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UNESCO International Workshop
"Re-designing Institutional Policies and Practices
to Enhance the Quality of Education through
Innovative Use of Digital Technologies"
14-16 June 2011, Sofia, Bulgaria

Information and Communication Technologies in Teacher Education: A Priority Area of UNESCO

Mariana Patru
Teacher Policy and Development Section
Division for Planning and Development of Education Systems
UNESCO HQ Paris

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Preamble

"However difficult, governments must protect education budgets and invest in what makes education work - creating stimulating learning environments, providing incentives for quality teaching, reaching out to the vulnerable and adapting curricula and pedagogies to a fast-changing world. The better the learning outcomes, the more attractive education becomes."

Address by Irina Bokova, Director General of UNESCO, to the Education World Forum, 11 January 2011, London

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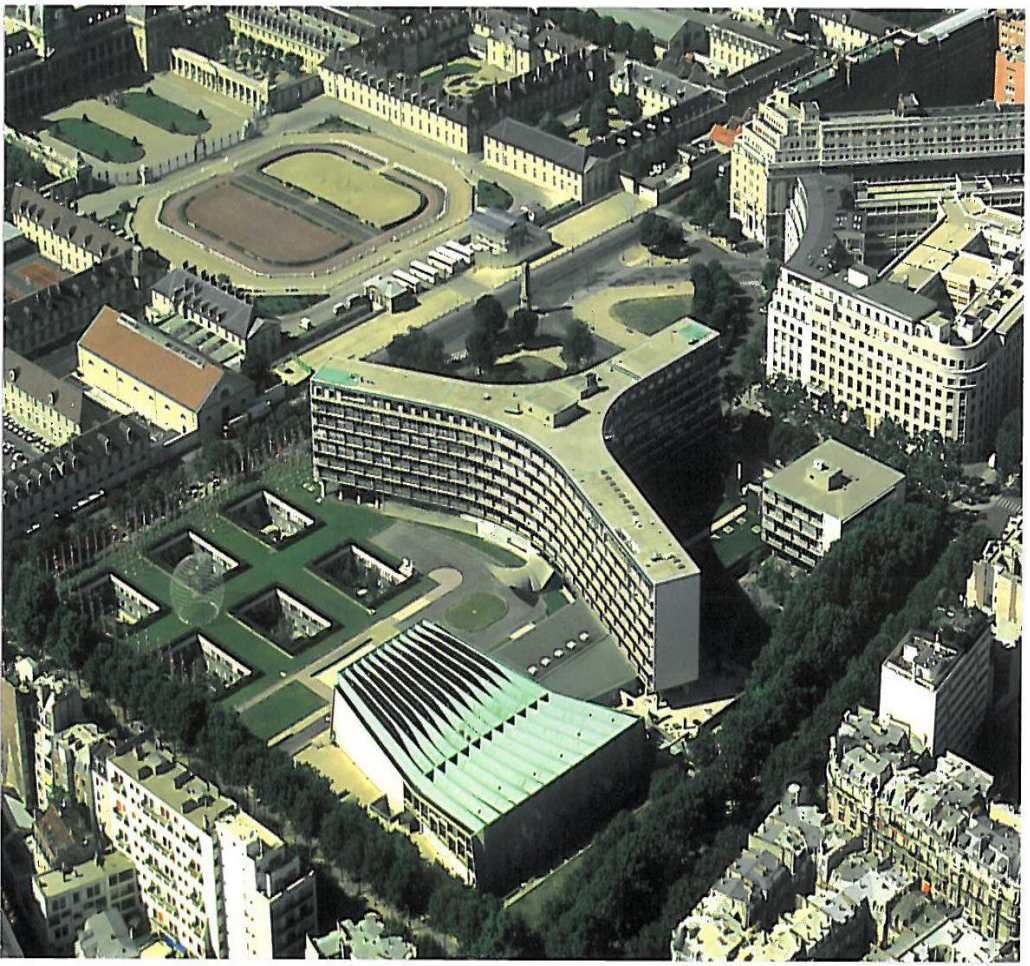
UNESCO
Its Five Functions



- Laboratory of ideas
- Standard-setter
- Clearing house
- Capacity builder
- Catalyst for international co-operation

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How Does UNESCO Work?

- Analysis of trends, challenges, needs and results through coordination and partnership
- Implementation of activities in cooperation with national authorities at policy- and decision-making level, intergovernmental organizations, non-governmental organizations, the private sector
- ICT in education:
  - **IGOs**: OECD, The World Bank, The European Commission, The Commonwealth of Learning, International Telecommunications Union
  - **NGOs**: International Federation for Information Processing (IFIP); Society for Information Technology and Teacher Education (SITE); European Association of Distance Teaching Universities (EADTU); European Distance and E-learning Network (EDEN); International Council for Open and Distance Learning (ICDE); etc.

