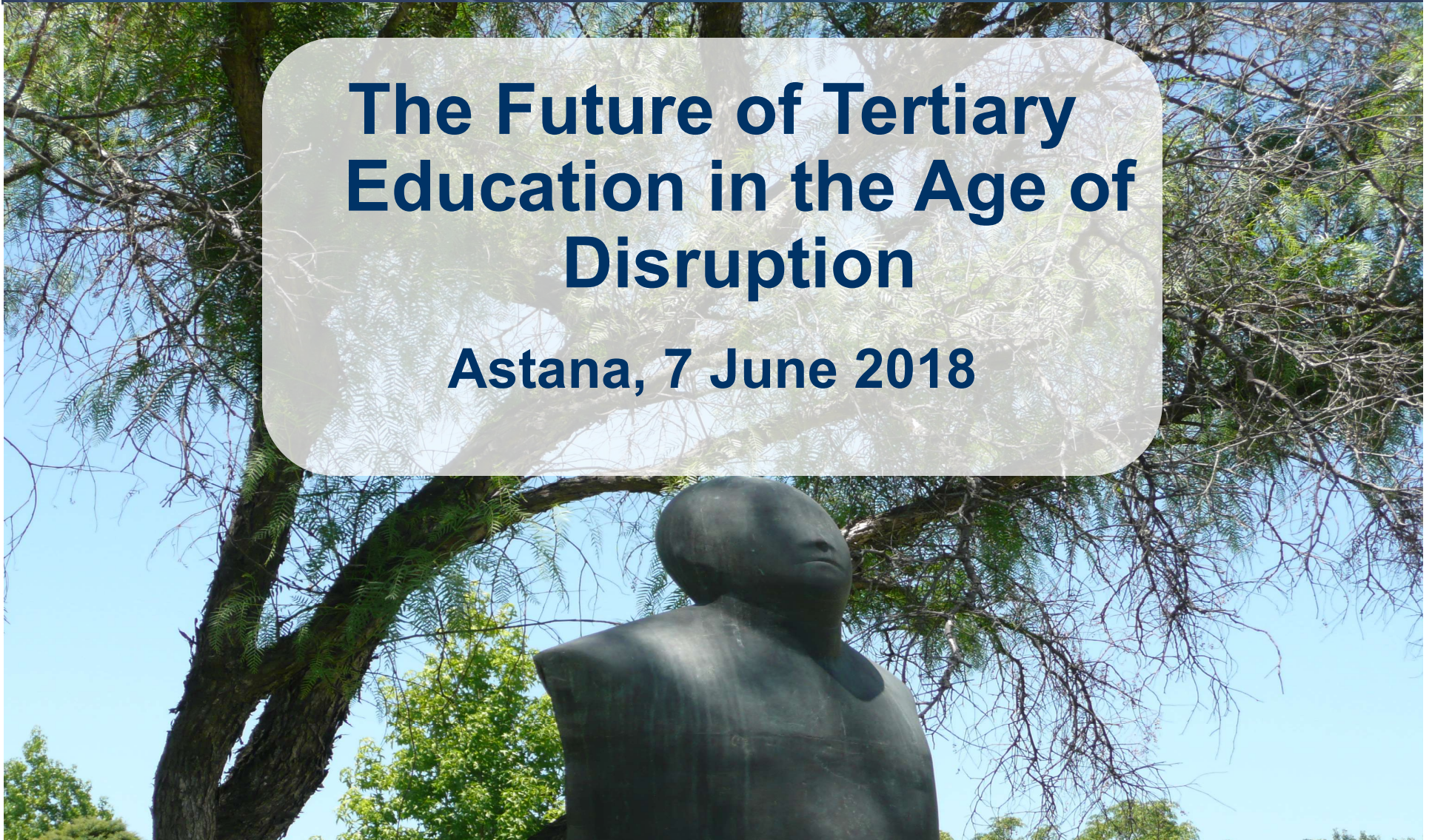




The Future of Tertiary Education in the Age of Disruption

Astana, 7 June 2018







Robot Doctors Replacing Real Doctors

washingtonpost.com



Physician's assistant Jeffrey E. Placitelli is accompanied on morning rounds by Dr. Louis Kavoussi, who joins him by way of video conference on a robot "doctor" at Johns Hopkins Hospital in Baltimore.

