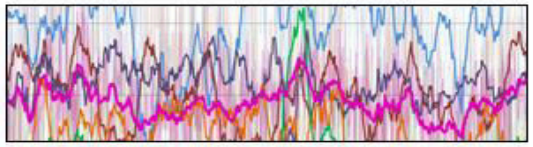

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How to Process, Analyze and Visualize Data

This class provides an introduction to data cleaning, analysis and visualization and is an excellent resource for anyone interested in MIT's new Bigdata@CSAIL initiative.

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1.010	Computing and Data Analysis for Environmental Applications	Fall 2003
1.011	Project Evaluation	Spring 2011
1.012	Introduction to Civil Engineering Design	Spring 2002
1.015J	Design of Electromechanical Robotic Systems	Fall 2009
1.017	Computing and Data Analysis for Environmental Applications	Fall 2003
1.018J	Ecology I: The Earth System	Fall 2009
1.020	Ecology II: Engineering for Sustainability	Spring 2008
1.021J	Introduction to Modeling and Simulation	Spring 2011
1.032	Advanced Soil Mechanics	Fall 2004
1.033	Mechanics of Material Systems: An Energy Approach	Fall 2003
1.040	Project Management	Spring 2009
1.040	Project Management	Spring 2004
1.041J	Frameworks and Models in Engineering Systems / Engineering System Design	Spring 2007
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1.050	Engineering Mechanics I	Fall 2007
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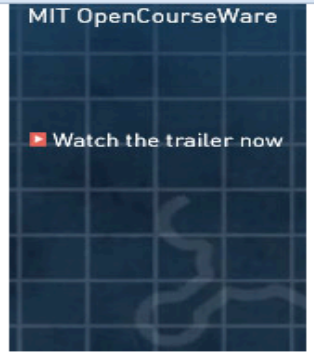

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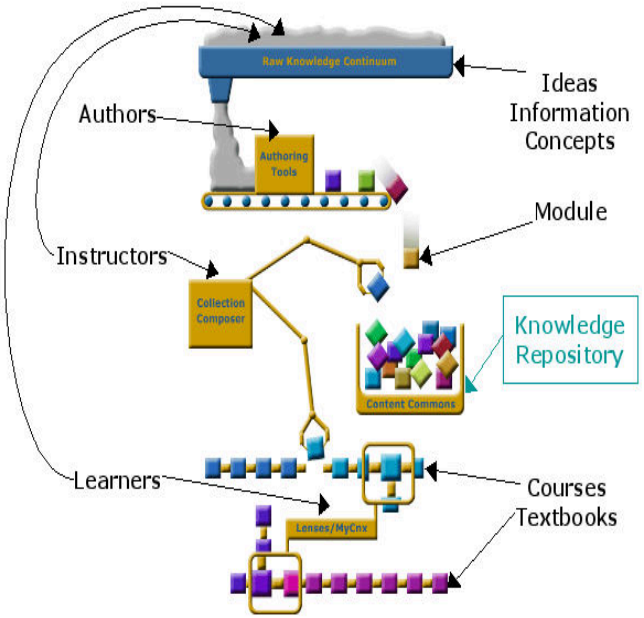

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OpenStax College Physics

This 1300 page introductory, algebra-based, two-semester college physics book is grounded with real-world examples, illustrations, and explanations to help students grasp key, fundamental physics concepts.

College Physics is the first of a planned 20 college textbooks to be released by OpenStax College. This online, fully editable and customizable title includes learning objectives, conceptual questions, links to labs and simulations, and ample practice opportunities to solve traditional physics application problems.

OpenStax College Introduction to Sociology

Introduction to Sociology is intended for a one-semester introductory sociology course. Conceived of and developed by active sociology instructors, this up-to-date title is now available on Connexions. This online, fully editable and customizable title includes sociology theory and research, real-world applications, simplify and debate features, and learning objectives for each chapter.

Introduction to Sociology was published by OpenStax College, an initiative of Connexions and Rice University. The project was generously funded by the Hewlett Foundation, Gates Foundation, 20 Million Minds Foundation and the Maxfield Foundation.

Collaborative Statistics

Collaborative Statistics was written by two faculty members at De Anza College in Cupertino, California. This book is intended for introductory statistics courses being taken by students at two- and four-year colleges who are majoring in fields other than math or engineering. The textbook was developed over several years and has been used in regular and honors-level classroom settings and in distance learning classes.

The book focuses on applications of statistical knowledge rather than the theory behind it. The focus is on thinking statistically, incorporating technology, working collaboratively, and writing thoughtfully.

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Lesson: What Makes Up A Color?

