Innovative Approaches to Teaching and Learning in Higher Education: The Role of Digital technologies in Preparing Students for Lifelong Learning and Successful Careers

Mariana Pãtru, UNESCO
Evgueni Khvilon, MSPU, Russia

UNESCO

United Nations
Educational, Scientific and
Cultural Organization

"Today's knowledge societies require talented, skilled and competitive workforces. This calls for robust but also flexible education systems, including higher education, capable of adjusting to meet new expectations and to promote learning that is relevant, accessible and innovative."

Irina Bokova, Director-General of UNESCO, *Visions for education in the new digital era*

UNESCO: Mission and Relevance in the 21st century

Global Trends and Challenges

Access, Equity and Quality in Higher Education

The Future of Education Agenda

File   Edit   View   Favorites   Tools   Help

⭐ 🅶 gmail Email from Google   🆂 Original Drivers and Appli...   🅔 Sony Download VAIO Dri...   🅔 Suggested Sites ▾   🅔 Get more Add-ons ▾

English Français Español Русский العربية 中文

Google™ Custom Search   Search

UNESCO.org   Member States   Staff

70 UNESCO
Anniversary

Find out more   Go to UNESCO website

UNESCO's Roadmap 2014-2021

▸ **Serving as a laboratory of ideas and generating innovative proposals and policy advice**

▸ **Developing and reinforcing the global agenda through policy analysis, monitoring and benchmarking**

▸ **Setting norms and standards and supporting and monitoring their implementation**

▸ **Strengthening international and regional cooperation and fostering alliances, intellectual cooperation, knowledge sharing and operational partnerships**

Global Trends and Challenges in the Digital Age
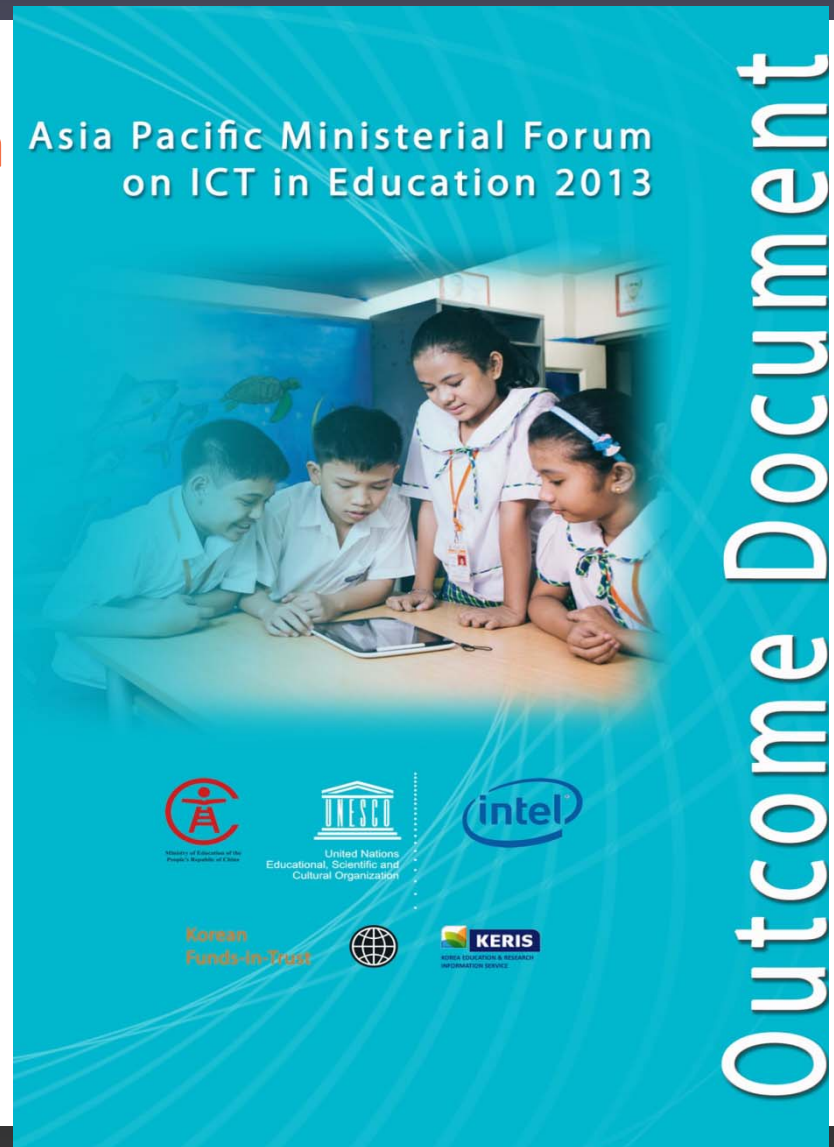
Drivers of Change

▸ **Democratization of knowledge and access will drive a global 'education revolution'**

▸ **Increased global competition for domestic and international student markets**

▸ **Digital technologies**

▸ **Global mobility**

▸ **Integration with industry**

(*University of the Future:* http://www.ey.com/Publication/vwLUAssets/University_of_the_future/$FILE/University_of_the_future_2012.pdf)

Policy Level Exchange and Dialogue on ICT in Education

- **Fostering institutional change with policy interventions**

- **Scaling up teachers' professional development to support students' 21st century skills**

- **Promoting exchanges among different education stakeholders at all levels for up-scaling**

- **Mainstreaming school innovations**

- **Continue to think beyond borders**

Asia Pacific Ministerial Forum on ICT in Education 2013

Korean Funds-in-Trust

KERIS
KOREA EDUCATION & RESEARCH
INFORMATION SERVICE

United Nations
Educational, Scientific and
Cultural Organization

Ministry of Education of the
People's Republic of China

intel

Outcome Document

The World of Higher Education Is Changing Quickly and Dramatically

- ‣ **Institutions are courting new student populations**

- ‣ **Creative financing is needed to balance shrinking budgets**

- ‣ **Online learning is the new frontier**

http://www.economistinsights.com/sites/default/files/EIU_AcademicPartns_WEBr1.pdf