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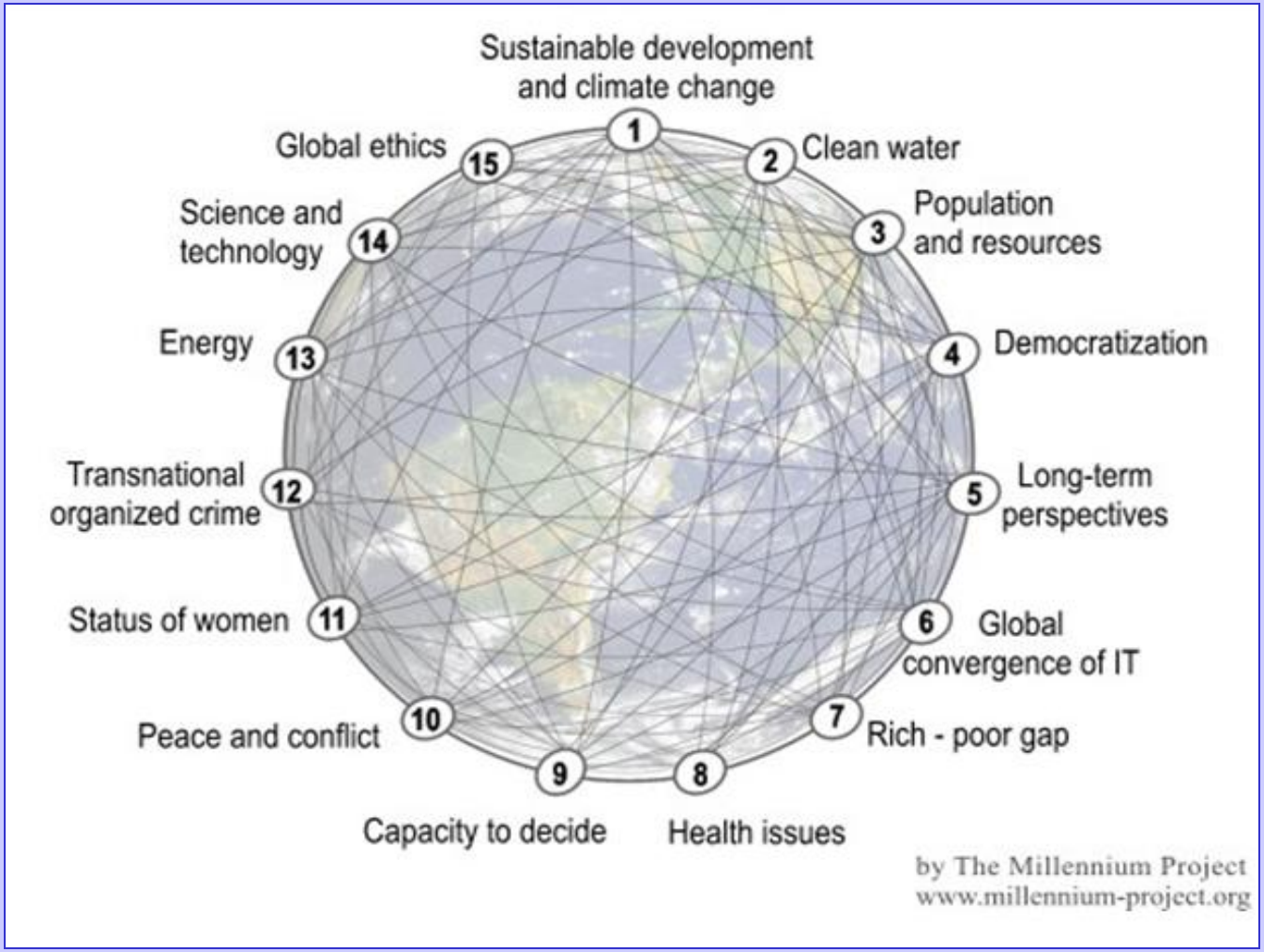
Fifteen Global Challenges for Humanity: The Key Issues of the Early 21st Century



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Regular Consultations with Ministers of Education

Education Ministers' Round Table 2009 | EDUCATION - | UNESCO - Windows Internet Explorer

http://www.unesco.org/en/education/events/education-ministers-round-table-2009/

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EDUCATION

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unesco.org / Education / Events / Education Ministers' Round Table 2009

- Themes
- Education for All
- Worldwide
- Institutes and Centres
- Networks and Communities

Education Ministers' Round Table 2009

UNESCO/M. Ravassard
Opening of the Education Ministers'Round Table

Round-up of the Education Ministers' Round Table

What should education look like in 20 years time and what needs to change to get there? That question formed the basis of a two-day round table "What Education for the Future? - Lessons from the Major International Education conferences" held on October 9 and 10 as part of UNESCO's General Conference (October 6 to 23).

Highlights

Session1: Improving skills: a qualitative leap for education

Session 2: Teachers' vital role in inclusive education

- Ministers' Statements
  - Statements
  - Country contributions
- Resources
  - Documents
  - Highlights
  - Keynote speeches
- Videos
  - Ministerial Round Table on Education

Local intranet | 150%

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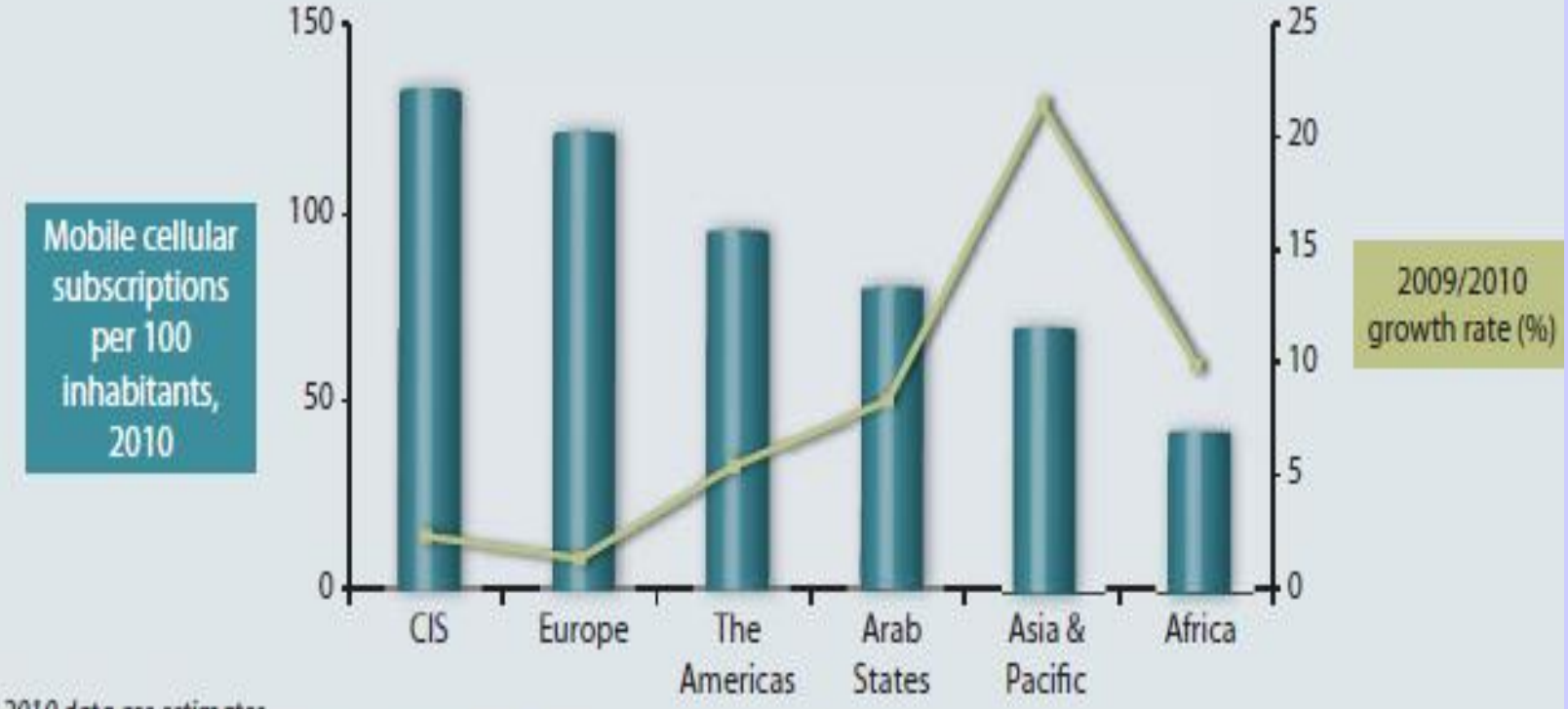
Exponential Growth of Mobile Technology (*ITU: ICT Indicators for 2010*)