Contributed by: VU Bioengineering RET Program, School of Engineering, Vanderbilt University

Summary

As a part of the research and revise step of the Legacy Cycle, this lesson provides students with information they will need later on to be able to average pixels to simulate blurring in the peripheral plane of vision. Students learn why image color becomes important as we distort the outer boundaries of an image and have to interpolate pixels to fill in gaps created from our algorithm. Students learn what a digital image is, what pixels are, and learn to convert between RGB and hexadecimal values.

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Engineering Connection

●○○ **Relating math concept to engineering**

A digital image is a type of digital signal. The field of digital signal processing is one of the main sub-fields of electrical engineering and is applicable to many areas. Two such areas are medical imaging and communications (transmission of data). The hexadecimal number system is often used in the computer science and computer engineering fields as an alternative way to represent numbers.

Contents

1. Learning Objectives
2. Introduction/Motivation
3. Background
4. Vocabulary
5. Associated Activities
6. Assessment
7. References

engineers help SHAPE THE FUTURE

Grade Level: 12 (11-12)
Time Required: 30 minutes

Lesson #: 2 of 3
Lesson Dependency: The Grand Challenge: Simulating Human Vision, Peripheral Vision Lab

Keywords: Challenge Question, Digital Image, Hexadecimal, Legacy Cycle, Peripheral Vision, Pixel, Raster, RGB, Robot
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subject areas	Computer Science
curricular units	Robotics Peripheral Vision
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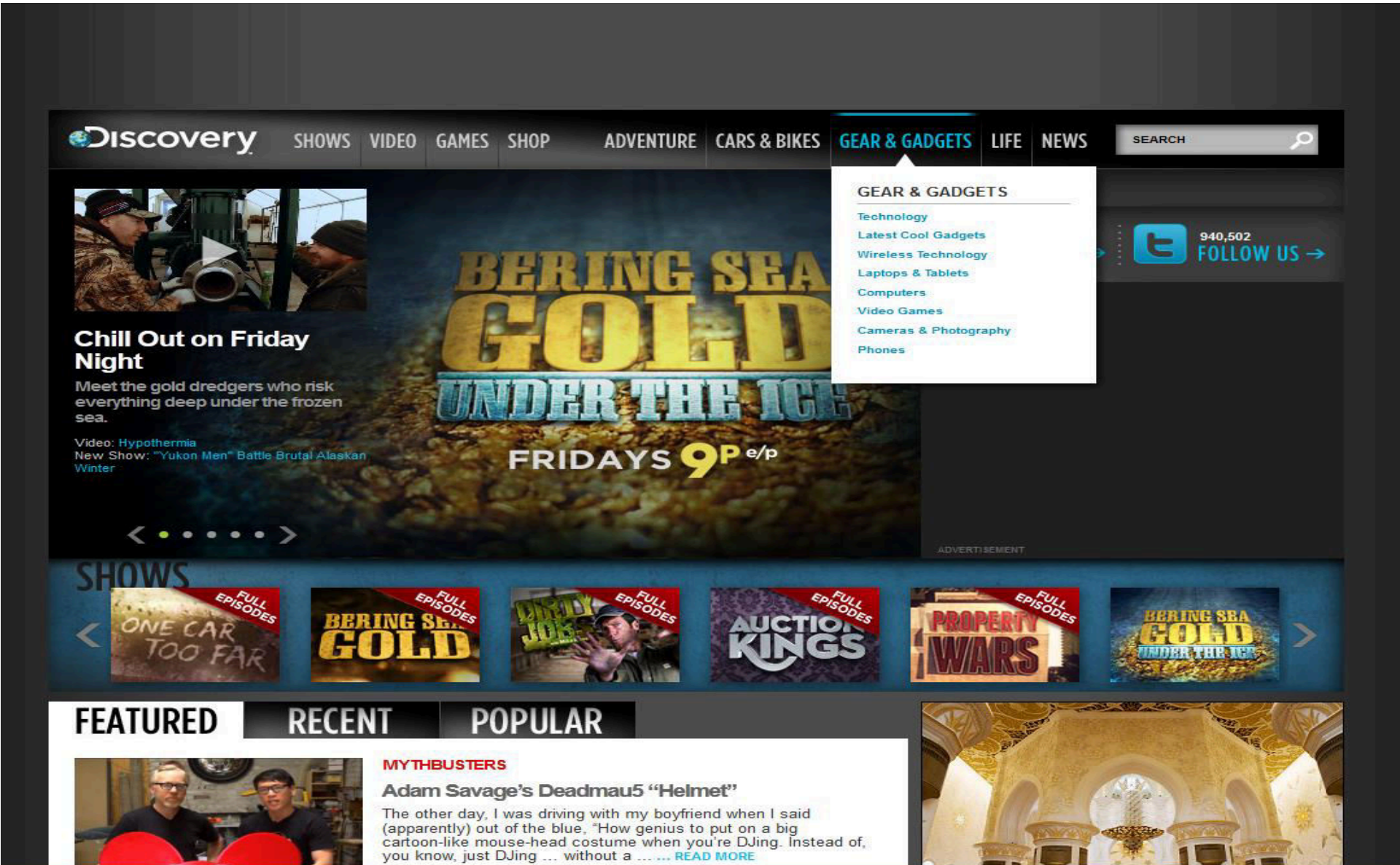

