The Future of Education:
An Interconnected Global Lifelong Learning Ecosystem

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The American University in Cairo

7th Eduniversal World Convention

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Education…Where to go next?

- Traditional/conventional methods, are they here to stay for some time!? Are they replaceable?

- Online education/learning – is it really growing? Where? How? What form?

- Distance education/learning – how can we define it?

- Blended education/learning methods – is it growing fast around the world? Is it really the **best of the 2 worlds** (mix of traditional and unconventional approaches)?

Education for a **smarter** planet

What's Next?

- The **Virtual Value** is it a credible alternative to the lecture theatre?
  - Credits
  - Programs
  - Degrees
- How long before students would complete an undergraduate degree without going to a university? Will that ever happen?

How Human Capital Perceive Education?

- Changing the mindset from once in a **lifetime education** to **lifelong learning.**

University Model → **First/Last Job**

Dynamic World → **Iterative/Evolving/ Changing Setting**
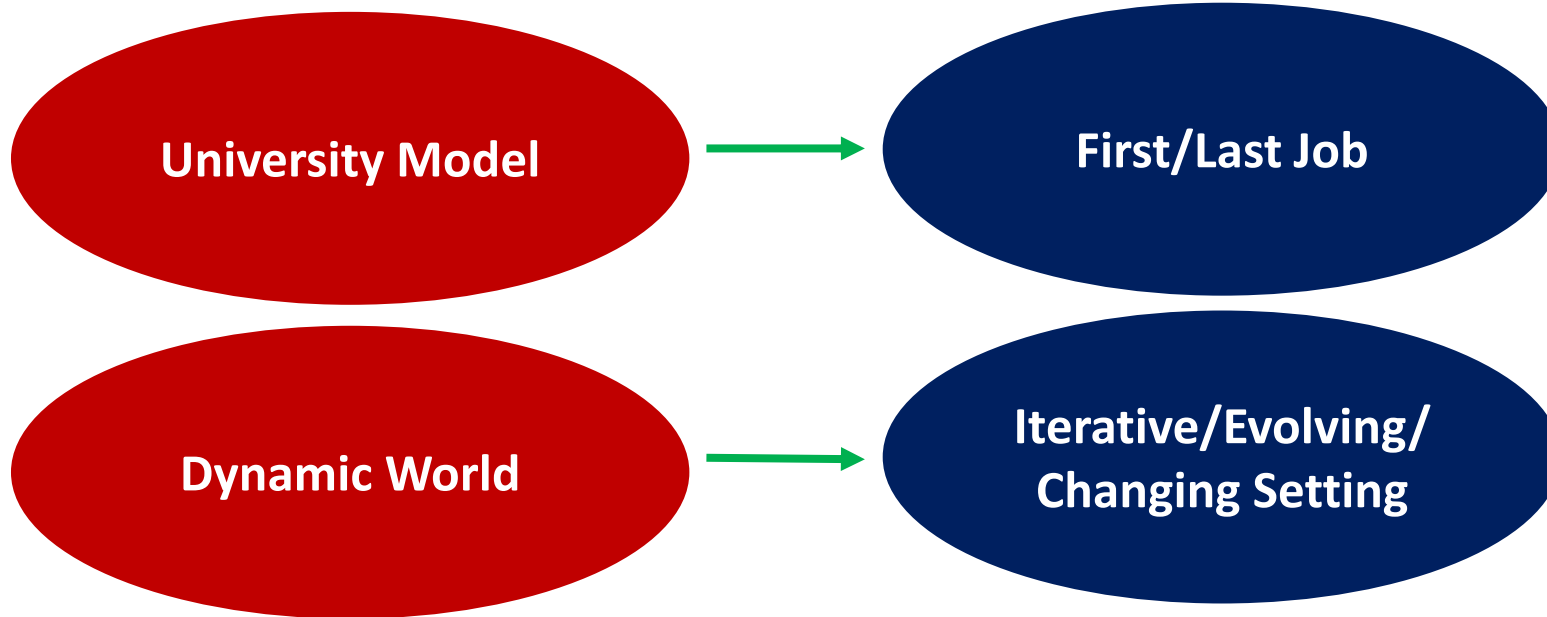
The Future of Learning

- The world is changing fast and the emerging cutting-edge **information and communication technologies** are playing an invaluable role.

Instrumented

Interconnected

Intelligent

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The Classroom of Today

COMPONENTS OF A
21st Century Classroom

Technology is undeniably changing the face of education, and it's easy to see the impact already. Imagine what classrooms will be like in 20 years with the speed of technological innovation. Learn more about some of the key advancements in the 21st century classroom.

91% of teachers have computers in their classroom...

...but just **1 in 5** feel their classrooms have the right level of technology

INCREASING THE PRESENCE OF THE FOLLOWING
TECHNOLOGIES COULD CHANGE THAT RATIO DRASTICALLY

Real World Education
Project-based learning (PBL) teaches concepts, but also organization, articulation, project management and collaboration

Integrating life skills into education can improve student engagement and retention and prepare them for 21st century careers

Online Courses
Almost a third of all college students take at least one online course

Online enrollments saw 21% growth while overall higher education student population only saw 2% growth

Over 65% of education institutions count online learning as critical for long-term educational success
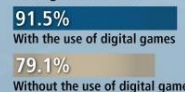
Games and Gamification
43% of teachers have used online games in the classroom

In one study, games raised average test scores:
91.5% With the use of digital games
79.1% Without the use of digital games

Learning Analytics
Help teachers assess top concerns and achievements related to their students

Registration for the Learning Analytics and Knowledge conference doubled between 2011 and 2012 — 2012 / 2011

One system claims to predict whether a student's likelihood of sufficient course completion with about 70% accuracy, highlighting risk factors for individual students — **70%**

Open Source Textbooks
In the next decade, open source textbooks are expected to grow to **25%** of the textbook market

By 2013, e-textbooks may comprise **11%** of textbook revenue

6 in 10 students have used a digital textbook
- just 4 in 10 had in 2011 -

81% of teachers believe tablets enrich classroom learning

86% of students believe they study more efficiently with tablets

1 in 5 students have used a mobile app to keep their coursework organized

29% of teachers use social media for coursework, compared to now **80%** of college professors

59% of students would like to use their own mobile devices to enhance learning

Top 3 Reasons for Teachers to Use Technology in the Classroom
76% Adapt to diverse learning styles
77% Boost student motivation
76% Enhance the material being taught

Over 51% of colleges cited wireless upgrades as their tech priority in 2011-12 given the **60% increase** in mobile devices on campus in the previous year

Integration of Social Networks
Engaging students with a free tool they already use can help them learn in new ways, gain focus and increase participation

A+ One social media pilot program assisted in a class' 50% rise in grades

4 in 10 students believe integrating social networks into the classroom would benefit their education