Note: 2010 data are estimates

Source: ITU World Telecommunication/ICT Indicators database

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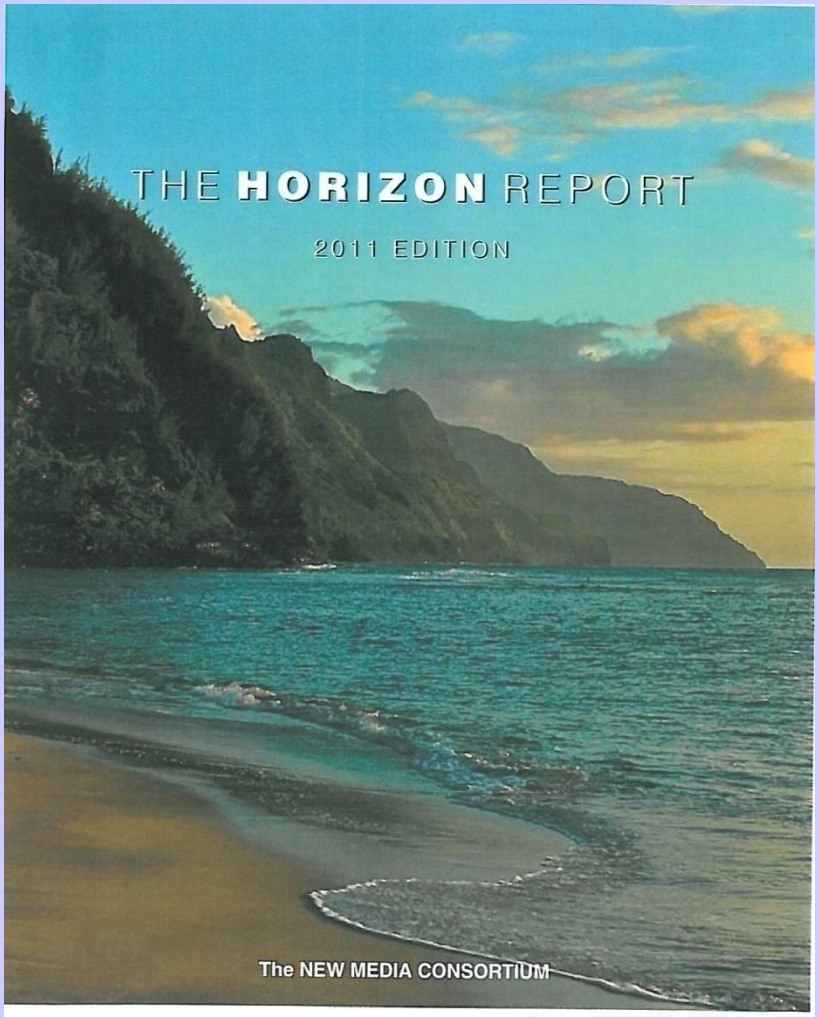
Emerging Technologies: Key Trends over the Next 5 Years



Within the next twelve months

- Electronic books
- Mobiles

Two to three years

- Augmented reality
- Game-based learning

Four to five years

- Gesture-based computing
- Learning analytics

(http://net.educause.edu/ir/library/pdf/HR2011.pdf)

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The World Bank Teacher Policies Around the World (TPAW): 8 core teacher policy goals

- Setting clear expectations for teachers
- Attracting the best into teaching
- Preparing teachers with useful training and experience
- Matching teachers' skills with students' needs
- Leading teachers with strong principals
- Monitoring teaching and learning
- Supporting teachers to improve instruction
- Motivating teachers to perform

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OECD: Improving Policies for Developing a High Quality Teaching Profession

