

**THE FUTURE OF HIGHER EDUCATION:
QUALITY ASSURANCE AS A PROMOTER OF CHANGE**
GLOBAL, EUROPEAN AND CROATIAN PERSPECTIVE

30 October 2018

Hotel Dubrovnik, Zagreb, Croatia

Global changes in the world of higher education: Challenges and opportunities ahead



WORLD BANK GROUP

Francisco Marmolejo

The World Bank

fmarmolejo@worldbank.org



[@fmarmole](https://twitter.com/fmarmole)

The good news...

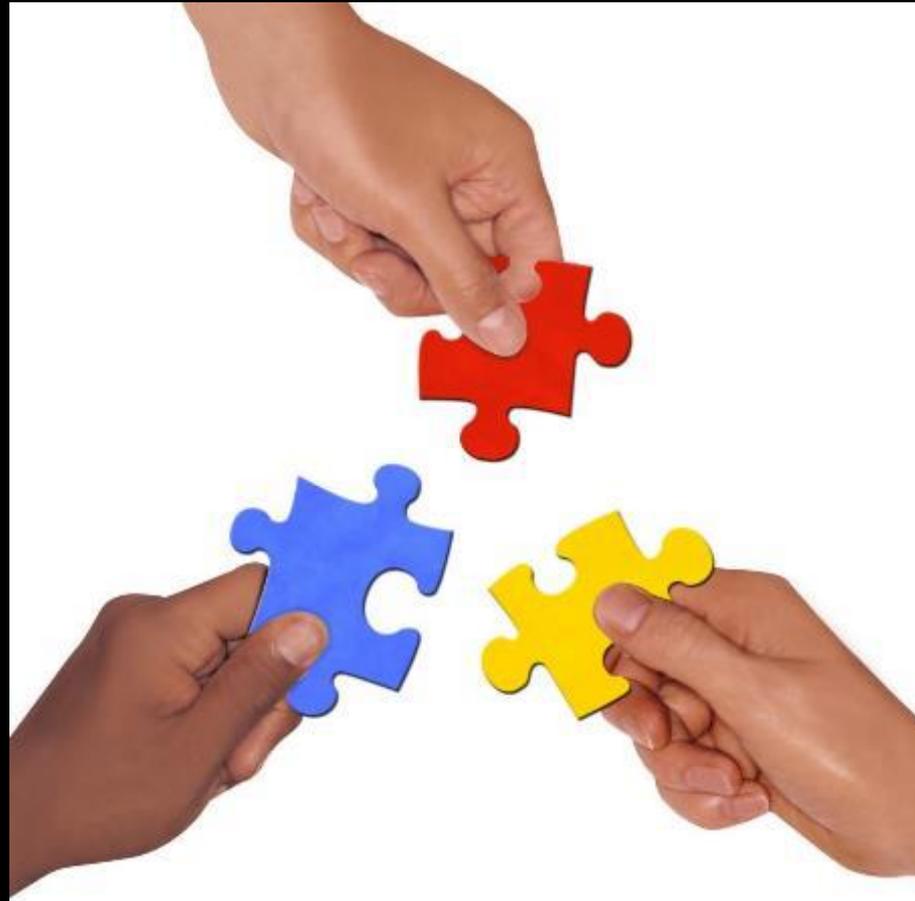
The current and future environment is a “fertile land” for more and better higher education

The challenging news

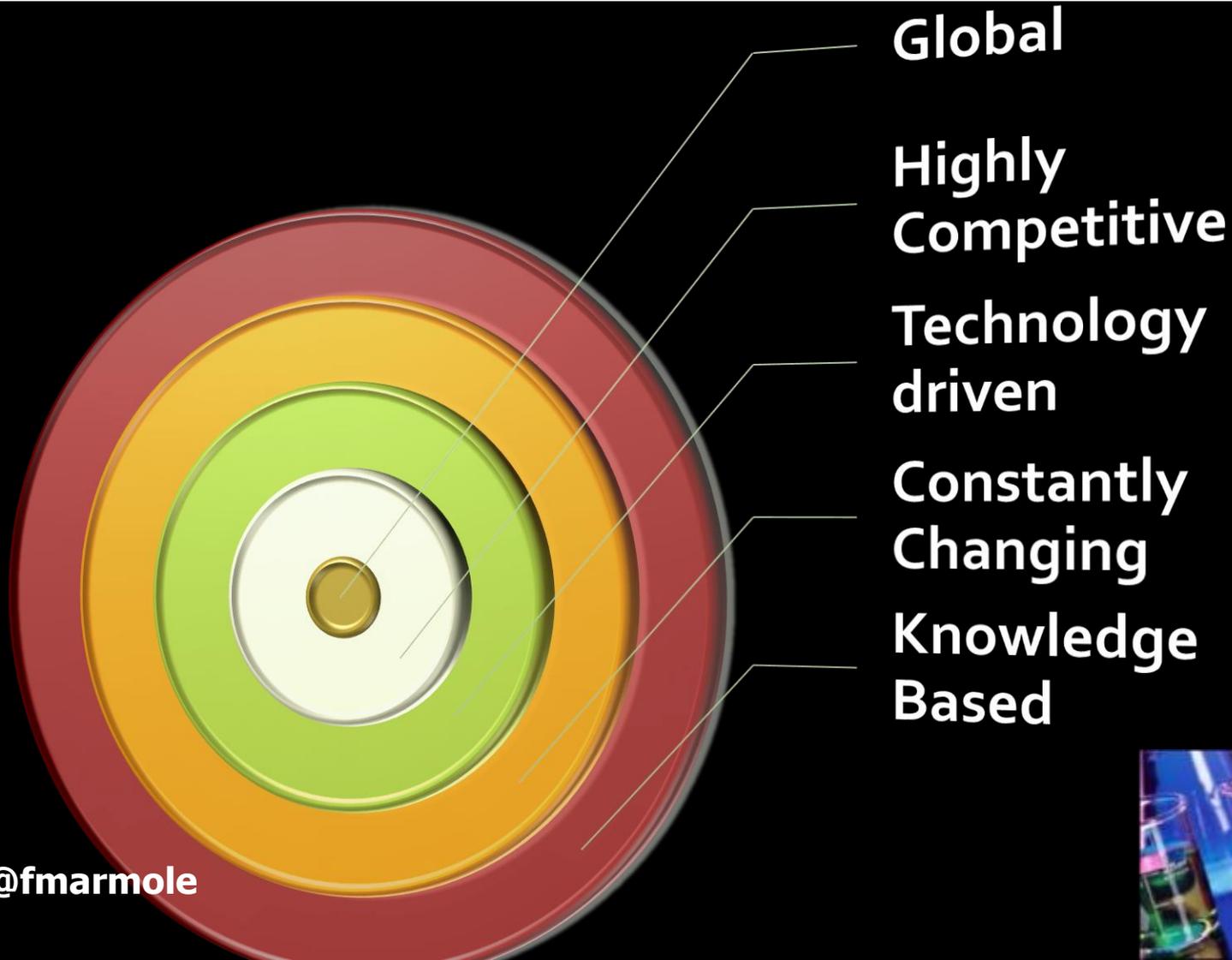
... we don't know how the current and future social, economic, political and technological shift will impact higher education (and its internationalization)

...and sometimes it looks like not too many people care about it

Towards an increasingly interdependent world



A new economy and society



A globalized economy



- Made in The Netherlands
- With ingredients from Morocco.
- Distributed by a Chinese company
- For sale in Delhi.

Mexican Salsa

Towards an increasingly interconnected world



Towards an increasingly turbulent world



"A new reality..."

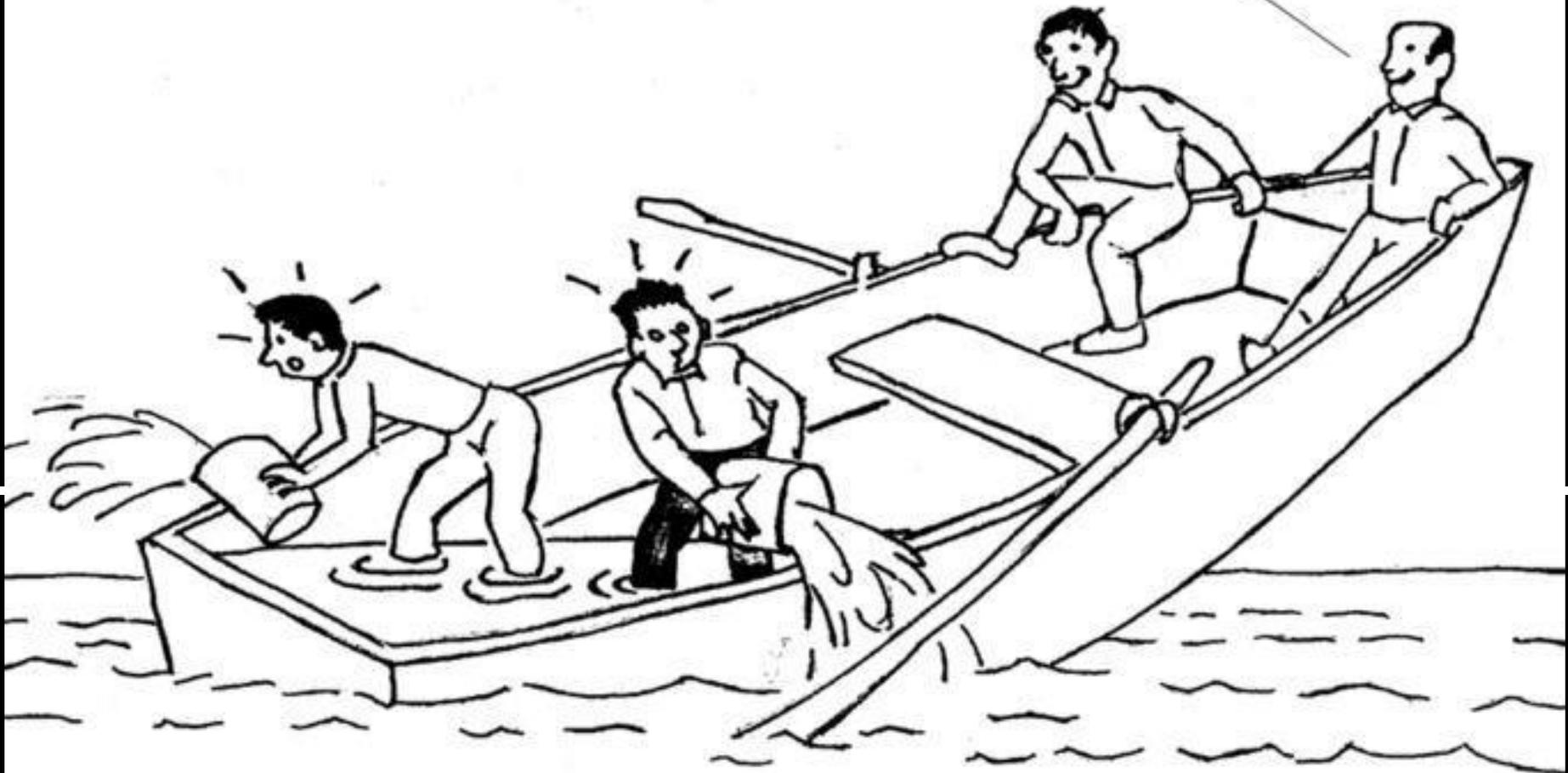


...to be seen with different lenses"



Why does it matter?

Sure glad the hole isn't at our end.



Who told us that the university shouldn't and can't change?



A reality check...

Limited employment growth

Missed opportunity to spur growth and welfare

Tension exacerbated by demographic and other social pressures

The rise of "nationalism" and nativism as the opposite of internationalism

Significant environmental concerns

The challenge of disinformation, misinformation and malinformation

Questioning about legitimacy of institutions

A reality check...

Unimaginable progress

Extreme poverty diminishing

Unthinkable innovation and discoveries

The world In the midst of the 4IR

Higher Education: the best investment

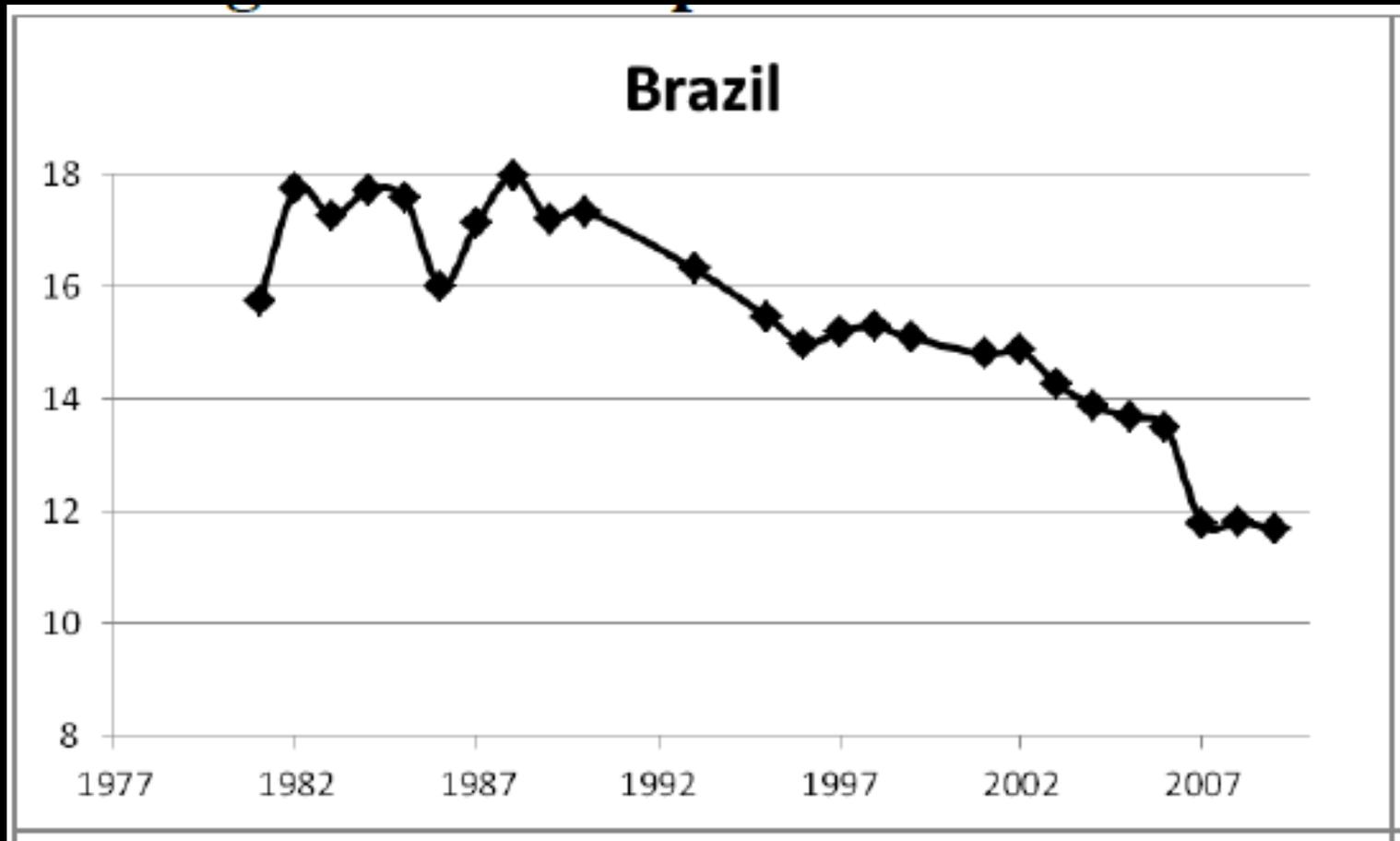
Economic returns by educational level and region*

Region	Primary	Secondary	Tertiary	GDP/pc (PPP 2005)	N
World	10.3	6.9	16.8	6,719	74
Middle East and North Africa	9.4	3.5	8.9	3,645	7
South Asia	9.6	6.3	18.4	2,626	4
Eastern and Central Europe	8.3	4.0	10.1	6,630	7
High Income Economies	4.8	5.3	11.0	31,748	6
East Asia and Pacific	11.0	6.3	15.4	5,980	6
Latin America and Caribbean	9.3	6.6	17.6	7,269	20
Sub-Saharan Africa	13.4	10.8	21.9	2,531	24

* Latest available year between 2000-2011

Source: Montenegro, C.E. & H.A. Patrinos (2013). Returns to Schooling around the World. The World Bank

However... returns are declining



...and even the ones having access to higher education, not always reap the benefits

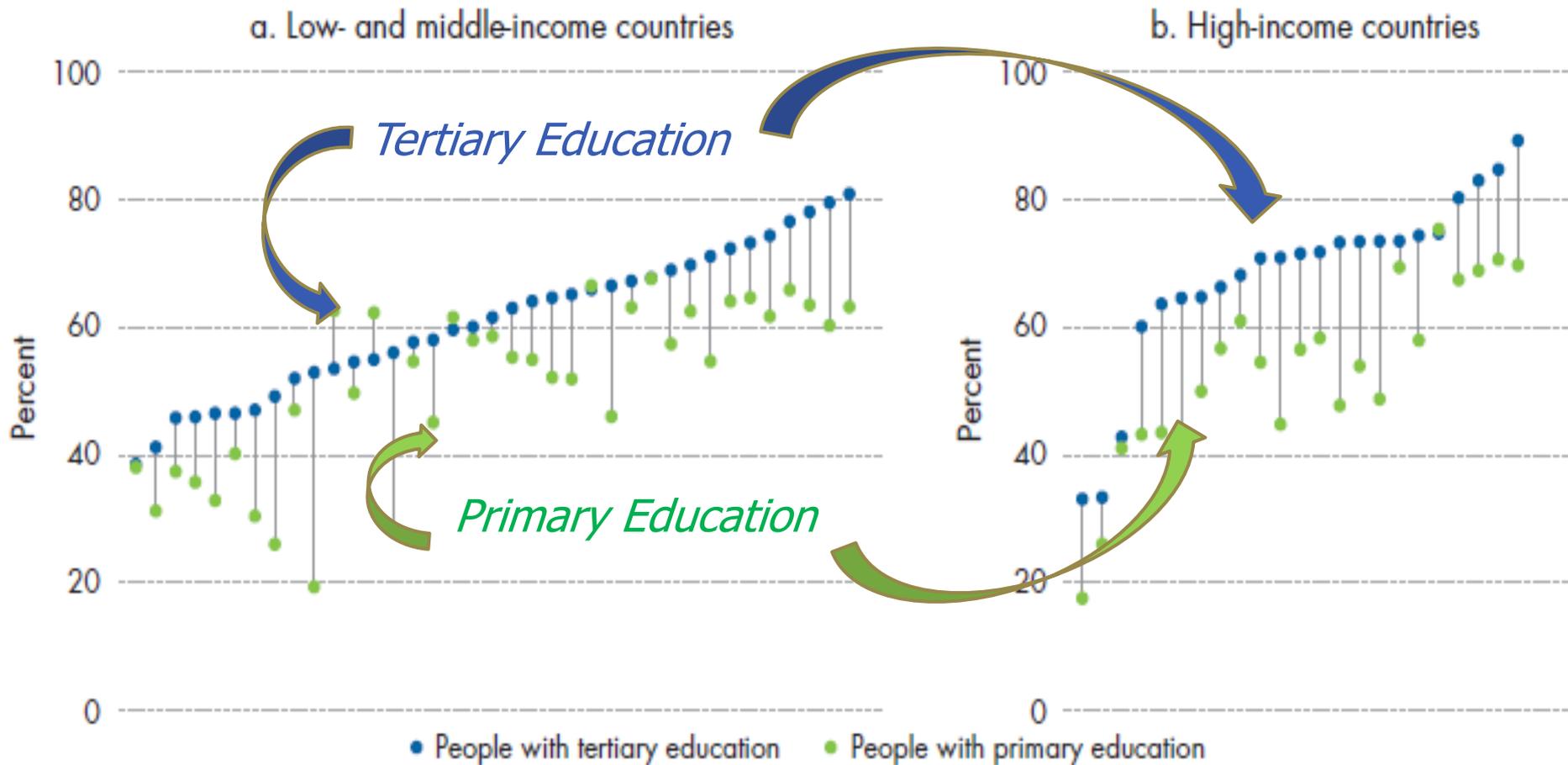


The case of Angelo

And it is much more than
just money

Higher Education as a key enabler of social development

Percentage of population that believes it is “absolutely important to live in a democracy,” by country and level of education



Source: WDR 2018 team, using data from World Values Survey (World Values Survey Association 2015). Data at http://bit.do/WDR2018-Fig_1-3.

LIFE EXPECTANCY



Education means a longer life.

People who graduate from college live at least 5 years longer than people who don't finish high school.

The **NATION'S HEALTH**

A PUBLICATION OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

www.thenationshealth.org/sdoh

Higher education as the last place in the formal education system to build tolerance and “otherness” awareness



we aim to **develop** human **personality** and personal **dignity**, respect for **human rights** and fundamental **freedoms** and promoting **understanding, tolerance** and **friendship**

**A renewed role for higher
education:**

***Towards globally-minded and
internationally abled, but
locally-engaged citizens***

A renewed role for higher education:

But also higher education institutions as role model local and global “corporate citizens”

A very different current (and future) context





Dynamics of globalization

New social challenges



The changing world of work



Transformation of childhood and families



ICT: The next generation



Was this a true prediction?

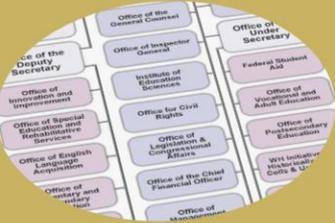
“Universities won’t survive...higher education is in deep crisis...The college campus won’t survive as a residential institution. Today’s [college] buildings are hopelessly unsuited and totally unneeded”



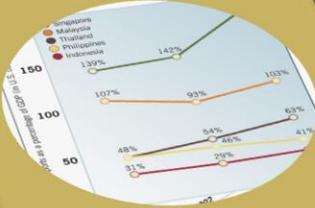
Peter Drucker, 1997

...or it has been just an exaggeration?

To begin with...



An increasingly complex sector



Significant expected growth, but...



A sector under a lot of pressure for a more effective response



Societies want solutions.