The Economist — Intelligence Unit

Higher education in the 21st century: Meeting real-world demands

An Economist Intelligence Unit research programme sponsored by Academic Partnerships

ACADEMIC PARTNERSHIPS

2014 Horizon Report: Higher Education

Important Developments in Educational Technology for Higher Education

One year or less	Flipped Classroom
	Learning Analytics
Two to three years	3D Printing
	Games and Gamification
Four to five years	Quantified Self
	Virtual Assistants

Significant Challenges
2014 NMC Horizon Report

▸ **Low digital fluency of faculty**

▸ **Relative lack of rewards for teaching**

▸ **Competition from new models of education (MOOCs)**

▸ **Scaling teaching innovations**

▸ **Expanding access**

▸ **Keeping education relevant**

EC High Level Task Force
on the Modernisation of
Higher Education

More information:

http://ec.europa.eu/education/librar y/reports/modernisation-universities_en.pdf

High Level Group on the
Modernisation
of Higher Education

REPORT TO THE EUROPEAN COMMISSION ON
**New modes of learning and
teaching in higher education**

OCTOBER 2014

Harnessing new modes of learning and teaching

‣ **The higher education landscape is undergoing significant change as a result of technological innovations**

‣ **These new technologies have the potential to enhance the quality and reach of higher education**

‣ **Online technologies provide opportunities to learn anywhere and anytime (essential for non-traditional learners, lifelong learning and continuous professional development)**

‣ **Digital technologies can underpin national efforts to drive greater collaboration between institutions, combining expertise and delivering greater critical mass**

EADTU
CONFERENCE

Lifelong
Learning
Programme

HOME   SCOPE & THEMES   PROGRAMME   VENUE   DOCUMENTS   PREVIOUS CONFERENCE

The Open and Flexible Higher Education Conference 2014

"New Technologies and the future of Teaching and Learning"

23-24 October, Krakow

EADTU's annual Conference 2014 is hosted by AGH University of Science and Technology.

Conference live feed →
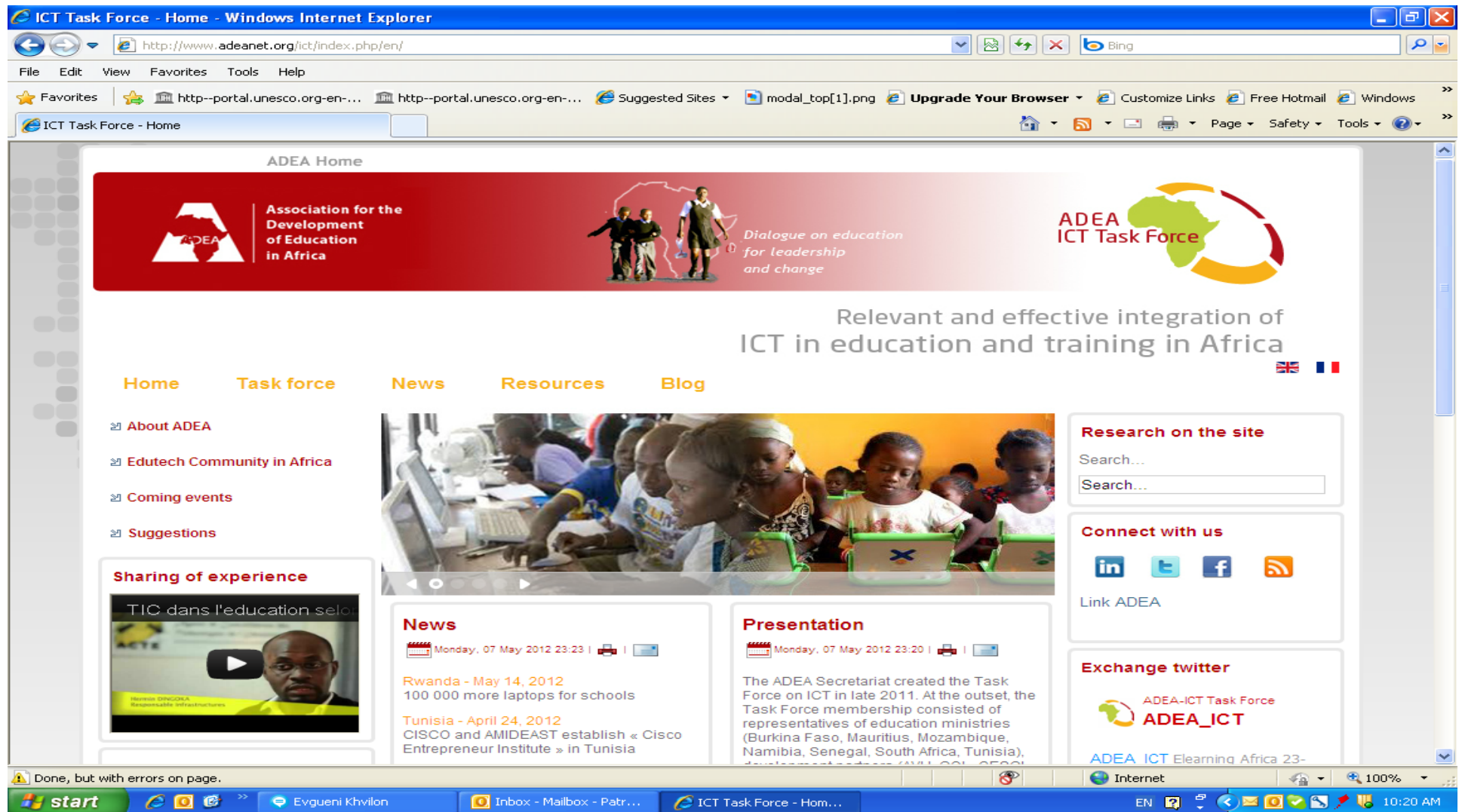
"EADTU

REGIST

ab

EADTU

abstract

KROWODRZA

aleja Kij

Prąd

Pa
Kl

Piastowska

Reymonta

Teatr Bagatela

Błonia   STAR
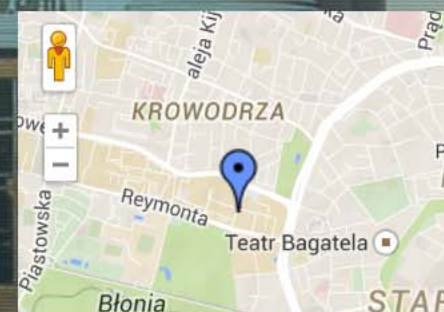
Scaling Up Good Practices Through Partnerships and Networking

