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IITE-2014 “New Challenges for Pedagogy and Quality Education:
MOOCs, Clouds and Mobiles”

15-16 October 2014

MOSCOW

UNESCO ICT in Education Programme: Challenges, Focus Areas, and Priorities



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Outline

- 1. Challenges of Harnessing ICT for Education**
- 2. UNESCO ICT in Education Programme**
- 3. UNESCO's Main ICT in Education Activities and Priorities**



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ICTs' Transformative Power for Education: Alignment with post-2015 education agenda

- **Access**: ICTs are expected to broaden access to learning opportunities at different levels and varied educational contexts
- **Quality**: ICTs are hoped to improve the quality of knowledge acquisition, knowledge deepening, and knowledge creation, and the development of 21st century skills
- **Equity**: ICTs are believed holding potentials to equalize learning opportunities in favour of economically and/or demographically disadvantaged populations

“Ensure **equitable quality** education and
lifelong learning **for all** by 2030”

1. Challenges developing countries are facing in harnessing ICTs' potentials for education

- **Affordability:** recurrent budget to ensure universal access to ICT devices and online digital resources, and regularly update ICTE
- **Capacities:** in making and managing sector-wide ICT in education policies; institutional and individual capacities in executing policies
- **Inclusion:** equal opportunities for the economically and/or demographically disadvantaged populations
- **Content:** content development and dissemination are enhanced and complicated by ICT at the same time. OER and open textbooks hold potentials, but barriers remain huge and complex
- **Quality assurance:** quality of digital content/textbooks; reform of quality framework to embrace new ICT-enabled learning outcomes; quality of online learning (e-safety of children online)

→ **Neo-PC (Personal Computing Devices) era for Post-2015 education**



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Key Policy Issues

- **Ensure inclusive and equal access** to ICT devices and online resources to the poor, to women and girls, and to learners in geographically isolated areas.
- **Build capacities** of policy makers, education managers, education institutions, and individual teachers in leveraging ICT.
- **Promote the free sharing and creative re-use** of open educational resources including online courseware.
- **Seize the emerging opportunities** enabled by the one-to-one (1:1), ubiquitous and mobile learning opportunities.





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2. UNESCO ICT in Education Programme



Overall Goal of ICT in Education Programme UNESCO is to assist member states in harnessing the potentials of ICT towards achieving the **equitable quality education and lifelong learning goal**



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2. UNESCO's ICT in Education Programme: Responding to the challenges

Based on its five main functions and its global network of offices, institutes and partners, UNESCO is committed to providing Member States with resources for elaborating ICT in education policies, strategies and activities to address the challenges.

- **Standard setting**
- **Capacity building**
- **Laboratory of ideas**
- **Clearing house**
- **International cooperation**

Policy	Teachers	Mobile Learning	OER



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3. UNESCO's Main ICT in Education Activities and Priorities

- Policy
- Monitoring and measuring (UIS)
- Teacher training
- Mobile learning
- Open educational resources (OER)





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3.1 Policy

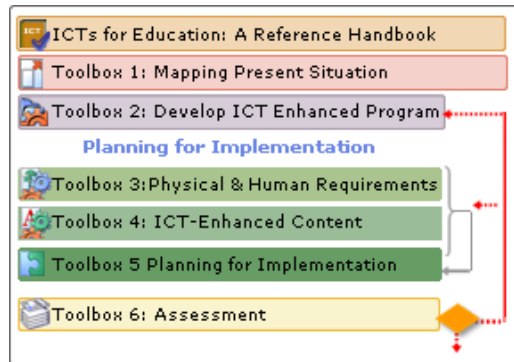
- **Facilitating high-level policy dialogues**
 - Global forward-looking debates on ICT in education
 - Ministerial Forums on ICT in Education: Africa, Asia, Eastern Europe
- **Policy review:** Benchmarking against countries with proximal context; review the implementation → Policy recommendations
- **Policy analysis:** Documenting and analysing what policy works → *Transforming Education: The Power of ICT Policies*
- **Capacity building on the development of ICT policies:** UNESCO ICT in Education Toolkit, workshops for more 40 countries





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UNESCO ICT in Education Toolkit and Capacity Building Workshops on Policy Making



- UNESCO ICT in Education Toolkit (www.ictinedtoolkit.org): An online toolkit to guide policymakers to develop sector-wide national ICT in education policy and a set of master plans, and coordinate among line departments or sectors – facilitated by workshops
- 21 national workshops and 3 sub-regional workshop; directly trained 700+ policymakers of more than 40 countries. The next focus will be African countries.
- Follow-up technical assistance to help member states develop National ICT in Education Master Plans



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UNESCO Modality to Assist ICT in Education Policy Development Cycle

- Contextualizing ICT in Ed policies
- National team or committee

- Facilitate consultation with multi-stakeholders

- Policy advocated
- Aligned with other policies & initiatives



- Knowledge transfer & capacity building – Policy Framework & Policy examples
- Draft of ICT in Education policy and master plans