WB: Some key challenges in HE

Biases towards "universities"

Limited pathways allowing mobility

Weak quality assurance

Clear disparities in access

Inadequate information guiding decisions

Insufficient investment

Weak engagement with community

Limited institutional efficiency

Limited adjustment of curriculum

Weak connection with innovation agenda

What are the top issues in higher education in your region?

Quality Assurance/Governance

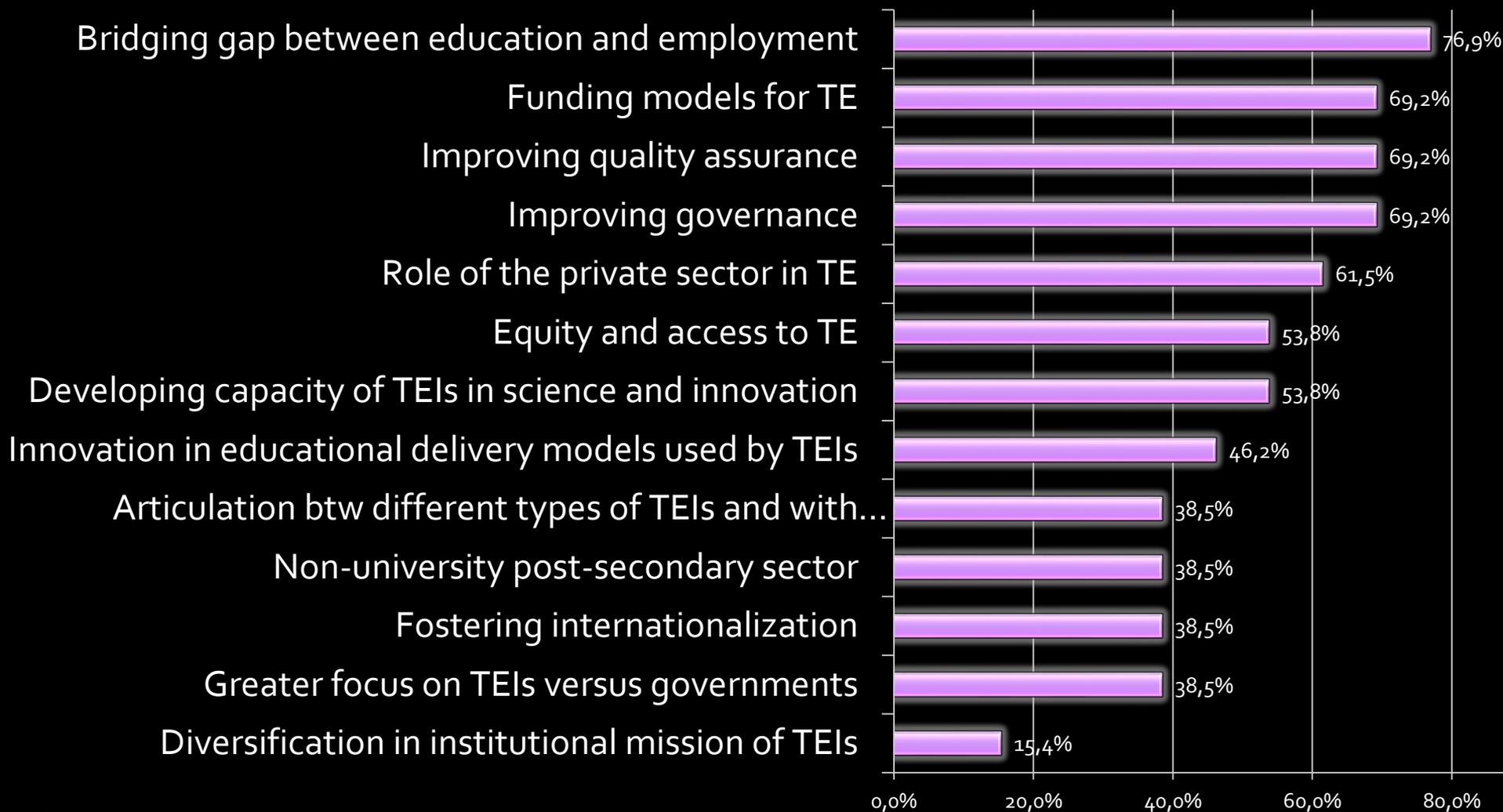
Employability of Graduates

Financing

Diversification of HE. Emphasis on TVET

Equity and Access, and Innovation

What priorities will be emphasized in higher education in the next 5 years? *



* *Multiple responses*

What do we know?
And what we don't know?

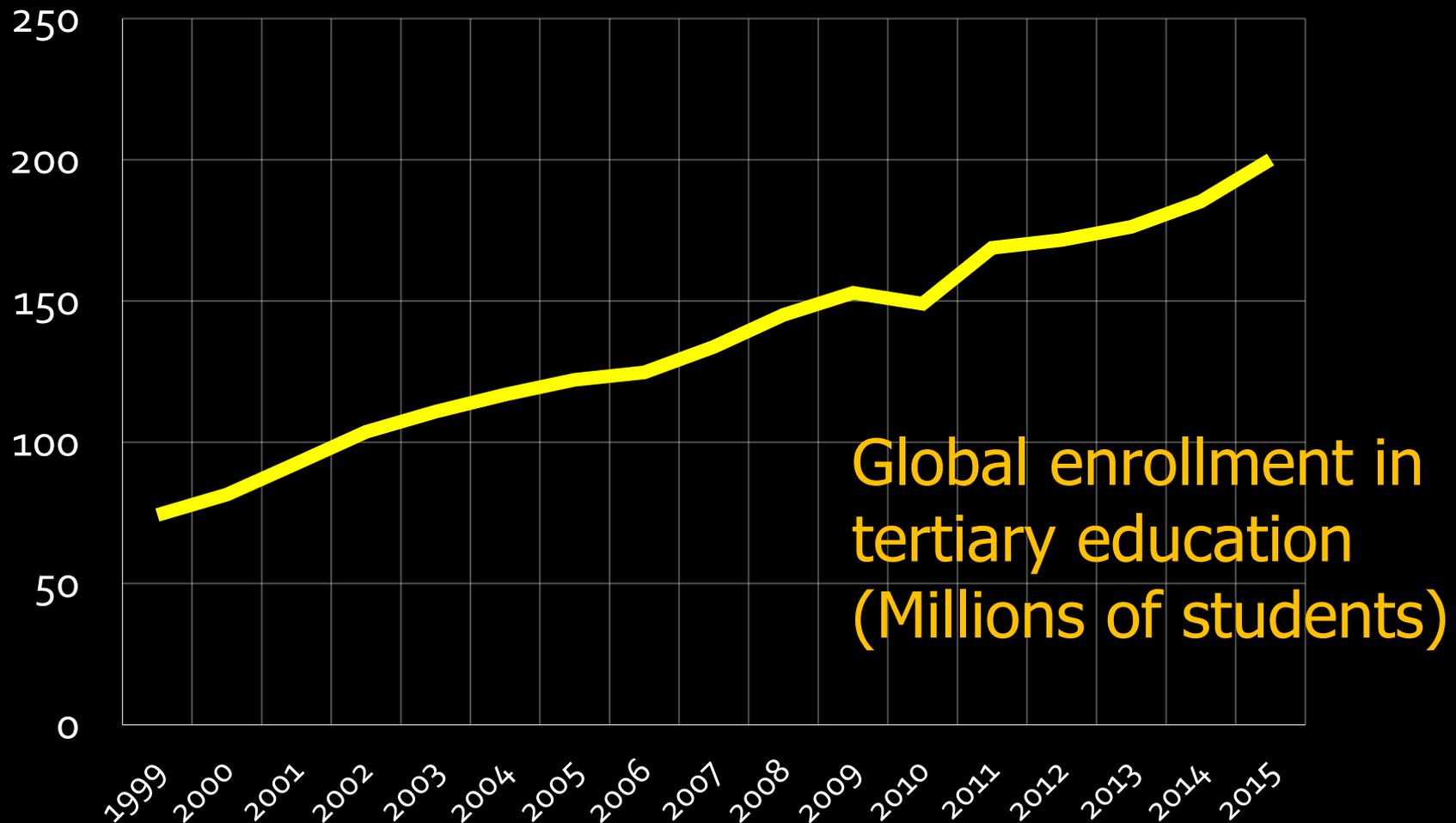
Key Trend 1:

Uneven expansion

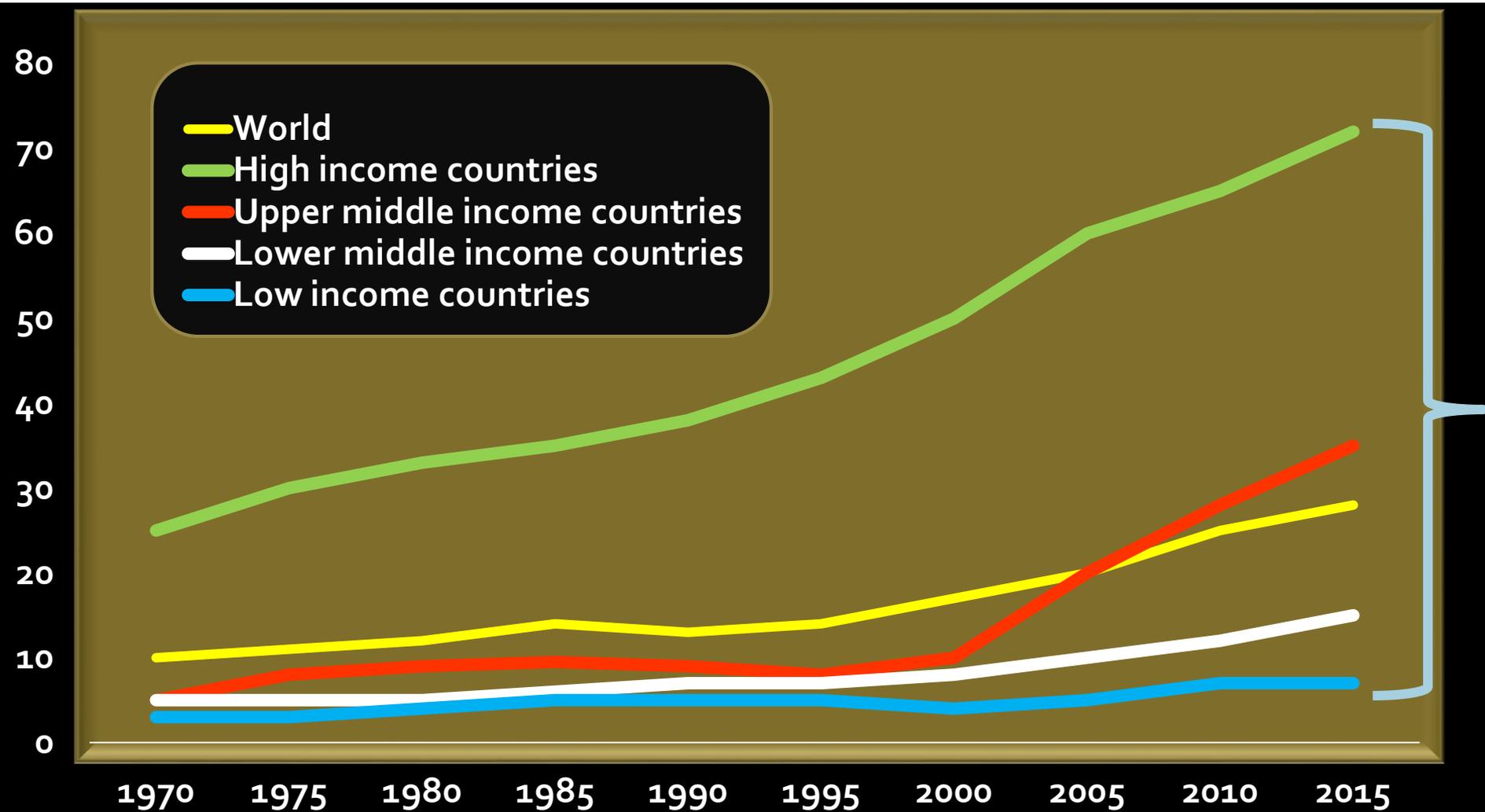
A fact...

Significant growth in higher education

More than ever more people are having access to higher education ...

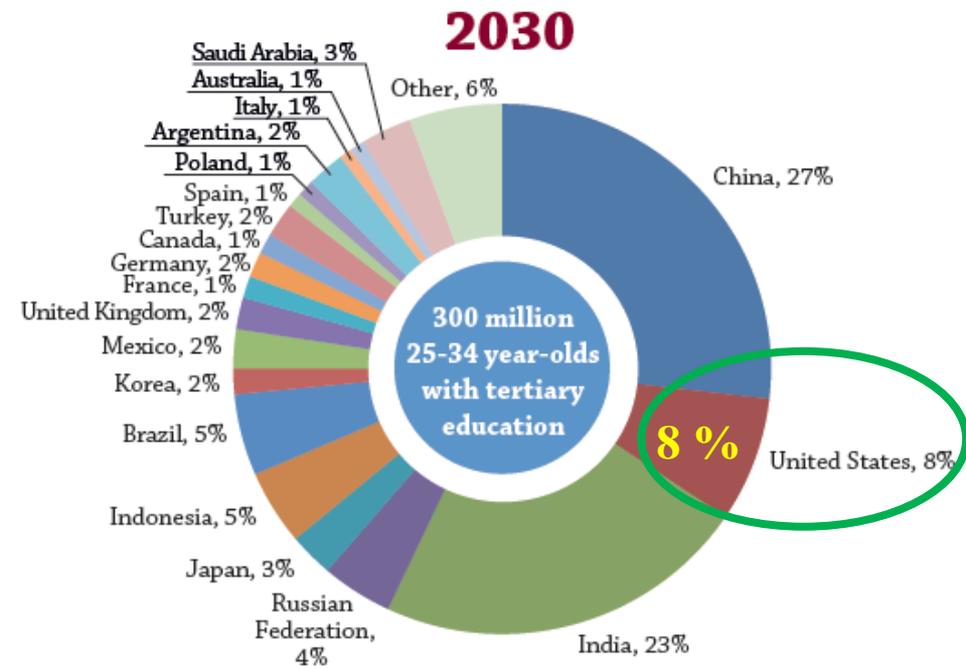
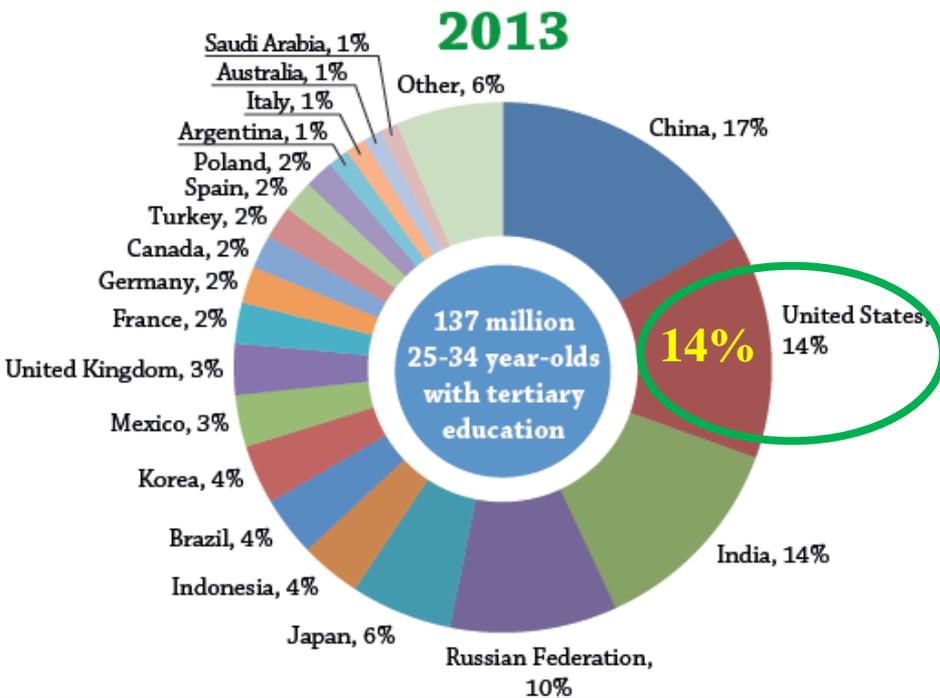


Tertiary education gross enrollment ratio, by country income group. 1970-2015. %



The shifting distribution of the global stock of people with tertiary education

Global distribution of tertiary educated 25-34 y-olds in 2013 and 2030

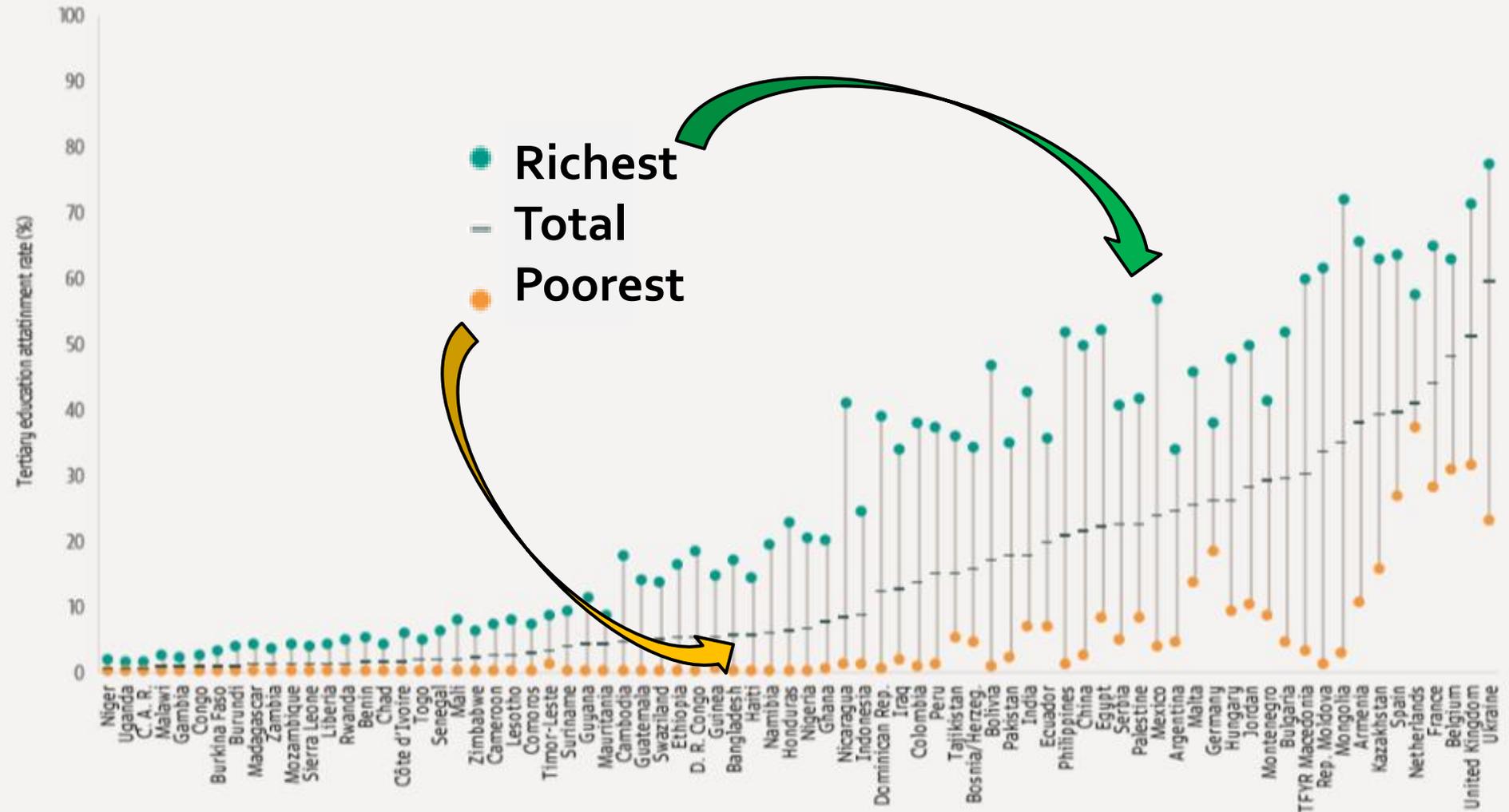


But, there is still a significant disparity in access

- *Rural*
- *Women*
- *Poor*
- *Socially disadvantaged people*



Percentage of 25-29 years old who have completed at least 4 years of tertiary education, by wealth. Selected countries. 2008-2014



Source: GEM Report team analysis of household survey data.