Priority Africa: Improving Access, Equity and Quality of African Education with ICT

# OECD: The State of Higher Education 2013

Higher education is increasingly relevant due to the shifting demand in skills

EXECUTIVE SUMMARY

The State of
Higher Education
2013

OECD Higher Education Programme (IMHE)

OECD
BETTER POLICIES FOR BETTER LIVES
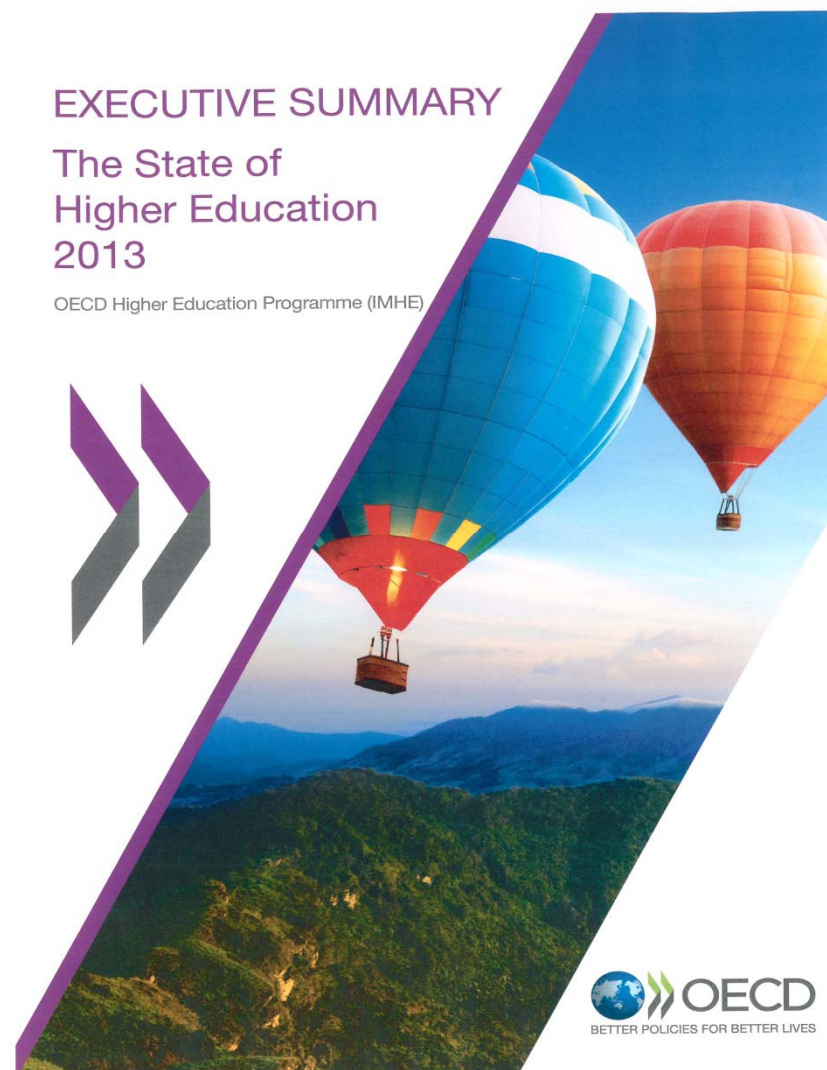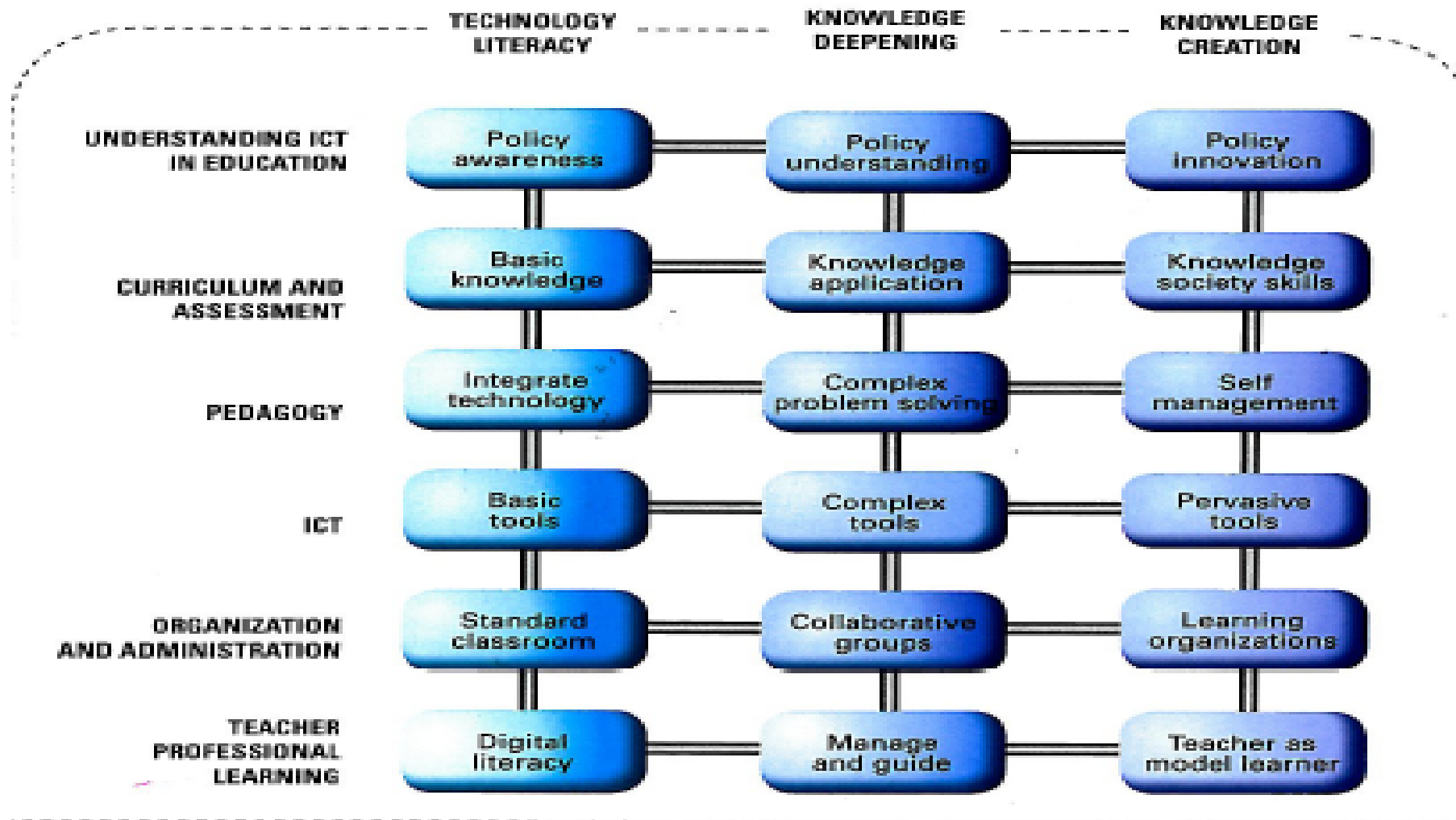
Enhancing Teachers' Competencies
to Use Digital Technologies