Sources: http://www.pbs.org/about/news/archive/2012/teacher-survey-fetc/ • http://www.pearsonfoundation.org/downloads/PF_Tablet_Survey_Summary_2012.pdf • http://www.nytimes.com/2011/11/24/world/americas/schoolwork-gets-swept-up-in-rush-to-go-digital.html?pagewanted=all • http://techcrunch.com/2012/02/18/open-source-textbooks/ • http://www.prweb.com/releases/2011/8/prweb8708680.htm • http://pearsonfoundation.org/downloads/PF_Tablet_Survey_Summary.pdf • http://edtechdigest.wordpress.com/2011/10/18/trends-survey-says-wireless-networks-expand-for-mobile-growth/ • http://patrickdunn.squarespace.com/storage/blunt_game_studies.pdf • http://sloanconsortium.org/publications/survey/going_distance_2011 • http://mashable.com/2010/09/29/social-media-in-school • http://www.babson.edu/Academics/centers/blank-center/global-research/Pages/babson-survey-research-group.aspx • http://www.tomorrow.org/speakup/pdfs/SU11_PersonalizedLearning_Students.pdf • http://www.scholastic.com/browse/article.jsp?id=3751748 • http://thedailysentinel.com/news/article_db82f6c0-4c10-11e1-8269-001871e3ce6c.html • http://www.bie.org/research/study/experimental_study_of_bie_project_based_economic_units • http://solaresearch.org/OpenLearningAnalytics.pdf • http://learninganalytics.net/LAK_12_keynote_Siemens.pdf

Open Colleges

graphs.net

Global Interconnectivity

- Between 26-30 billion devices on the **Internet of Things** by 2020.
- Today, there are 2.8 billion Internet users.

|	
Asia	45.1%
Europe	20.2%
North America	10.7%
Lat Am / Caribb	10.8%
Africa	8.6%
Middle East	3.7%
Oceania / Australia	0.9%

The World in 2014

- We live in a world that is connected economically, socially and technically.

- **95%** of data that was ever created – was created over the last **three years!!**

- A diversified educated innovative tech-savvy workforce is invaluable to the development of society.
  - They need to learn to be **innovative** because most probably they will be doing jobs that have not been invented ye.
 - Deal with in-demand **jobs** today in 2014, that didn't exist in 2000.

Big Data

Data Analytics

The **Learner** of Today in **2014** v **1980**
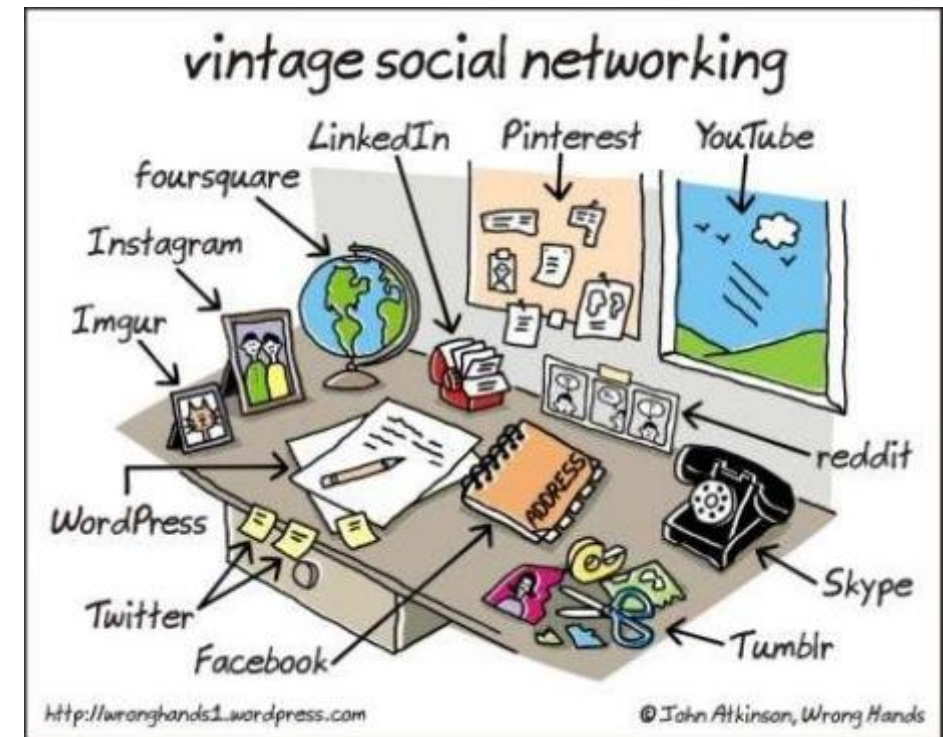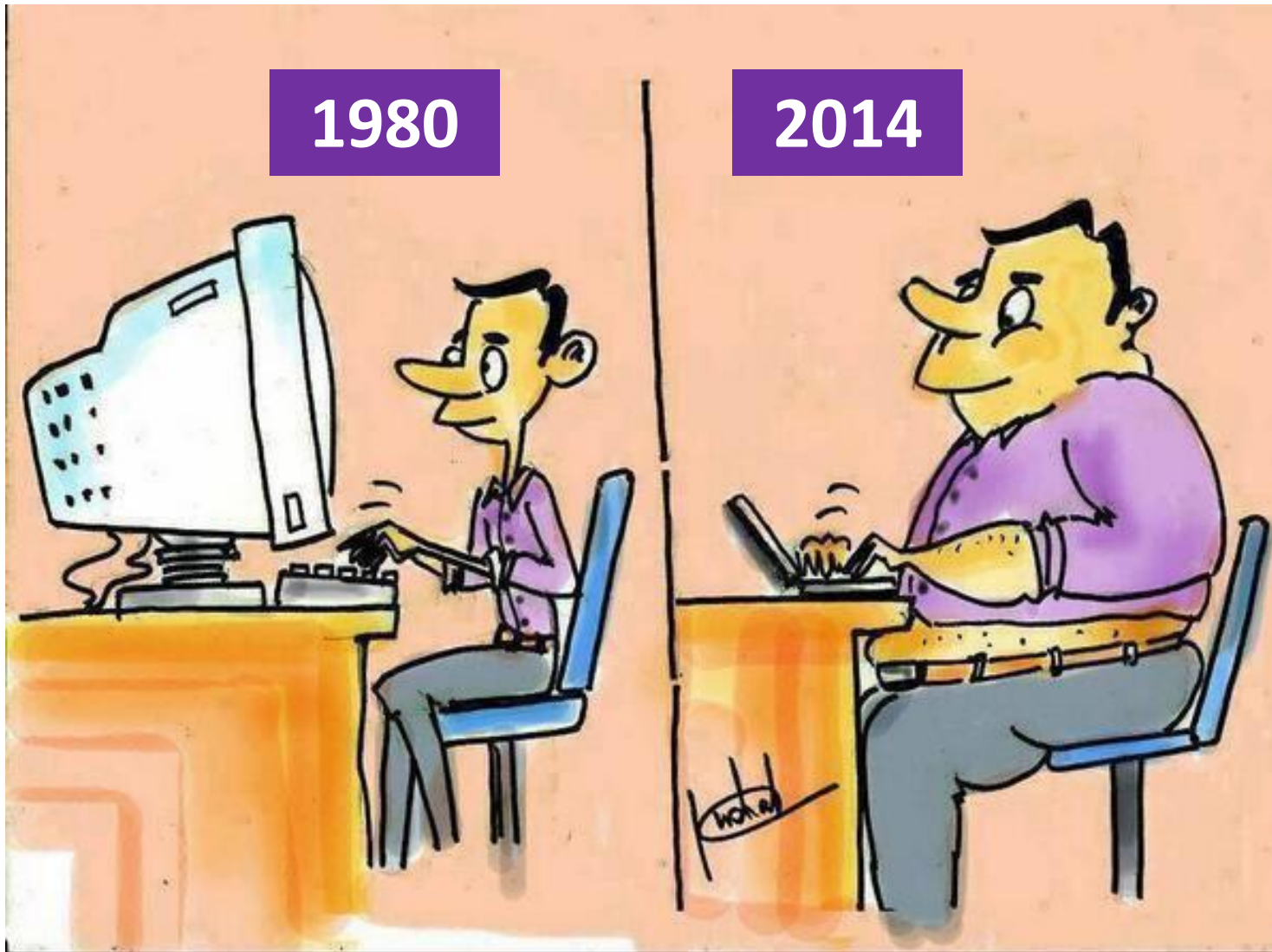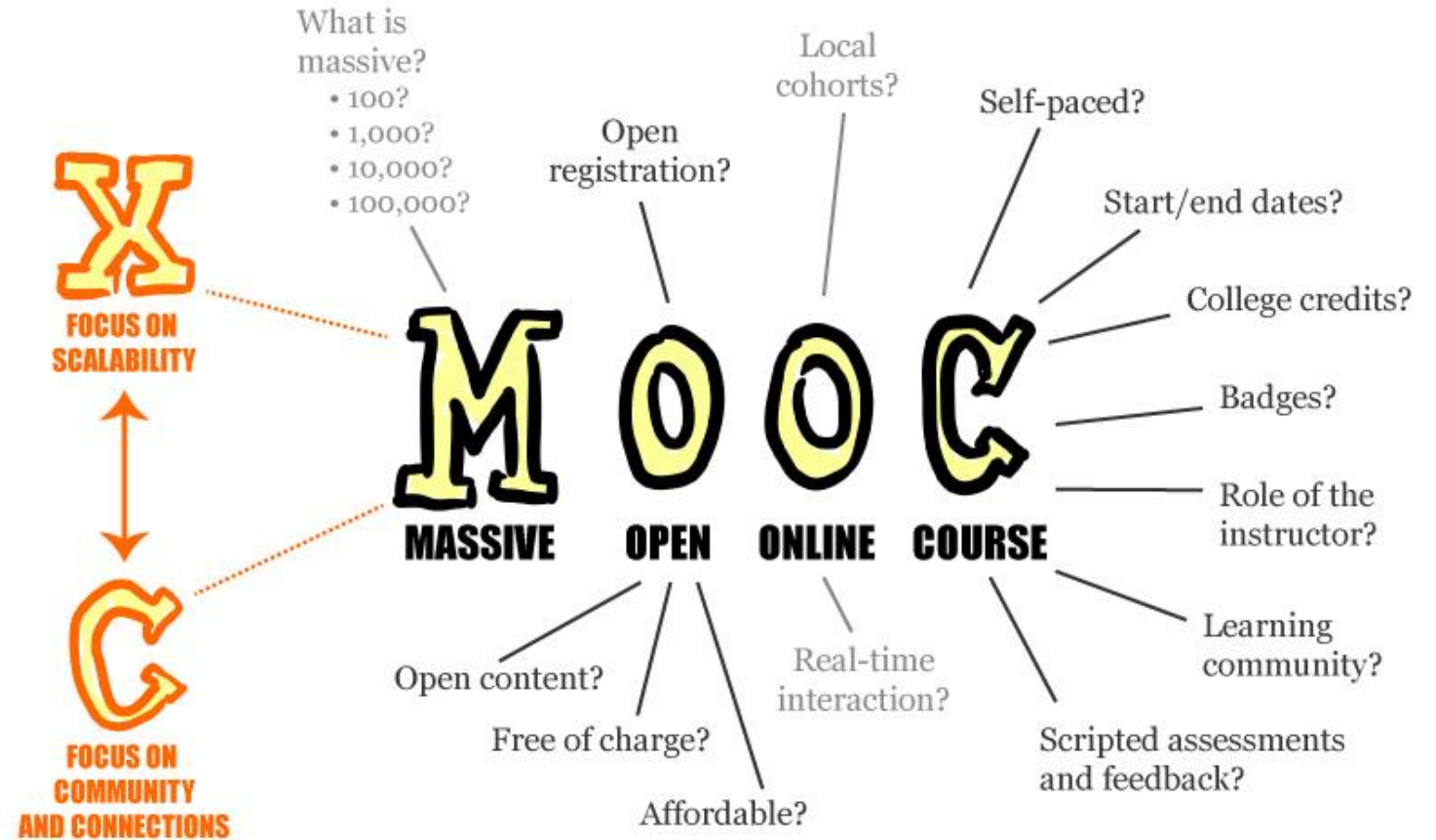
The Growing World of MOOCs