Relevant Facts



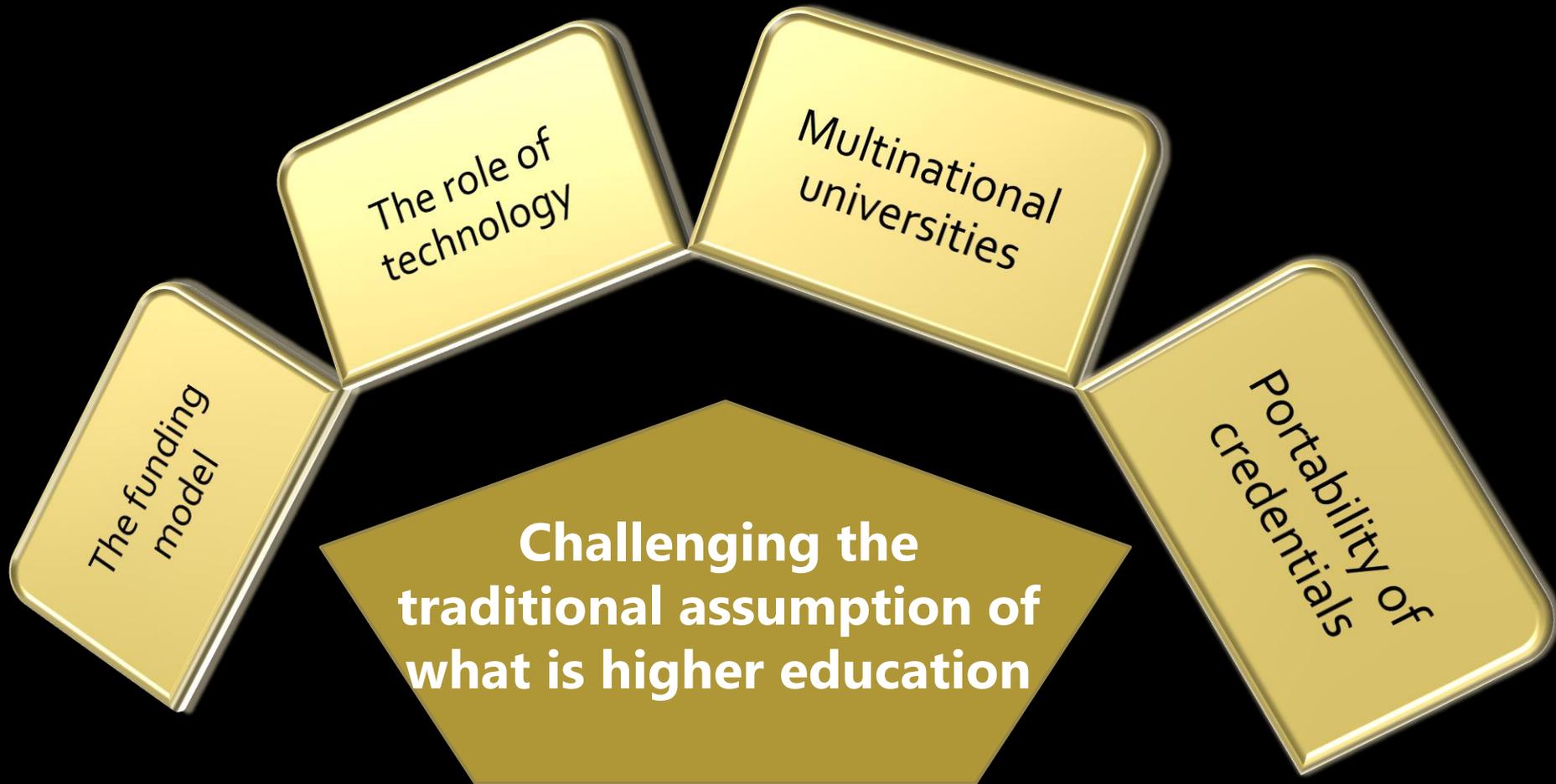
Implications of the global growth in HE

Now the low and middle-income countries have the greatest share of the worldwide higher education enrollment.

It is in the developing economies where the future profile of global higher education will be defined.

Worldwide, higher education will transition from an elitist approach towards a flexible access model.

2025: Dramatic diversification of modalities/providers of education



Expanding HE beyond national boundaries

International branch campus facts

76
countries hosted
international branch
campuses in 2015
(10% higher than in 2011)

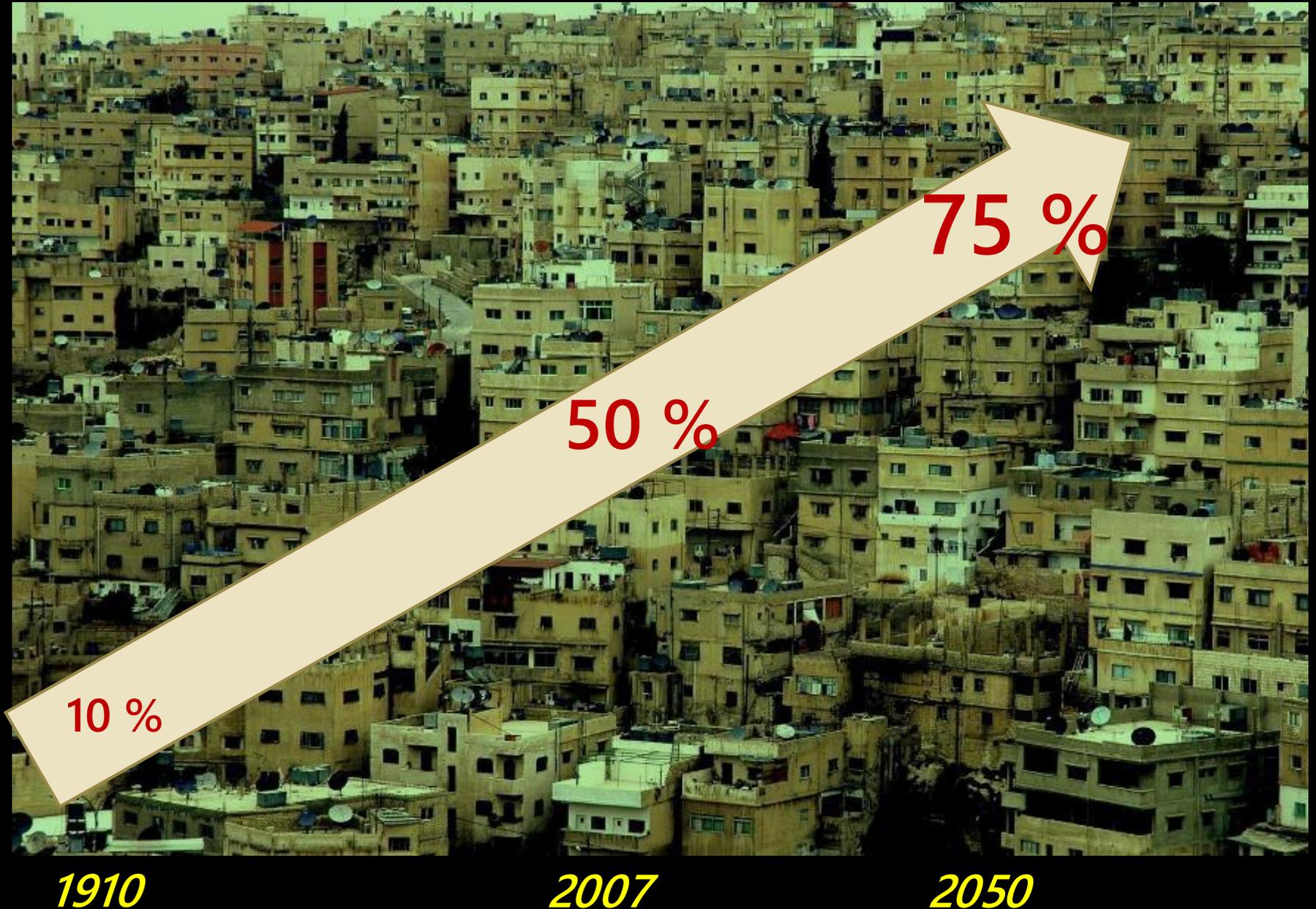
45%
Branch campuses
under development
worldwide being
planned by U.S. and
U.K.-based institutions

73%
Portion of total international branch
campuses run by institutions in the U.S.,
U.K., France, Russia or Australia

Increased pressure for access to higher education... but not for many years, and not everywhere

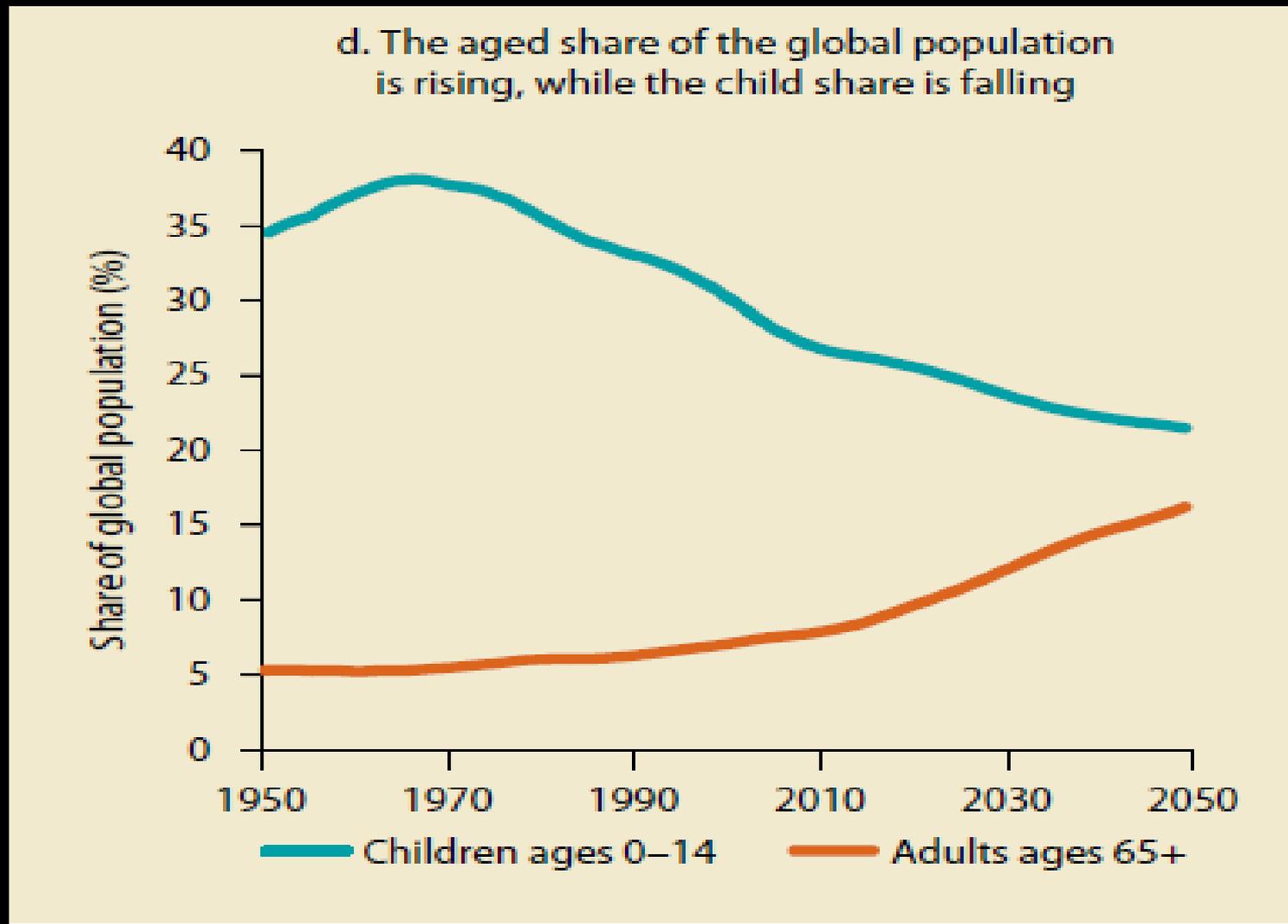


WORLD POPULATION LIVING IN CITIES

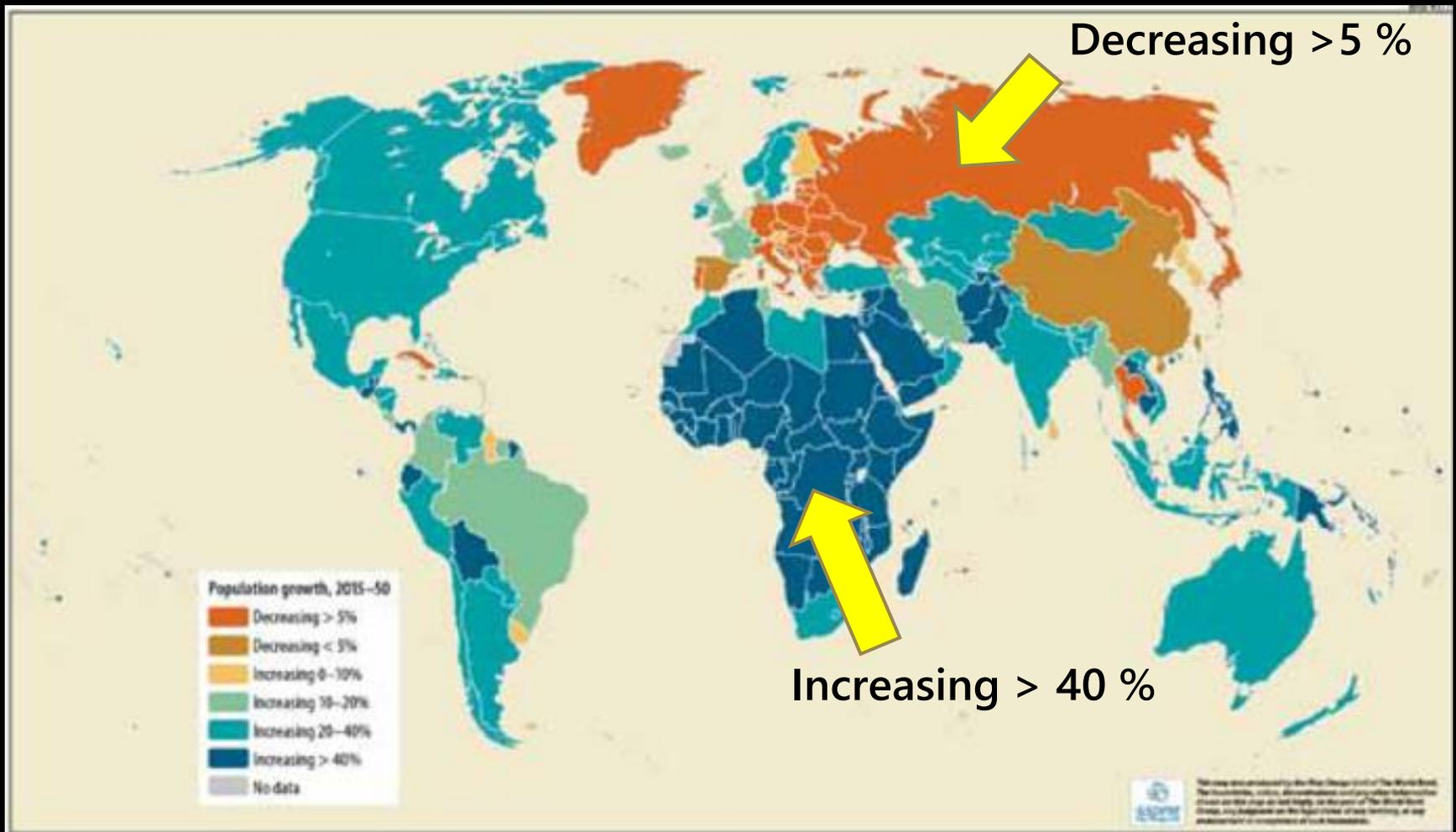


WB: World Development Report

2015



Population Growth 2015-2050



Source: World Bank. World Development Report. 2015

The case of Italy



Ostana, Italy in the Washington Post

WorldViews

For the first time in 28 years, a baby has been born in this Italian town



© GOURMET BY JOSH TRENKLE/GETTY IMAGES

February 1, 2016

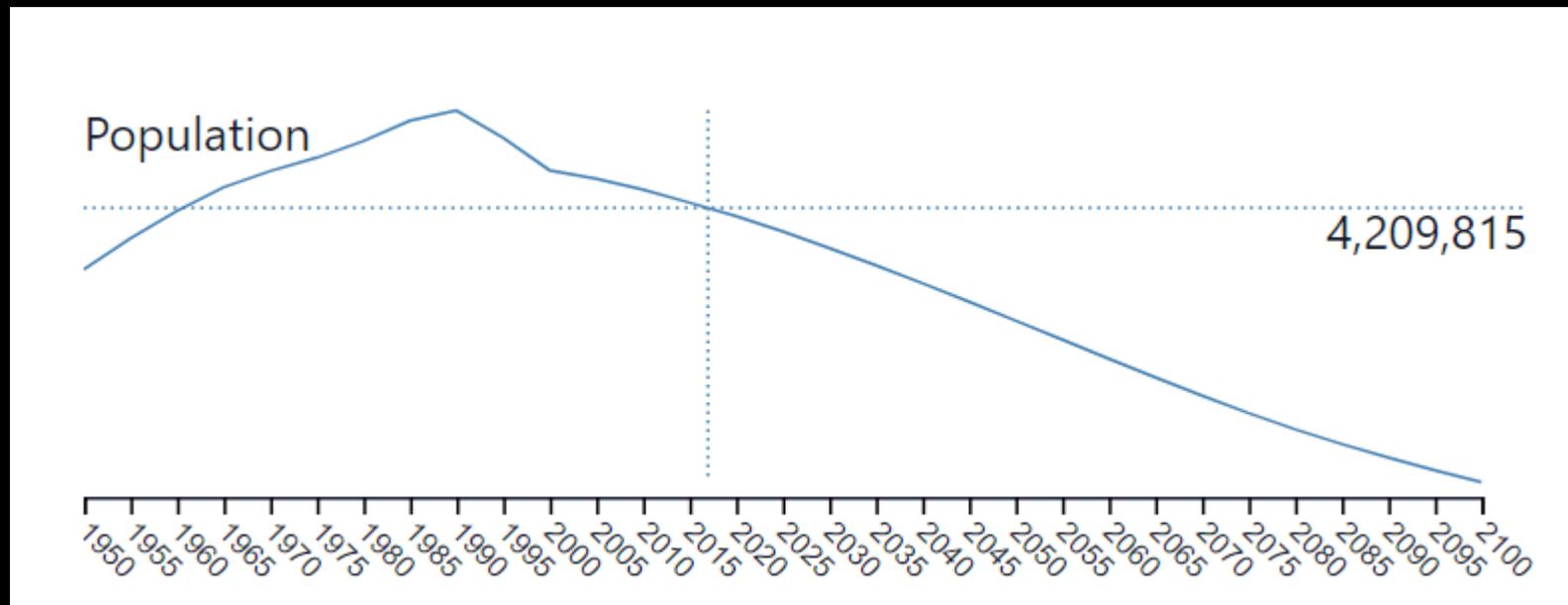
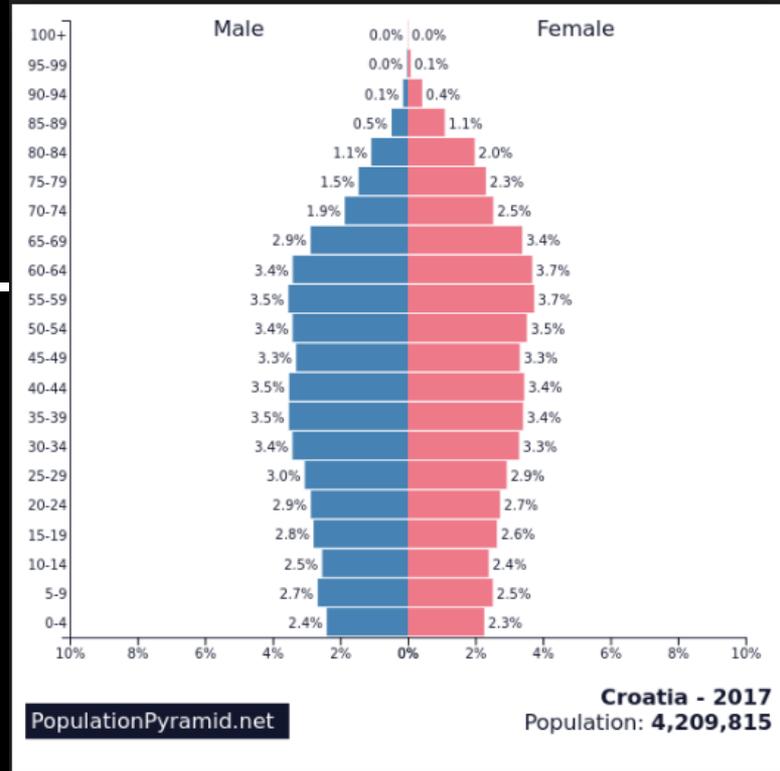
<https://www.washingtonpost.com/news/worldviews/wp/2016/02/01/for-the-first-time-in-28-years-a-baby-has-been-born-in-this-italian-town/>

News from Japan (2015)...

- The population of higher education students in Japan is forecast to decline by about a third over the next 15 years, from 650,000 students in 2018 to 480,000 in 2031.
- Competition among universities has predictably increased as the applicant pool has begun to shrink and roughly 40% of the country's private universities were operating below capacity as of 2014.

The case of Croatia

It is expected that by 2020, the average age in Croatia will be 44 yrs



In contrast...

Nearly a half of the
population in Africa is under
twenty



The case of Kenya

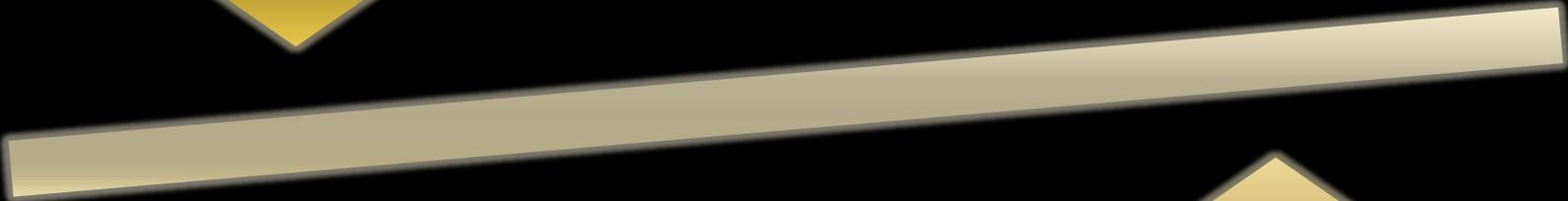
- At present, 26 million Kenyans —**more than half of the country's population**— is under the age of 25.
- By 2030 two thirds of Kenyans are projected to fall into the under 25 cohort.



A dramatic demographic shift...



From 2015-2050, the total population in most of Europe will decrease by 5 % while most of Africa will grow by more than 40 % (World Bank, 2015).