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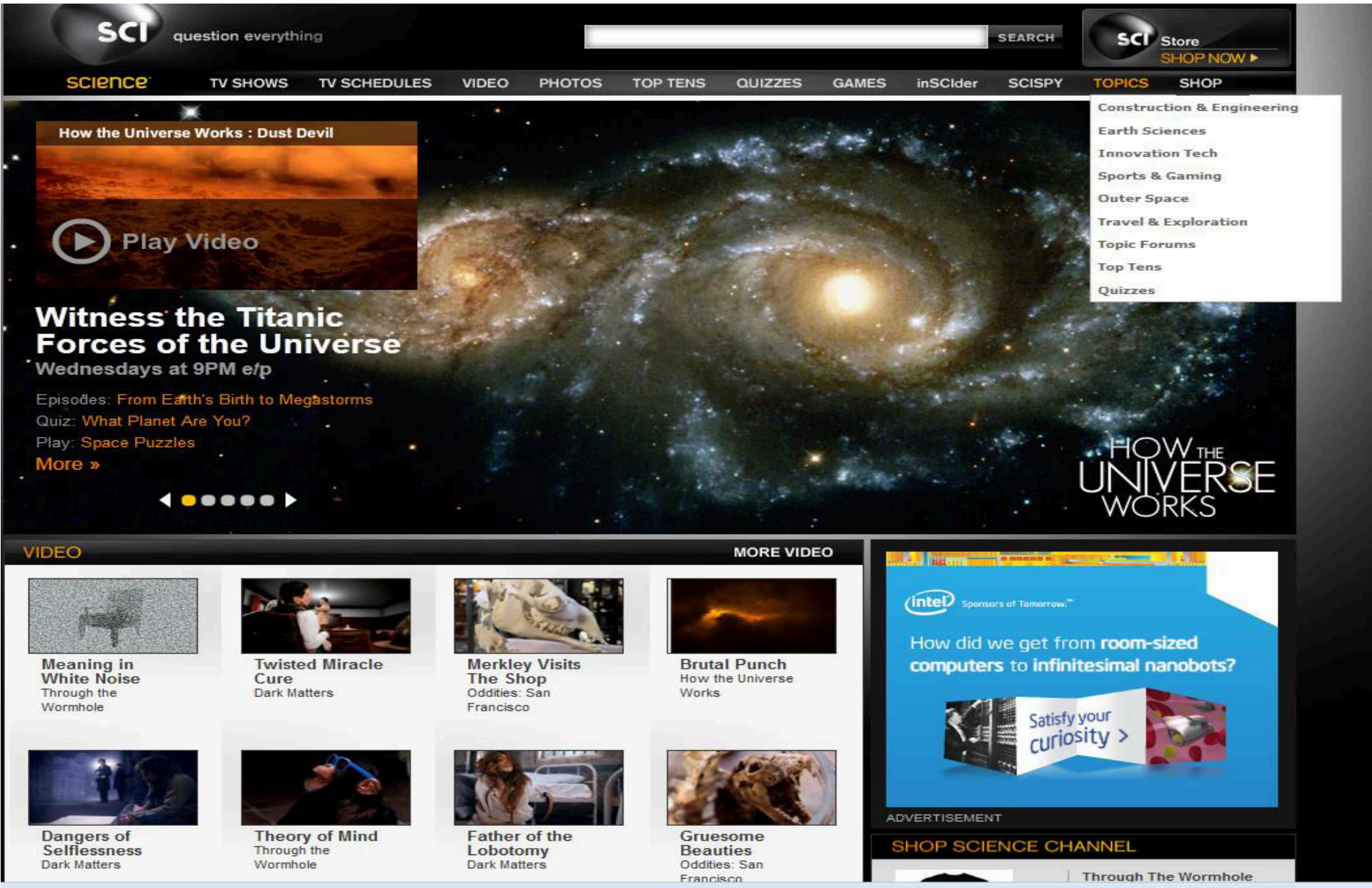

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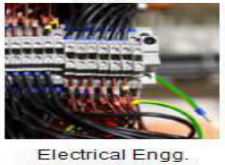
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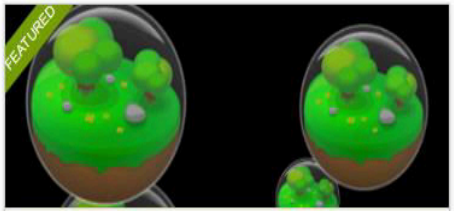