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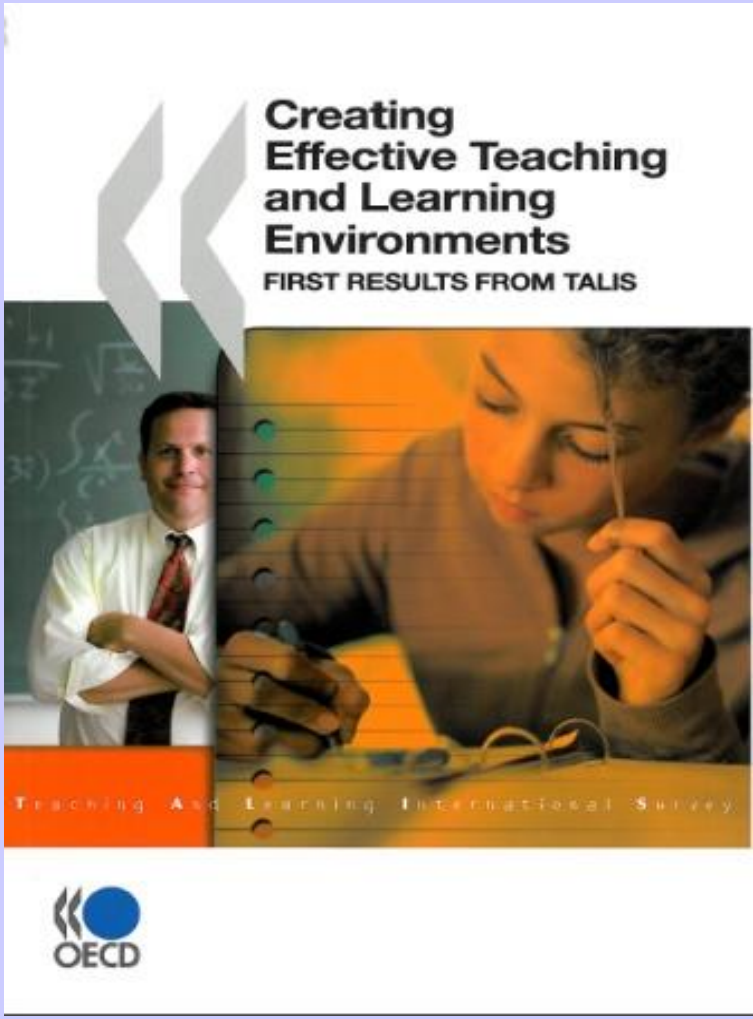
Teachers Move Up on the Policy Agenda: TALIS 2008 and 2013

- How well are teachers prepared today to face the diverse challenges in schools?
- How efficiently do appraisal and feedback incite good teaching and support teachers' development needs?
- How can policy makers ensure that resources invested in teachers' professional development will have a positive impact on teachers' work?



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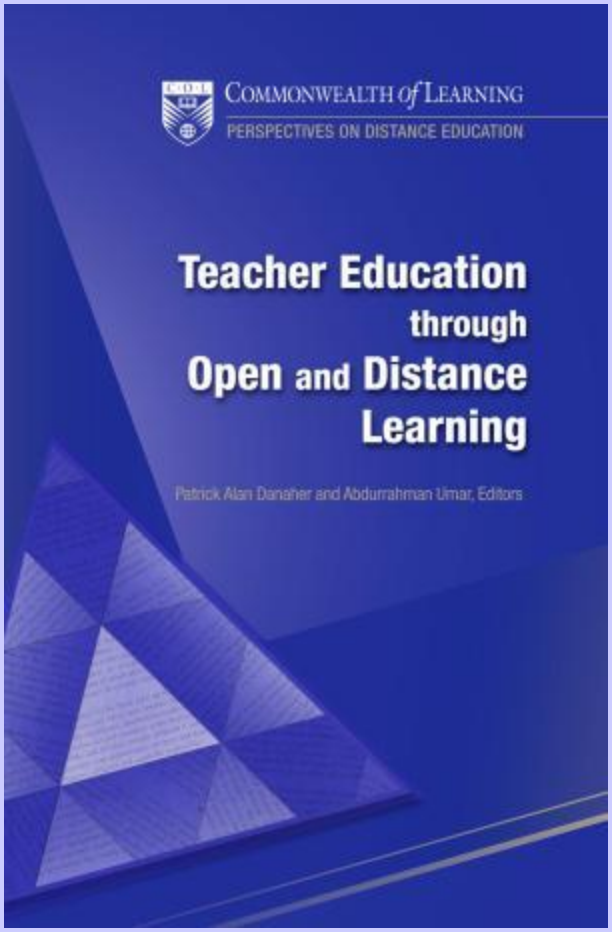
COL: Harnessing ODL to Recruit and Train Millions of Teachers



- Teacher education and ODL - two domains of research and practice crucial to national development and global sustainability in the early 21st century and beyond
- Exemplars of innovative technologies and equally innovative applications of those technologies in teacher education in developing and developed countries are provided

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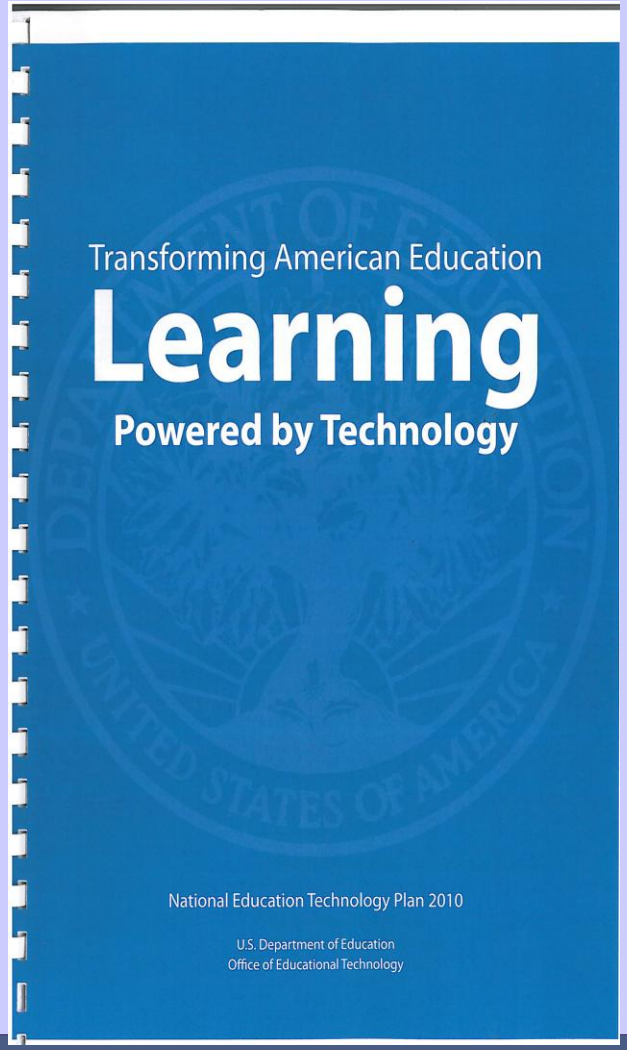
US: Transforming Education with ICT