By 2030, 42 % of the youth globally will live in Africa



Currently more than 70 percent of youth in Africa live on less than 2 U.S. dollars per day

2025-2050: Brutal pressure for talent

A furious competition for talent



720,000 onshore enrolments by 2025

Australia



450,000 international students by 2022

Canada



Increase international student intake by 20% (amounting to 470,000 based on current levels)

France



350,000 inbound internationally mobile students by 2020

Germany



300,000 international students by 2020

Japan



143,000 international students by 2025

New Zealand



44,000 foreign students by 2019/20

Ireland

A furious competition for talent



720,000 onshore enrolments by 2025

Australia



450,000 international students by 2022

Canada



500,000 international students by 2020

China



Increase international student intake by 20% (amounting to 470,000 based on current levels)

France



350,000 inbound internationally mobile students by 2020

Germany



300,000 international students by 2020

Japan



143,000 international students by 2025

New Zealand



58,000 foreign students by 2019

Taiwan



250,000 international students by 2025

Malaysia



200,000 foreign students by 2023

South Korea



44,000 foreign students by 2019/20

Ireland

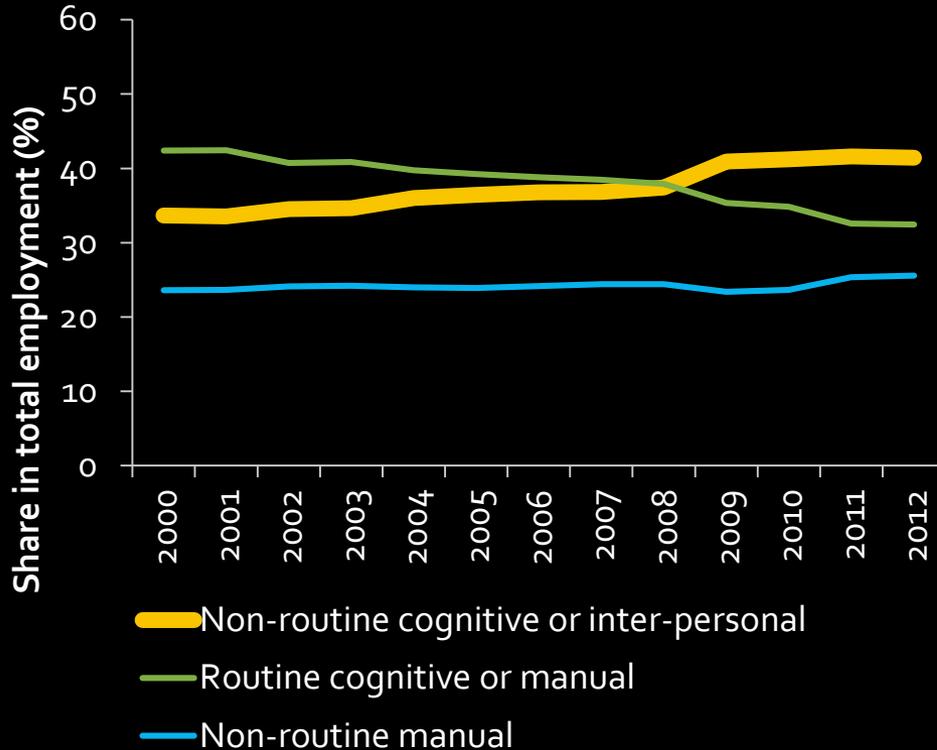
However, it is a contested terrain



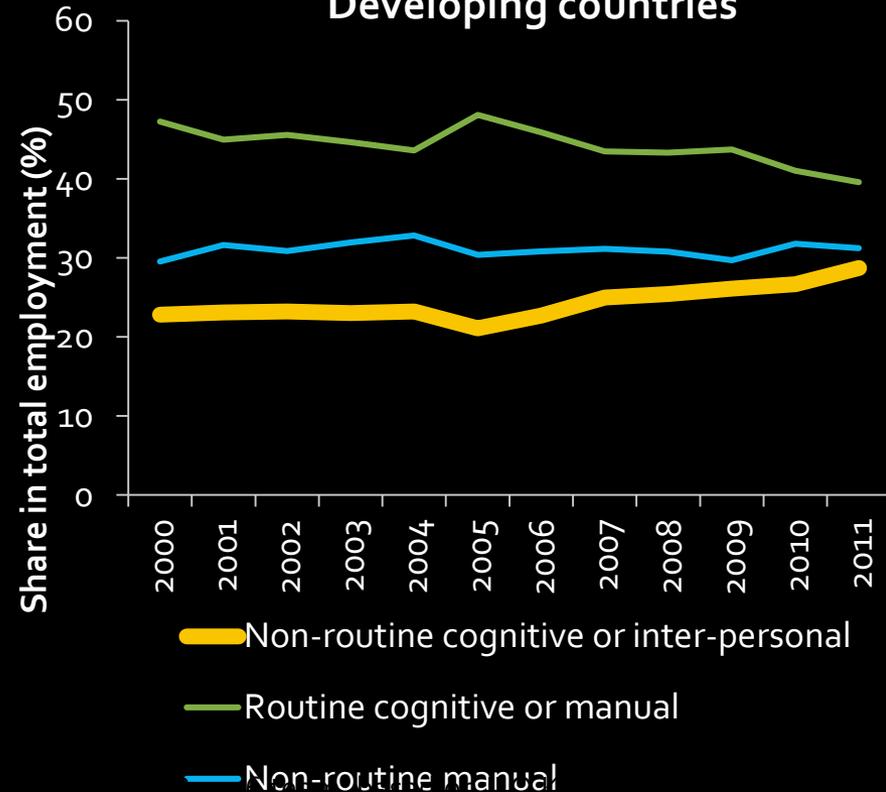
Globally, skills demand is shifting towards “New Economy Skills” (non-routine cognitive and interpersonal skills)

Employment Composition (simple cross country average by type of occupation (2000-2012)

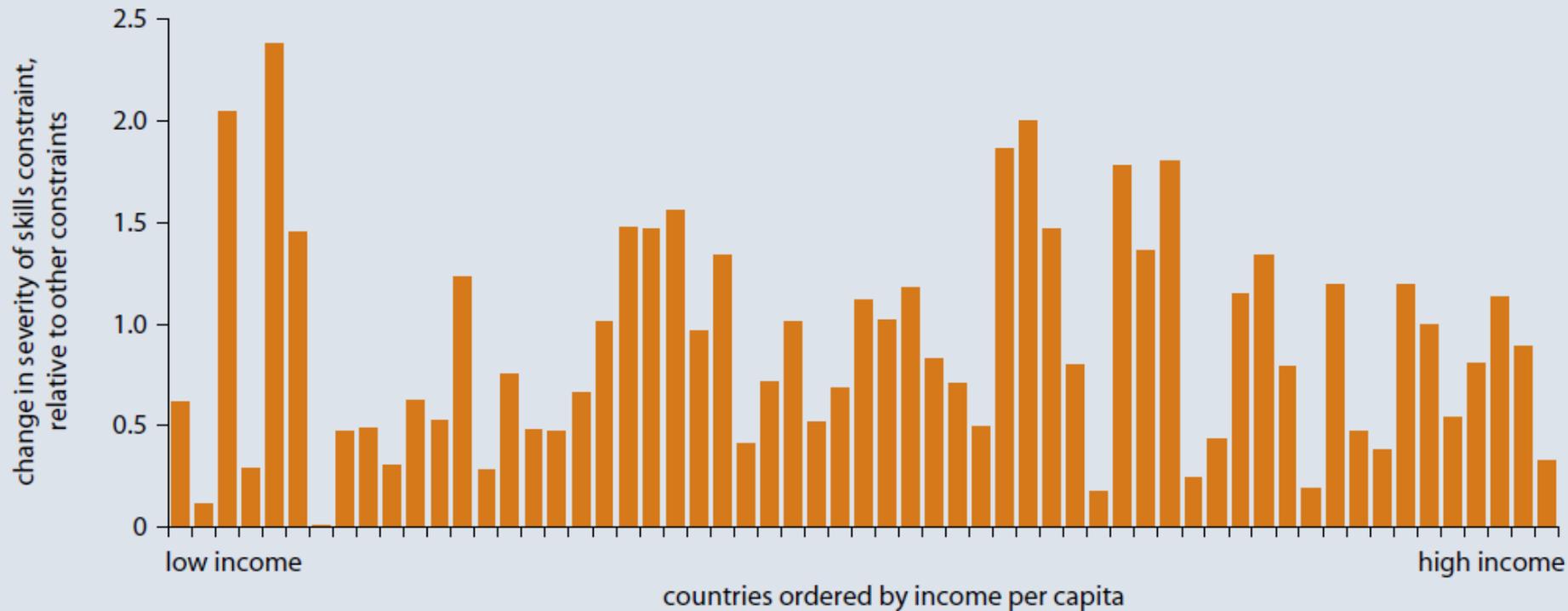
OECD countries



Developing countries



Relative to other obstacles, skills have become a more severe constraint to business



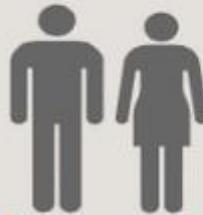
Source: World Development Report 2013

A mismatch of talent

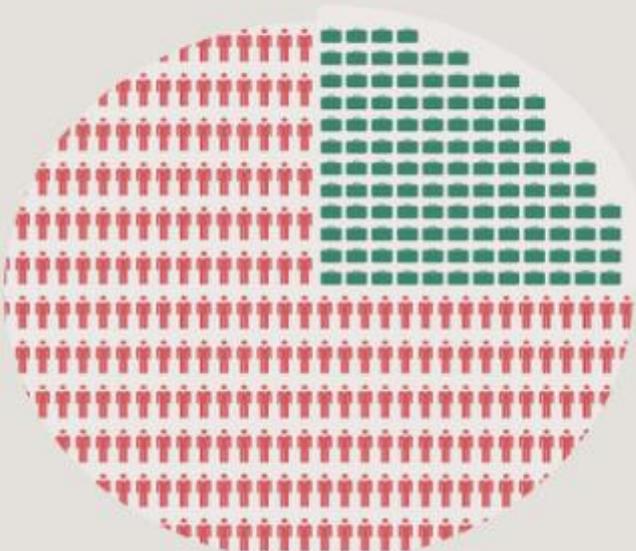
THE WORLD TODAY

A mismatch of talent is challenging companies and countries alike, leading to a lack of prospects for families, missed innovation and a shortfall of growth.

200 million unemployed



THAT IS THE SAME AS THE ENTIRE POPULATION OF BRAZIL.



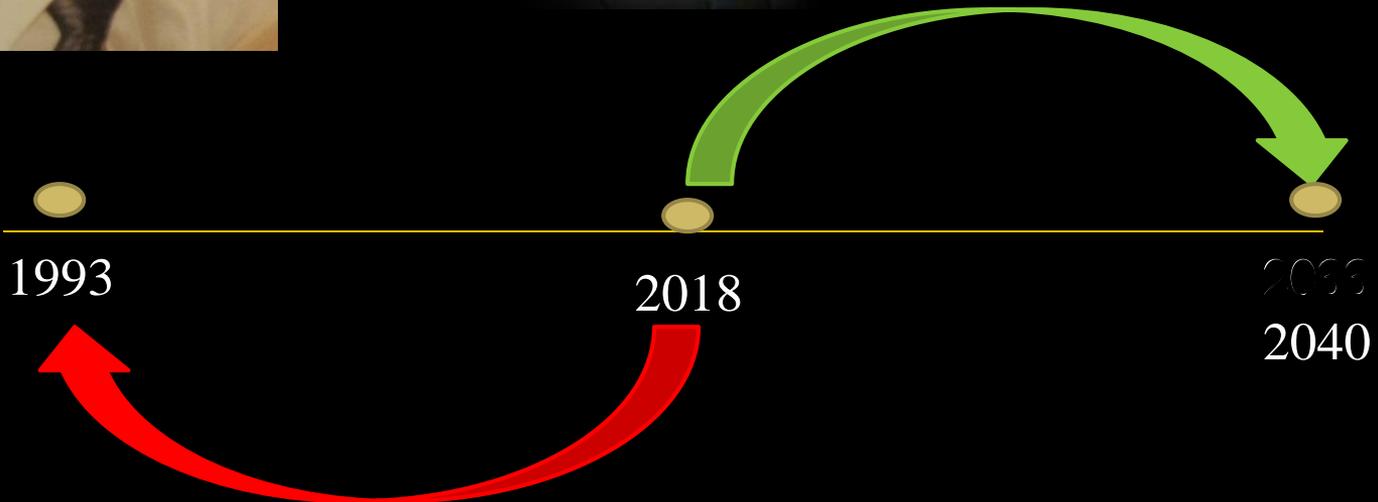
DESPITE 33 MILLION
LOOKING FOR A JOB IN THE
US & EUROPE



8 MILLION
JOBS ARE LEFT VACANT
EACH YEAR

BACK
TO
THE FUTURE

Back to the Future...



Today's children will face a labor market that:

Will change rapidly, because of shifts in economic structure, technological progress, and increased globalization



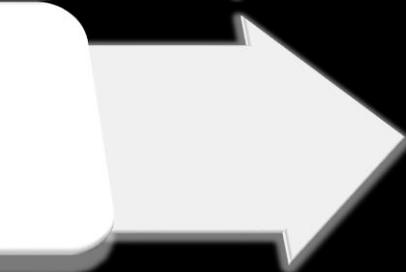
Will shift away from jobs that require unskilled (routine and manual) to skilled (non-routine cognitive) labor



Will be comprised of jobs that do not exist today (4 in 5 elementary school students in developed economies will have a "new" job)



Will require much higher job rotation



Key Trend 2:

Limited efficiency

Timely retention

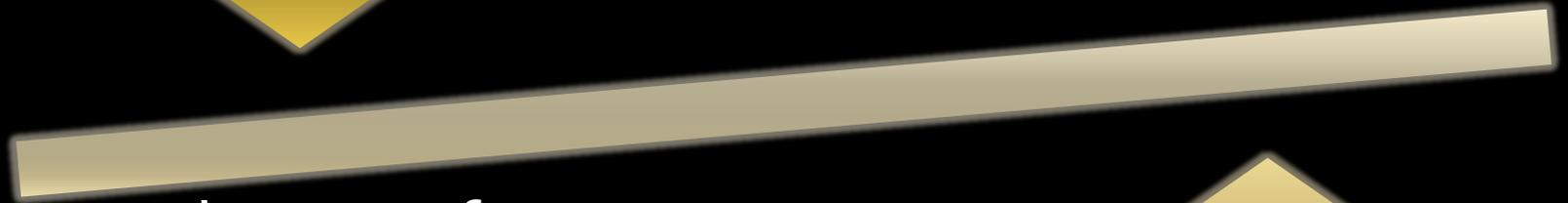


...a larger problem

Two key issues...



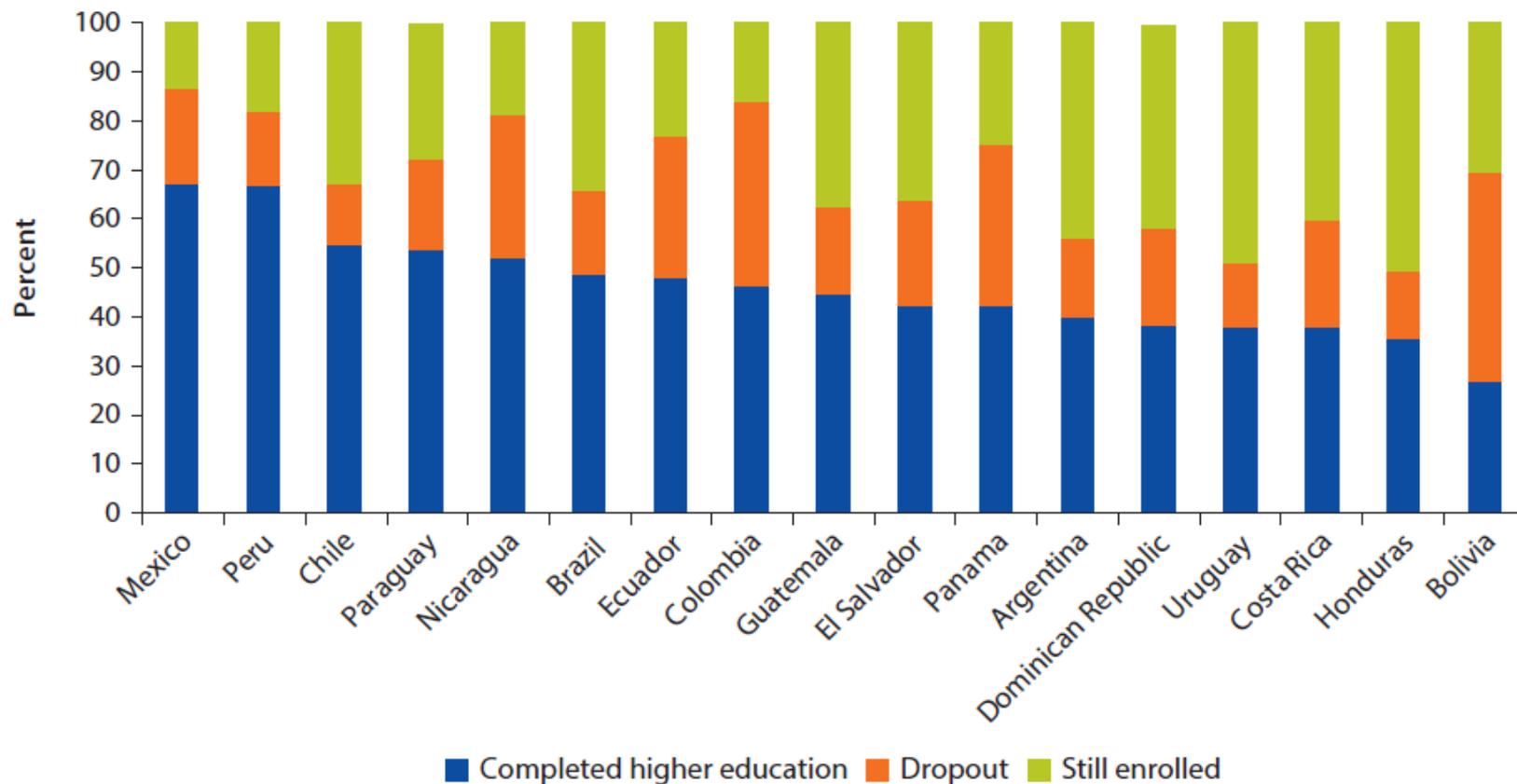
Significant number of drop-outs



Also, significant number of students not finishing on a timely manner



Completion Rates for Youth Ages 25-29 Years. *Latin America and the Caribbean. 2012*



Source: World Bank calculations based on SEDLAC.

Note: For each country, individuals ages 25–29 years who have ever started higher education are classified into three groups: those who completed their program, those who dropped out, and those who are still enrolled. Completion rates are estimated as the ratio between youths ages 25–29 years who completed a higher education program and the number of people ages 25–29 years who ever started a higher education program.

Key Trend 3:

*Questioning about quality and
relevance of tertiary education*

The magic word: Accreditation

A mixed picture...



THE
GOOD

THE BAD AND THE UGLY



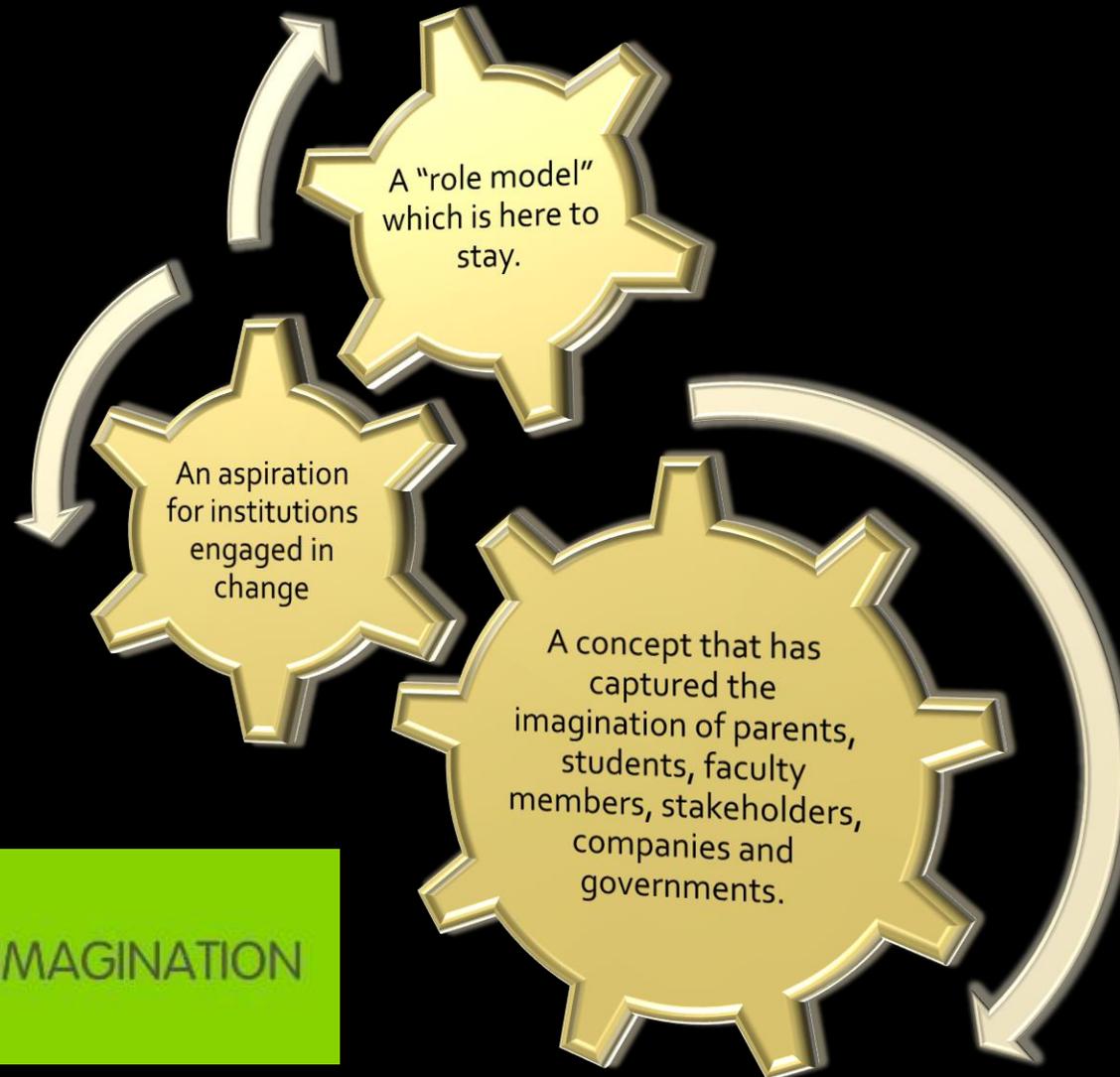
Accreditation as a major enabler of...



Accountability and openness



Something intriguing about it



CAPTURING YOUR IMAGINATION

But, what role model?



THE
GOOD

THE
BAD

AND
THE
UGLY

THE
BAD

The not so good (or bad)...

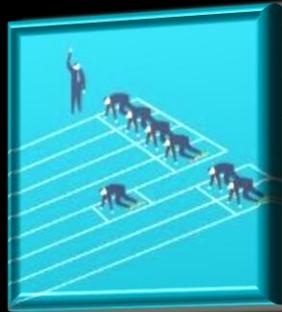
*Is accreditation an adequate proxy
of good higher education
institutions?*

What?