Supporting countries to improve the quality and impact of teaching
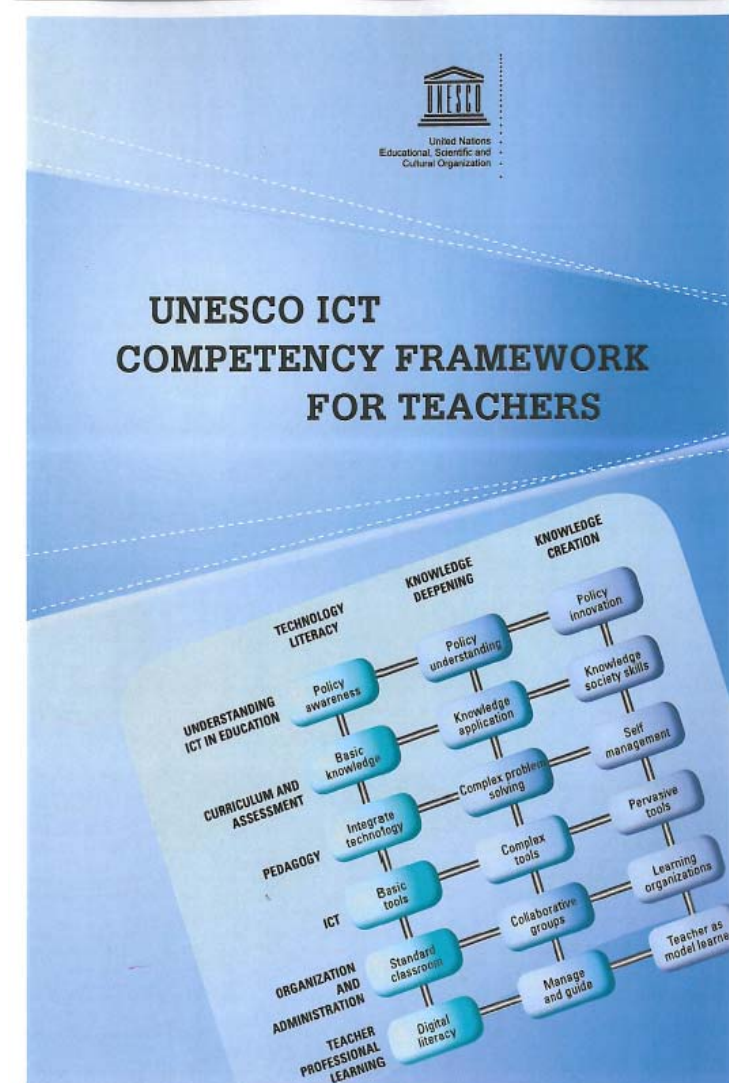
Building a Digital Age Teaching Profession
(http://unesdoc.unesco.org/images/0021/002134/213475E.pdf)

Canada: Learning and Technology Policy Framework

2013

Learning and Technology Policy Framework

Alberta Government

The Building Alberta Plan

Canada: Learning and Technology Policy Framework

Five Policy Directions form the core of the framework. They are grounded in the *Inspiring Education* vision.

Policy Direction 1:
Student-Centred Learning
Technology is used to support student-centred, personalized, authentic learning for all students.

Policy Direction 2:
Research and Innovation
Teachers, administrators and other education professionals read, review, participate in, share and apply research and evidence-based practices to sustain and advance innovation in education.

Policy Direction 3:
Professional Learning
Teachers, administrators and other education professionals develop, maintain and apply the knowledge, skills and attributes that enable them to use technology effectively, efficiently and innovatively in support of learning and teaching.

Policy Direction 4:
Leadership
Education leaders establish policy and governance structures, cultivate innovation and build capacity within the system to leverage technology in support of student-centred learning and system efficiencies.

Policy Direction 5:
Access, Infrastructure and Digital Learning Environments
All students, teachers, administrators and other education professionals have access to appropriate devices, reliable infrastructure, high-speed networks and digital learning environments.