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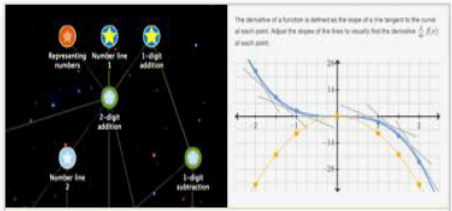

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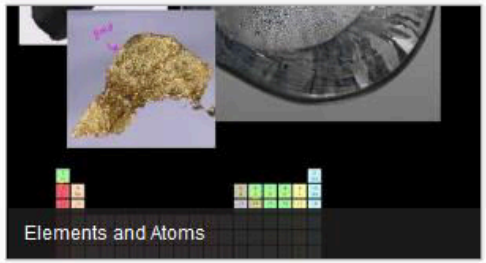

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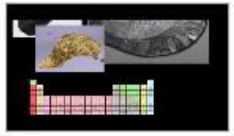

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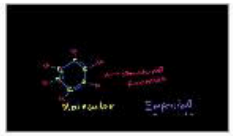

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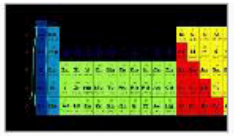

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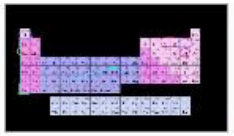

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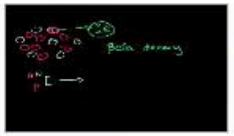

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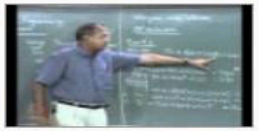