Why?

How?

Towards the need for more diversified higher education systems



Biases towards "universities"
as the only higher education
option persist.

Pathways allowing mobility
between technical and
vocational institutions and
universities are also very
limited, if they exist at all.



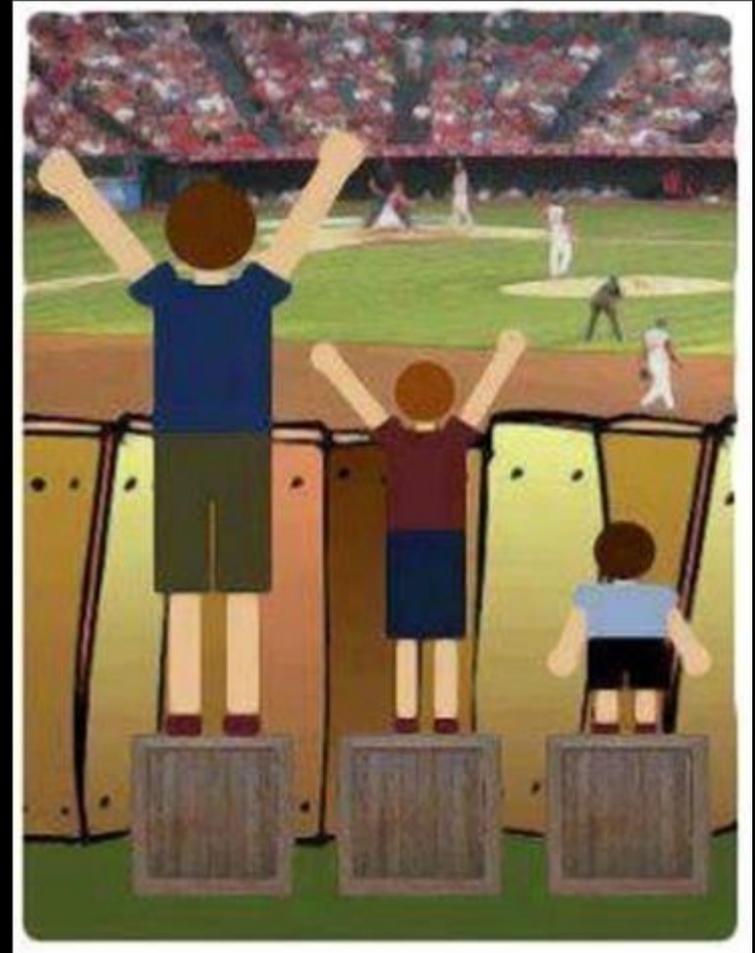
Non WCUs as "second class"
citizens

The not so good (or bad)...

Unintended (or intended?)
stratification in the educational
system (and in society).

Selectivity for whom

A regressive funding approach



THE
GOOD THE
BAD

AND
THE UGLY



Some additional “ugliness”

Misleading facts and
manipulating numbers?

A predatory and
cannibalistic field?

A perverse incentive and rewards
system

About quality or about capacity to “sell”
better?

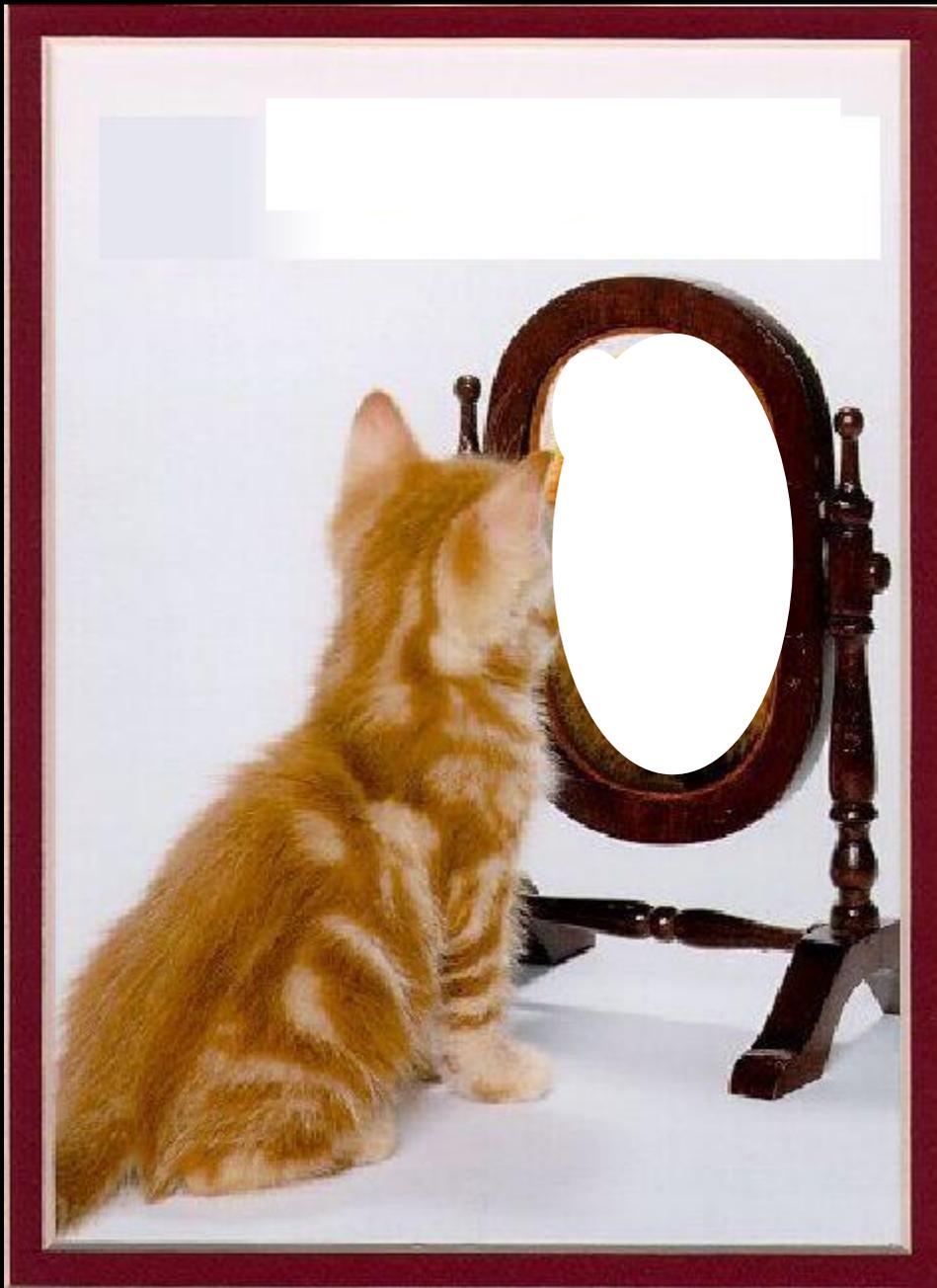
Brutal reallocation of internal
funding and priorities just for
the sake of improving the
rankings

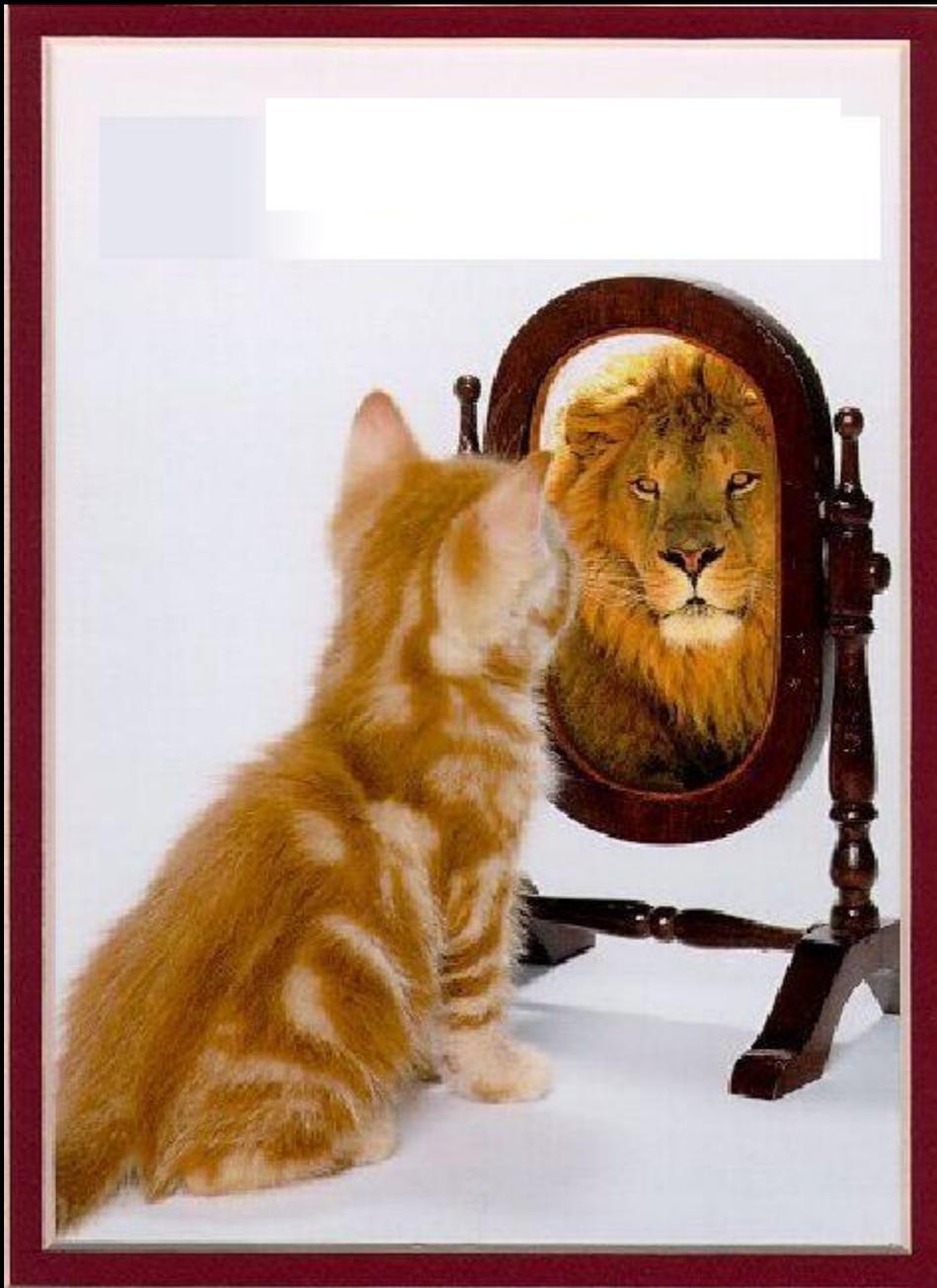
A distortion of the
ultimate goals of
tertiary education

Does the end justify the means no
matter what?

On quality...and rankings







On Quality

Accreditation: Act of compliance or means for enhancement?

Quality as goal or as means?

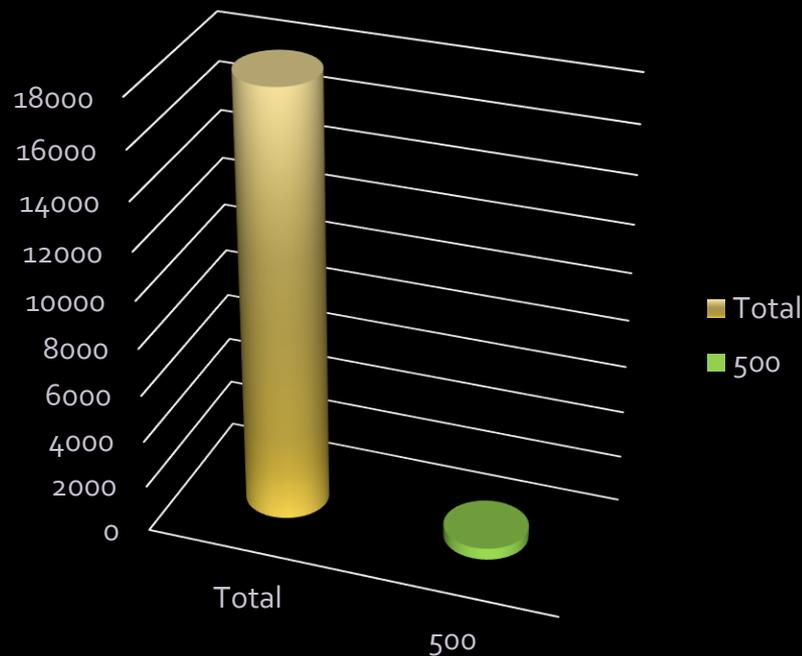
QUALITY

*Does quality respond to relevance needs?
Do we know?*

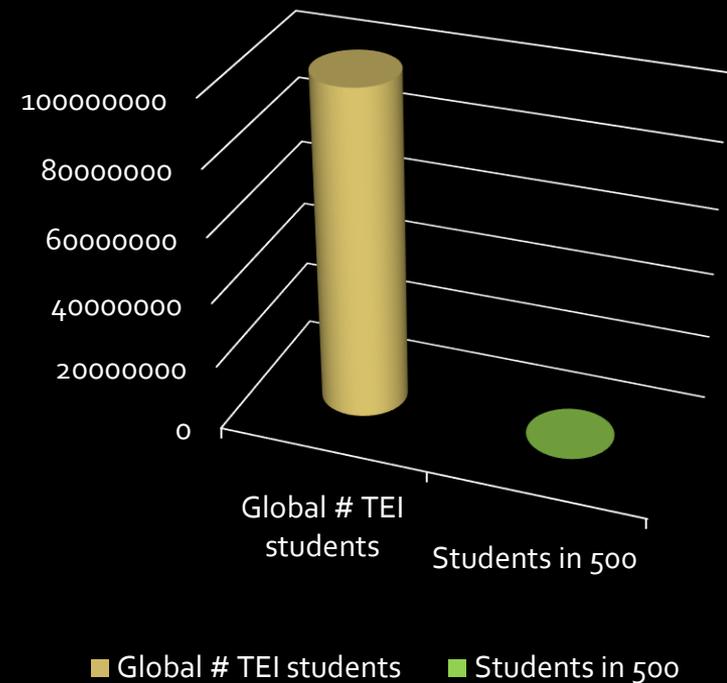
The tyranny of rankings

The share of Top 500 universities in the world of higher education

NUMBER OF INSTITUTIONS



STUDENT ENROLLMENT

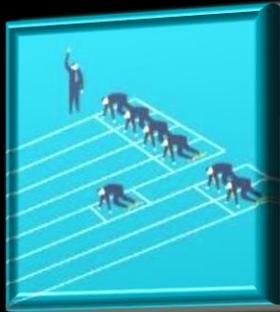


Key Trend 4:

Institutional diversification

Diversification or fragmentation?

Towards the need for more diversified higher education systems



Biases towards "universities"
as the only higher education
option persist.

Pathways allowing mobility
between technical and
vocational institutions and
universities are also very
limited, if they exist at all.



Non ranked institutions as
"second class" citizens

Key Trend 5:

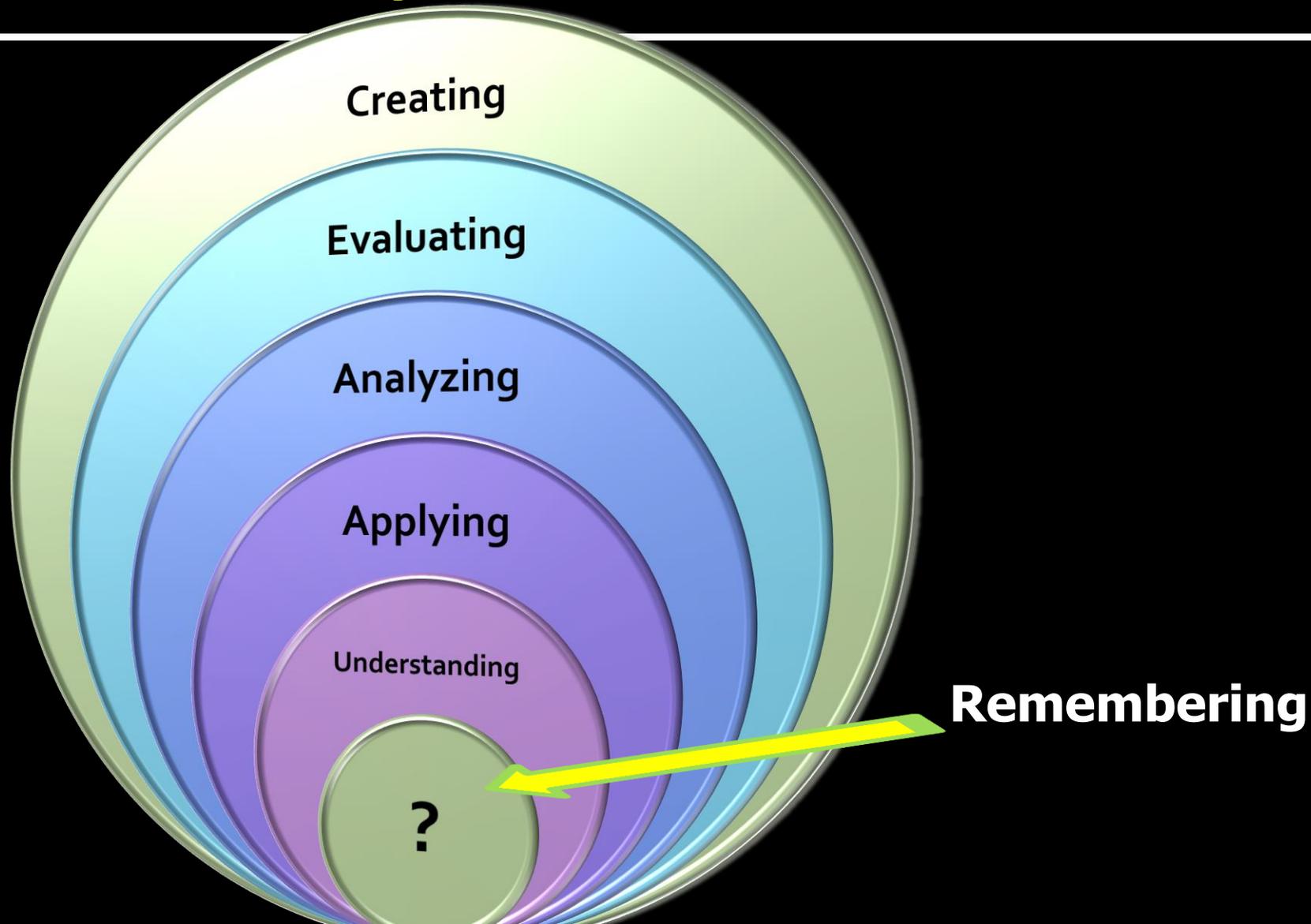
*The changing learning paradigm
and the need for increased
relevance*

What are our students learning?



SCHOOL

What are students learning? *Bloom's Taxonomy (Revised)*



Skill Gaps

Integrity
 Reliability
 Teamwork
 Willingness to learn
 Entrepreneurship
 Self-discipline
 Self-motivated
 Flexibility
 Understand/take directions
 Empathy

Core Employability

Modern tools
 Knowledge Math/Sci/Engg
 Creativity
 Problem solving
 System design
 Contemporary issues
 Customer Service

- + Integrity
- + Reliability
- + Flexibility
- + Empathy
- + Creativity
- + Awareness of contemporary issues

Communication in English
 Written Communication
 Reading
 Technical Skills
 Experiments/data analysis
 Verbal Communication
 Basic computer
 Advanced computer

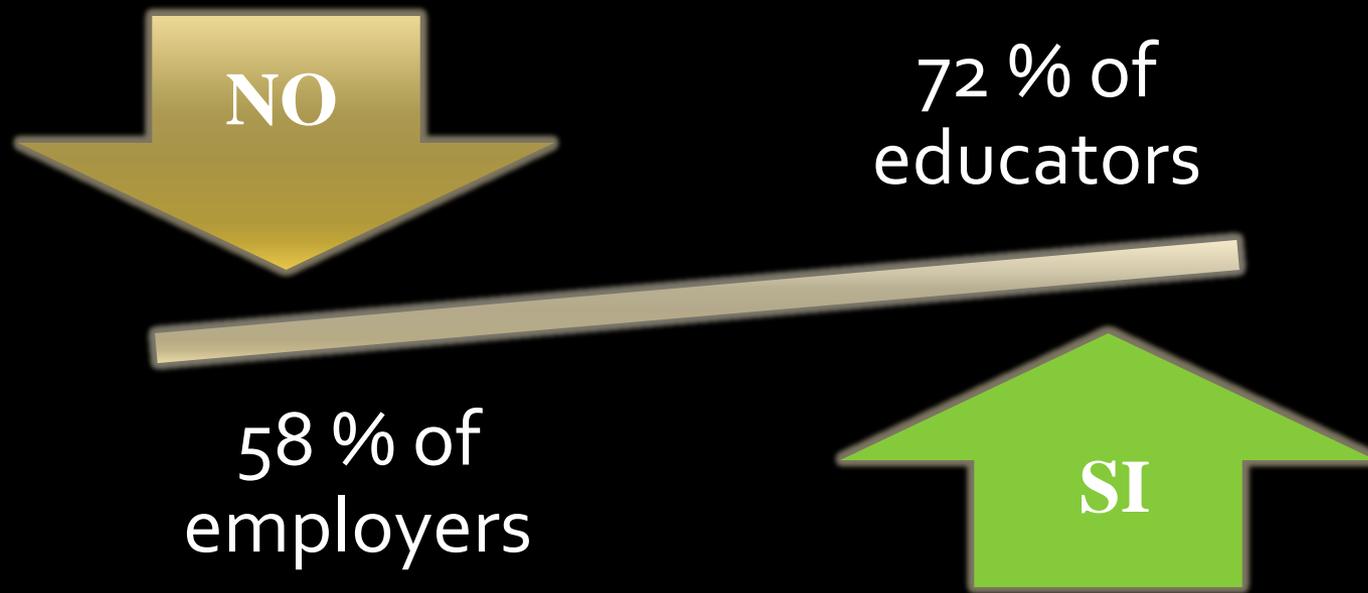
Communication

0 Not at all Not Very Somewhat Very Extremely

◆ Satisfaction ▲ Importance



Employers complain that workers don't have the adequate skills.