- Policy endorsed
- Master plans and funds approved for implementation



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ICT in Education Policy: Using educational needs to harness ICT's promises

Decision Making & Policy Planning →

Educational Need	ICT's Promise	E-Readiness & Reality	Sector-wide Policy and Master Plan
Universal & equal access to education	Universal access to ICT enables universal access to education	<ul style="list-style-type: none"> • ICT readiness • Schooling conditions 	<ul style="list-style-type: none"> • ICT for literacy education • Equal access to educational resources • ICT for job-ready skills development • Ubiquitous learning opportunities
Better learning and human outcomes	ICT promotes (adds) learning outcomes and human ethics	<ul style="list-style-type: none"> • Curriculum standards • Teachers' competency & pedagogy • Assessment 	<ul style="list-style-type: none"> • Teachers' ICT competency • ICT as new learning outcomes • ICT enhanced learning outcomes of core subjects • ICT enable 21st-century skills • E-safety and e-ethics
Efficient educational management	ICT improves educational management	<ul style="list-style-type: none"> • Human & ICT of different Edu. ADMs 	<ul style="list-style-type: none"> • EMIS and evidence-based policy making • School-home-community portal • ICT for in-emergency & post-crisis edu.

← Monitoring, Evaluation & Assessment



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Main Criteria to Review the National ICT in Education Policies

To what extent your policy targets the expected educational result?



1. Delivering equal life-long learning opportunities through ICTs
2. Defining and assessing **E-Skills and E-ethics** as results
3. Creating inclusive usable **e-learning environments**
4. Preparing **ICT-qualified teachers** and supporting their CPD
5. Fostering innovative **ICT-pedagogy integration** and e-learning
6. Institutionalizing **EMIS**



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ICT in Education Policy: Priorities for the next biennium

- 1.1 **A multi-entry approach** to the development of integral ICT in education policies and a web-portal
- 1.2 Widen and sustain the **regional ministerial-level policy dialogue mechanism** on ICT in education
- 1.3 Guide the planning and implementation of **1:1 Learning Policy**





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3.2 Monitoring and Measuring the Impact of ICT on Education

- **UNESCO UIS** ICT in Education Indicators
- Assisting member states in developing its national ICT in Education Indicators – UNESCO has been helping China develop a set of ICT in Education Indicators





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3.3 Teacher Training

- ICT Competency Framework for Teachers (ICT-CFT)
- Assisting member states in developing ICT Competency Standard for Teachers
- Institutional capacity building for teacher education institutions





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UNESCO ICT Competency Framework for Teachers (ICT-CFT)

To help Member States develop national ICT Competency Standard for Teachers and provide guidelines for planning teacher education programmes.