- Massive Open Online Course (MOOCs); evolving since 2012.
- Online content "course" aimed at **unlimited participation** and **open access** via the world wide web.
- **Interactive** participants forums supporting different stakeholders.
- **Complementing** traditional learning methods
- From **free open access** and open licensing of content and learning material to all to **closed licenses** of free content for specific users.
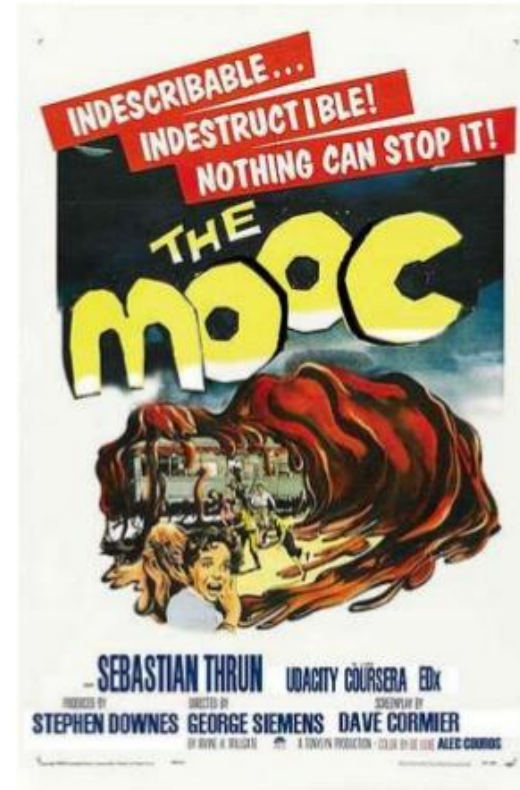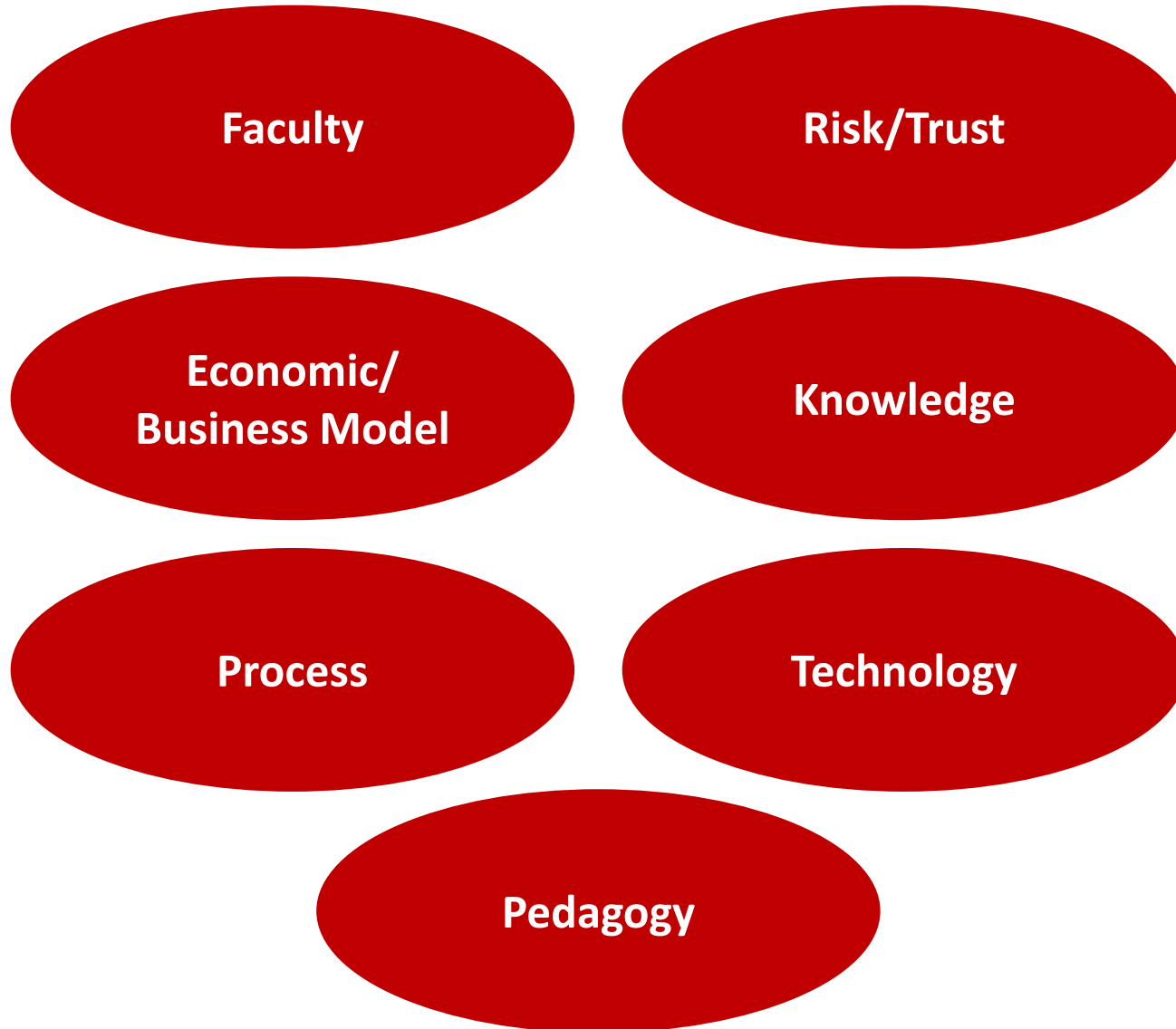
Common Characteristics? Aims? Myths?