Source: Mourshed, Farrell, y Barton (2012), *Education to Employment: Designing a System that Works*.

Hypothesis : the labor market is demanding a combination of skills different to the ones that are being provided by the educational system

10 key skills for future graduates



Sense-making



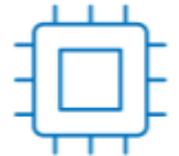
Social
intelligence



Novel & adaptive
thinking



Cross-cultural
competency



Computational
thinking



New media
literacy



Transdisciplinarity



Design
mindset



Cognitive load
management



Virtual
collaboration

Source: The Institute for the Future.

British Council (2017). 10 trends Transformative changes in higher education

Needed, a greater culture of evidence

Does the learning of those skills happen...?

Due to internationalization

Despite the internationalization

Independently of internationalization

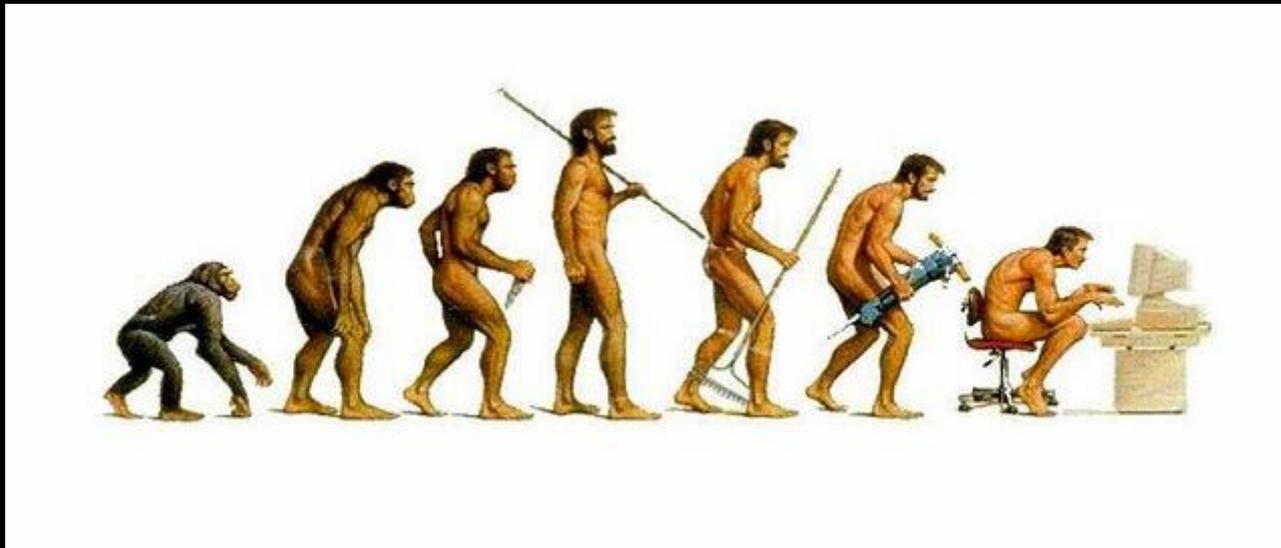
Many times we don't know

Key Trend 4:

The disruption of technology

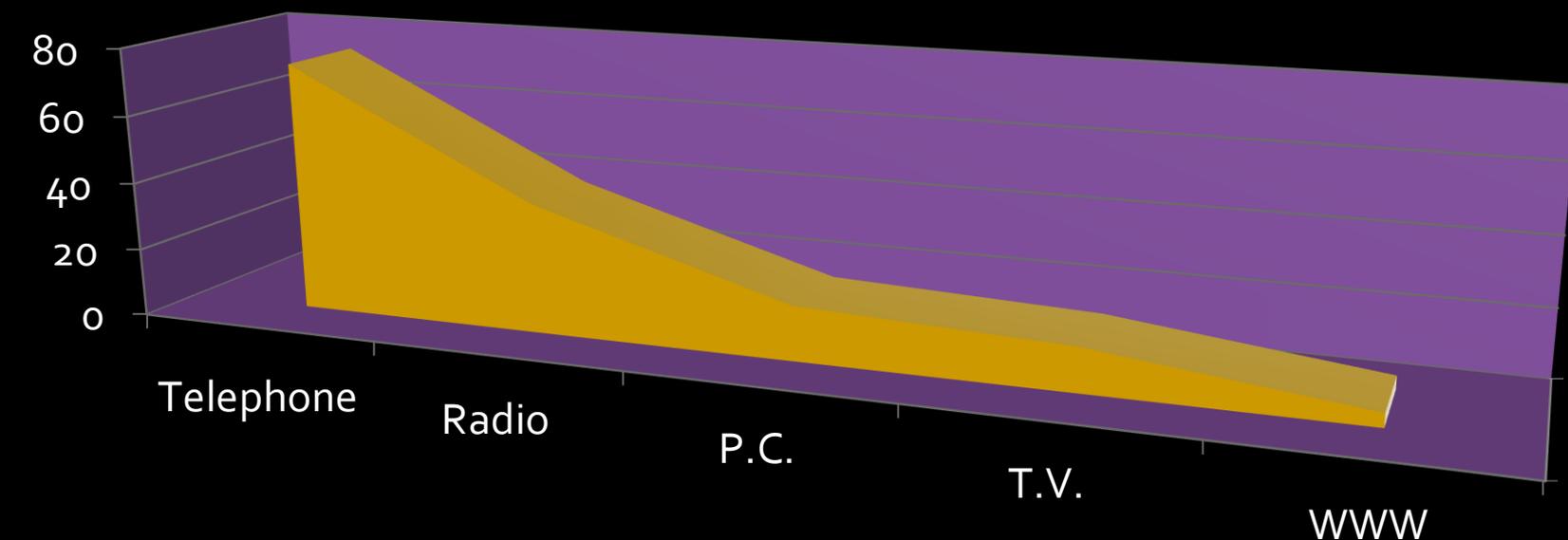


Back to the Future...



Adoption of Technology in 50 million households worldwide

Years required



Telephone	Radio	P.C.	T.V.	WWW
74	38	16	13	4

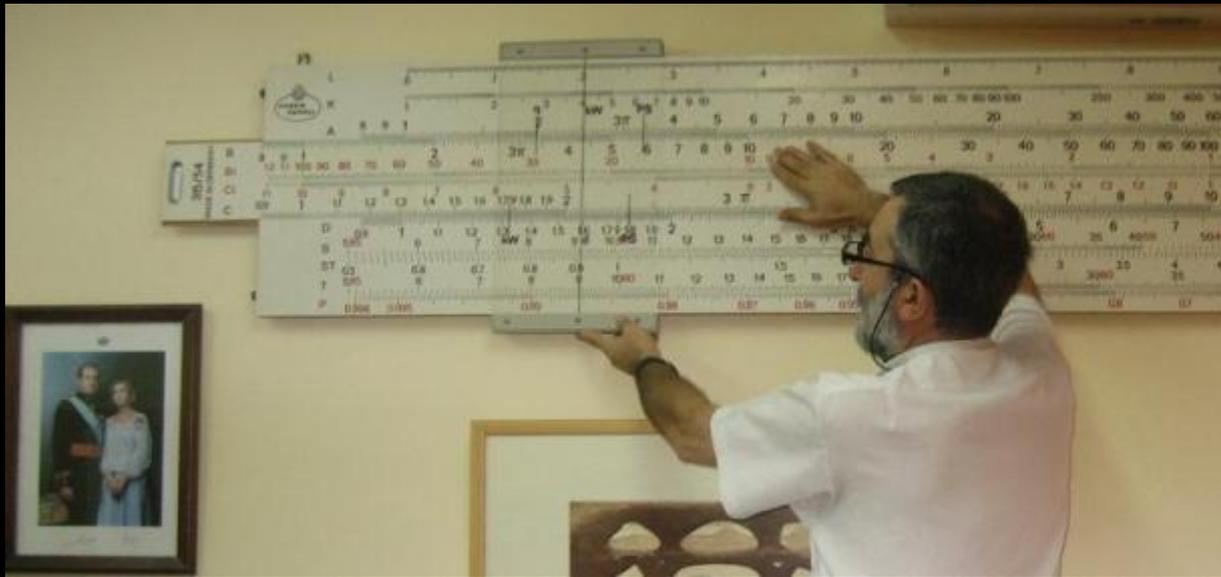


Source: ITU, 1999

Aunt Consuelo



Do you remember the Slide Rule?



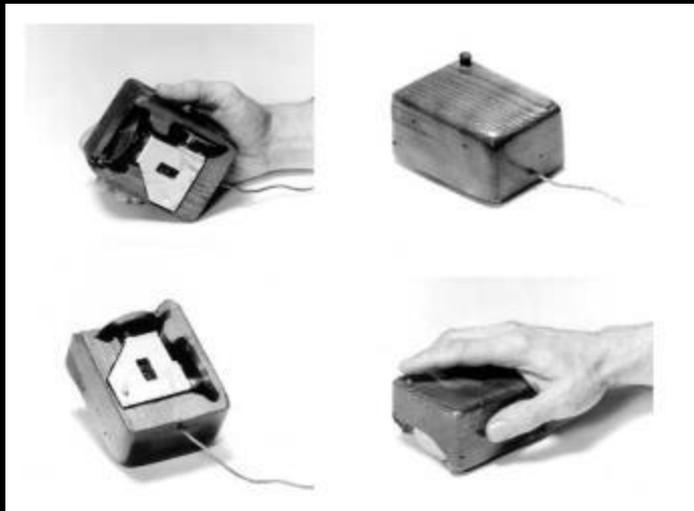
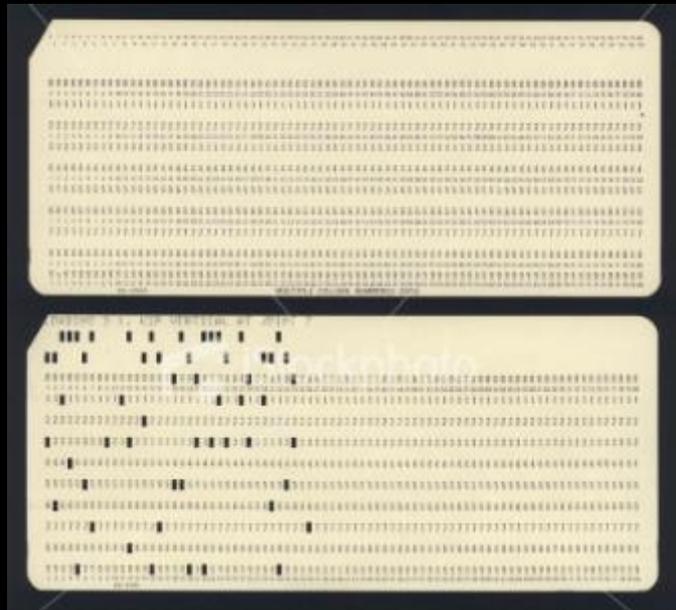
150 Extra Engineers

An IBM Electronic Calculator speeds through thousands of intricate computations so quickly that on many complex problems it's just like having 150 EXTRA Engineers.

No longer most valuable engineering personnel... now in critical shortage... spend priceless creative time in routine repetitive figuring.

Thousands of IBM Electronic Business Machines... vital to our nation's defense... are at work for science, industry, and the armed forces, in laboratories, factories, and offices, helping to meet urgent demands for greater production.

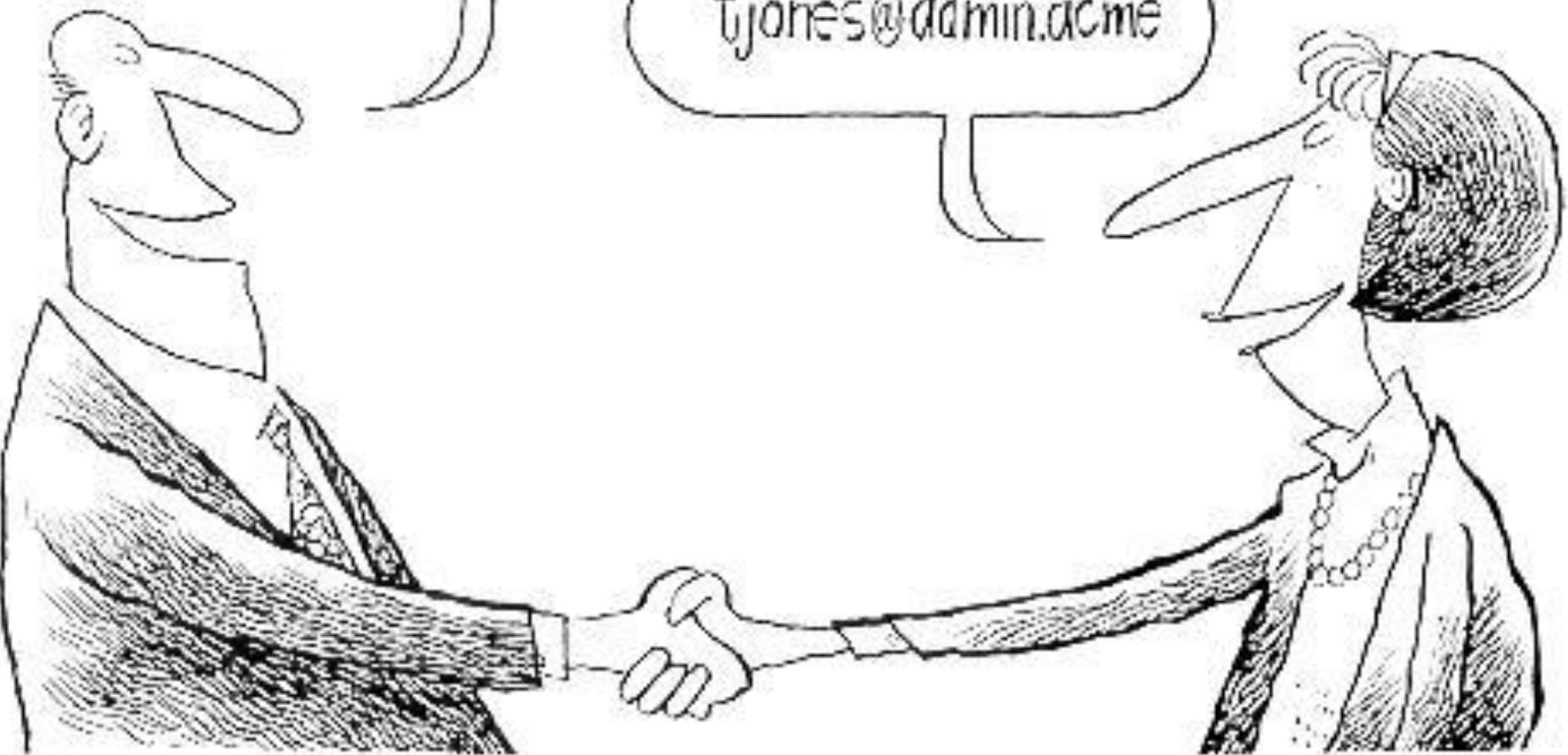
IBM INTERNATIONAL BUSINESS MACHINES



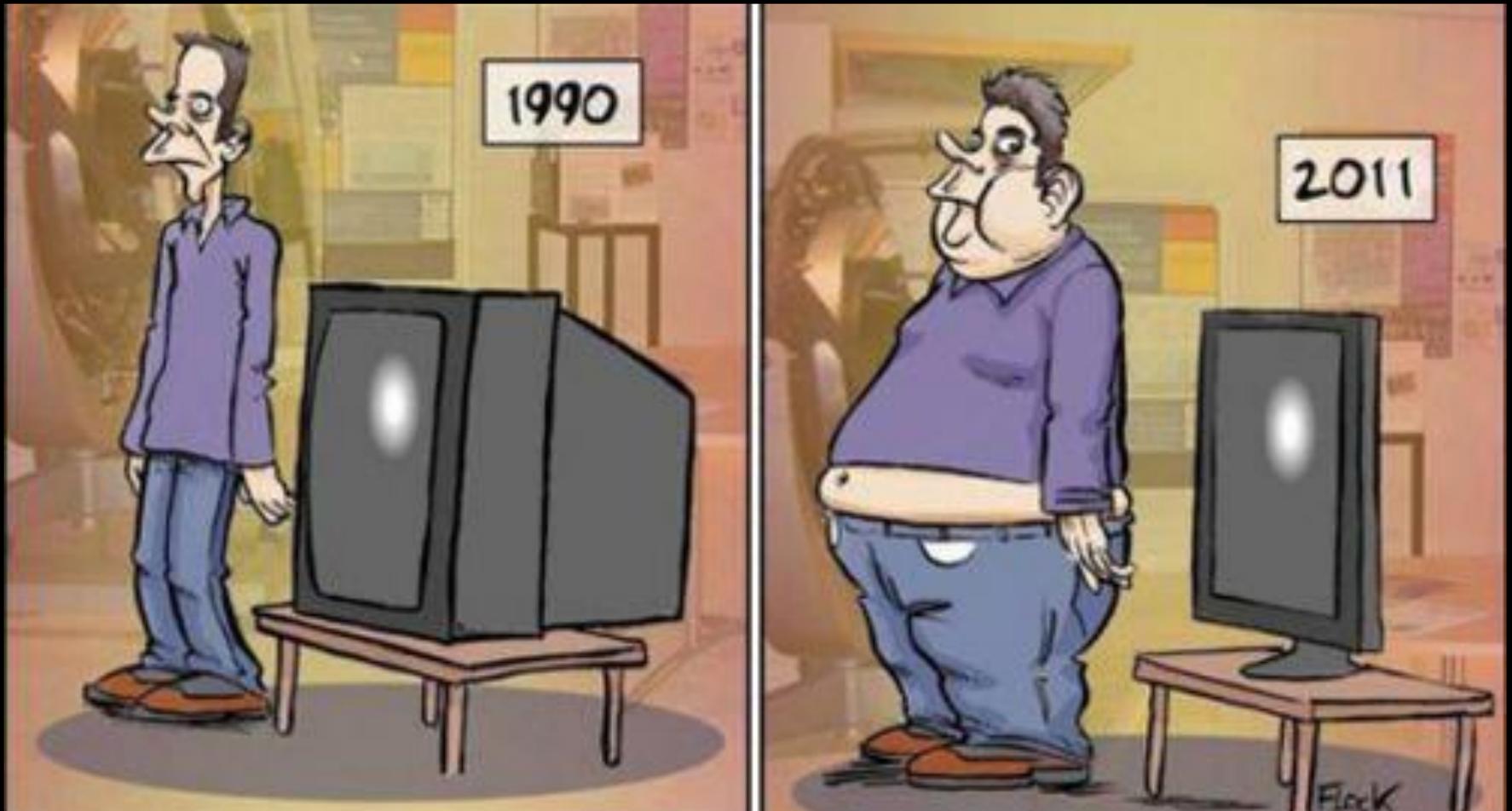
bjsmith@admin.gov

tjones@admin.acme

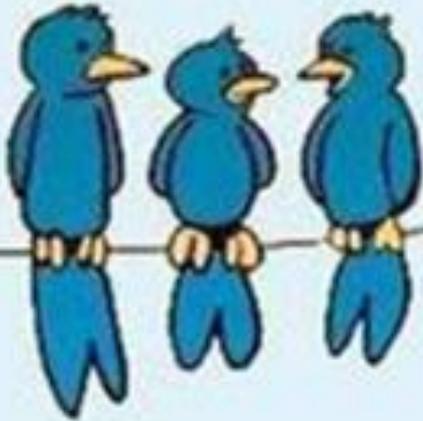
STAHLER
© THE ORIGINAL POST, 1999



Our technology



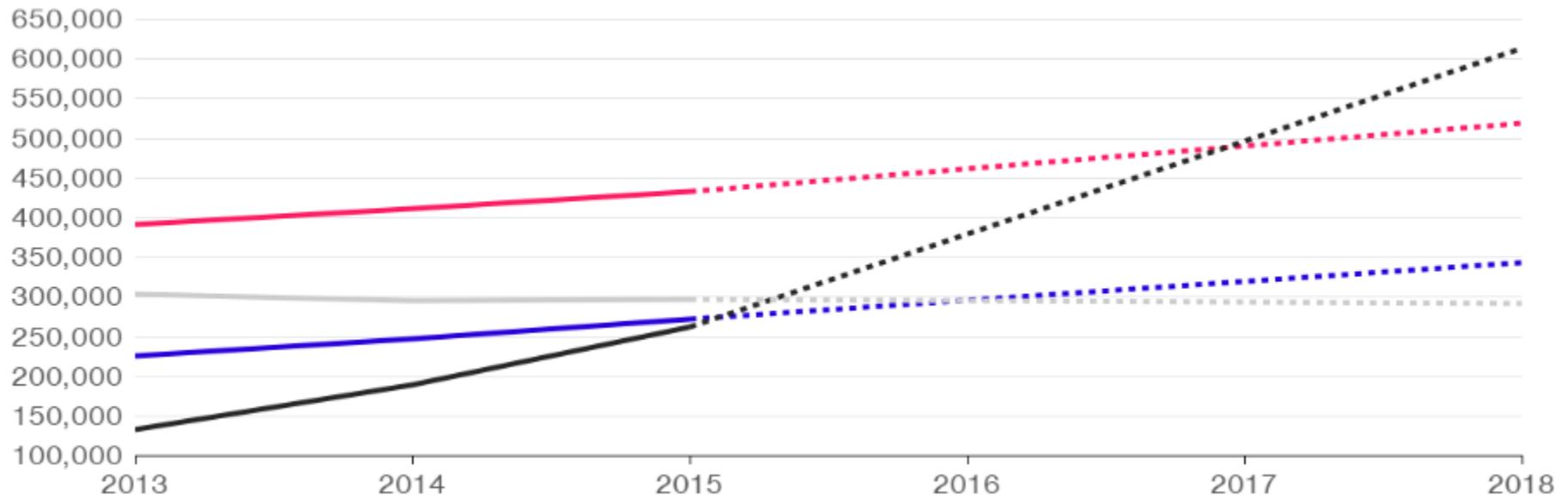
He uses WiFi



Robotization: a reality

The stock of industrial robots in operation worldwide will rise 12% a year between 2014-2018

America Europe China Japan



Sources: UniCredit Research, International Federation of Robotics

Bloomberg

Are the skills changing due to the ramifications of the IR 4.0?



1784-1840

4th Industrial Revolution (IR 4.0): What are we talking about?