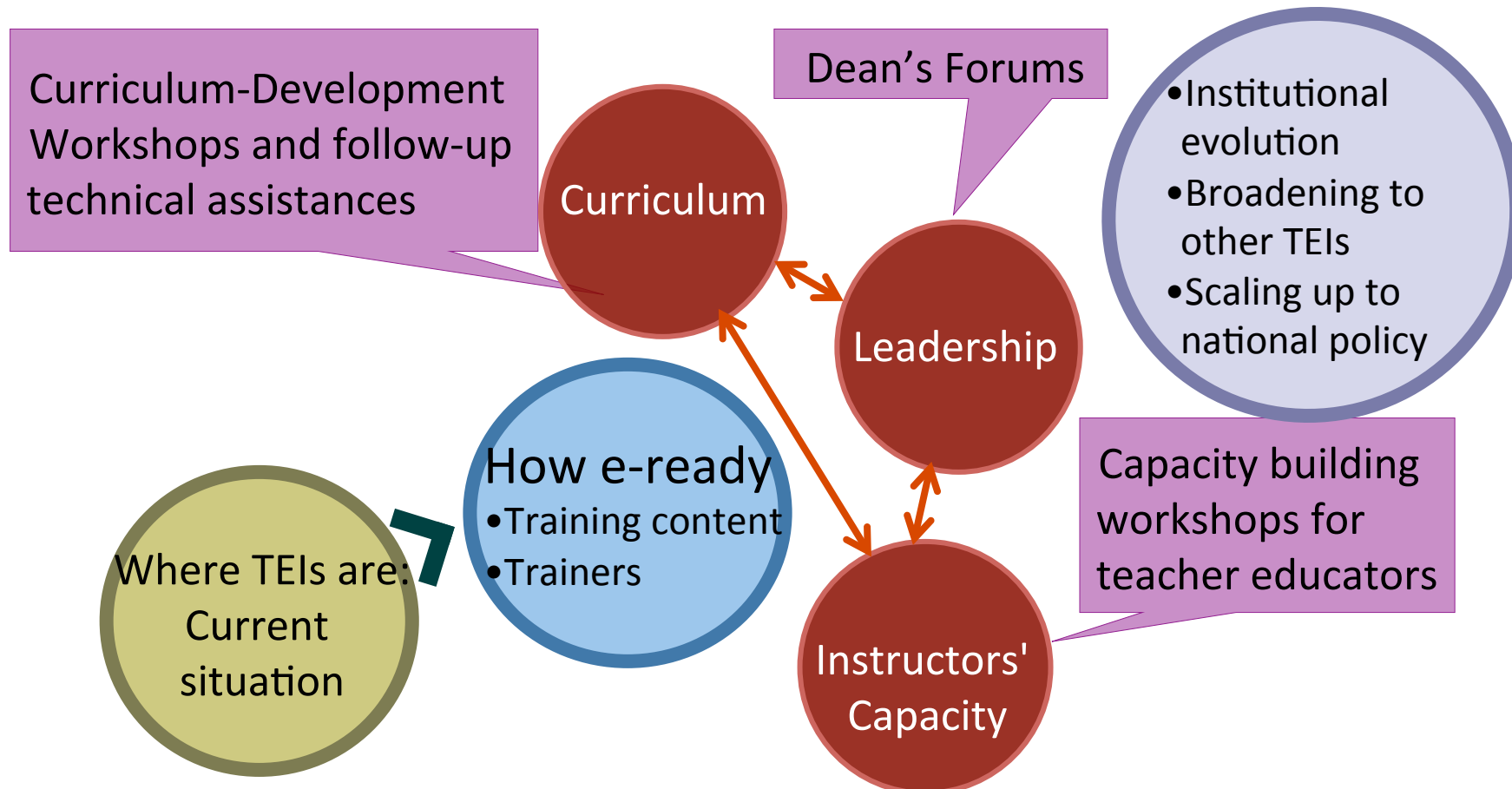




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Building the institutional capacity of the teacher institutions on ICT in education

UNESCO has been building the institutional capacity of the teacher education institutions (TEIs) in **designing and providing the training on ICT-pedagogy integration for pre-service teachers**: more than 60 TEIs from 30+ countries





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Chinese Funded UNESCO Project on Teacher Training for Africa

Thanks to the newly established Chinese Funds in Trust (CFIT), UNESCO is building the institutional capacity of key teacher colleges of 8 African countries to speed up the achievement of EFA goals.





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Chinese Fund in Trust Project to Enhance Teacher Education Institutes in Sub-Saharan Africa to

- Increase the supply of qualified teachers particularly through open and distance training programmes
- Support teachers continuous professional development via blended learning modalities
- Equip teachers with skills of using ICT to improve quality of teaching and learning
- Reinforce networks of TEIs for knowledge sharing





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Cross-cutting ICT in education activities

ICT1 – ODL: Open and Distance Learning Platform for Teachers

ICT2 – Blended CPD: Blended media to broaden face-to-face supports for teachers' continuous professional development

ICT3 – Online Forum: Online forum to support CPD of in-service teachers

ICT4 – ICT Courses: Updating/reforming ICT-related courses of TTIs to develop teachers ICT skills needed by effective pedagogical use of ICT

ICT5 – IBT: Equipping classrooms of TTIs with ICT to enhance the quality of teaching for students of TTIs

ICT6 – E-Library: Digital libraries for pre-service teachers to practice ICT skills and search online materials

ICT7 –Deans Forum: Deans Forum to facilitate knowledge sharing on training about ICT-pedagogy integration



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Teacher Training on/with ICT: Priorities for the next biennium

- 2.1 Update ICT-CFT and support the national and institutional adoption of ICT-CFT → **ICT-CFT V3.0**
- 2.2 Support to use ICT to address teachers' shortage and quality of Sub-Saharan countries → **ODL**
- 2.3 Build the **school leadership** on planning and supporting effective pedagogical use of ICT





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3.4 Mobile Learning: UNESCO's Understanding and Actions

Mobile Learning is learning anywhere, anytime through the use of mobile technologies, often empowered by wireless broadband connection. **Scope of mobile devices:** tablets, mobile phones, e-readers, etc.

UNESCO's main focus areas/activities:

- Mobile learning **policy**
- Mobile technologies for **teachers** development
- Mobile **literacy** education for women and girls
- Mobiles for **reading**
- **Annual Mobile Learning Week**
- Mobile apps for **data collection** → IIEP





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Why Mobile Learning: Leading policies towards Neo-PC era

Penetration of Mobile Phones (ITU or GSMA)

- 90% of world's population and 80% of rural people have mobile coverage.
- 105 countries have more mobile phone subscriptions than inhabitants.
- Developing countries accounted for more than 80% of the 660 million new mobile subscriptions added in 2011.
- Mobile broadband subscriptions have grown 45% annually over last 4 years.