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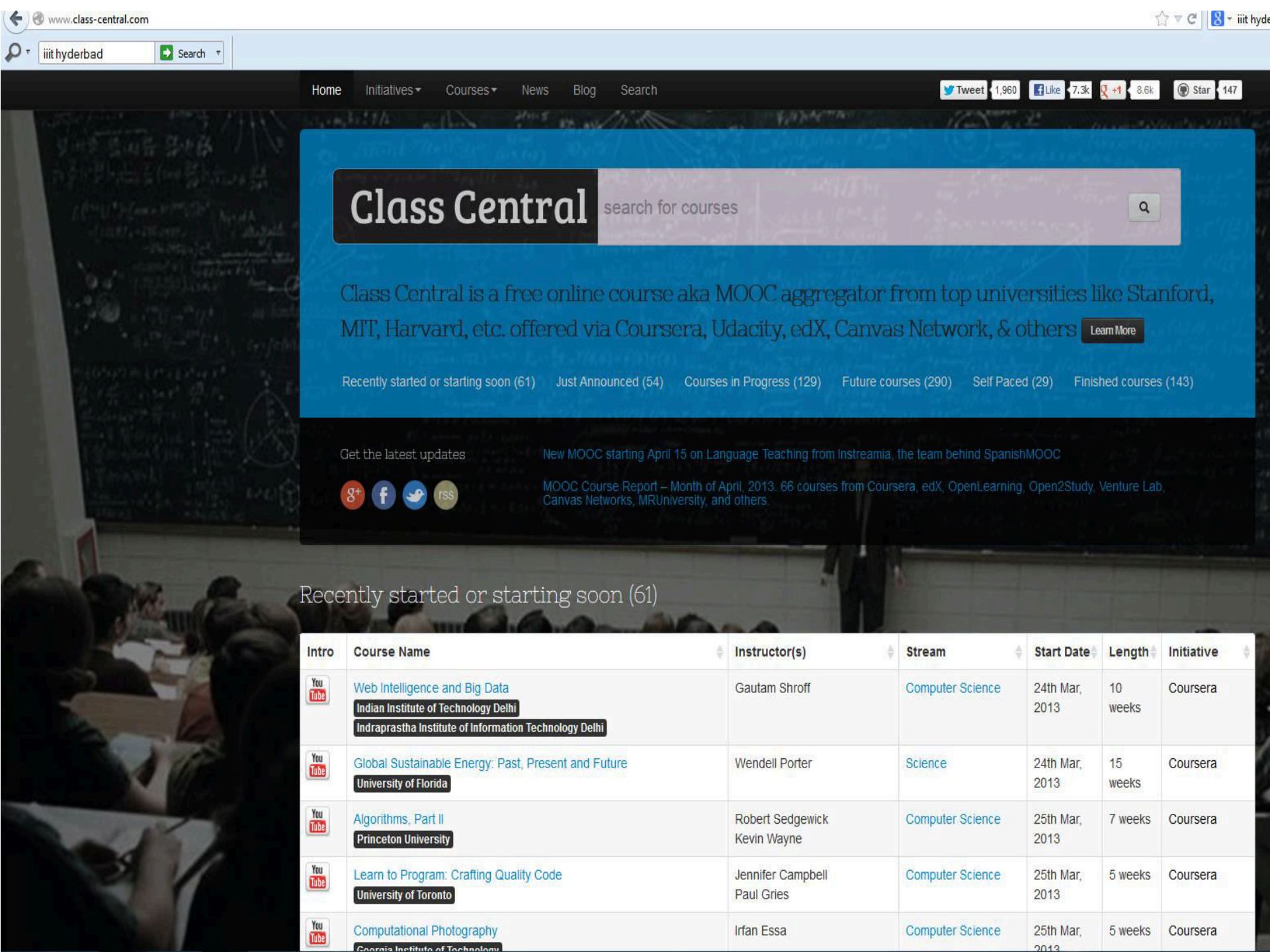
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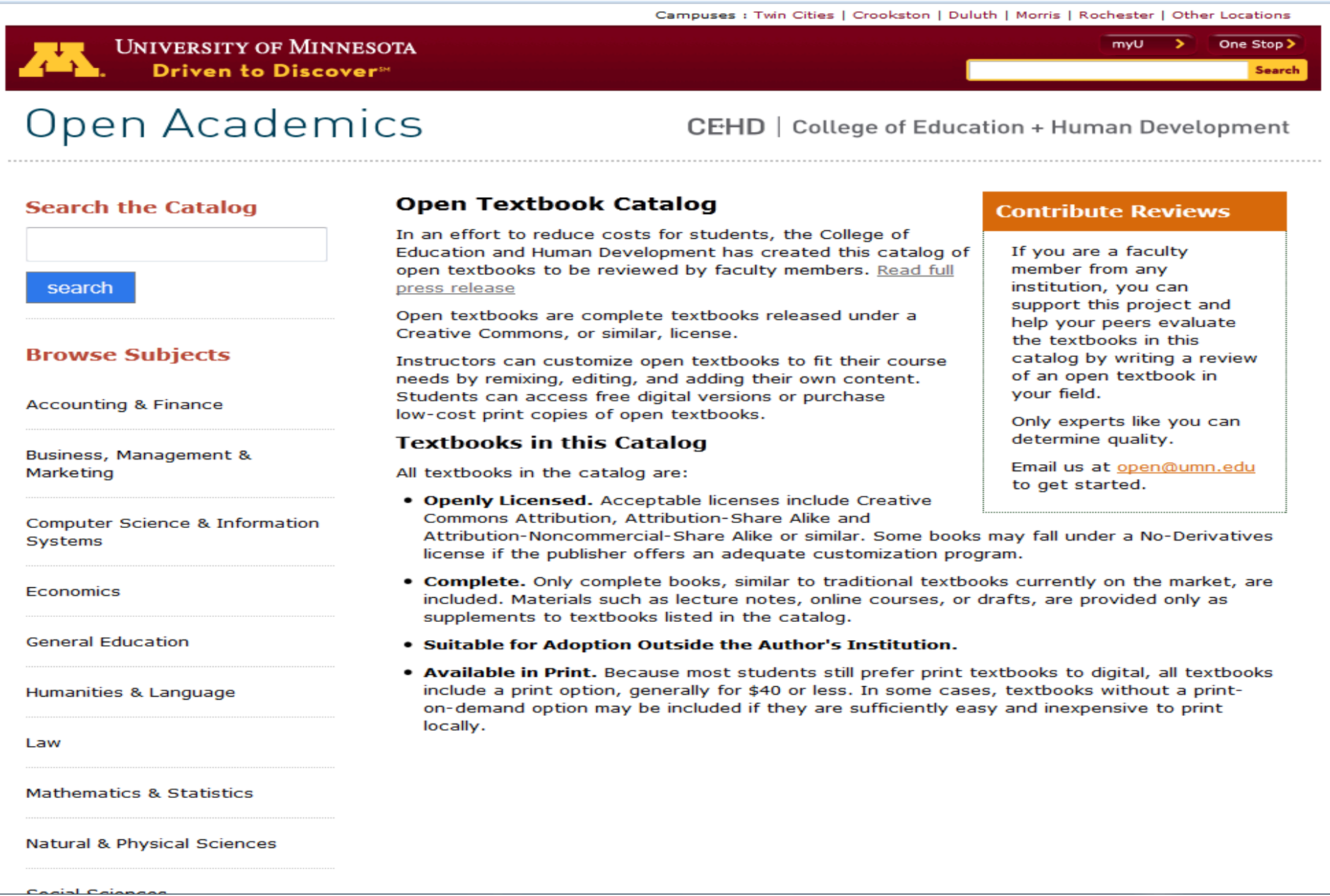