- Free and universal access to education (different levels).

- Decrease the cost of higher education.

- Replace and substitute formal education.

The MOOCs Building Blocks

Faculty

Risk/Trust

Economic/ Business Model

Knowledge

Process

Technology

Pedagogy

Partnership Opportunities

Joint Collaboration

Exchange of ideas

Best Practices

Uses and Impact of MOOCs

- Multiple and **diversified** creation, delivery and exchange of knowledge.
- Expands **access** to educational content.
- **Global** visibility and **outreach**.
- Emergence of platforms and tools for stakeholders to **maximize** the **learning experience**.
- **Complementing** regular courses taught using traditional methods.
- Consolidation of blended models.
- Continuous **change** in the **role** of professors and students; other stakeholders.
- Possible growth in alliances and **strategic partnership** between different players in the education/learning ecosystem.

MOOCs Advantages

Autonomy
Students decide how much to participate

Diversity
Different backgrounds, countries, cultures and experiences

Openness
Free or low lost educational platform, anyone can participate

Interactivity
Chats, social media, networking, video meetings, collaboration

MOOCs Beneficiaries

- All lifelong leaners….
  - PhD degree programs.
  - Master degree programs.
  - Executive education programs (open enrolment/custom-made).
 - Undergraduate degree programs.

Degree

Non-degree

Role of Social Media++

Videos

Classroom

Social Networks

Webinars

Wearable Technology

Pedagogical Outcomes of MOOCs

- **Real-time**/instant feedback to course participants.

- Ongoing innovative approaches to **rethinking** pedagogy.

- More **interactive** and collaborative settings for learning.

- **Adaptive** learning and more **personalization**.

Continuous improvement is a **journey**, not a destination

Then	vs	Now
Analog	→	Digital
Tethered	→	Mobile
Isolated	→	Connected
Generic	→	Personal
Consumption	→	Creating
Closed	→	Open

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Who are the Global/Regional Players/Users?
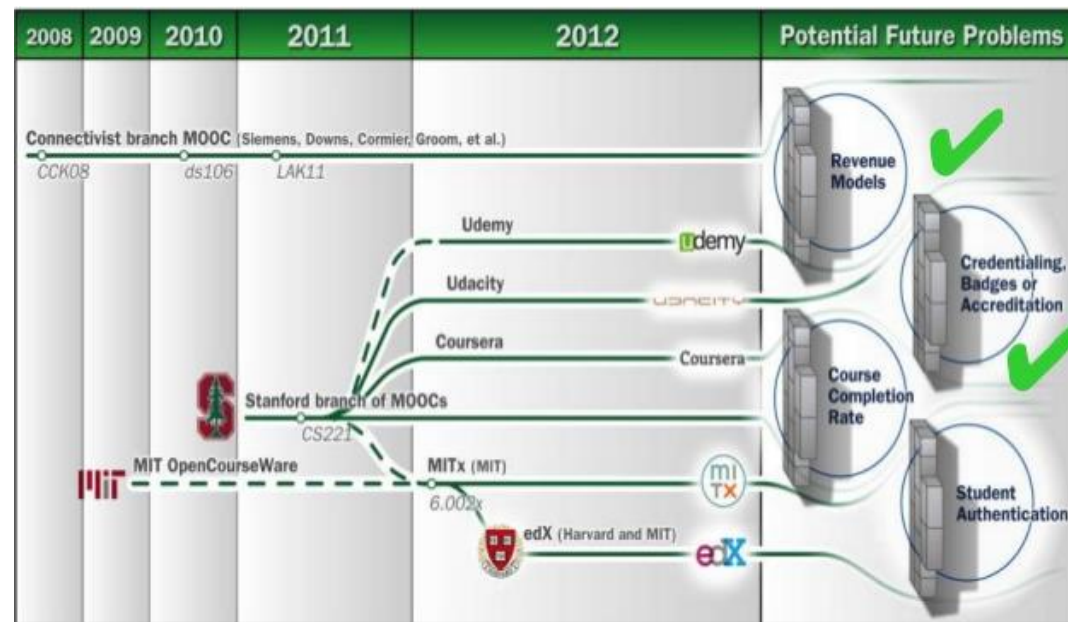
30% University/ School Level Students

70% Holders of University Degrees

Age range 8-90 Years

Coursera www.coursera.org

- The online Revolution: **education for everyone**.
- The extended classroom – no time or distance barriers.
- Market today is 2/3 outside and the US and 1/3 in emerging economies.
- "An extension of some of the world's greatest universities; top professors" – Rick Levin, CEO Coursera
- Introduce **Specialization** program – Certificate Program

NEW

Humanities   **Sciences**   **Engineering**   **Business**

EdX www.edx.org

- An online learning platform hosting **university-level courses** in a wide range of disciplines to a worldwide audience for free.
- It is a **non-profit** running on an **open-source** software platform.
- Founded by the Massachusetts Institute of Technology and Harvard University in 2012.
- Today, there are 56 schools, non-profits, corporations, and international organizations that offer or plan to offer courses on the edX website.
- As of July 2014, edX has more than **2.5 million** users taking over 240 courses online in multiple languages.