Neo-PCs era is coming:

- Sales of tablet computers are expected to surpass sales of PCs by 2016.
- There will be 788 million mobile-only Internet users by 2015 (<http://arstechnica.com/tech-policy/2011/03/world-mobile-data-traffic-to-explode-by-factor-of-26-by-2015/>)



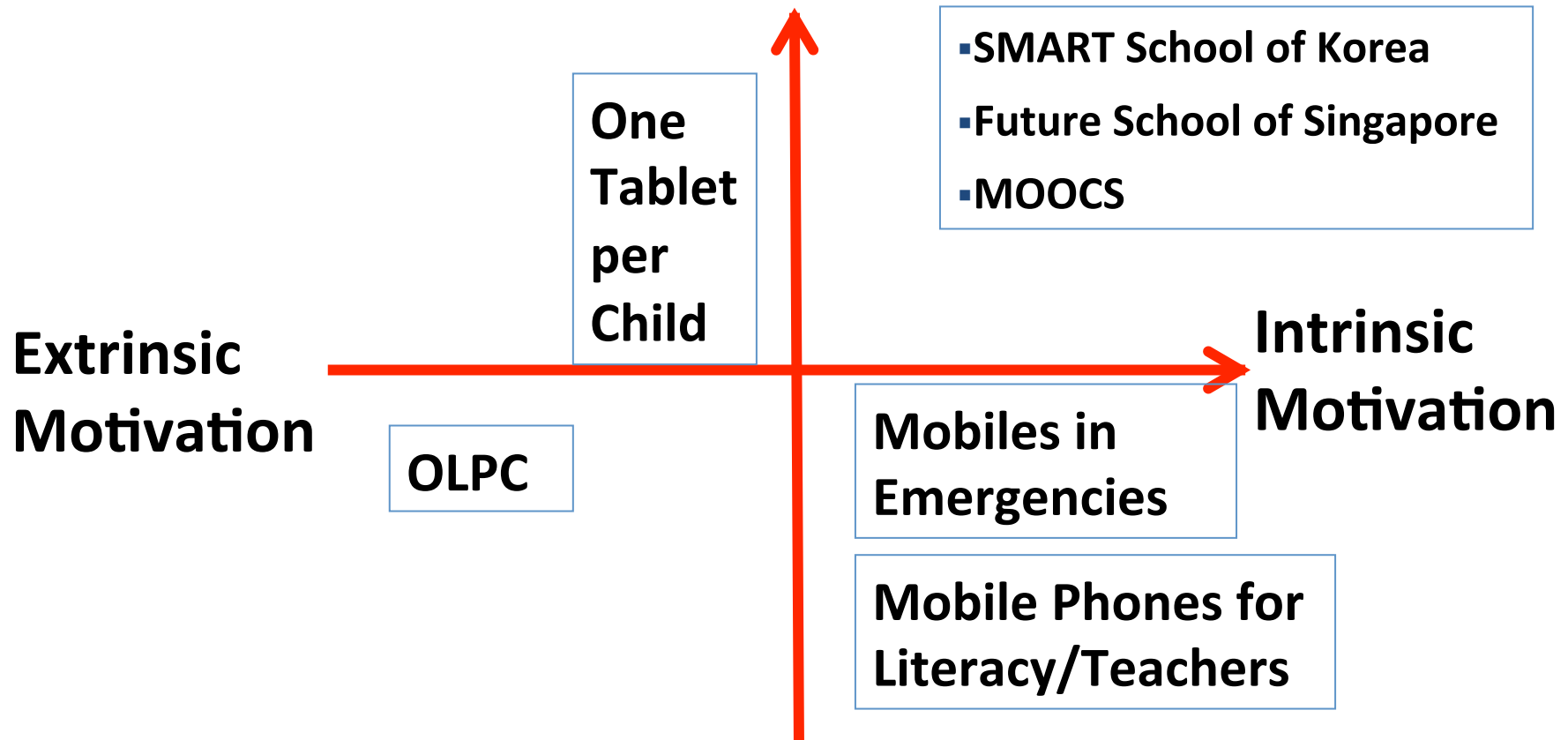
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Mobile Learning Under Different Contexts