« BACK 1 ■■■■ NEXT »

HIDE CAPTIONS

Photo by Sarah J. Voisin - The Washington Post

EMAIL THIS GALLERY







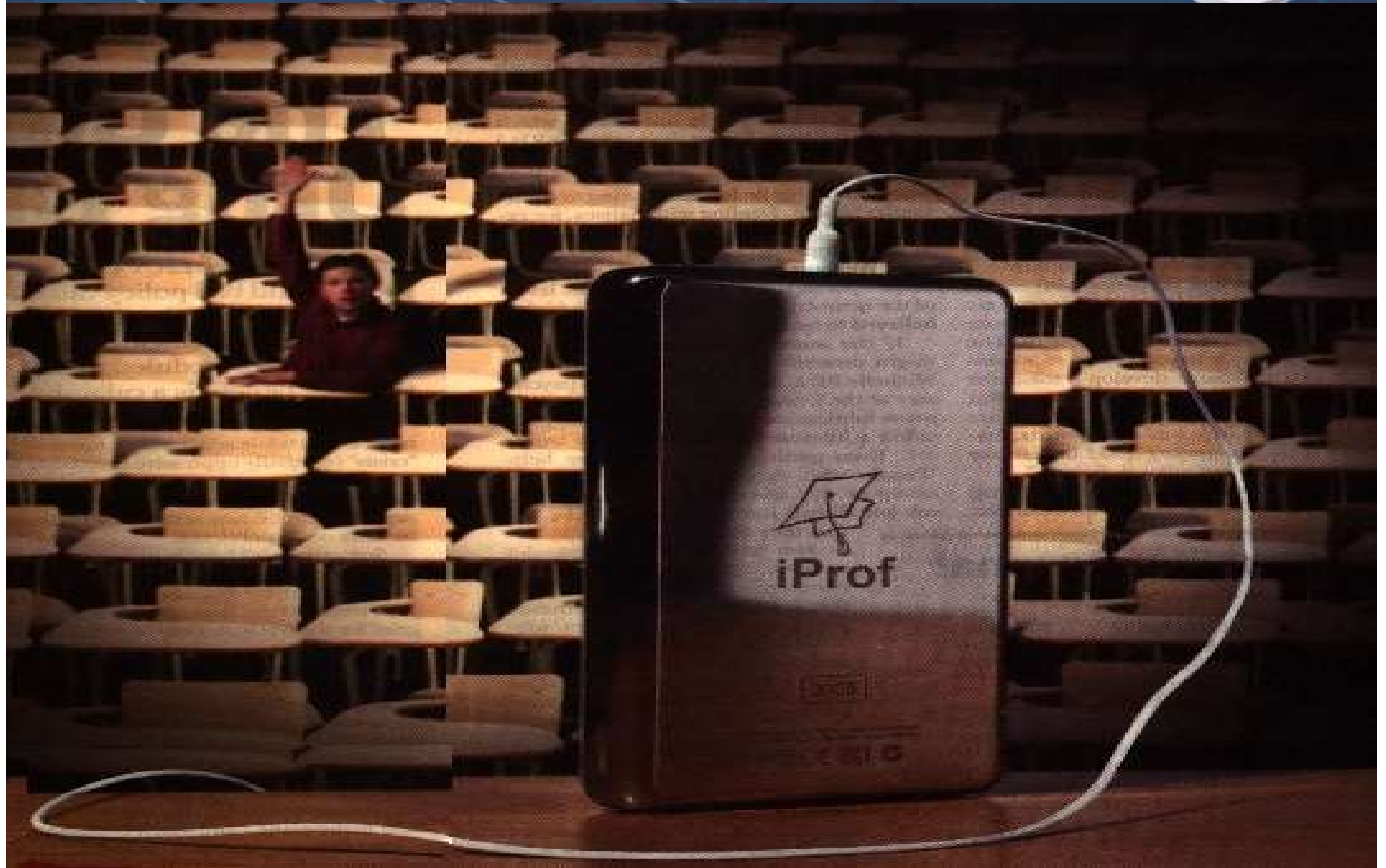
The future of tertiary education?