A stage in the development of knowledge in which the lines between the physical, digital and biological spheres are being blurred.



Potential consequences



A full scale shift would add billions of dollars to the global economy in the next 15 years



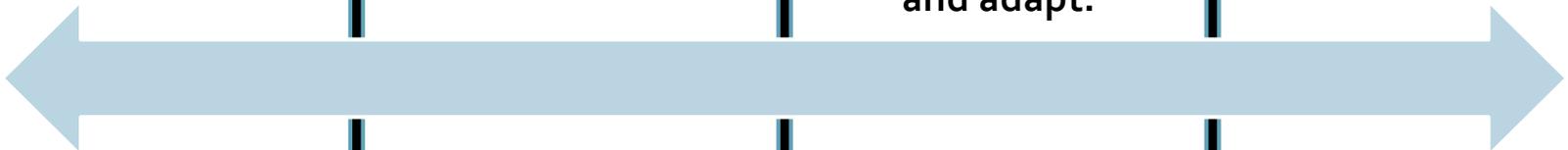
At least 5 million Jobs in the 15 most industrialized countries would disappear



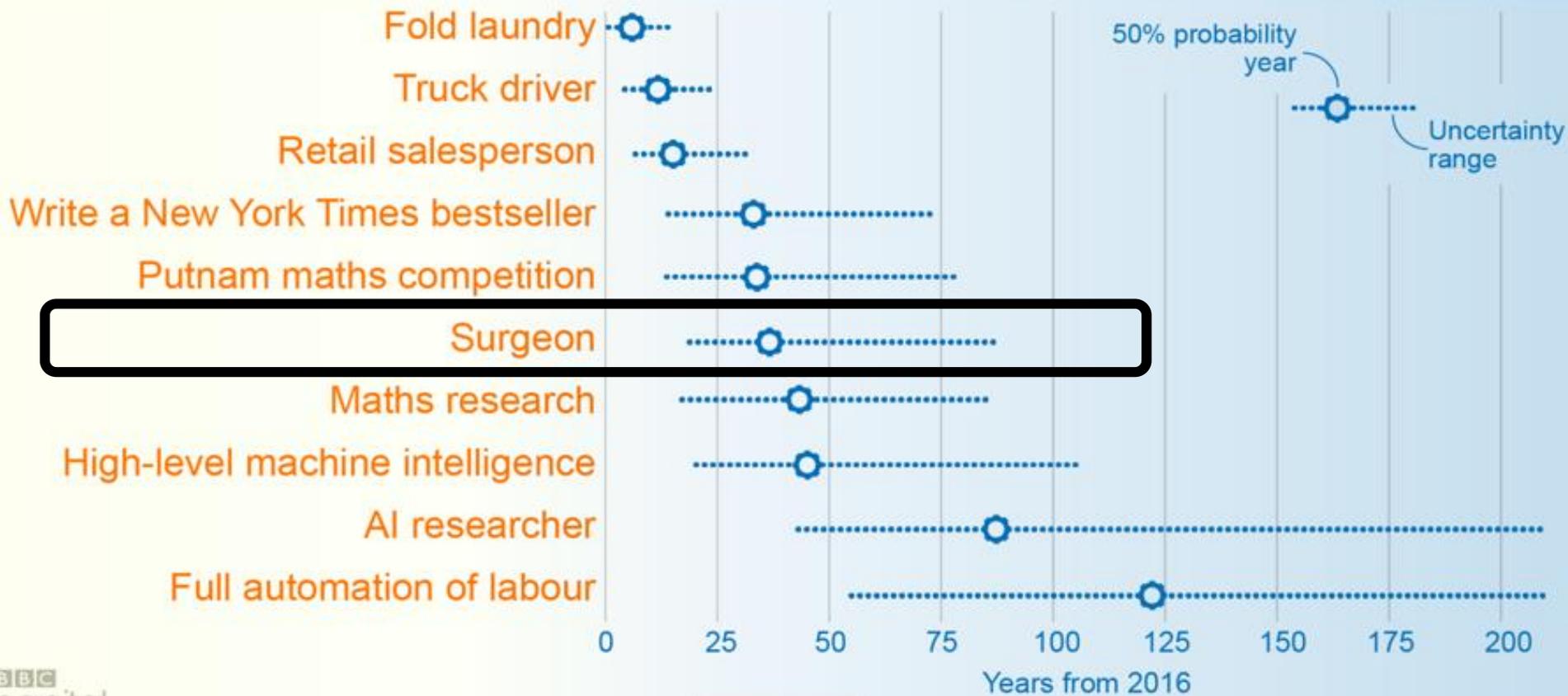
It has the potential to increase global income and to improve life conditions of entire populations, but it would mostly benefit to those able to innovate and adapt.



It may increase inequality and income distribution, and it would entail all kinds of geopolitical Security dilemmas



How many years until a machine can do our job better than us?



Science fiction or reality?

AMRITA

ONE OF OUR FAVOURITE EMPLOYEES ISN'T EVEN HUMAN

THE DA VINCI SURGICAL ROBOT AT AMRITA HOSPITAL HAS COMPLETED OVER 700 SURGERIES IN MULTIPLE SPECIALTIES IN JUST 2 YEARS

NEUROSURGERY	GYNAE-GYNECOLOGY	UROLOGY	GI SURGERY	HEAD & NECK SURGERY	CVTS
--------------	------------------	---------	------------	---------------------	------

AMRITA INSTITUTE OF MEDICAL SCIENCES
Exceptional Technology, Compassionate Care.

Edappally, Kochi-682041, India
www.amritahospital.org

For appointments, call: 9947747069



da Vinci Xi

The Da Vinci Surgical Robot at Amrita Hospital has completed over 780 surgeries in multiple specialties in **just 2 years**

What is the impact on education?



"You should check your e-mails more often. I fired you over three weeks ago."



A new type of
students

Why does it matter?

 @fmarmole

Email: fmarmolejo@worldbank.org

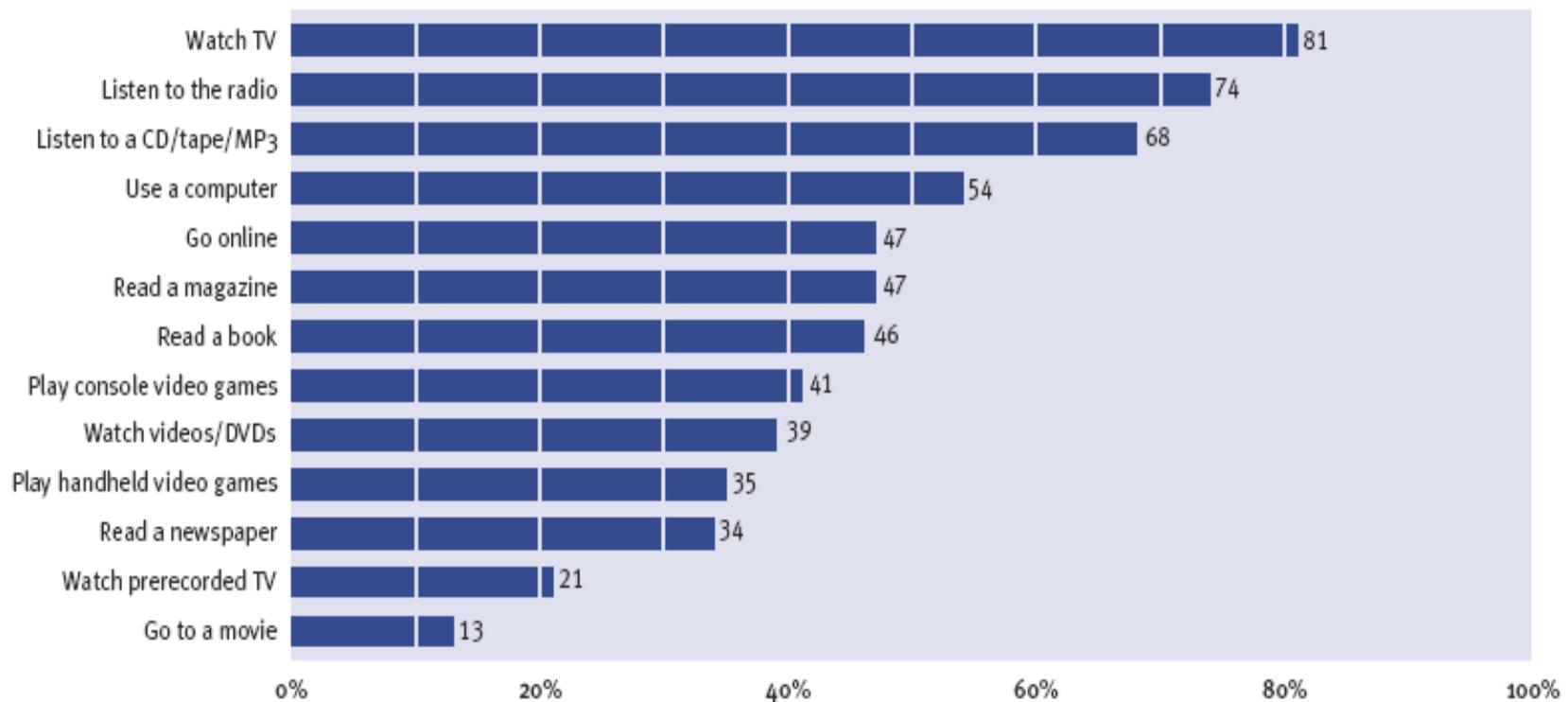
Different youth?



¿Sequential? Multi-task?

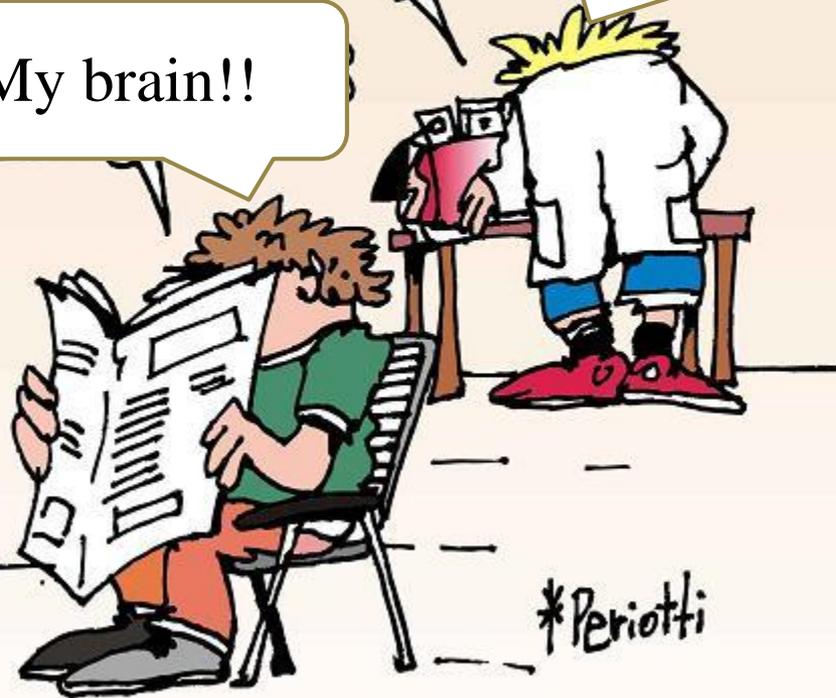
Which Media Young People Use

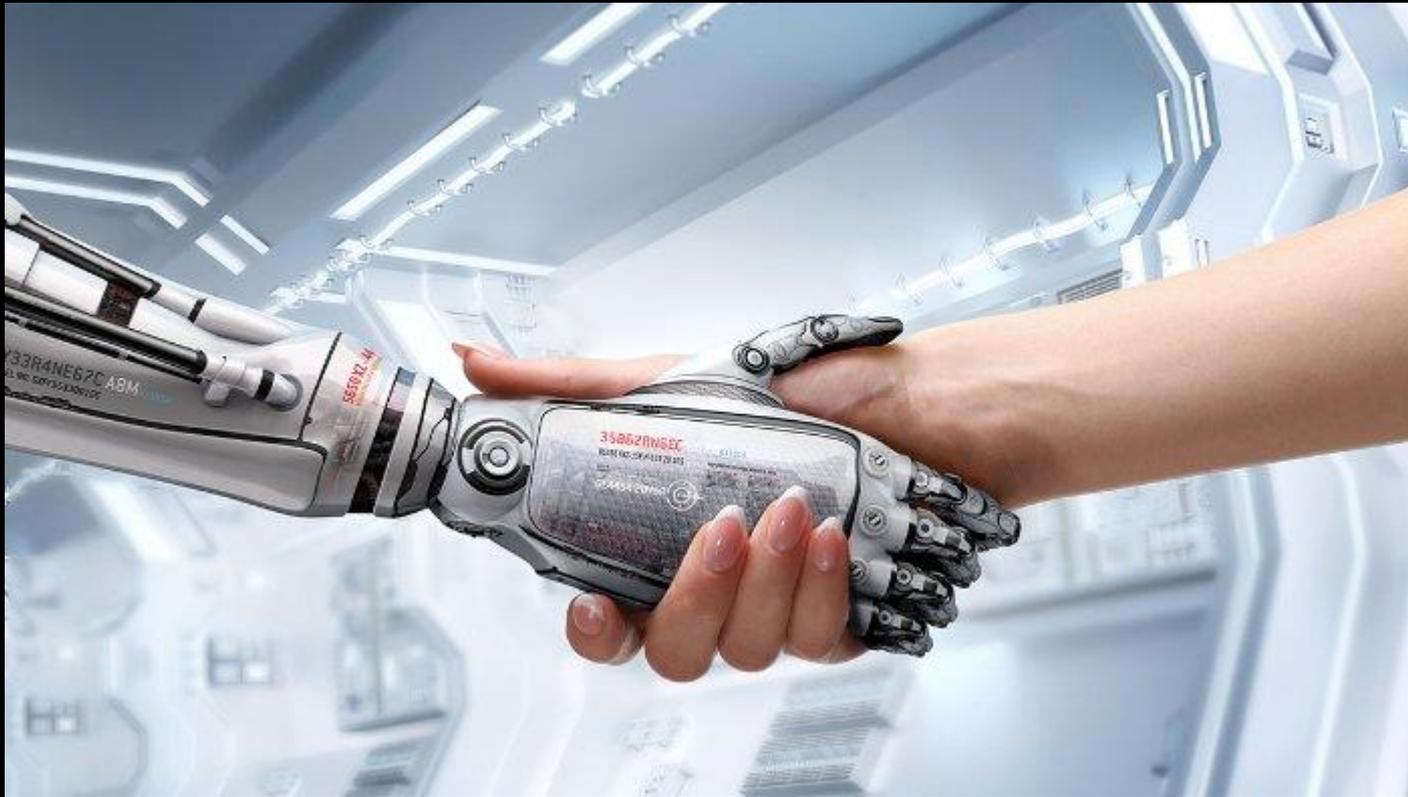
In a typical day, percentage of 8- to 18-year-olds who...



I have a netbook, MP3
Players, flashdrive, IPAD...
Dad, what did you use in
school when you were
student?

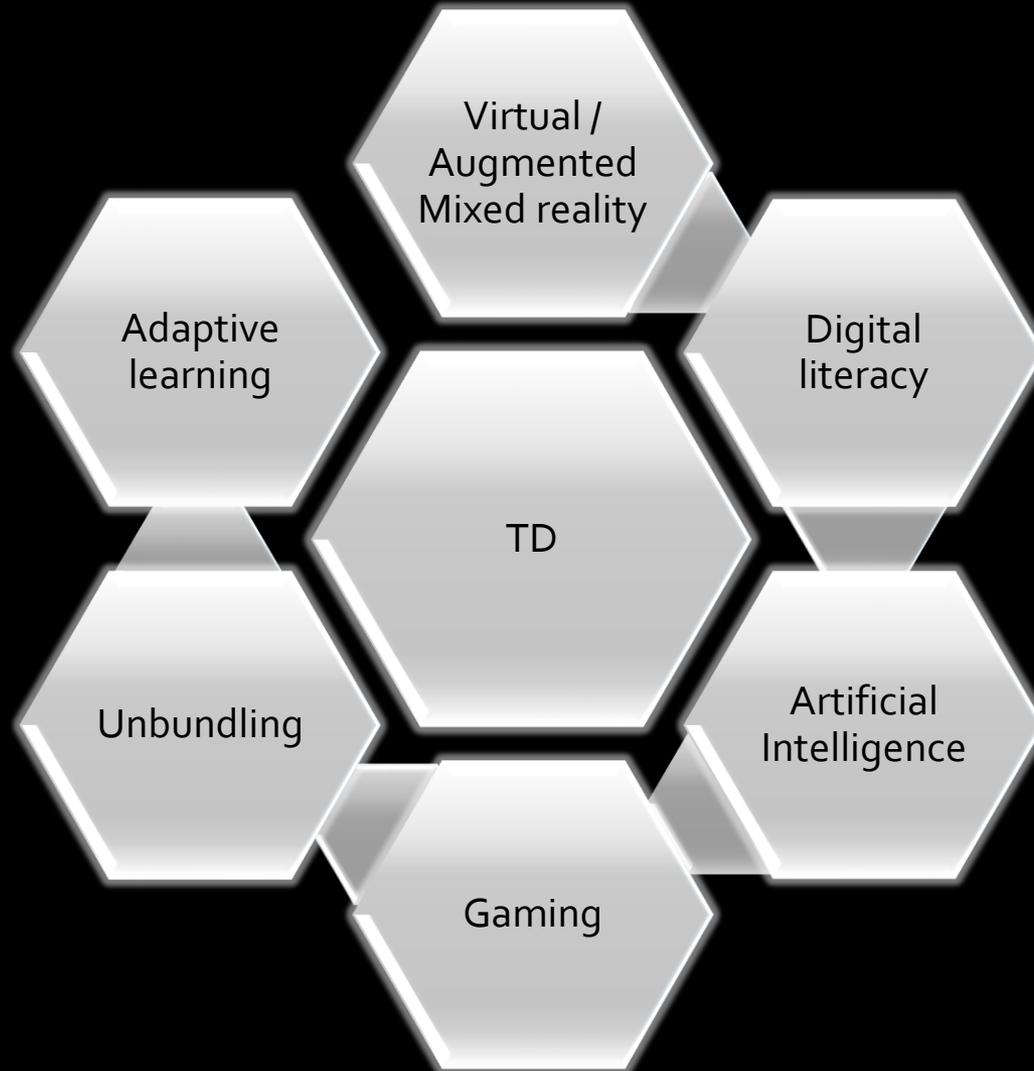
My brain!!





A possible future? Reality or science fiction?

Technological developments: Direct impact on education



Some global trends in curriculum innovation

	General global trends	USA
Recognition of previous learning	Increased acceptance. NQF	
Flexibility in academic subjects	General Education	
Easier transition pathways between levels and institutions	Articulation arrangements	
Competency-based portfolio	NQF	
Blended teaching-learning	MOOCs	
Experiential & service learning	Co-Op programs	
Internationalization	+ 2 nd language and increased student mobility + Internationalization "at home"	
Academic workload	Significant "compression"	

Governments must act..

...But national level changes
are not sufficient...

... Higher Education Institutions
need to embrace the change
themselves.

Higher education is data rich,



but information poor.

LEARN MORE AT

HigherEdFacts.org

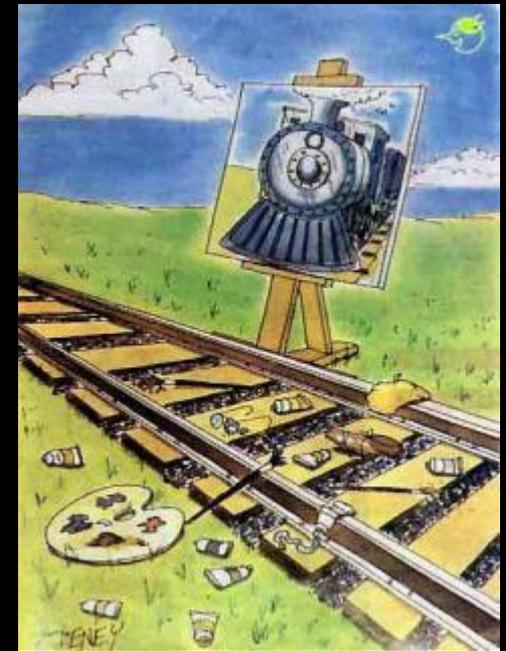
The Italian University in 1350



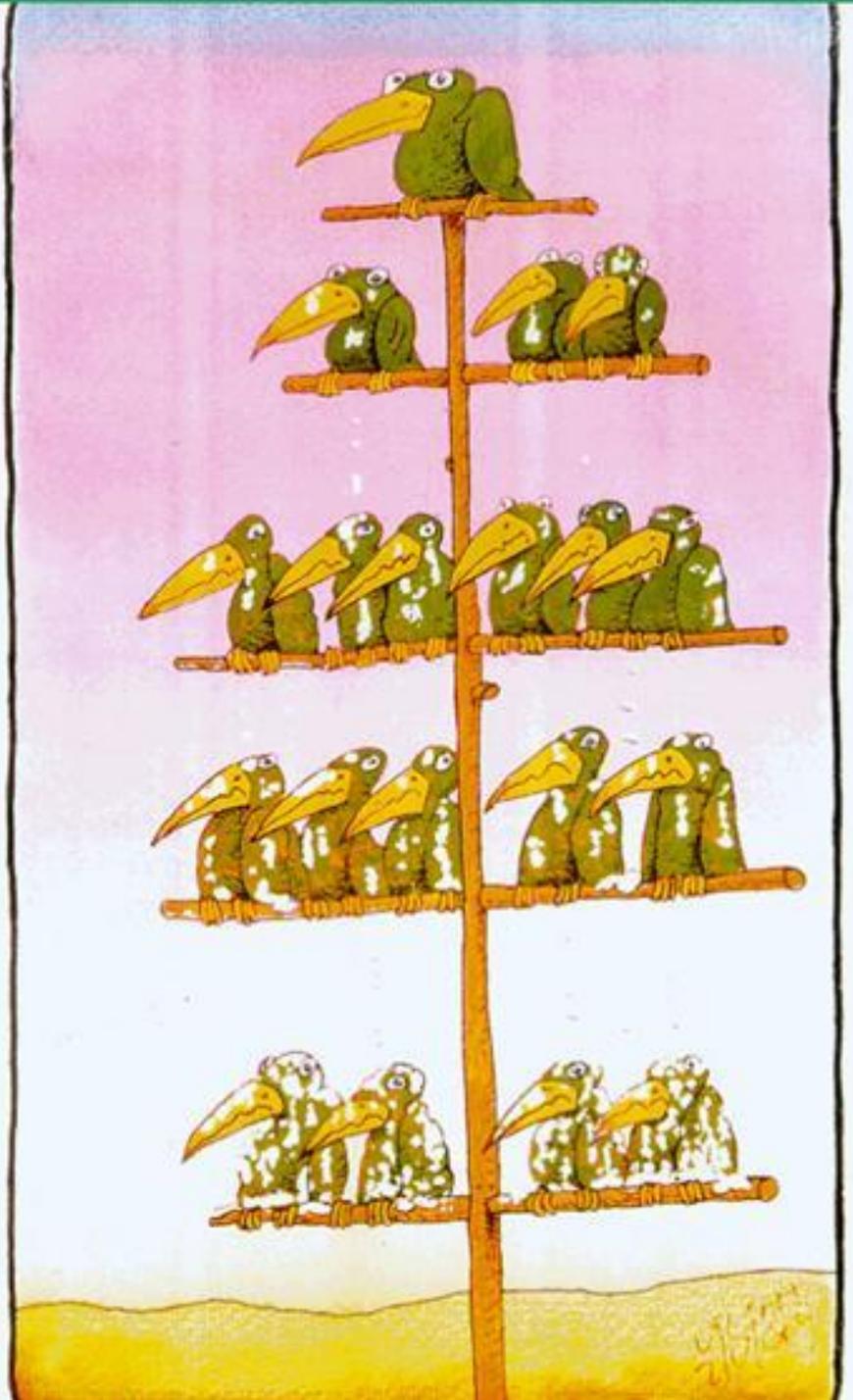
...and today's universities

The art of ambiguity

Continuing doing the same,
but waiting
different results



Who is responsible?