- Recommendations in five key areas:
  - Learning
  - Assessment
  - Teaching
  - Infrastructure
  - Productivity

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The ICT Revolution

A revolution which has triggered:

- a redefinition of the **roles for academics** (such as coaches, mentors, partners rather than content experts only)
- a new business model for universities faced with competitive forces (e.g. partnerships with other content providers - publishers and media companies - in the textbook market)
- the convergence of various communication devices at an affordable cost (m-learning)
- openness, sharing, participation and collaboration at an unprecedented scale (open source, open content, open educational resources)

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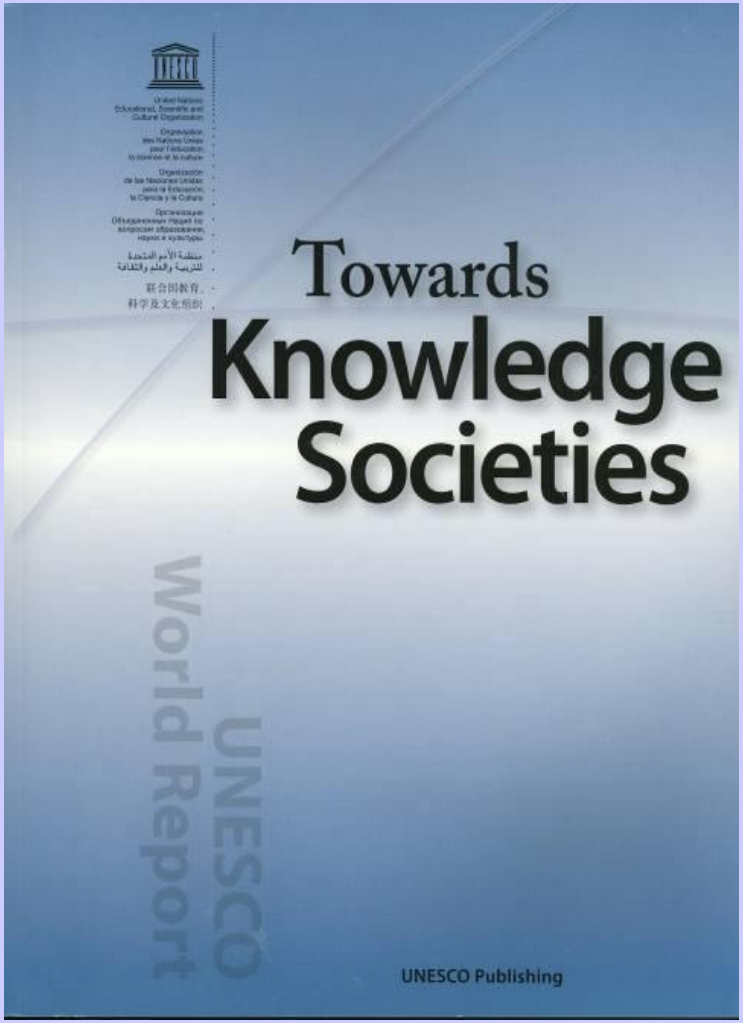
Towards Knowledge Societies (KN)

UNESCO World Report, 2005:

- ✓ Offers an **intellectual, strategic and ethical vision on KS**
- ✓ **Education and access to knowledge**
- ✓ **Quality education for all**
- ✓ **Knowledge sharing** as a development imperative
- ✓ Innovative approaches to **e-learning**



- Enhancing capacities for e-learning in education
- Communication and learning tools
- E-learning policies and strategies
- Digital content within learning and education
- Legal and Institutional frameworks
- Research and development in e-learning

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2009 World Conference on Higher Education: What Role for ICT?

- A few **key messages** in this regard:

- Member States should support the fuller integration of ICTs to meet increasing demands for **quality higher education in a lifelong learning perspective**

- the application of ICT to teaching and learning has great potential **to increase access, quality** and **success**

- the accelerated velocity of technology change has created pressing challenges that higher education, governments and industry must address together

- **increasing attention to teacher training**: empowering teachers ("digital immigrants") to harness the potential of ICT to provide learners with the knowledge and skills they need in the 21st century

- in spite of the progress made, ICT are still unfairly distributed worldwide - need for more international solidarity to close the digital and knowledge divides

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Will ICTs Make the Traditional University Obsolete?

- The conventional system alone cannot meet the challenges. We must ask the questions:
  - Will present-day universities become the dinosaurs of tomorrow?
  - Will there be profound changes in learning content?
  - What is the role of students and staff?
  - How will we ensure quality and sustainability on the Internet?
- Several innovations, such as open educational resources, mobile devices, social software and virtual mobility will radically change the landscape of global learning and expand the global learning community.