Medicine

Law

Humanities

Arts

Engineering

Computer Science

Music

Udacity www.udacity.com

- Udacity is a **for-profit** educational organization.

- Launched in 2012.

- Offering university style MOOCs focusing on **vocational** courses for professionals.

- **1.6 million** users.

Udemy www.udemy.com

- Udemy.com is a an online platform for MOOCs driven by traditional collegiate coursework

- Udemy provides a **platform** for experts of any kind to create courses which can be offered to the public, either at no charge or for a tuition fee.

- Udemy provides tools which enable users to create a course, promote it and earn money from student tuition charges.

- Most participants take courses as a means of improving job-related skills.

- Over **3 million** users; offering 16,000+ course alternatives.

Khan Academy www.khanacademy.org

- Khan Academy is a **non-profit** educational organization.
- Launched in 2006.
- Provides **free education for anyone, anywhere**.
- Thousands of educational resources, including a personalized learning dashboard, over 100,000 practice problems, and over 6,000 micro lectures via video tutorials stored on **YouTube**
- Disciplines include mathematics, history, medicine, finance, physics, chemistry, economies, music computer science, etc…
- **10+ million** users**.**
- 468+ million views.

Middle East North Africa Region

Arab region/Arabia/Arab World

Middle East/Near East Region

Education is Key

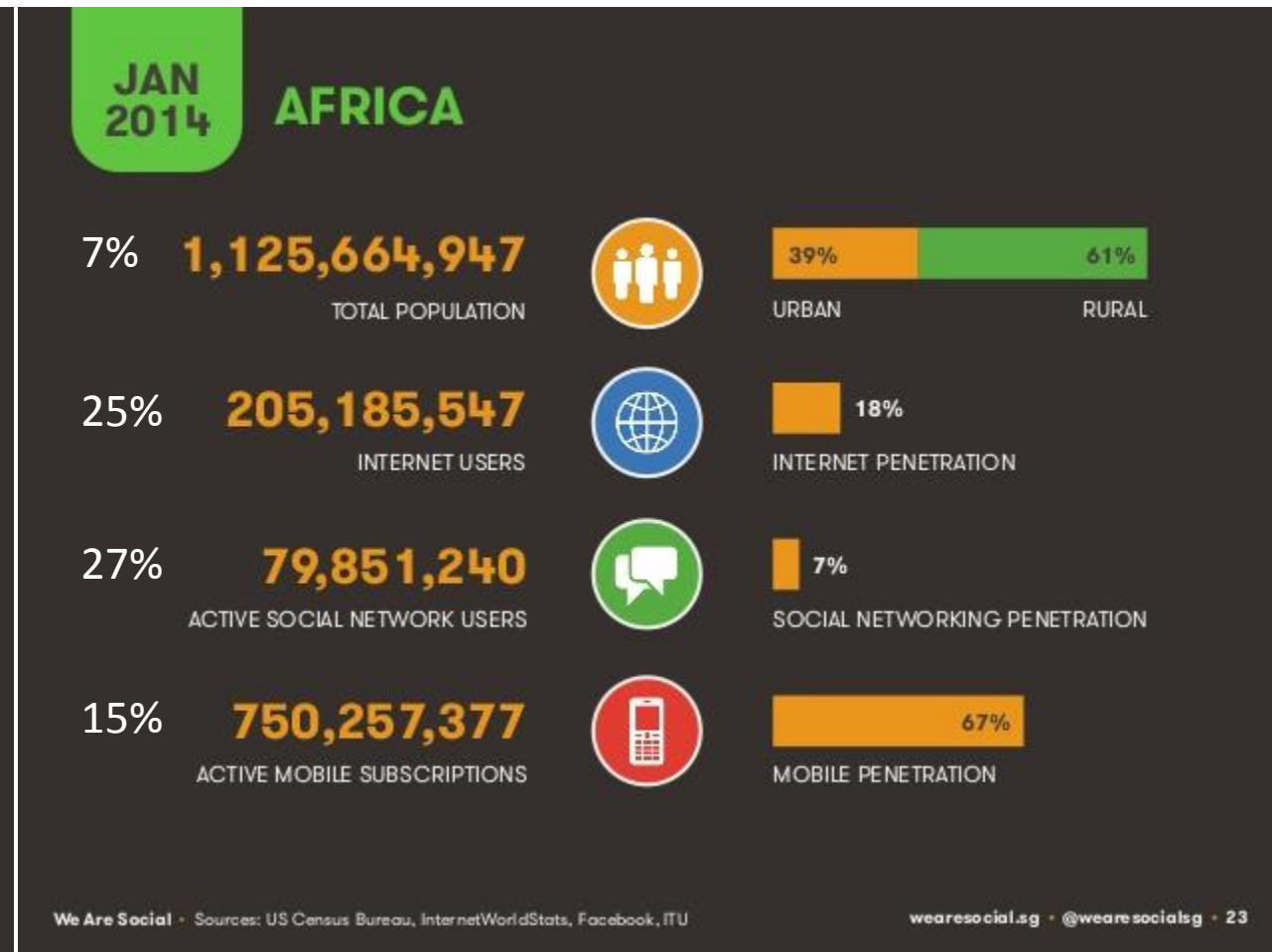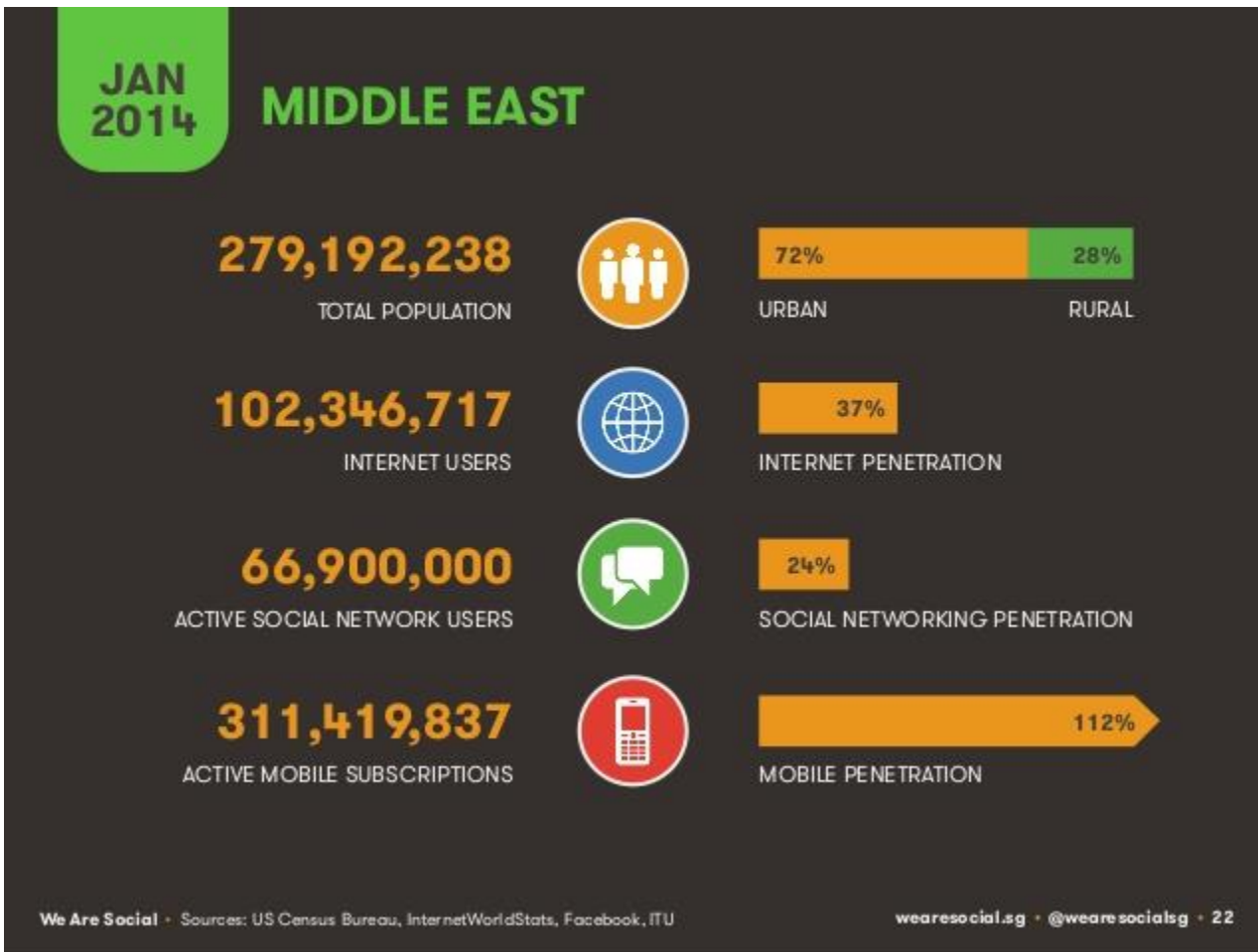| Young workforce **60+% < 25yrs** | 5,145,048 Square miles | **350+** million people "customers" (6% of the world population) | One language, multiple dialects | **Huge, young, labor force** | **Massive untapped resources** |