5

LEARNING AND TECHNOLOGY POLICY FRAMEWORK 2013

Alberta
Government
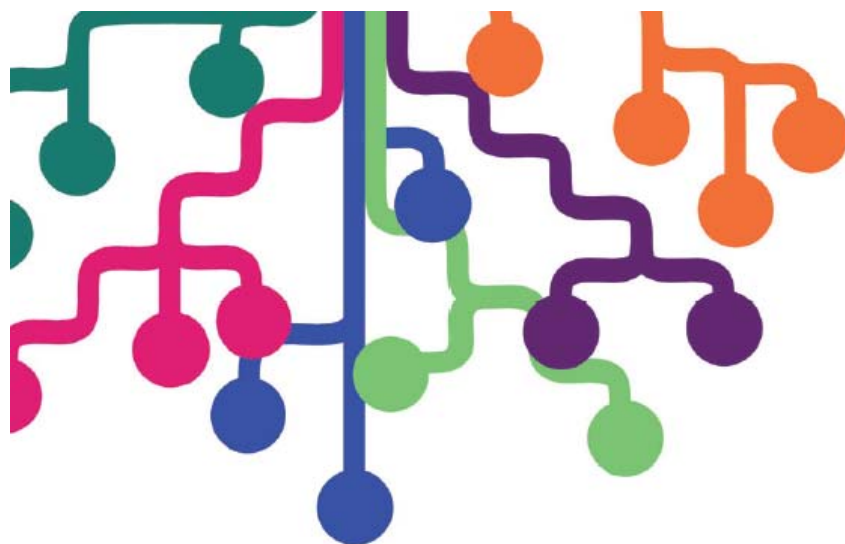
Introducing
Tablets in Schools:

The Acer-European Schoolnet
Tablet Pilot

Highlights

‣ **Majority of teachers had more than 10 years of professional experience**

‣ **Majority of teachers had at least 4 years' experience using ICT to support teaching**

‣ **Half of the participating teachers had used a tablet in the 6 months prior to the pilot**

‣ **Teachers feel confident to use ICT for lesson planning and delivery but less so for professional development, lesson follow-up and assessment**

‣ **Teachers are competent to use the Internet and general ICT-based applications but fewer feel competent in the use of VLEs and social networking tools**
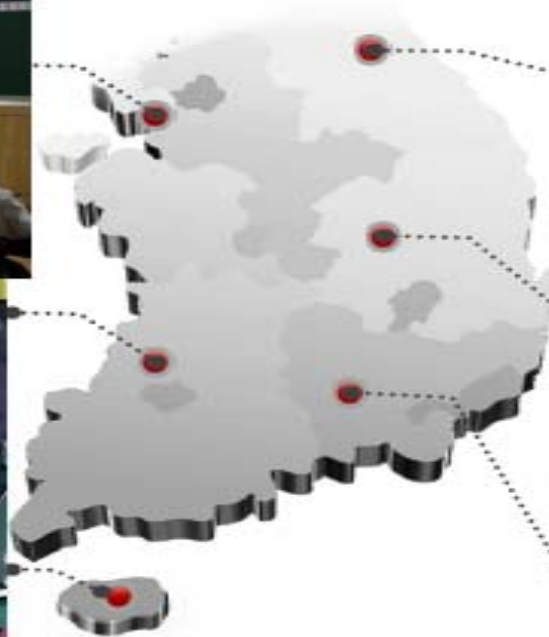
Korea: Smart Education

Singapore: A Teacher Education Model for the 21st Century
(http://www.nie.edu.sg/files/spcs/TE21_Executive%20Summary_101109.pdf)
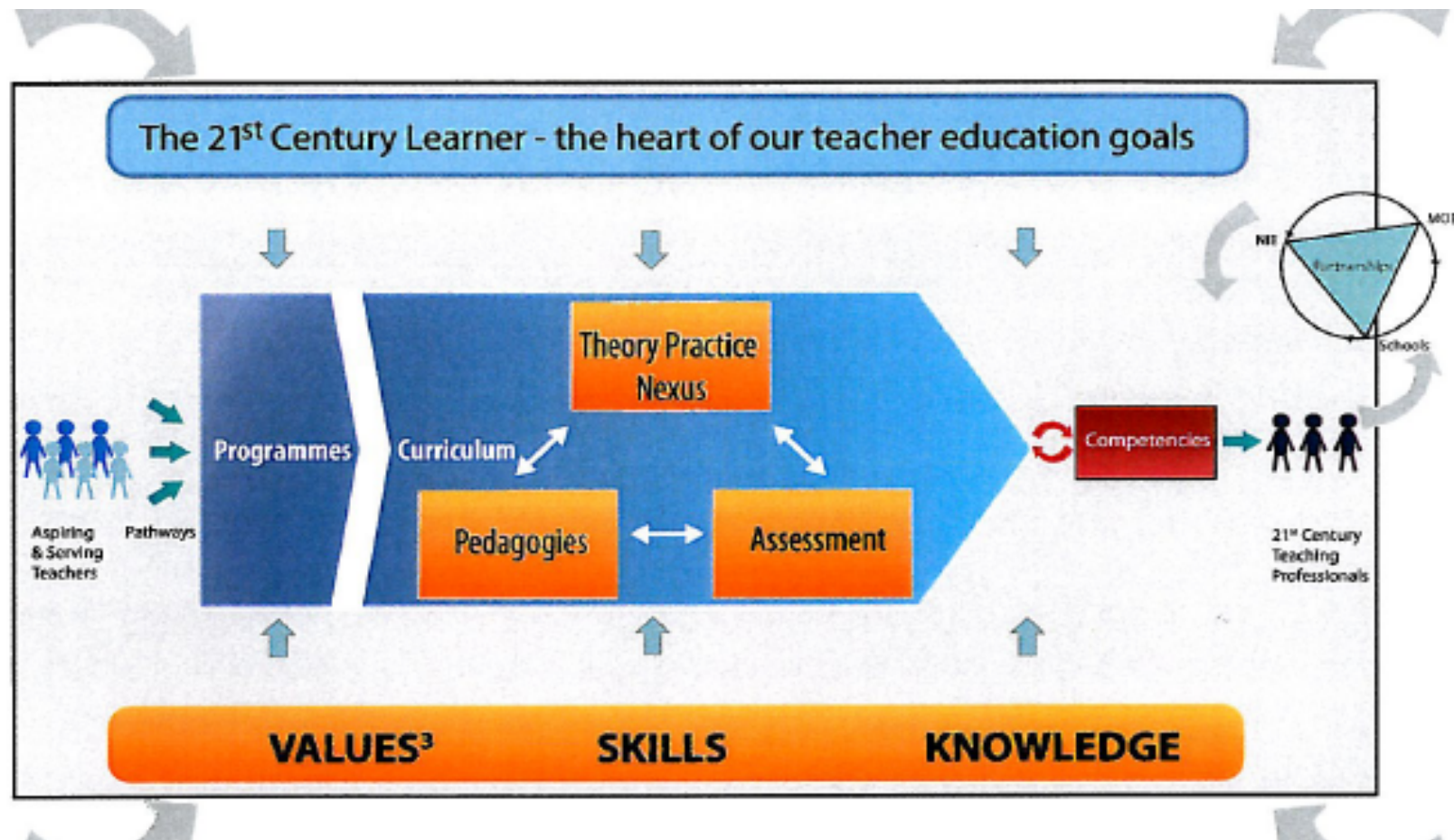
Broadband Commission for Digital Development
Working Group on Education
24 February 2013, UNESCO Headquarters, Paris