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UNESCO ICT Competency Framework for Teachers (developed in partnership with Intel, Microsoft, Cisco, ISTE, Virginia Tech)

- Strong global need to impart ICT skills to teachers
- No universally recognized certification for ICT skills for teachers and no framework to update teacher training programmes
- To enhance teachers' professional development so as to advance their skills in pedagogy, collaboration and school innovation using ICT
- Three booklets: policy framework; competency standards modules; implementation guidelines (translated into over 12 languages)

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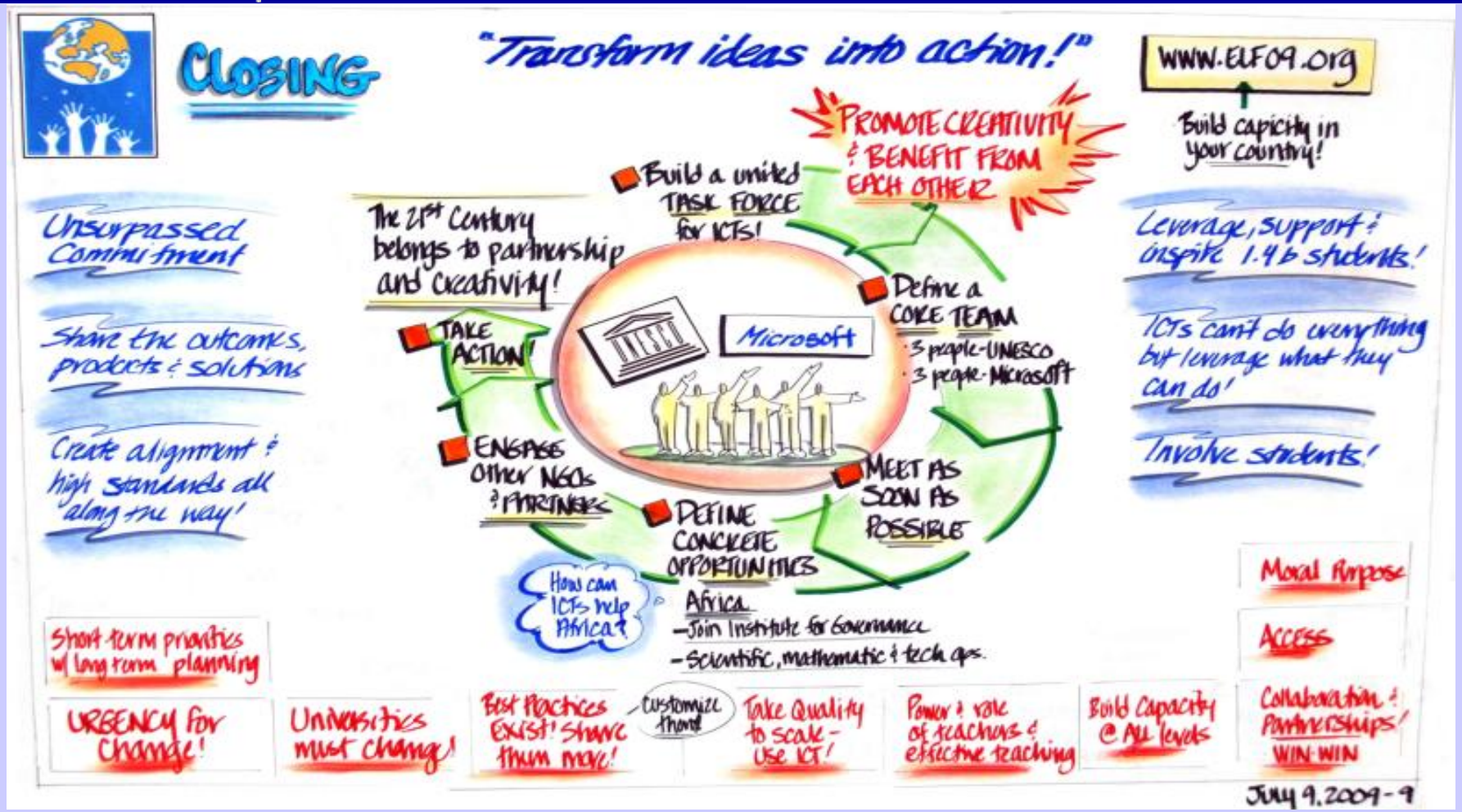
2009 Education Leaders Forum: "Universities Must Change!" (organized by UNESCO and Microsoft)



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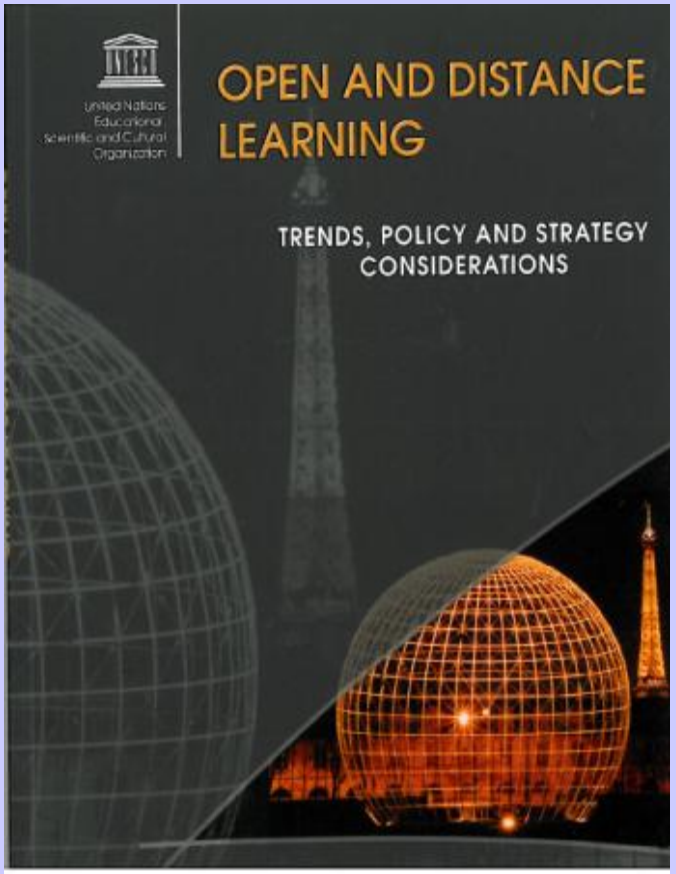
Open and Distance Learning: A Viable Alternative to Conventional Education