Resource- Rich Settings

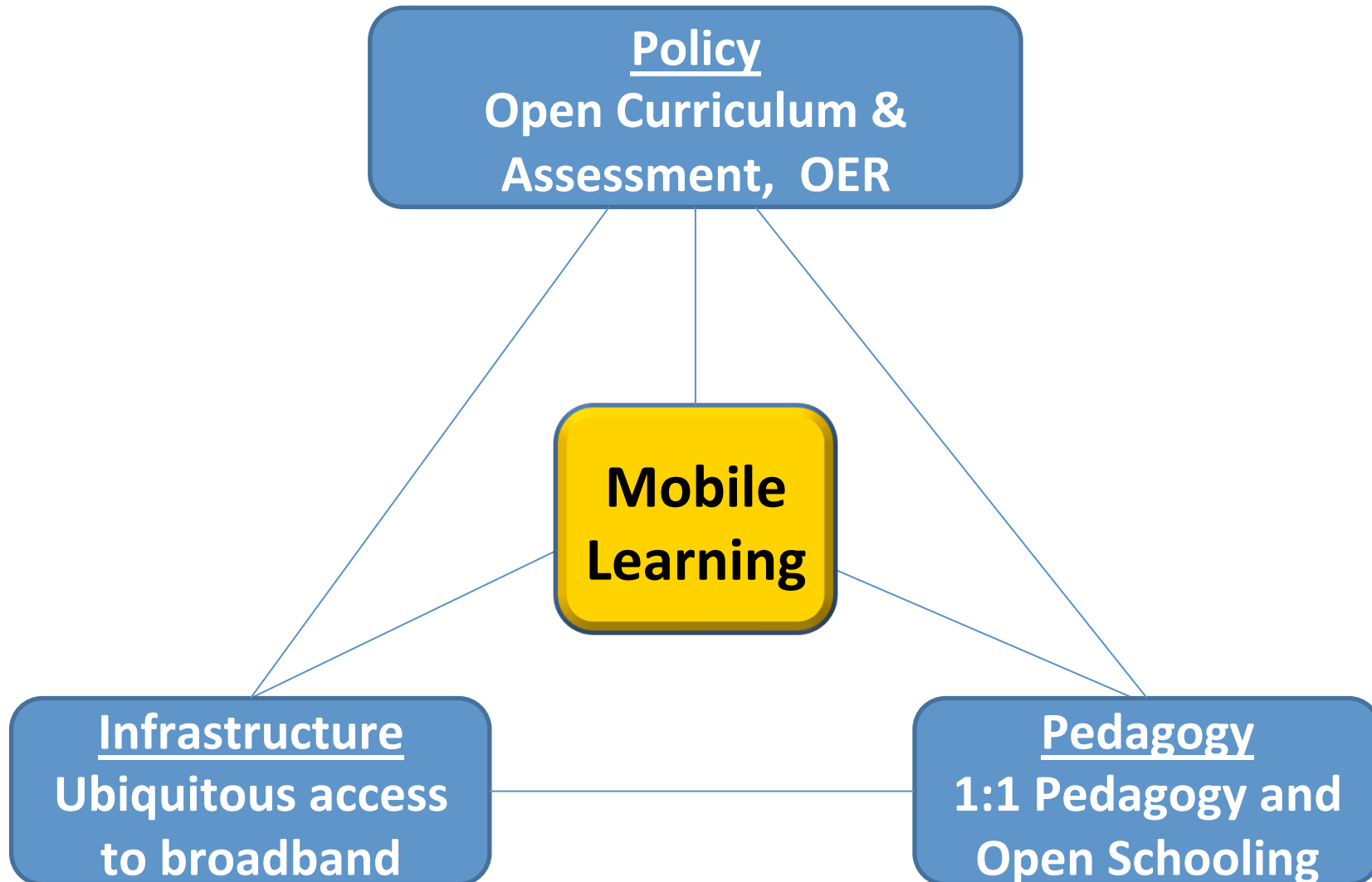


Resource- Poor Settings



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Three Pillars of Mobile Learning at Neo-PC Era

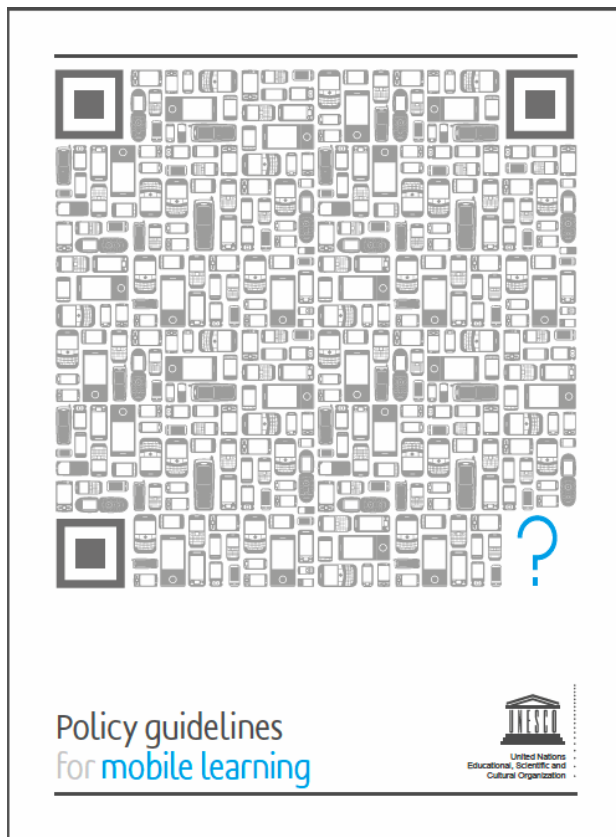




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UNESCO Guidelines for Mobile Learning

- UNESCO is advising countries on how to shape policy to better leverage mobile technologies for a better learning and better education administration.