TECHNOLOGY,
BROADBAND AND EDUCATION
ADVANCING THE EDUCATION FOR ALL AGENDA

Continuous High Growth of Mobile Broadband

‣ **Almost 7 billion mobile cellular subscriptions**

‣ **Number of mobile-broadband subscriptions reaches 2.3 billion with 55% of them in developing countries**

‣ **Globally, mobile-broadband penetration will reach 32% by end 2014 (Africa leads)**

‣ **Fixed-broadband growth is slowing down in developing countries**

‣ **Almost 3 billion people – 40% of the world's population are using the Internet (but 4 billion not yet using)**

ITU, ICT Facts and Figures 2014
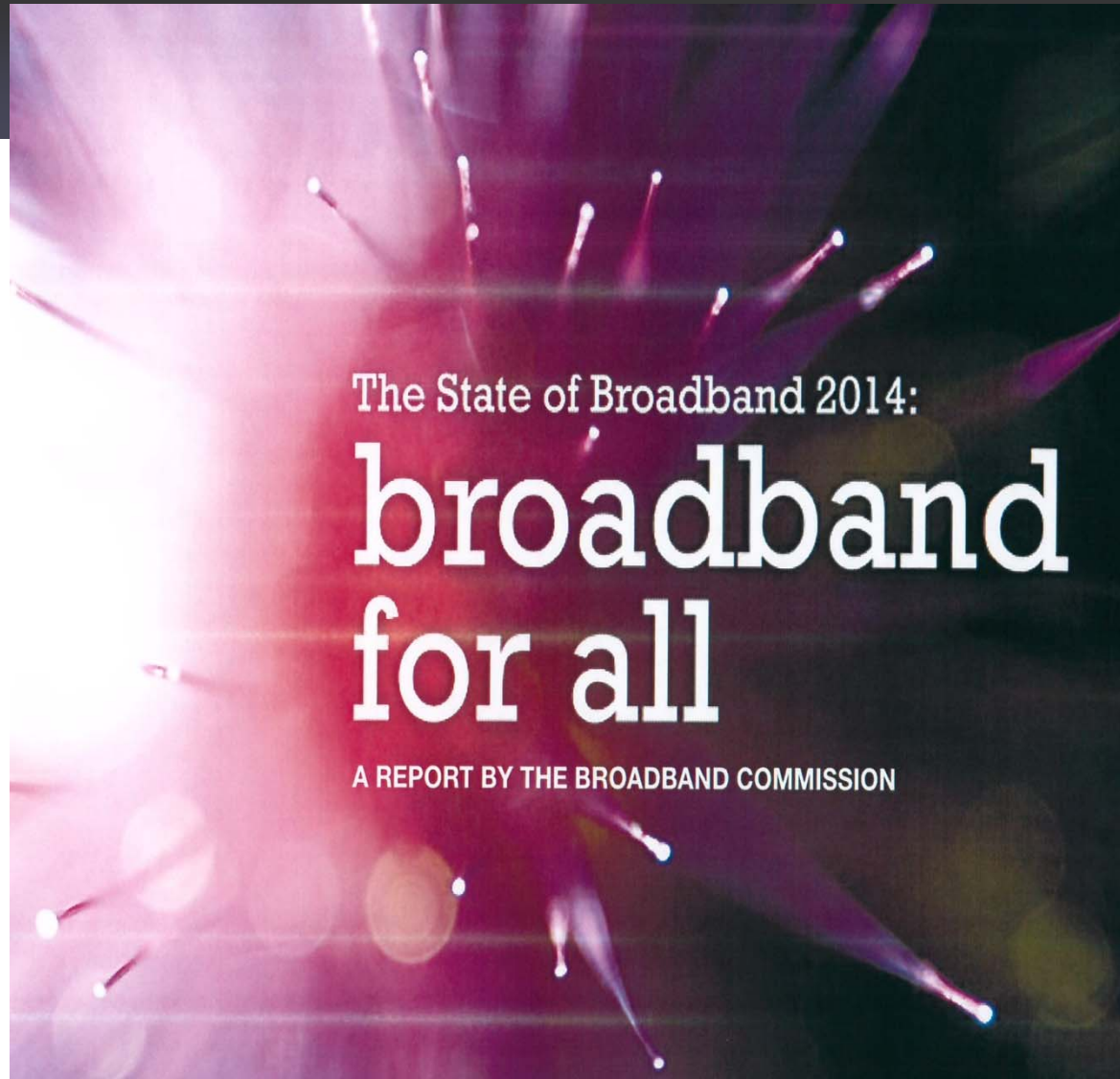
Half of the world will be online by 2017

WHY BROADBAND?