- ODL - a major strategy for **expanding access**, **raising quality** and **ensuring cost-effectiveness**
- For **governments** –
  - the main potential is to increase the capacity and cost-effectiveness of education and training systems
  - to reach target groups with limited access to conventional education and training
  - to support and enhance the quality and relevance of existing educational structures



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ODL: A Viable Alternative (cont'd)

- For the **student/learner** -
  - ODL means increased access and flexibility as well as the combination of work and education
  - also a more learner-centred approach, enrichment, higher quality and new ways of interaction

- For **employers** -
  - ODL offers high quality and usually cost-effective professional development in the workplace
  - allows upgrading of skills, increased productivity and development of a new learning culture (in addition, it means sharing of costs, of training time, and increased portability of training)

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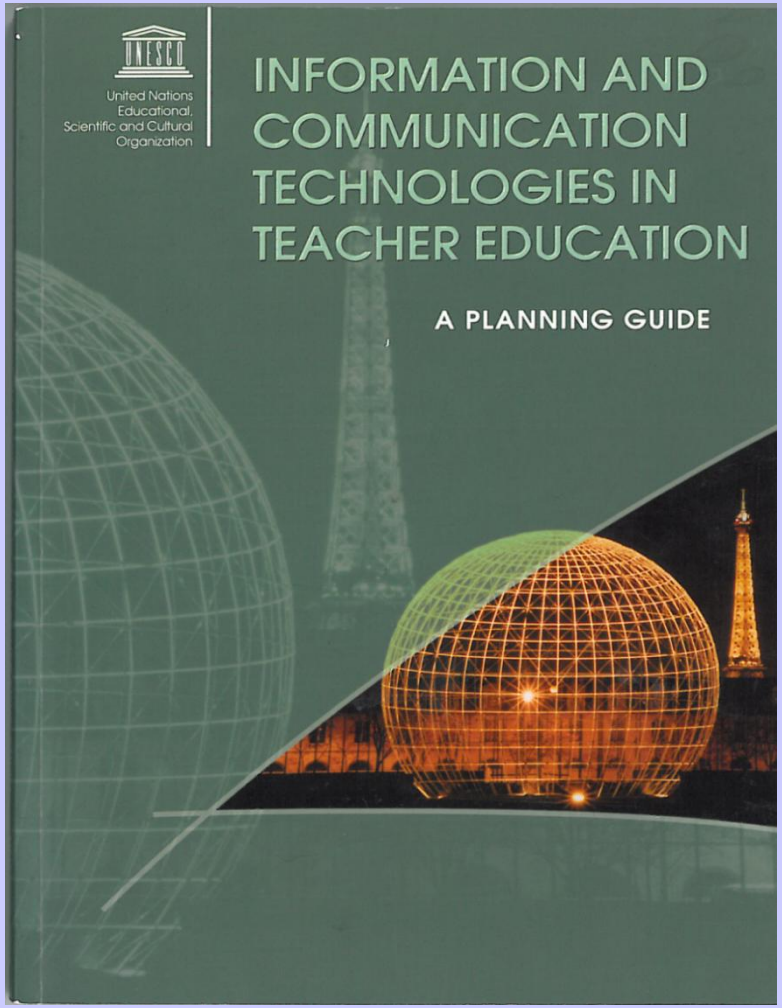
A Framework for Successful Implementation of ICT Use in Teacher Education



- Seven chapters which provide resources to make policy makers better apply ICT to teacher education programmes
- Implementing successful integration of ICT in teacher education – key to fundamental wide-ranging reform

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Open Educational Resources for Teachers

WIKIVERSITY

OPEN COURSEWARE CONSORTIUM

OER
Open
Educational
Resources

OER Africa
Building African education capacity through openness

MITOPENCOURSEWARE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

KOREA UNIVERSITY
Global KU
Frontier Spirit
OPENCOURSEWARE

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One Laptop per Child (OLPC): "Connecting the Unconnected"

An MIT Media Lab project:

- a low-cost, low-powered full-featured computer
- designed to dramatically enhance children's primary and secondary education worldwide
- 1 GB of memory; 4 GB of flash memory
- has wireless broadband

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UNITWIN / UNESCO Chairs Programme

I. Definition and Background

- UNITWIN is the abbreviation for the University Twinning and Networking.

- The UNITWIN/UNESCO Chairs Programme, established in 1992, is conceived as a way to advance research, training and programme development in higher education by building university networks and encouraging inter-university cooperation through transfer of knowledge across borders.

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Disciplinary and Geographic Breakdown

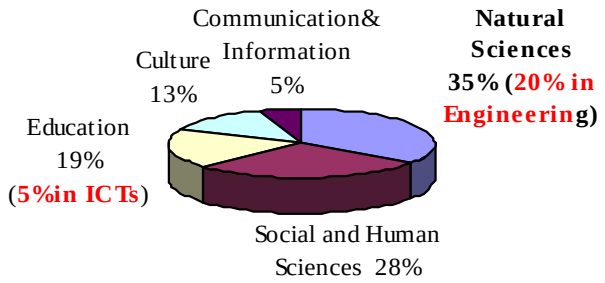
II. UNITWIN in figures (as of 21.04.2010)

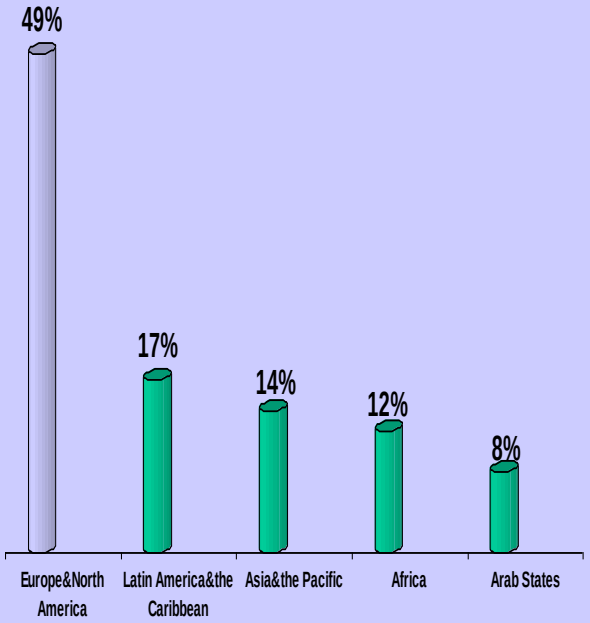
659 UNESCO Chairs

65 UNITWIN Networks

770 Higher Education Institutions

127 Member States





Международный форум «Формирование современного информационного общества – проблемы, перспективы, инновационные подходы»