- **What** is mobile learning?
- Unique **benefits** of mobile learning
- Policy **guidelines**
- *Complementary resources*



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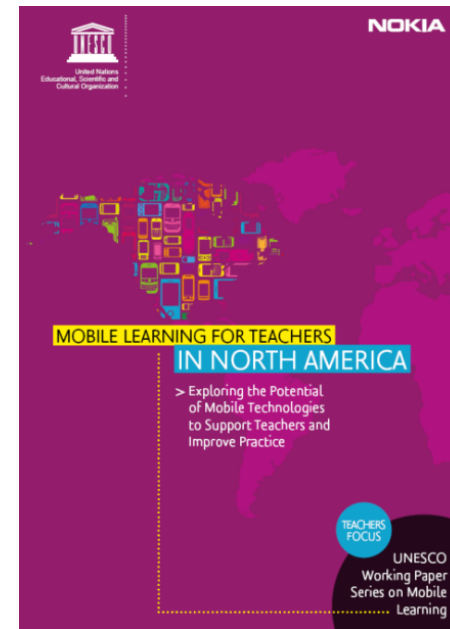
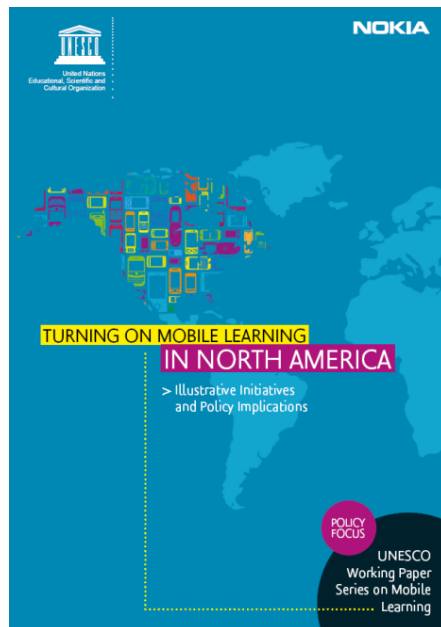
UNESCO Working Paper Series on Mobile Learning

To illuminate the ways mobile technologies can be used to support the EFA Goal, supplement and enrich formal schooling, and make learning more accessible, equitable, personalized and flexible for students everywhere:

-5 Papers on Policy, Turning on Mobile Learning in Asia, Africa, Europe, Latin America, and North America

-5 Papers on Mobile Learning for Teachers in Asia, Africa, Europe, Latin America, and North America

(<http://www.unesco.org/new/en/unesco/themes/icts/m4ed/mobile-learning-resources/unescobilelearningseries/>)





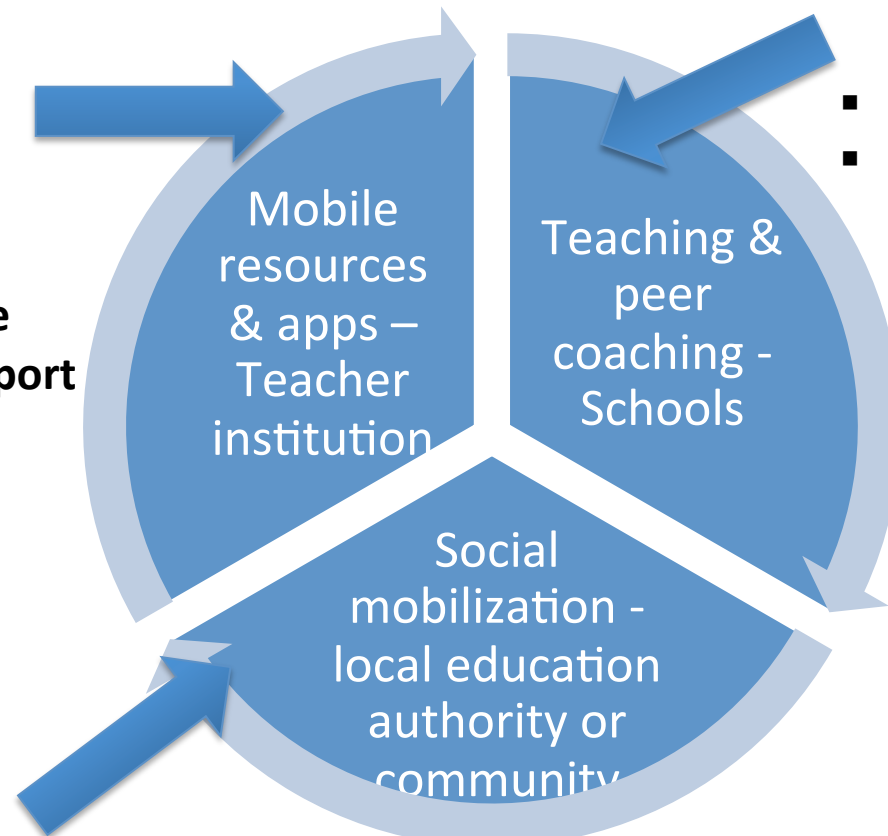
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Using Mobile Technologies to Support Teachers Development

UNESCO explores the establishment of eco-system that enable the use of mobile technologies to support teachers to do a difficult job better and reveal important information about which projects work, which ones don't, and why.