JAMIL SALMI
Global Tertiary Education Expert



A world of science fiction?

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Global Tertiary Education Expert



Are today's universities ready?

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Global Tertiary Education Expert





Not BUSINESS AS
USUAL

A red rectangular sign with a white border is hanging from a thin white string. The sign features the word 'Not' in a white cursive script, followed by 'BUSINESS AS' in a white sans-serif font, and 'USUAL' in a large, bold, white sans-serif font. A person's hand is visible at the bottom, holding the sign. The background is blurred, showing warm, out-of-focus lights.

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Global Tertiary Education Expert



What if?





Knowledge at the heart of economic growth

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Global Tertiary Education Expert



- Nordic countries
- Lisbon agenda of the EU
- Asian tigers / dragons





Creation of the Research Institute



Knowledge Enterprise

A Publication of National University of Singapore

FEBRUARY 2010

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Tertiary Education Expert



NUS Solar Energy Research Institute: Taking the lead in solar energy research and development ²

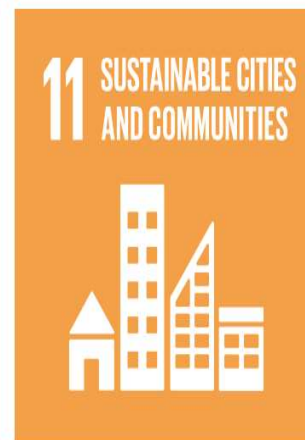
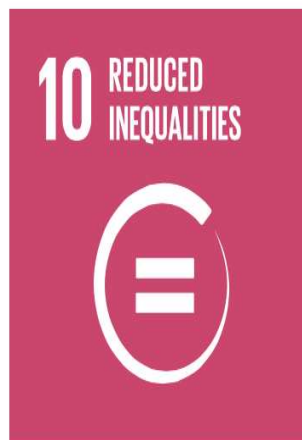
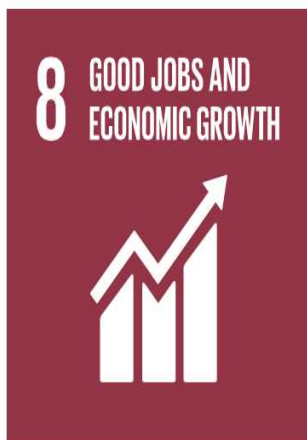
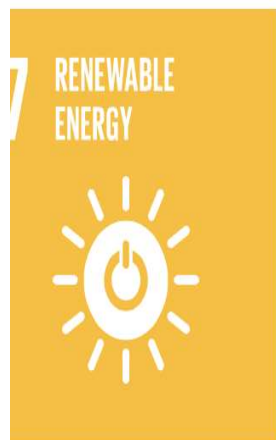


Research in
Renewable Energy
by 5 researchers

Supported by:



NUS Enterprise



Tertiary Education & the SDGs

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- Preparation of skilled professionals
- Knowledge generation, adaptation & diffusion
- Institutional development & capacity building
- Values & citizenship skills

Excellence and corruption in Colombia

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Global Tertiary Education Expert



University	Corruption ranking	Excellence ranking	Status
U Externado de Colombia	1	15	Private
U. Pontificia Javeriana	2	7	Private
U Los Andes	3	1	Private
U Santo Tomás	4	49	Private
U Nacional de Colombia	5	2	Public
U Libre	5	50-100	Private
U del Rosario	7	3	Private
U de Antioquia	8	6	Public
U del Norte	8	11	Private

SDGs	Preparation of Skilled Professionals	Knowledge Generation, Adaptation & Diffusion	Institutional Development & Capacity Building	Values & Citizenship Skills
1. Poverty Ended	X	X	X	X
2. Sustainable Agriculture to End Hunger	X	X	X	
3. Healthy Lives	X	X	X	X
4. Inclusive & Equitable Quality Education	X	X	X	X
5. Achieve Gender Equality	X		X	X
6. Water & Sanitation for All	X	X	X	X
7. Sustainable Energy	X	X	X	
8. Inclusive & Sustainable Economic Growth	X	X	X	
9. Resilient Infrastructure	X	X	X	
10. Reduced Inequality	X			X
11. Sustainable Cities	X	X	X	X
12. Sustainable Consumption & Production		X		X
13. Managed Climate Change		X	X	X
14. Sustainable Marine Resources	X	X	X	X
15. Sustainable Use of Terrestrial Systems	X	X	X	X
16. Peaceful & Inclusive Societies		X	X	X
17. Global Partnership for Sustainable Development			X	X