International Forum «Modern information society formation – problems, perspectives, innovation approaches»

Санкт-Петербургский государственный университет аэрокосмического приборостроения
Межфакультетский центр информационных технологий

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Best Practices in and with ICT in Education

- **UNESCO King Hamad Bin Isa Al Khalifa Prize for the Use of ICT** (set up in 2005; donation made by the Kingdom of Bahrain)
- US$50,000 divided equally to 2 prizewinners; rewards innovative and creative use of ICT to enhance teaching, learning and overall educational performance

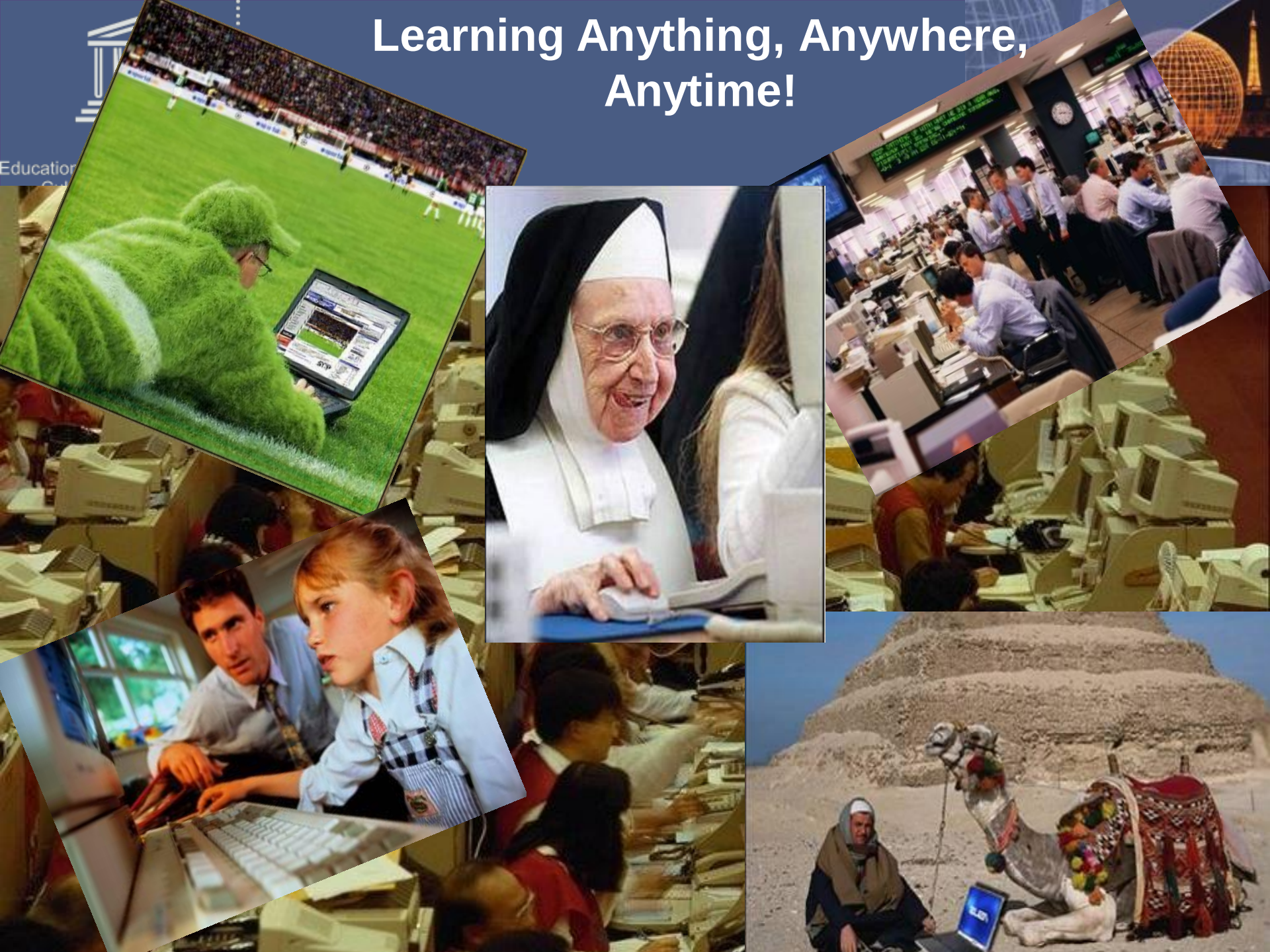
Prizewinners:

2006: KERIS (Korea); Kemi-Tornio Polytechnic (Finland)
2007: Claroline Consortium (Belgium), Curriki (USA)
2008: Shanghai TV University (China); Dr Hoda Baraka (Egypt)
2009: Alexei Semenov (Russian Federation); Jordan Education Initiative
2010: NIACE (UK); Fundación Infocentro (Venezuela)

"If a country is to be corruption free and become a nation of beautiful minds, I strongly feel there are three key societal members who can make a difference. They are the Father, the Mother and the Teacher."

Address to the Nation on the Eve of Independence Day, 2006 - Dr. A.P.J. Abdul Kalam, President of India, 2002-2007

Learning Anything, Anywhere, Anytime!



БЛАГОДАРЯ ЗА ВНИМАНИЕ!

THANK YOU!

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