- **Innovative mobile solutions to local teacher gaps**
- **Training programme and continuous support strategy**

- **Ownership**
- **Local partners**
- **Governmental scaling-up**



- **Effective pedagogy**
- **School-based professional development**





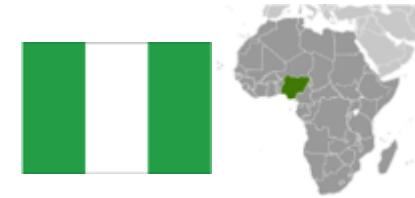
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Using Mobile Technologies to Support Teachers Development

Mexico, Nigeria, Pakistan, and Senegal have been selected for the pilot test. Each country project employs a different approach to support the work of teachers.



Mexico: Enhance the teaching practice of primary school Spanish language teachers working with students who speak indigenous languages.



Nigeria: Support the pedagogical practice and content knowledge of primary school English language teachers.



Pakistan: Develop professional practice of early childhood care and education instructors working in rural areas.



Senegal: Improve the teaching of science and math in primary schools.



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UNESCO Mobile Learning Week

- UNESCO launched its first Mobile Learning Week (MLW) in November 2011, and held the Second MLW in February 2013 at its Headquarters in Paris, France.

UNESCO Mobile Learning Week 2014 ***“Mobile Learning for Mobile Teachers”***

UNESCO Headquarters, Paris, France

17-21 February 2014

tinyurl.com/mlw2014





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Mobile Phone Literacy: Empowering Women and Girls

Mobile learning provides new opportunities to expand access to learning opportunities, particularly for women and girls

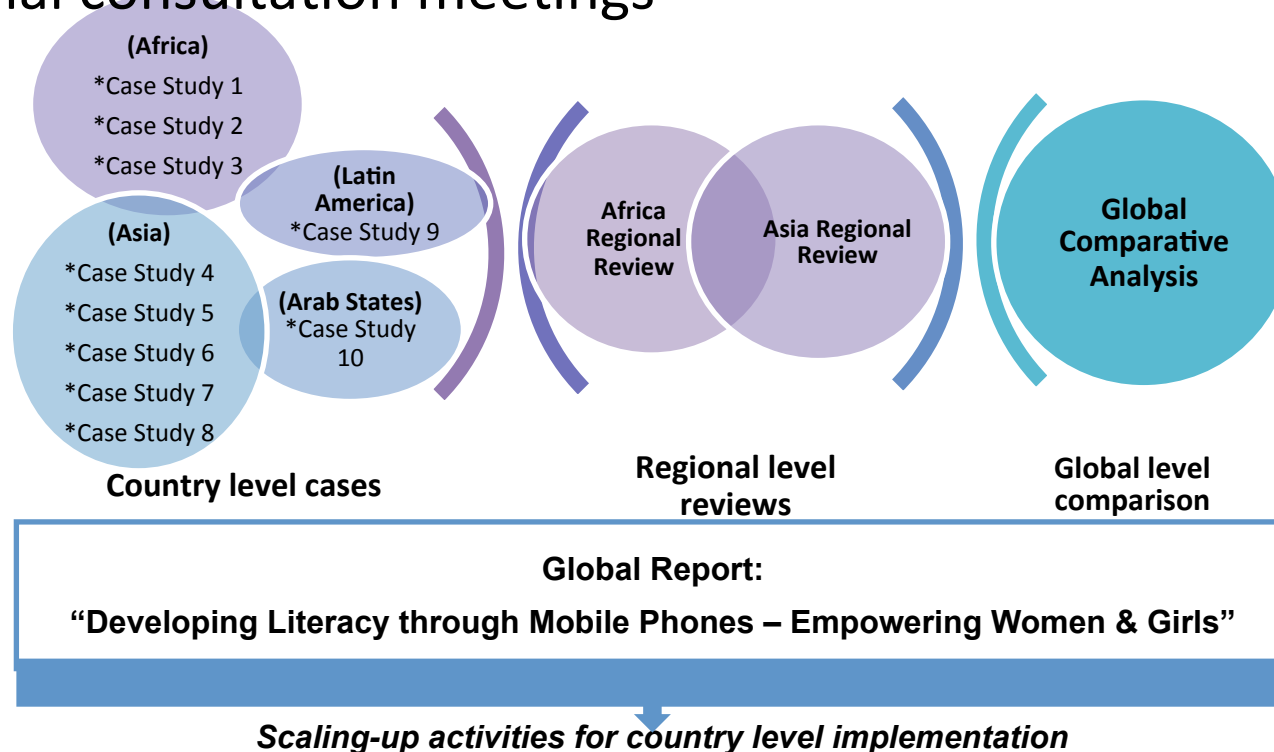




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Mobile Phone Literacy: Empowering Women and Girls