The future of jobs

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Global Tertiary Education Expert



- Jobs that disappear (700 professions)
- New jobs

Jobs that did not exist 10 years ago

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- App developer
- Social media manager / YouTube content creator
- Digital risk manager
- Smart city / smart building architect
- Driver-less car engineer
- Cloud computing specialist
- Big data analyst
- Sustainability manager
- Drone operator

The future of jobs

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- Jobs that disappear (700 professions)
- New jobs
- Jobs that are undergoing transformation (47%)

21st-Century Skills

Foundational Literacies

How students apply core skills to everyday tasks



1. Literacy



2. Numeracy



3. Scientific literacy



4. ICT literacy



5. Financial literacy



6. Cultural and civic literacy

Competencies

How students approach complex challenges



7. Critical thinking/
problem-solving



8. Creativity



9. Communication



10. Collaboration

Character Qualities

How students approach their changing environment



11. Curiosity



12. Initiative



13. Persistence/
grit



14. Adaptability



15. Leadership



16. Social and cultural awareness

Lifelong Learning

Generic complex competencies

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- Information analysis, critical thinking & problem solving
- Global contextual analysis
- Teamwork / collaboration
- Communication
- Creativity

STEAM, no STEM

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Meet my son Karim...

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Character qualities

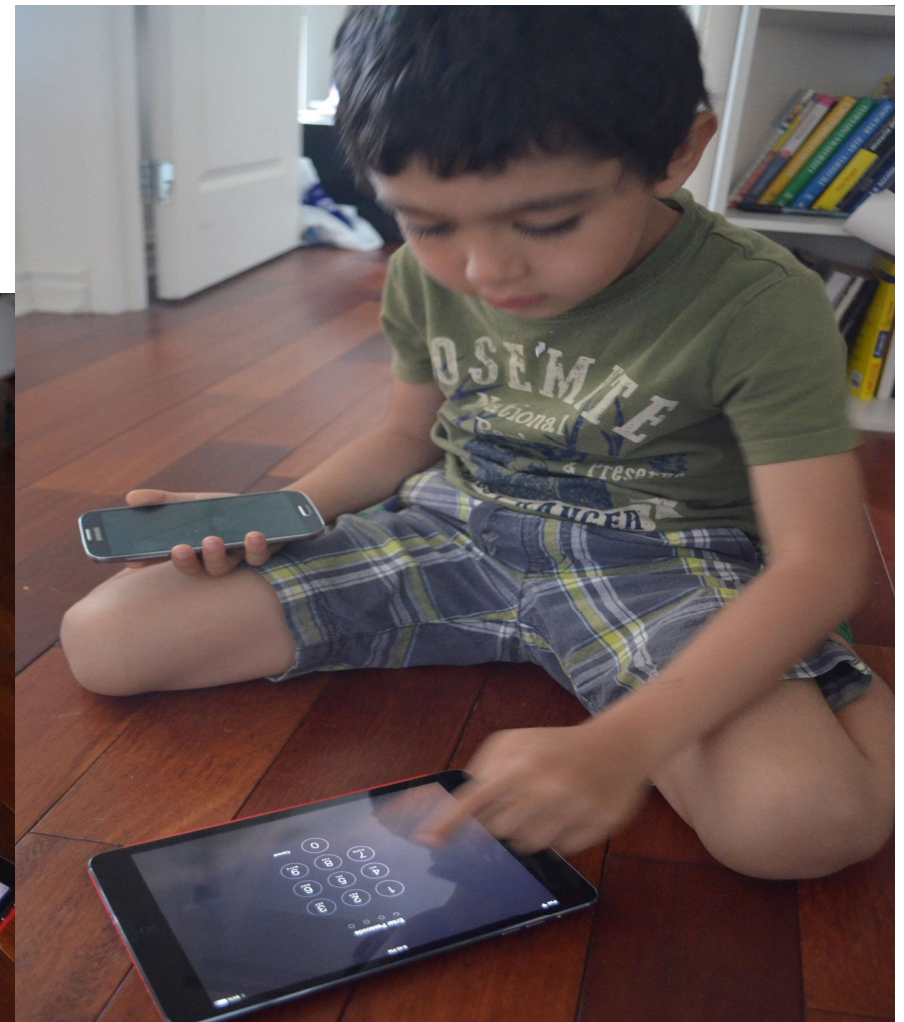
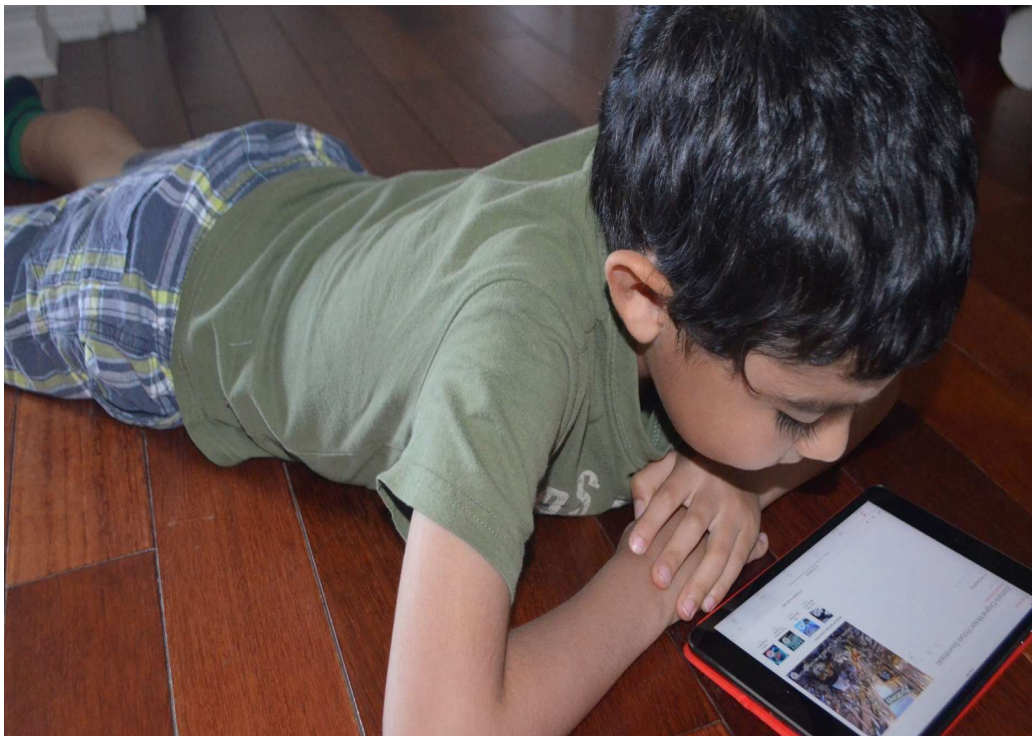
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- Curiosity (motivation)
- Initiative (entrepreneurial thinking)
- Persistence / grit / resilience
- Adaptability
- Leadership
- Ethical awareness & reasoning (social, cultural & environmental dimensions)

Meet my grandson Emilio...

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New educational approach

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- Active
- Interactive
- Experiential

Curricular innovations

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- Experiential learning (coop, service, simulations, role playing)
- Multi-disciplinary programs
- Competency-based learning
- Internationalization