Fuels sustainable development

Accelerates progress towards MDG & EFA Goals

Enhances learning opportunities

Ameliorates digital and developmental divides

Widens access to quality education

Empowers citizens with knowledge and skills

Facilitates the exchange of information
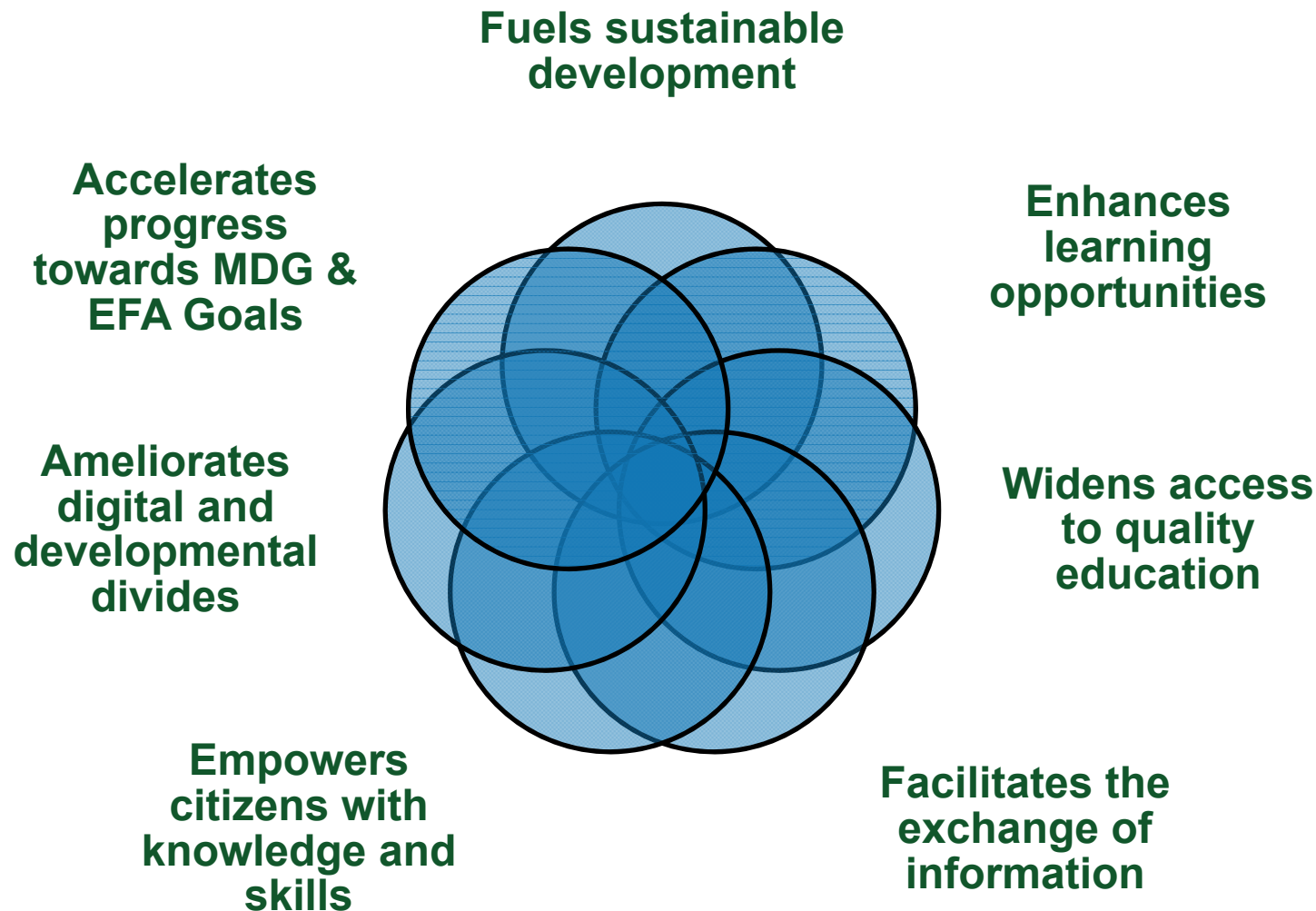
THE POLICY AGENDA

Countries increasingly recognize broadband and ICT as having educational value.

HOWEVER,
more initiatives and policy directives are needed to indicate how education systems can best leverage technology.

3 out of 4 countries have education policies that mention broadband internet as a means of improving teaching and learning.

KEY AREAS TO ADDRESS:

- Reconcile infrastructural deficits
- Train teachers to use new technologies to further student learning
- Promote the use broadband to accelerate and improve teacher training
- Develop and share of educational content with learners and educators
- Leverage technology to improve educational planning and management
- Evaluate and improve the effectiveness of ICT use in educational settings

KEY AREAS TO ADDRESS:

- Reconcile infrastructural deficits
- Train teachers to use new technologies to further student learning
- Promote the use broadband to accelerate and improve teacher training
- Develop and share of educational content with learners and educators
- Leverage technology to improve educational planning and management
- Evaluate and improve the effectiveness of ICT use in educational settings

LOOKING AHEAD

1. Increase access to technology and broadband
2. Incorporate technology and broadband into job training and continuing education
3. Teach ICT skills and digital literacy to all educators and learners
4. Promote mobile learning and OERs
5. Support the development of content adapted to local contexts and languages
6. Work to bridge the technological divide between countries