“Higher education is the only business that holds a formal ceremony to get rid of its clients”



Elliot Masie, President - The Masie Center

A paradox



Higher education institutions are the best laboratory for social change

...but they have a tendency to inhibit their innovation capacity

A simple formula: More and better education

**...but what type of
education?**

The professional of the future



- In the future, work will be based on the principle of "adjustment": intelligent individuals able to combine education, interests and skills in order to become a sort of unipersonal multifunctional team.
- Success will depend on the ability to "adjust": to creatively develop or modify skills and knowledge

Graduates required in today's world

***Able to
work in
teams***

***Able to adapt
to changing
multicultural
environments***

***Global
awareness and
local
consciousness***

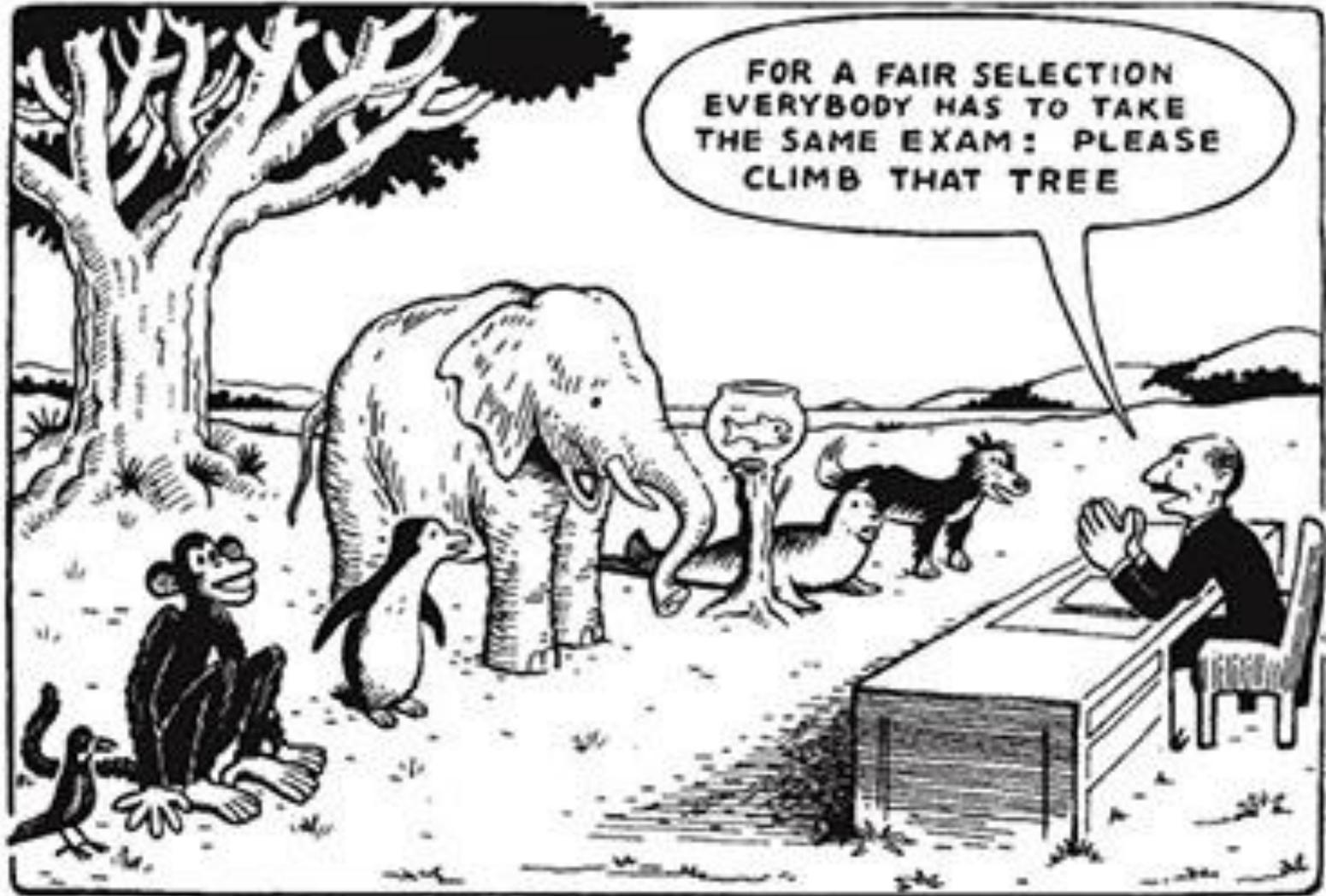
***Fluency in
at least a
second
language***

***Ability to
communicate
and to use ITC***

***"Have
learned to
keep
learning"***

Technical Skills

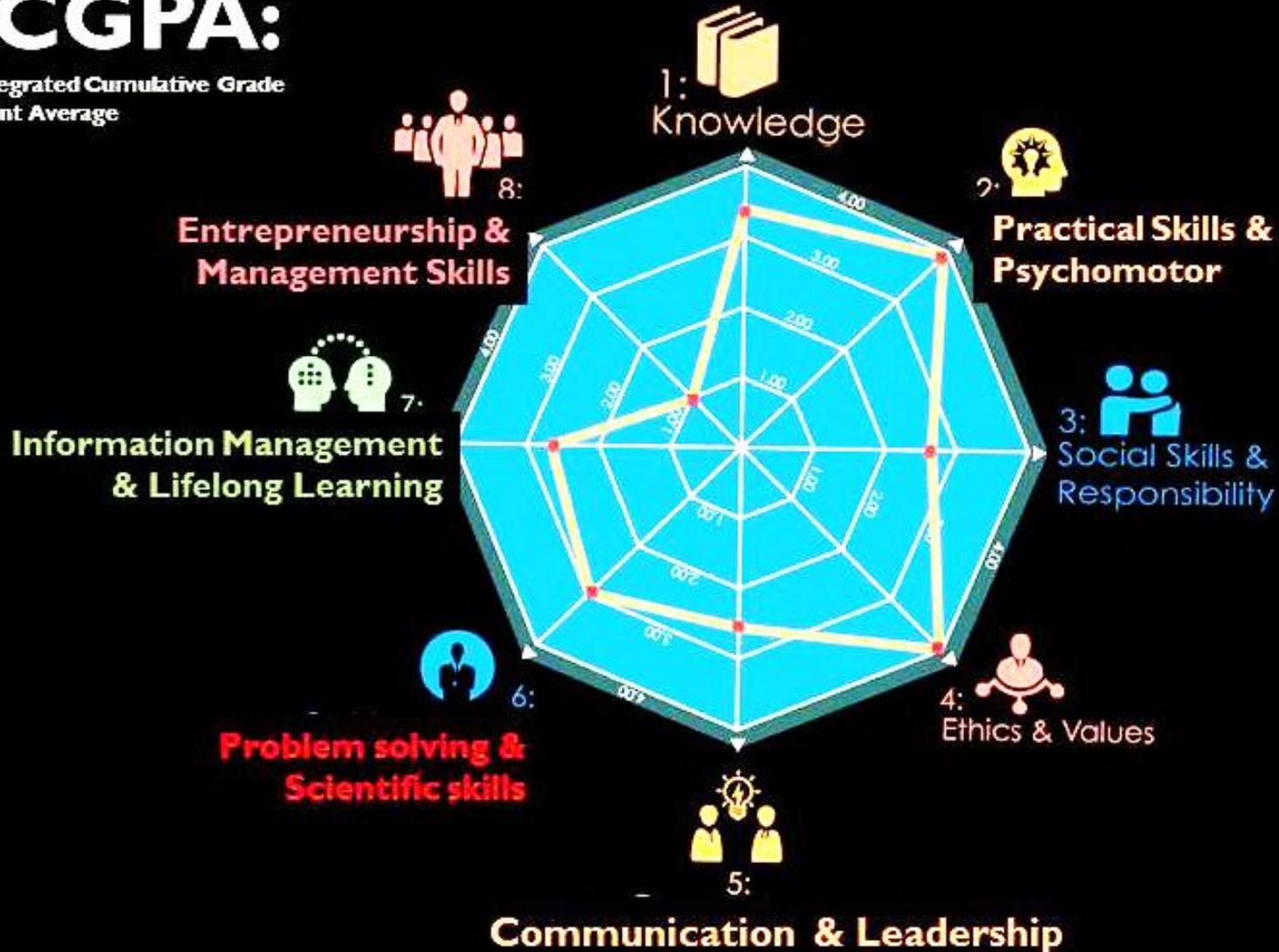
Are we measuring learning properly?



The case of Malaysia

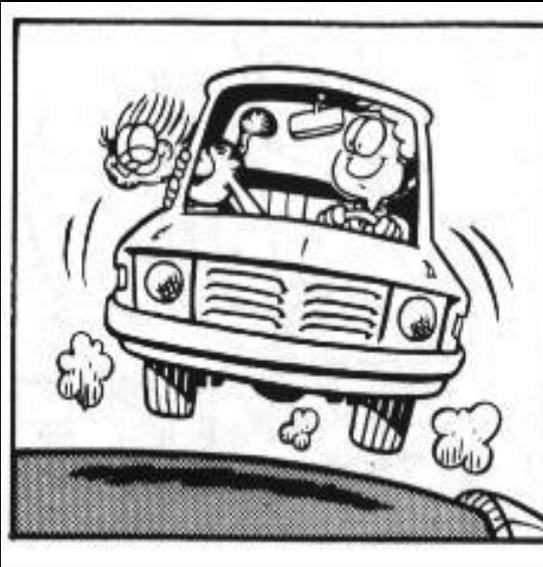
iCGPA:

Integrated Cumulative Grade Point Average



There is no magic formula...

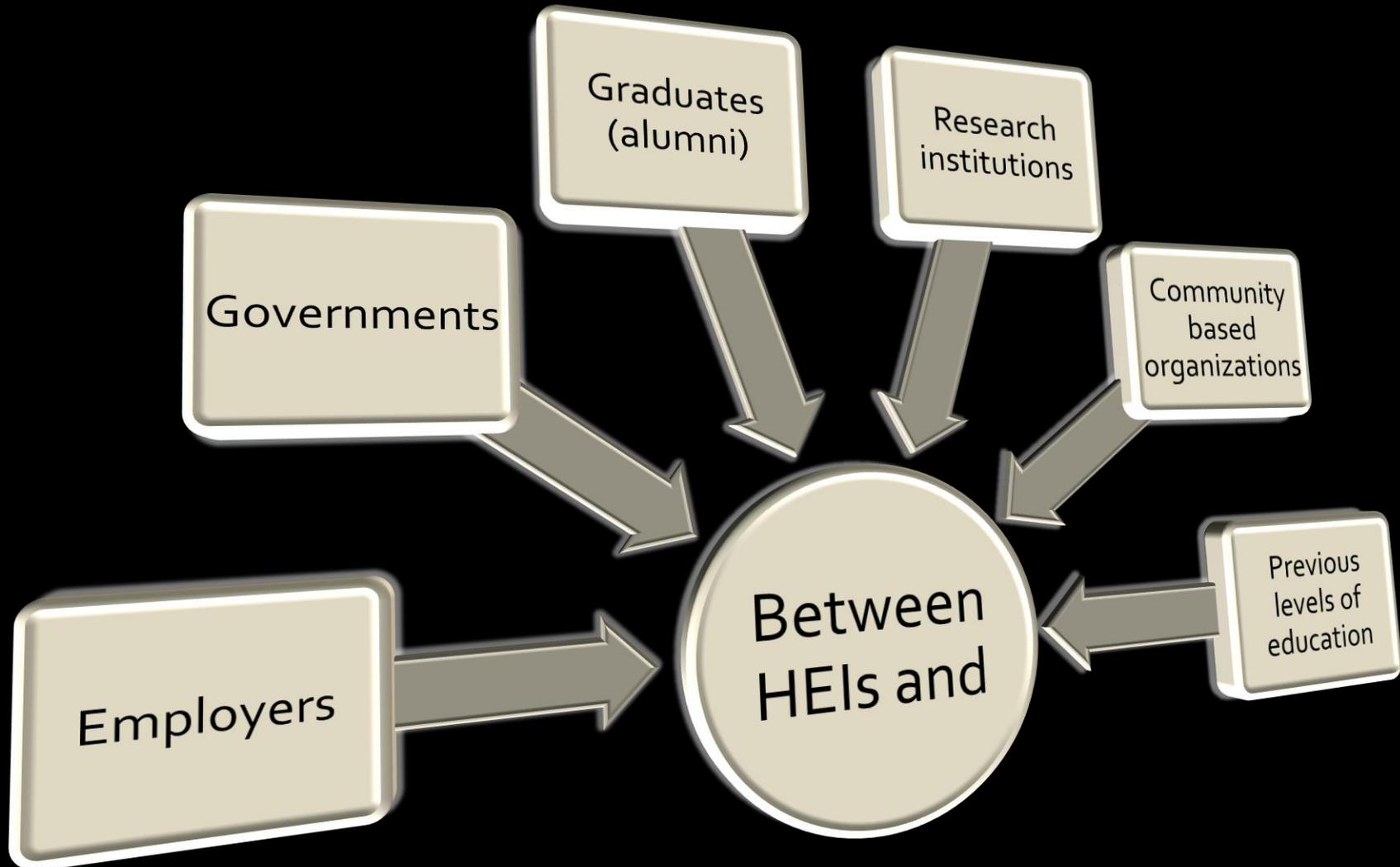
- What it may work in one case



...it is not necessarily the best solution in other cases

Higher education does not always work as a system of connected actors.

Some disconnects



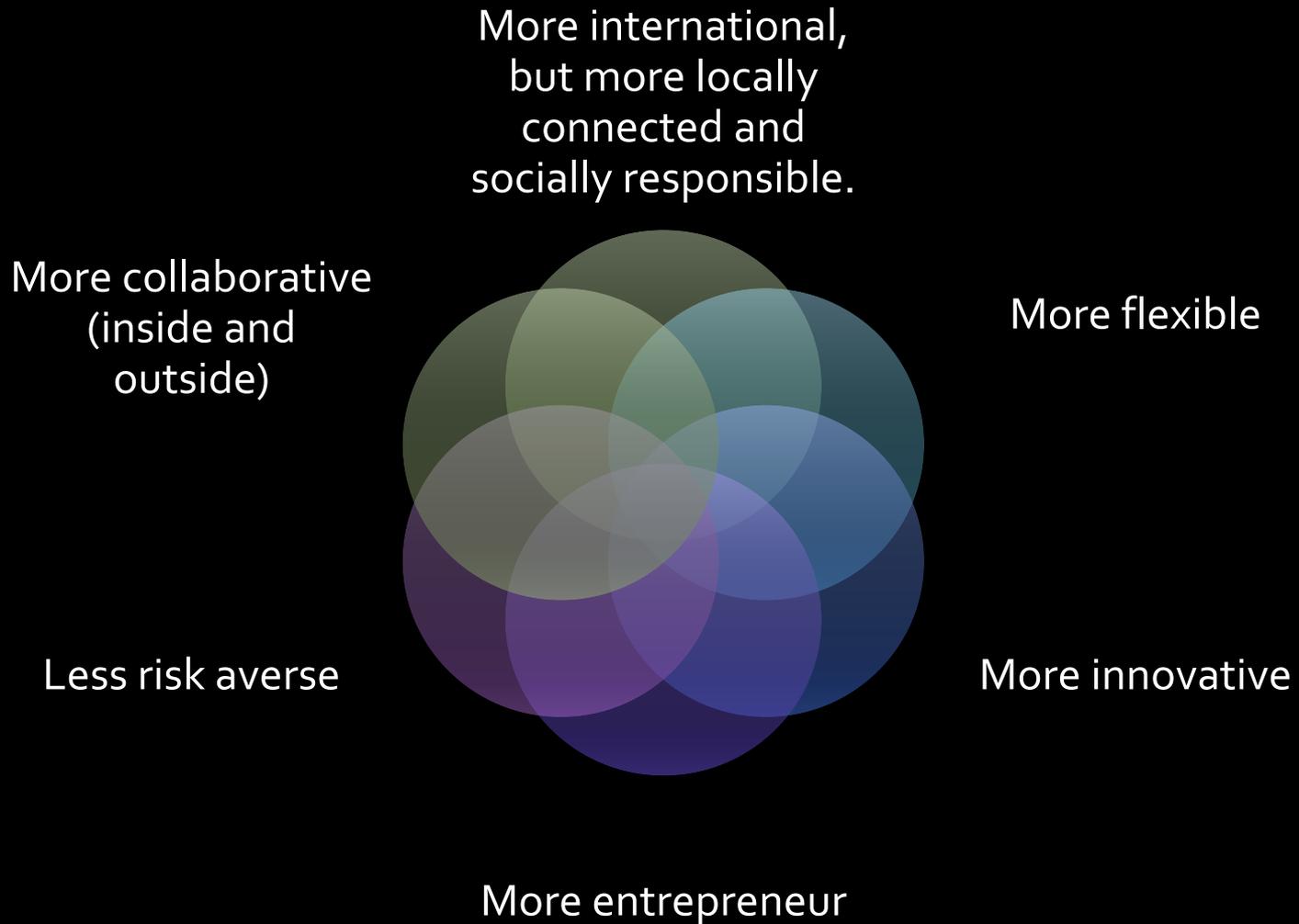
Other Disconnects



Among higher
education
institutions

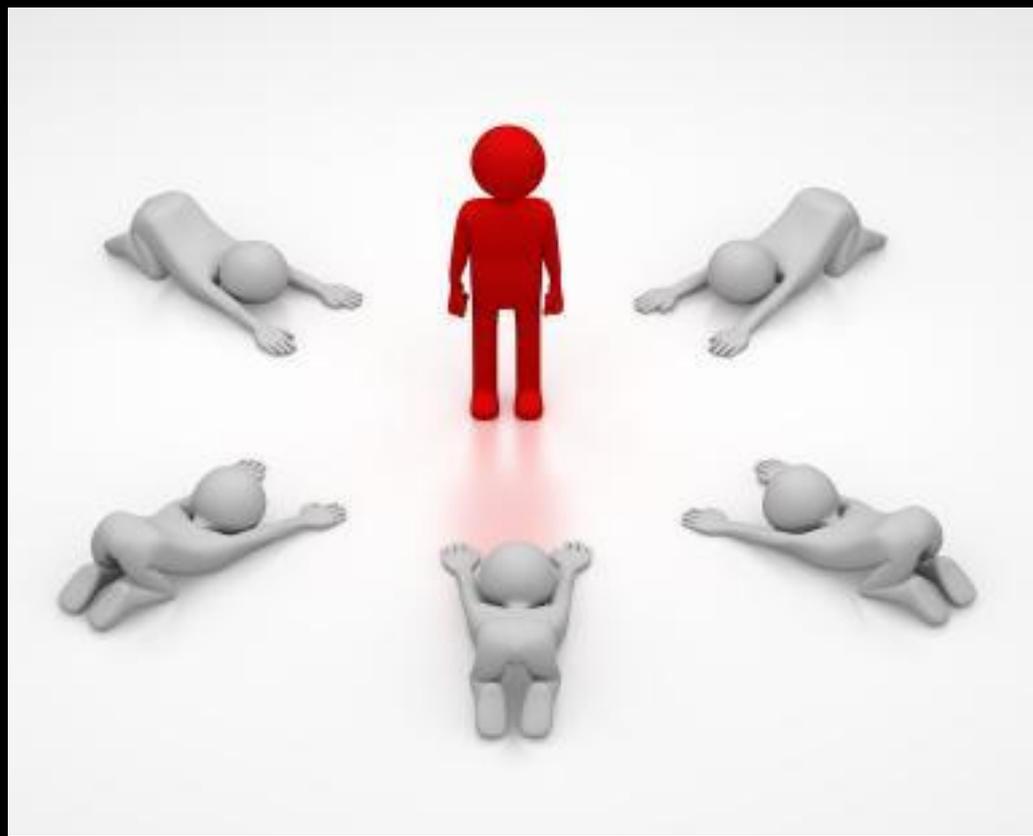
Inside higher
education
institutions

Some Elements for HEIs



The importance of collaboration







Golden key: Everybody's contribution could make a big difference

All the Windows are frozen again!





“ The trouble with our times is that
the future is not what it used to be ”

Paul Valéry



Francisco Marmolejo
Global Lead of Tertiary Education and Lead Education Specialist, India
The World Bank
Tel. +91-11-41479384

Email: fmarmolejo@worldbank.org
<http://www.worldbank.org/education/tertiary>