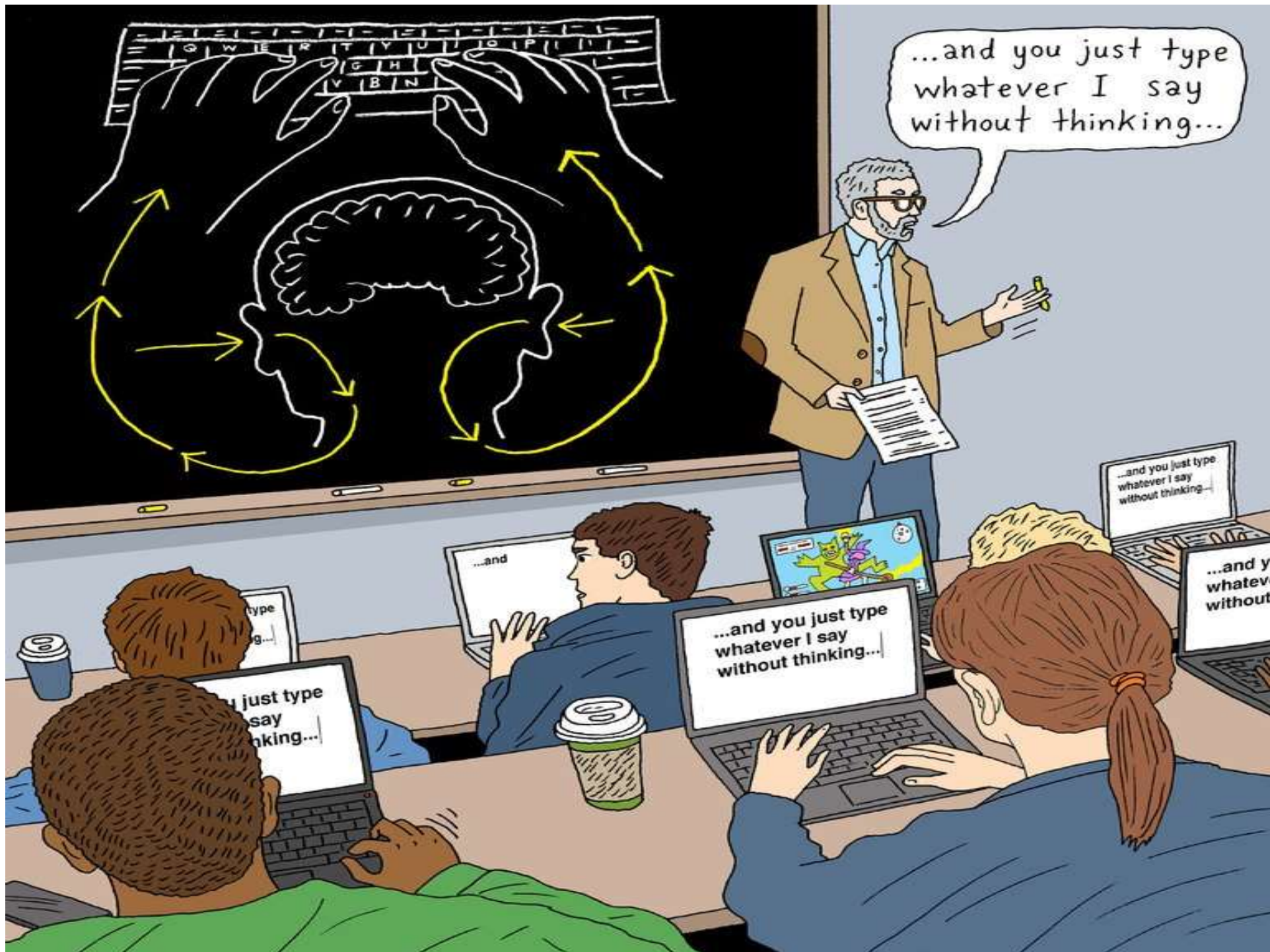
Innovative pedagogical approaches

UAS MI
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- Peer learning
 - Clickers / Flipped classroom
- Project and design based learning
 - Olin, Roskilde, Aalborg, Maastricht
 - Simulations
 - Serious games
- Self-learning using AI-based software





Learning is not a spectator sport

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Assessment aligned with new educational approach

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- “Assessment = killer of learning”
- Aspiring Mind