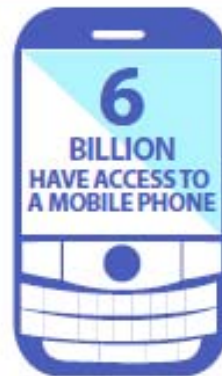# Mobile technology as a promising vehicle

BOOKS ARE SCARCE

MOST PEOPLE IN SUB-SAHARAN AFRICA DO NOT OWN A SINGLE BOOK

SCHOOLS IN POOR COUNTRIES RARELY PROVISION TEXTBOOKS

LIBRARY PER POPULATION RATIO

UNITED KINGDOM
1 : 15,000

NIGERIA
1 : 1,350,000

BUT MOBILE PHONES ARE EVERYWHERE

7 BILLION PEOPLE ON EARTH

4.5 BILLION HAVE ACCESS TO A TOILET

6 BILLION HAVE ACCESS TO A MOBILE PHONE

CELLULAR NETWORKS REACH **OVER 95%** OF THE WORLD'S POPULATION
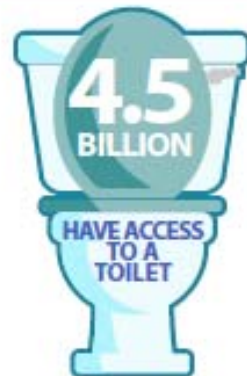
Mobile Learning Week 2015

MOBILE LEARNING WEEK

in partnership with UN WOMEN

Leveraging technology to empower women and girls

2015
Paris,
23–27 February

Monday, 23 February	Tuesday & Wednesday, 24–25 February	Thursday, 26 February	Friday, 27 February
WORKSHOPS	**SYMPOSIUM**	**POLICY FORUM**	**RESEARCH SEMINAR**
The workshops will be dedicated to hands-on training and interactive demonstrations of mobile learning content, technology and interventions.	The symposium will feature keynote speakers, expert panels and numerous breakout presentations. An exhibition will accompany the symposium, allowing various organizations opportunities to showcase work and share information.	The policy forum will bring together senior representatives from different countries to discuss how mobile learning can accelerate progress towards gender equality in education. The event will also explore how new educational technologies can contribute to post-2015 development priorities.	The research seminar will allow participants to share findings from investigations of mobile learning implementations. The seminar will also help improve communication between the research community and other stakeholder groups.

UNITWIN/UNESCO Chairs Programme

Chairs & Networks by domains:

Communication&Information 5%

Natural Sciences 35%

Culture 13%

Social and Human Sciences 22%

Education 25%

* By percentage

Natural Science | Education | Social & Human Science | Culture | Communication & Information
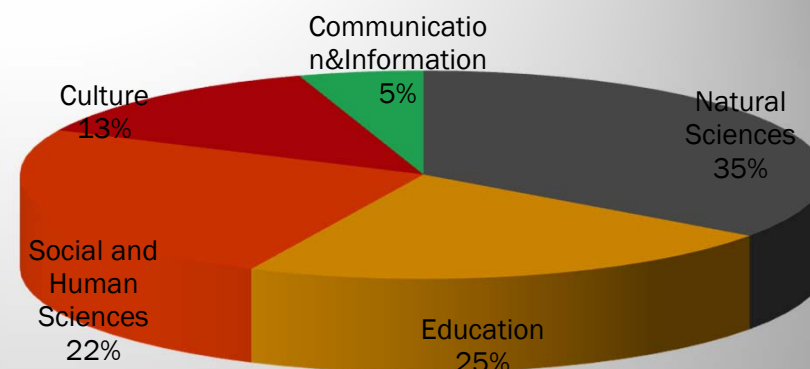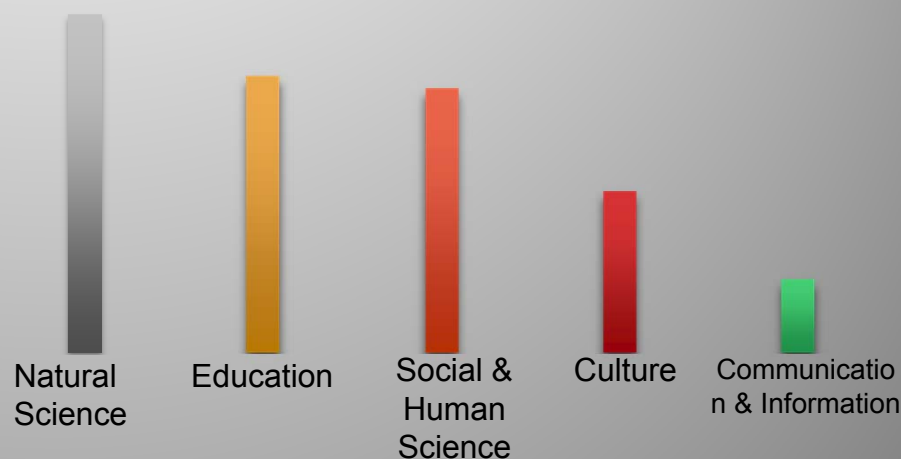
* By numbers

POST-2015 EDUCATION AGENDA:

ENSURING EQUITABLE QUALITY EDUCATION AND LIFELONG LEARNING FOR ALL BY 2030

(UNESCO, Position Paper on Education Post-2015 – http://unesdoc.unesco.org/images/0022/002273/227336E.pdf)

ARE UNIVERSITIES PREPARING STUDENTS FOR THE JOBS OF THE FUTURE?

Future jobs that don't exist today

Jobs before 2020

- **Augmented reality engineers**

- **Alternative currency bankers**

- **Global system architects**

- **Waste data managers**

- **Urban agriculturalists**

- **3D printing engineers**

- **Book-to-app converters**

- **Social education specialists**

(http://www.futuristspeaker.com/2011/11/55-jobs-of-the-future)

"THE ONLY CONSTANT THING IS CHANGE"

Heraclitus of Ephesus, Greek philosopher
(535-475 B.C.)

THANK YOU!

БЛАГОДАРЯ!

m.patru@unesco.org