Social Media, Internet and Mobile in MENA

JAN 2014 — MIDDLE EAST

279,192,238 — TOTAL POPULATION
URBAN 72% | RURAL 28%

102,346,717 — INTERNET USERS
INTERNET PENETRATION 37%

66,900,000 — ACTIVE SOCIAL NETWORK USERS
SOCIAL NETWORKING PENETRATION 24%

311,419,837 — ACTIVE MOBILE SUBSCRIPTIONS
MOBILE PENETRATION 112%

We Are Social · Sources: US Census Bureau, InternetWorldStats, Facebook, ITU
wearesocial.sg · @wearesocialsg · 22

JAN 2014 — AFRICA

7% 1,125,664,947 — TOTAL POPULATION
URBAN 39% | RURAL 61%

25% 205,185,547 — INTERNET USERS
INTERNET PENETRATION 18%

27% 79,851,240 — ACTIVE SOCIAL NETWORK USERS
SOCIAL NETWORKING PENETRATION 7%

15% 750,257,377 — ACTIVE MOBILE SUBSCRIPTIONS
MOBILE PENETRATION 67%

We Are Social · Sources: US Census Bureau, InternetWorldStats, Facebook, ITU
wearesocial.sg · @wearesocialsg · 23

350+ Million   153+ Million   88+ Million   423+ Million

© 2014 US Census Bureau.

Tahrir Academy www.tahriracademy.org

- Established in 2012, is an **Arabic** online space that creates **engaging learning** experiences to stimulate the minds of Egyptian youth, empowering them to think critically, seek knowledge, choose and decide.

- Aim: "to build the biggest Arabic video library to provide educational content to the 13-18 year-old Egyptian youth demographic".

- NOOCs4D Conference' Best MOOC in the Developing world (2014) and Youtube' top Educational Channel in MENA (2013).

- Total Views: +6.8 Million.

- 92K+ Subscribed Learners.

- 50 Tahrir Academy Clubs.

Tahrir Academy

Virtual Teaming in the **Cloud**

4 Continents
North America
Europe
Africa
Asia

5 Countries
USA
Egypt
Ireland
Russia
Taiwan

6 Universities
UMass
AUC
NUI
NSU
NCTU
WUUL

University of Massachusetts Amherst, Massachusetts, USA.

The American University of Cairo, Egypt.

The National University of Ireland, Galway, Ireland.

Novgorod State University, Russia.

The National Chiao Tung University, Taiwan.

Wenzao Ursuline University of Languages, Taiwan
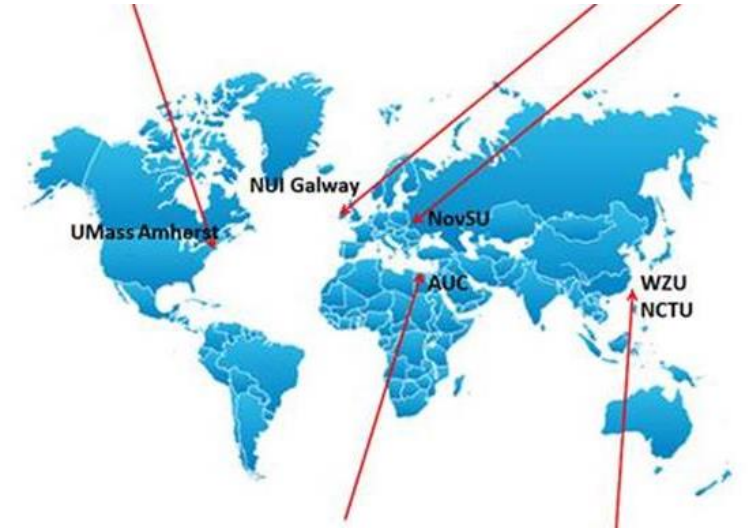
Drs Gino **Sorcinelli** (UMass) and Amr **Badr Eldin** (AUC)
Program leaders

Objective: Effective Decision Making in the "**Age of Cloud Computing**"

- To prepare students to…
  - **Communicate** effectively; written and oral.
  - **Work** collaboratively in teams/virtual-teams.
  - **Enhance** quantitative and qualitative reasoning.
  - **Gain** global competence through intercultural teamwork.
  - **Use** cutting-edge technologies in course components.
- To introduce and support students to use…
  - **Virtual**-Teams.
  - **Active** Learning.
  - **Intercultural** interactions.
  - Online database **research**.
  - College-to-Career **experiences**.

CLOUD 9:

THE THUNDERHEAD:

THE CLOUDIANS:

STRATUSFACTION:

ENCLOUD:

Edraak – skill**academy** – Rwaq - MenaVersity

MACAT www.macat.com

MACAT'S MISSION

Macat is dedicated to creating innovative, academically rigorous resources for teachers and students worldwide that address two challenging paradigms in today's global education landscape.

- **Educational Access vs. Quality**: Macat's resources are designed to expand access for a wide array of learners regardless of prior preparation, language facility, and other barriers.

- **Breadth vs. Depth of Knowledge**: Macat leverages new ways of authoring, organizing, and presenting content, and the best in technology innovation, to deliver both broad and deep knowledge.

MACAT

A DIGITAL INTERACTIVE LIBRARY OF ANALYSIS

Macat is building the world's largest interactive digital library for the social sciences and humanities.