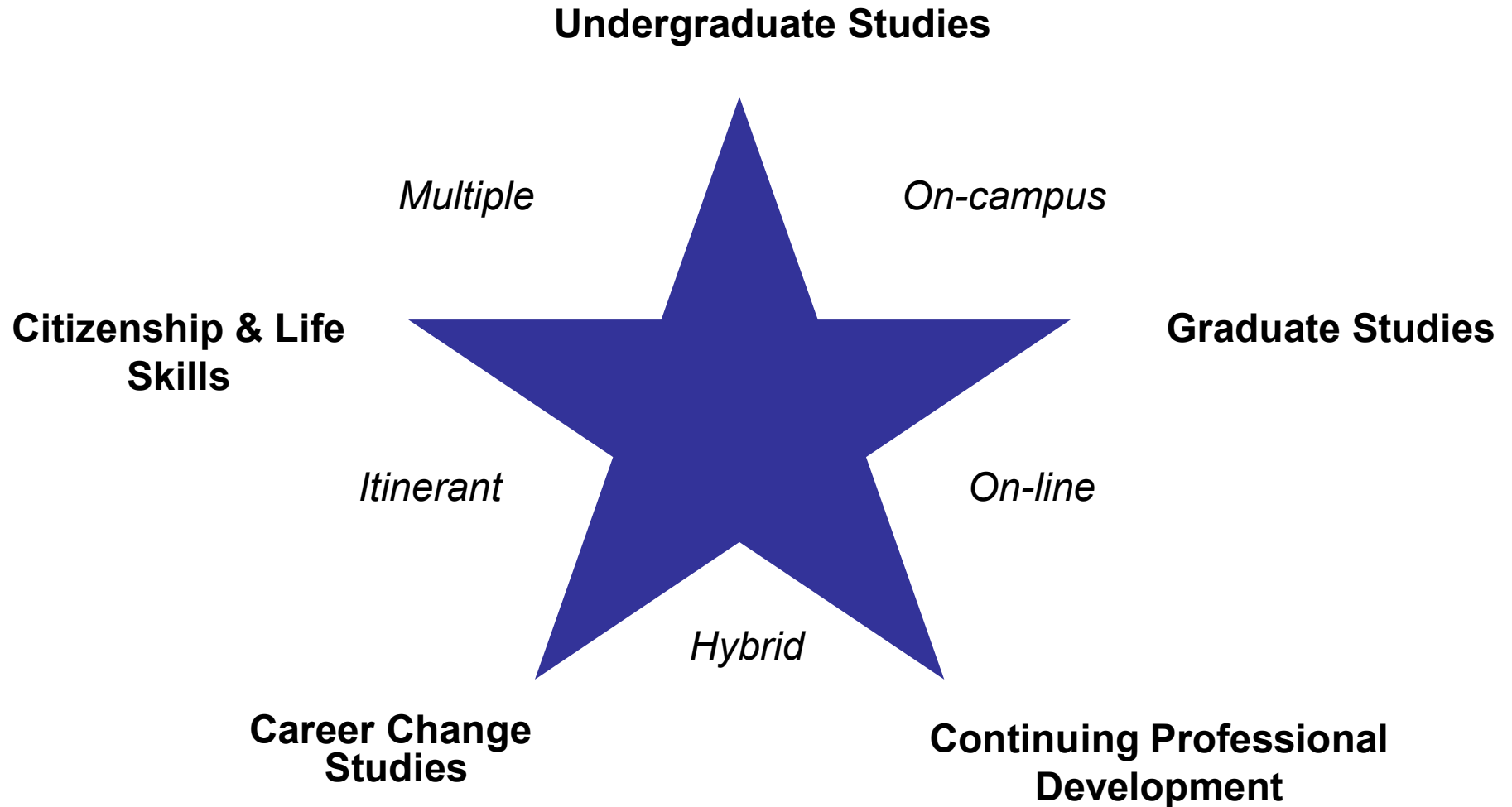
Today



postgraduate
studies

first degree

university of the future?



THE SHANGHAI PRINCIPLES

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- **Ethics:** strong emphasis on ethical values and behaviors (honesty, tolerance, solidarity)
- **Objectivity:** promoting critical thinking and fact finding
- **Inclusiveness:** academic excellence becoming more inclusive than exclusive
- **Relevance:** research to address global challenges
- **Global Collaboration:** WCUs act as a community cooperating for the global good