Project Aims: Advocating the use of mobile technologies to empower women and girls through documenting and disseminating successful stories based on **analysis of what works and how to make it work, and what does NOT work** - Ten case studies, two regional reviews, and two regional consultation meetings





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Selected Case-Studies

AFRICA

1. Jokko Initiative by Tostan International & UNICEF (Senegal)

Mobiles for women's literacy skills / 2009-2010 / several communities

2. Project ABC – Mobiles 4 Literacy, Tufts University, University of Oxford, Catholic Relief Services (Niger)

Mobiles for basic literacy as a learning tool in Hausa and Zarma, with literacy classes targeting over 7'000 adults in 140 villages

ARAB STATES

3. Somali Youth Livelihoods Project

Souktel & EDC (Somalia)

LATIN AMERICA & the CARIBBEAN

4. AlfabeTIC Celular

Organization of Ibero-American States (Argentina)



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Selected Case-Studies

ASIA

5. Literacy by Mobile Phone Project, UNESCO (Pakistan)

Mobile for women's literacy & empowerment / 1'500 adolescent girls

6. MILLEE Project, CMU (India & China)

Mobiles for literacy/language acquisition / 2011

7. Nokia Life Tools (India, China, Indonesia, Nigeria)

Mobiles for English language & education services for women / 2009, on-going

8. Pink Phone Project, Oxfam & Women for Prosperity (Cambodia)

Mobiles for women's empowerment / since 2010, ongoing

9. Mobile Literacy Program, Georgetown University & Afghan Institute for Learning (Afghanistan): Mobiles for literacy to empower girls/Nov 2011 – Feb 2012



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Mobile Phone Literacy: Empowering Women and Girls

Mobile learning eco-system:

- The targeted **barriers** to the literacy education for women and girls: religious and/or social, poverty, conflicts, etc.
- **Issues** underlying literacy itself: relapse of literacy, irrelevance of literacy skills, information overloading, etc.
- Technological **infrastructure and pre-conditions**: electricity supply, access to computer and internet
- **Mobile solutions**: Phone sets, SIM cards, memory cards, cost of SMS and internet data, internet connectivity required, social media (facebook, twitter, etc.), dedicated apps (MoReading, NED, Nokia Life, MoMath, Yoza)...
- **Mobile content**: T/L themes, tips of T/L methodologies, Videos/Pics
- **Mobile pedagogy**: Communication via phones, F2F training + school based learning, self study and cooperative learning
- **Enabling policies**



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Mobile Learning: Priorities for the next biennium

- 3.1 Support to integrate mobile learning into national ICT policies → **One component of integral policy**
- 3.2 Facilitate global knowledge sharing on mobile learning through annual **mobile learning week**
- 3.3 Coordinate **mobile literacy** initiatives particularly for women and girls
- 3.4 Scale up effective models of using mobile technologies to support teachers development





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3.5 UNESCO's Work on Open Educational Resources (OER)

- The term **Open Educational Resources (OER)** was coined UNESCO in 2002: Open Educational Resources (OER) are *teaching, learning or research materials that are in the public domain or released with an intellectual property license such as Creative Commons that allows for free use, adaptation, and distribution.*
- UNESCO, in cooperation with Commonwealth of Learning has developed and published *Guidelines for OER in Higher Education*



UNESCO's Work on Open Educational Resources (OER)

- **World Congress on OER:** UNESCO, in cooperation with Commonwealth of Learning, organized a World Congress on OER in June 2012. **Paris OER Declaration 2012** was released by the end of the World Congress:
 - Facilitate enabling technological environment for the access to OER through the provision of universal access to internet connection and low-cost digital devices;
 - Encourage the inter-sector policies on adopting open licensing of educational materials produced by public funds;
 - Provide capacity building and technical supports in developing sector-wide or institution-wide OER policies;
 - Create evidence base of, and disseminate knowledge on, effective use of OER to improve the quality of teaching & learning

UNESCO's Work on Open Educational Resources (OER)

Projects to operationalizing Paris OER Declaration funded by Hewlett Foundation:

- **Policy Development:** supporting Member States to develop sector-wide OER policies through the development of OER **Policy Toolkit, capacity building workshops**, and the provision of technical support to Member States
- **Case studies on OER policies**





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OER: Priorities for the next biennium

- 4.1 Case studies on national OER policies → **Policy Review**
- 4.2 Support the **development of OER policies** through
Guidelines and technical assistances
- **Right-based approach to OER advocacy**: Proposed
objectives and targets in the post-2015 global
education agenda – All government ensuring that
learning content developed with public funds be made
available under open licenses ?



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Thank you...