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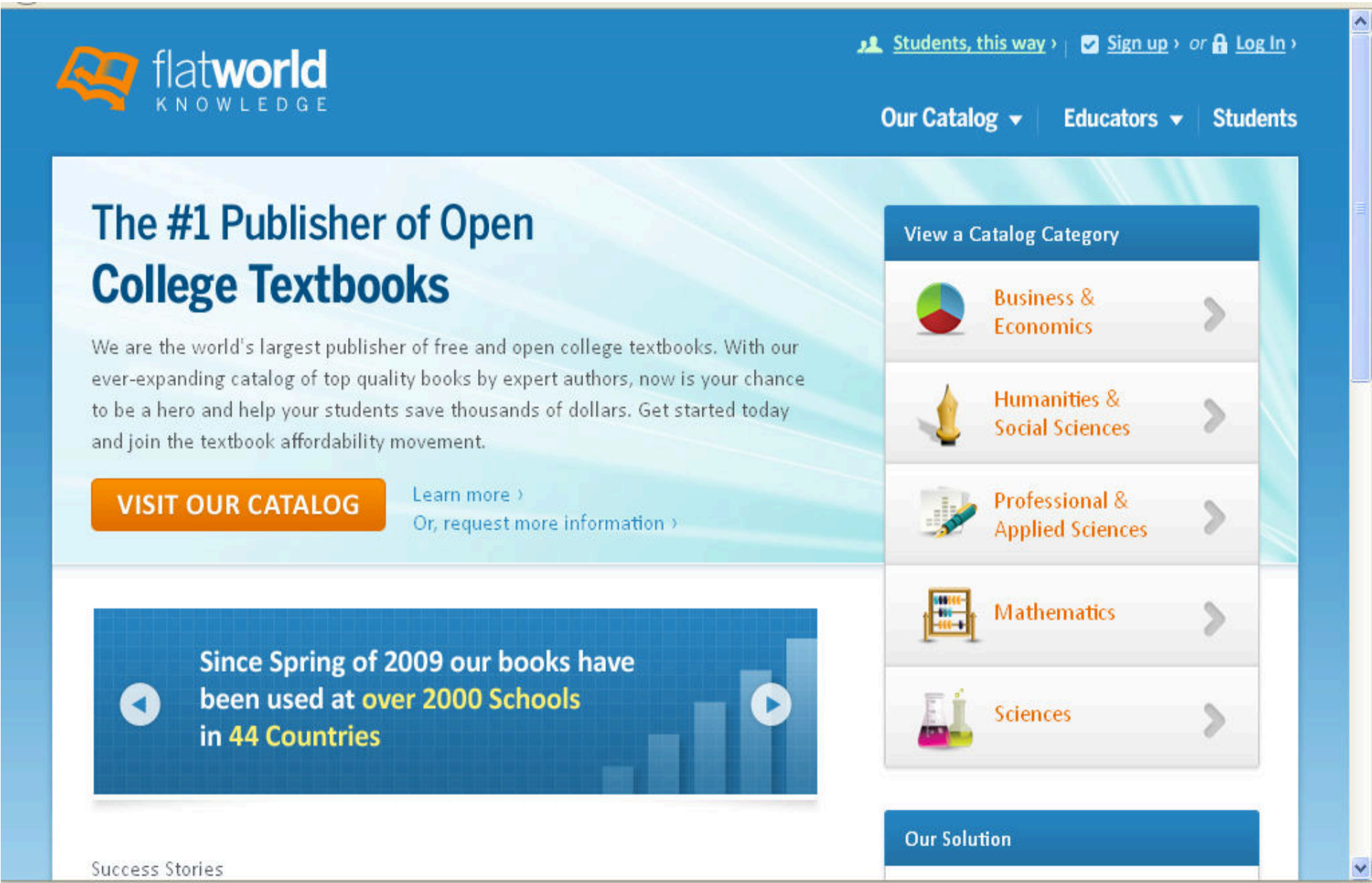

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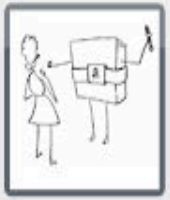

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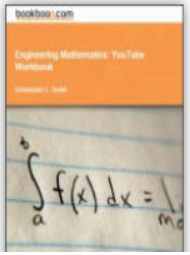

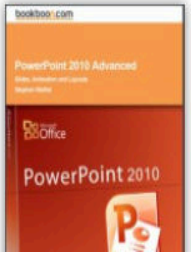

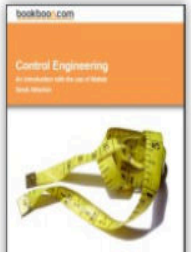

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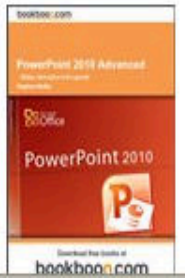