It is a library not of books, but of analysis of books.

We focus on seminal books that have had a significant, widely recognized impact on their disciplines.

Our library covers 14 academic disciplines in the social sciences and humanities.

Macat's unique learning ecosystem allows teachers and learners across the world to access and apply concepts and knowledge in new and powerful ways, and makes interdisciplinary study easy.

MACAT
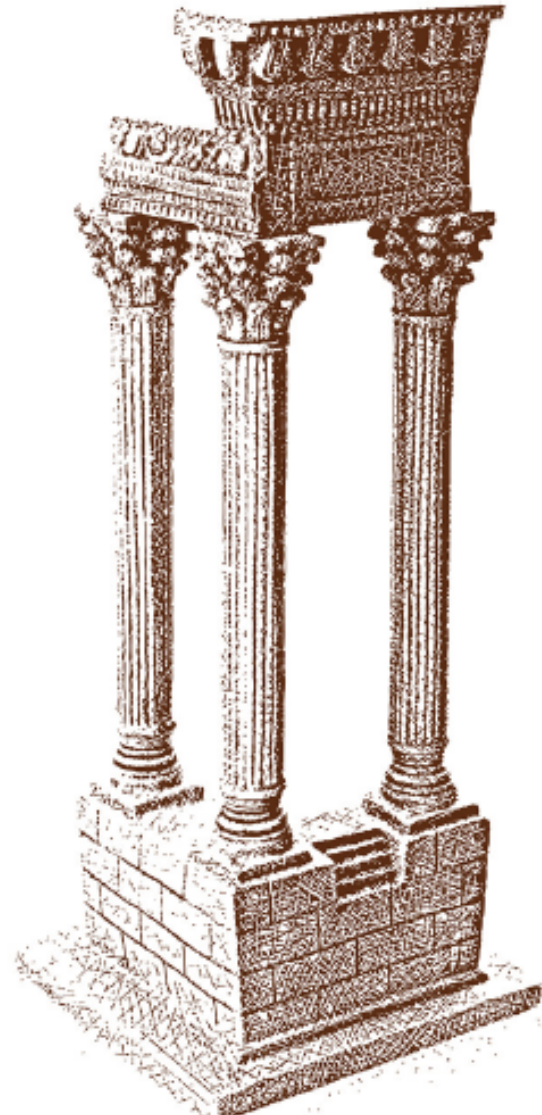
A PARTNERSHIP WITH EDUCATORS

We believe the social sciences and humanities have a crucial role to play in the development of critical, independent thinking and 21st-century skills.

We know that the greatest resource in education is the relationship between a dedicated teacher and a curious student.

Our objective is to work in partnership with educators to deliver resources that are truly useful to teachers and learners, and that meet their needs flexibly and intuitively.

MACAT

THE MACAT LIBRARY: 14 DISCIPLINES

Anthropology

Business

Classics

Economics

Geography

History

History of Arts

Law

Literature

Philosophy

Politics

Psychology

Sociology

Theology

CREATING A LIST OF SEMINAL WORKS

Macat has identified 400 seminal works in each of 14 disciplines by:

- Examining reading lists and course syllabi at top institutions and departments worldwide;

- Reviewing bibliographies and citation indexes;

- Consulting with leading librarians and scholars

These 5,600 books form the basis of Macat's library.

Macat regularly reviews and updates the library to ensure the highest standards of quality and relevance. The library will change and grow as scholarship advances.

MACAT

THE MACAT LIBRARY: SEMINAL BOOKS

OUR ANALYSIS

Macat has developed a unique standardized structure for the summary analysis of each seminal work in thelibrary.

Each book is analyzed across 27 consistent topics or themes that cover the entire universe of a book. These 27 units, which we call "connectomes" (a term from neuroscience), examine the "three I's:"

- Nine units examine influences on the book
- Nine units examine the ideas within the book
- Nine units examine the impact of the book

Each connectome is an original critical examination of four key questions, written as a cohesive 500-word essay – a brief but powerful journey into a single topic or theme.

OUR SCHOLARSHIP

All analysis for the Macat library is prepared by a network of senior PhD and early-career academics recruited from the world's top academic departments and universities.

There are currently more than 700 academic associates in our network.

Macat's associates author the analyses in accordance with their expertise, ensuring richness and quality of content.

Each piece of analysis is subject to a rigorous 50-step process of review, including peer critique, plagiarism checks, and academic-press-quality editing.

MACAT

OPENING UP ACCESS TO SEMINAL KNOWLEDGE THROUGH TECHNOLOGY

Macat is committed to creatively leveraging technology to accommodate multiple learning styles, encourage engaged learning, and open up access for learners worldwide.

- All analysis in the Macat library is presented in text, audio, and video formats, along with a video book trailer and podcast debate between two scholars for each book.

- Interactive learning tools such as discussion forums, comment features, dictionaries, bibliographies, and mind maps supplement the content.

- All of the library content is translated into numerous languages for use in educational settings around the world.