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- American FactFinder
- AmericasBarometer Surveys
- Australian Data Archive
- Center for Population Research in LGBT Health
- Demographic and Health Surveys
- DiversityData.org
- North American Jewish Data Bank
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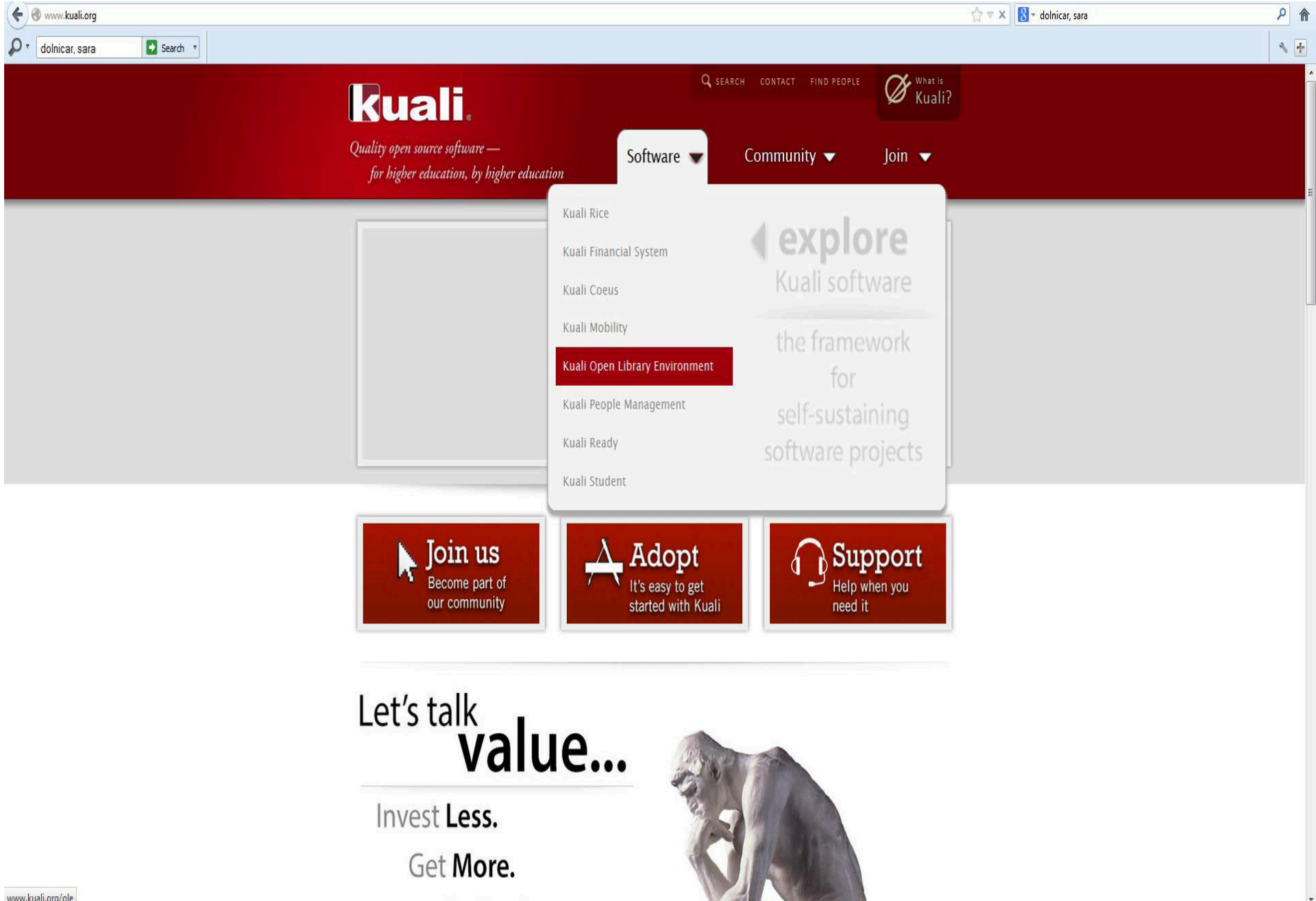


Open Library Environment

Overview
Modules
News Blog
Organization
Presentations
Timeline
Partners

Overview of OLE

Open Library Environment (OLE) - An Extensible Service-Driven Library Management System

Kuali OLE is the **first system designed by and for academic and research libraries** for managing and delivering intellectual information.

A community of partners will deliver an enterprise-ready, community-source software package to manage and provide access not only to items in their collections but also to licensed and local digital content. Kuali OLE (pronounced oh-LAY, for Open Library Environment) features a governance model in which the entire library community can collaborate to own the resulting intellectual property.