- Macat is available across an array of digital platforms and compatible with other commonly used learning tools.
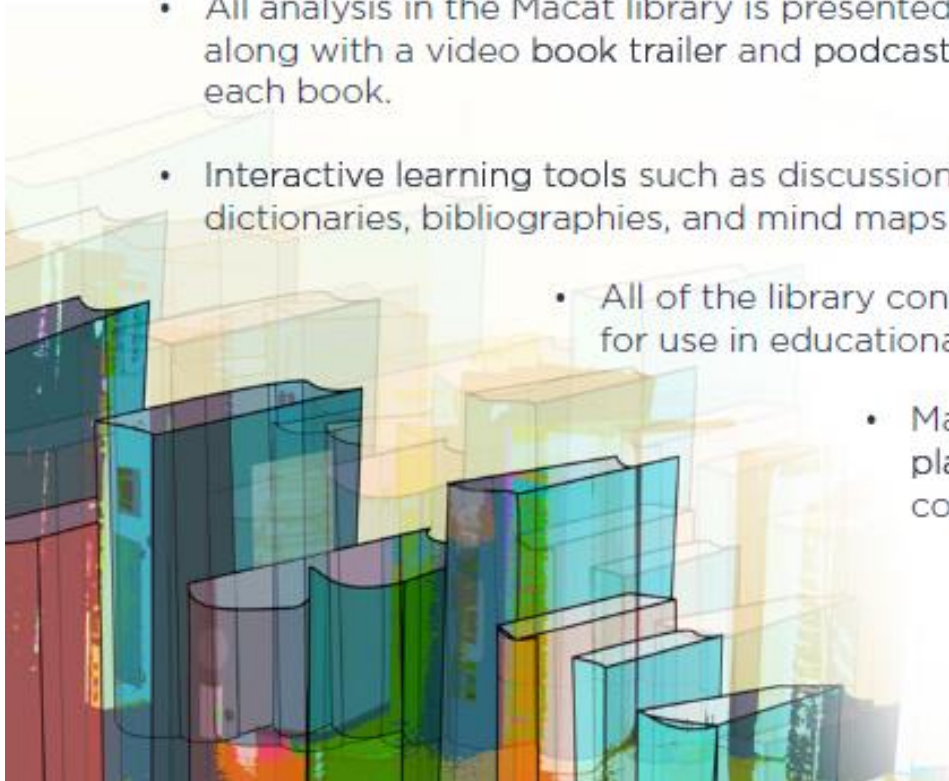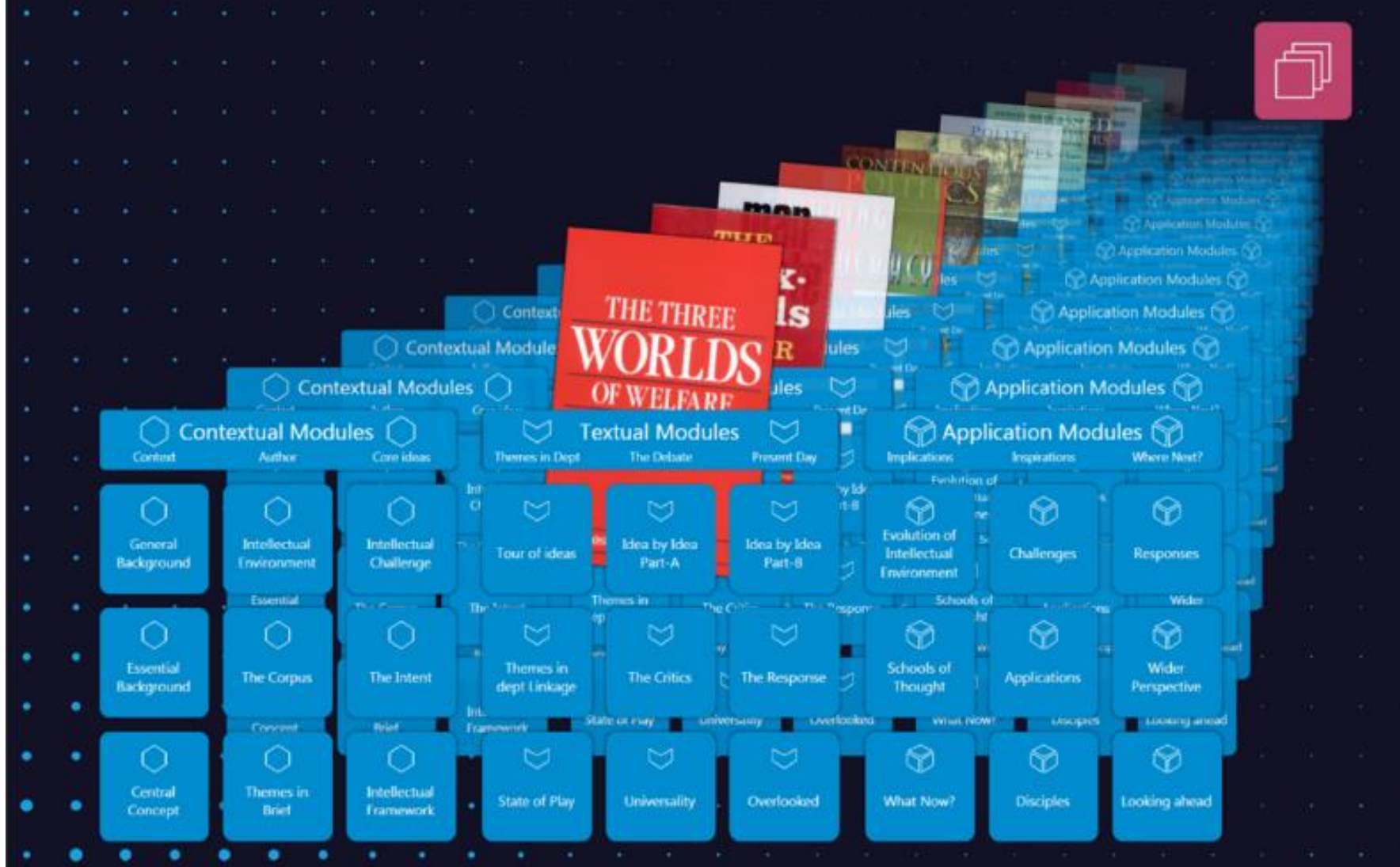
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ENABLING REMARKABLE OUTCOMES

The unique structure of Macat's library makes it possible to quickly gain a deeper understanding of complex themes and topics in the humanities and social sciences.

The consistent 27-point analysis structure creates a knowledge graph across books, and across disciplines, creating the possibility of myriad "knowledge journeys."

Macat's multimedia, multi-language content and innovative technology platform open up many more avenues to access to knowledge than were possible before.

MACAT

THE MACAT LIBRARY: A UNIQUE "KNOWLEDGE GRAPH"

CREATING COURSES WITH MACAT'S UNIQUE LEARNING PLATFORM

Macat has developed a flexible, interactive course builder application that teachers and learners can use to quickly and easily organize courses, course modules, or reading lists.

- Teachers can select material from the Macat library by book, unit of analysis, format, and language, and organize these in an intuitive, modular environment.

- They can also add their own content, such as handouts, videos, web links, and notes.

- These custom-built courses can be published to a dedicated web link for access by students. The course web site offers metrics and tracking tools that allow the teacher to see students' progress through the course.

MACAT

UNLOCKING THE WORLD'S BEST SCHOLARSHIP

Macat aims to open up the universe of the world's best scholarship, from anthropology and geography to philosophy and psychology, business, and economics, and make it accessible to anyone, anywhere.
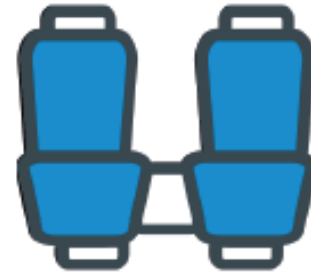
The purpose of the Macat library and learning platform is to:

Unlock the potential for critical thinking

Create pathways to wider and deeper learning

Foster interdisciplinary exploration

MACAT

How can MOOCs Change **Business Schools**?

- Will there be implications on faculty? Degree programs? Pedagogy?
- Key issue is the technology deployed!
  - Short videos
  - Customized delivery
  - Asynchronous interactions
  - Adaptive assessment
  - Self-paced learning

SuperText

- It is **SuperText** that poses the opportunity and challenge to traditional business education.
- "While public attention is focused on the massive and open characteristics of the courses, the SuperText technology has proved highly effective as a learning technology."
- What needs to be done moving forward….(leverage lower costs + maintain educational quality)
  - Use SuperText to target non-degree students and executive education.
  - Use SuperText to bundle their courses to support just-in-time education.

How can Business Schools change the **Entrepreneurial Space**?

- The learning **approach** undoubtedly impacts future entrepreneurs and business leaders.

- In an **interconnected** ecosystem, the learning space extends 24/7 and the **tacit** knowledge acquired off-campus through technology deployment is magnified compared to the on-campus interactions.

- Way beyond case studies and internships but more exposure, interaction and bringing the start-up culture to the extended **learning space**.

- Entrepreneurship is all about **mentorship**, **empowerment** and **venturing** into **innovative endeavors**, unless this is embedded into the curriculum setting today how can future entrepreneurs get there?

- Expanding the **learning horizon** through ICT.

Building a startup culture…

Aiming-at
- Sustainability
- Socio/economic Impact
- Scalability

Driven-by
- Youth/Passion
- Technology
- Untapped Opportunities
- Creative Minds/Innovative Solutions

Focused-on
- Responsible Business
- Ethics
- Education/Vocational Training
- Leadership/Governance

Building Block

Targeting
- Entrepreneurship SMEs/Corporates Success Future
- What really counts is "Human Capital"

Build a startup mindset

Startup Community

Startup Culture