Summary

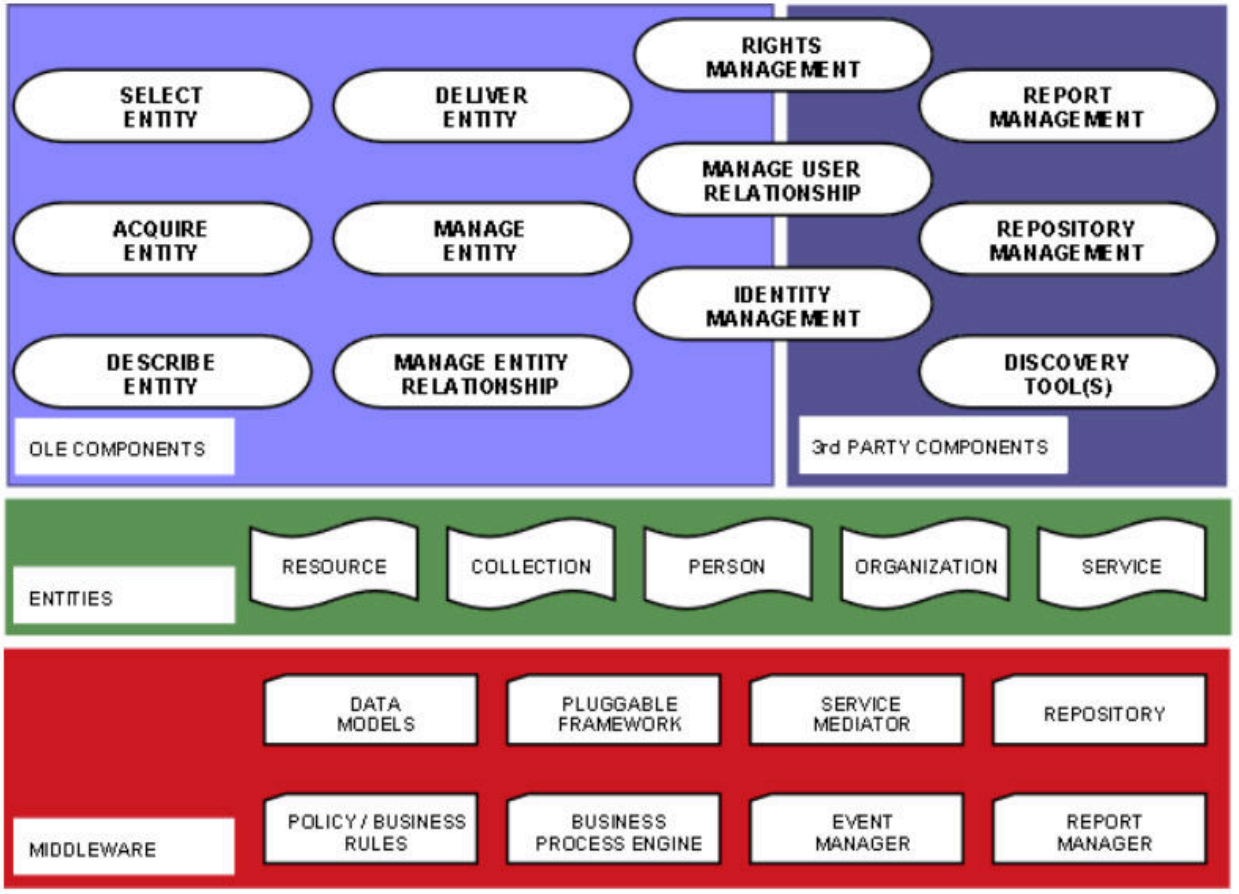
- Built, owned, governed by the academic and research library community
- Supports the wide range of resources and formats of scholarly information
- Interoperates & integrates with other enterprise and network-based systems

Download the source code

Test Drive this application

Overview
Modules
Acquire Entity
Deliver Entity
Describe Entity
Manage Entity
Manage Entity Relationship
Manage User Relationship
Select Entity
News Blog
Organization
Presentations
Timeline

Modules (OLE Reference Model)



Kuali OLE Road Map

Kuali OLE 1.0
Target date: Q4 2013

Select & Acquire •Serials receiving workflows •Voucher output and transmittal •Initial integration with GOKb •Electronic acquisitions workflows **Deliver** •Patron self services •Circulation standards: NCIP •Integration with ILL and Course Reserve Systems **Describe** •Batch editing •Record extraction •Support for analytics •Support for "staff only" records	**Kuali OLE 1.0 Ready for Implementation**	**Implementation Tools** •Reporting Tools •Documented API & service registry •Distribution packaging •Framework for training development •Documentation •Completed migration toolkit •Descriptive data •Circulation history •Acquisition history •Complete system ready for implementation •Exposed Service Registry

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THANK YOU!

anilkumar@iimahd.ernet.in