CENTRAL ASIA SYMPOSIUM ON ICT IN EDUCATION
INNOVATIVE ICT PRACTICES ON LIFELONG LEARNING

SUMMARY OF KEY FINDINGS & NEXT STEPS
January 30, 2012
Mobile & Internet in Central Asia

- **Mobile cellular telephone subscriptions per 100 inhabitants (2010)**
- **Fixed broadband Internet subscriptions per 100 inhabitants (2010)**
- **Internet Users per 100 inhabitants (2010)**

Source: ITU Database (2011)

CIS includes: Belarus, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Uzbekistan, Azerbaijan, Georgia, Moldova, Ukraine, Armenia, Turkmenistan
Challenges in Central Asia

• Scarcely populated with nomadic culture
• Varying national languages and scripts

• Use of ICT as a potential solution to transform education in Central Asia
Population by Age Group

In Central Asia, around half of the population is younger than 25
Rural Population

Rural population (% of total population) (2009)

Source: UNESCO UIS (2010)
Outline

1. Context
2. Issues: emerging trends and challenges
3. Lessons learned
4. The role of the state
5. Future Prospect (participants’ view)
Background

Expansion of learning opportunities with ICT

“Borderless” environment, physical & virtual

Need for lifelong learning is evident, to stay abreast with changes

Quality education leading to decent jobs

Importance of the Asia-Pacific in changing world

Lifelong learning is not a new concept, but current, evolving

ICT has a potential to improve access to and quality of lifelong learning
Skills and Lifelong Learning

- **Foundation skills**
  - the literacy and numeracy skills that can pay enough to meet daily needs
  - a prerequisite for continuing in education and training, and also for acquiring transferable and technical and vocational skills

- **Transferable skills**
  - the ability to solve problems, communicate ideas and information effectively, be creative, show leadership and conscientiousness, and demonstrate entrepreneurial capabilities
  - required for young people to adapt to different and changing work and life environments.

- **Technical and vocational skills**
  - the specific skills since many jobs require “specific technical knowhow and competencies”
  - often provided at upper and post-secondary education levels, either in formal and non-formal education institutions.
Participation in Pre-Primary education

Source: EFA Global Monitoring Report 2012
Access to Schooling

Intake, survival and transition, 2010

Source: Statistical annex, UIS, October 2012.
Quality of Learning

Diverse results of student achievement in PISA mathematics and reading tests

Source: OECD Programme for International Student Assessment 2009 Database
## Gender Disparities in Learning Outcomes

<table>
<thead>
<tr>
<th>Country / Territories</th>
<th>Reading</th>
<th>Math</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>−37</td>
<td>10</td>
<td>−1</td>
</tr>
<tr>
<td>Japan</td>
<td>−39</td>
<td>9</td>
<td>−12</td>
</tr>
<tr>
<td>ROK</td>
<td>−35</td>
<td>3</td>
<td>−2</td>
</tr>
<tr>
<td>New Zealand</td>
<td>−46</td>
<td>8</td>
<td>−6</td>
</tr>
<tr>
<td>HK-China</td>
<td>−33</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Indonesia</td>
<td>−37</td>
<td>−1</td>
<td>−9</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>−43</td>
<td>−1</td>
<td>−9</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>−53</td>
<td>−6</td>
<td>−22</td>
</tr>
<tr>
<td>Macao-China</td>
<td>−34</td>
<td>11</td>
<td>−2</td>
</tr>
<tr>
<td>Shanghai-China</td>
<td>−40</td>
<td>12</td>
<td>−1</td>
</tr>
<tr>
<td>Singapore</td>
<td>−31</td>
<td>5</td>
<td>−1</td>
</tr>
<tr>
<td>Chinese Taipei</td>
<td>−37</td>
<td>5</td>
<td>−1</td>
</tr>
<tr>
<td>Thailand</td>
<td>−38</td>
<td>4</td>
<td>−13</td>
</tr>
</tbody>
</table>

Source: OECD (2010), *PISA 2009 Results: What Students Know and Can Do – Student Performance in Reading, Mathematics and Science (Volume I)*
http://dx.doi.org/10.1787/9789264091450-en
Gender Parity in Youth Labour Participation

- In many cases young women are doing better than young men in school.
- Except for East Asia, labour participation is significantly lower for young women than young men.
- Female youth still encounter more barriers to making the transition from school to work.

<table>
<thead>
<tr>
<th>Indicator/Region</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>54.2</td>
<td>62.3</td>
<td>45.6</td>
</tr>
<tr>
<td>Asia</td>
<td>57.8</td>
<td>64.9</td>
<td>50.3</td>
</tr>
<tr>
<td>Central Asia</td>
<td>42.3</td>
<td>60.4</td>
<td>23.4</td>
</tr>
<tr>
<td>East Asia</td>
<td>67.6</td>
<td>63.8</td>
<td>71.6</td>
</tr>
<tr>
<td>Pacific Islands</td>
<td>54.7</td>
<td>55.6</td>
<td>53.8</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>58.1</td>
<td>66.6</td>
<td>49.5</td>
</tr>
<tr>
<td>South Asia</td>
<td>49.7</td>
<td>66.4</td>
<td>31.8</td>
</tr>
</tbody>
</table>

Youth labour force participation rate:

<table>
<thead>
<tr>
<th>Indicator/Region</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>51.1</td>
<td>58.7</td>
<td>43.1</td>
</tr>
<tr>
<td>Asia</td>
<td>53.4</td>
<td>60.2</td>
<td>46.0</td>
</tr>
<tr>
<td>Central Asia</td>
<td>45.0</td>
<td>61.6</td>
<td>27.7</td>
</tr>
<tr>
<td>East Asia</td>
<td>59.8</td>
<td>57.5</td>
<td>71.6</td>
</tr>
<tr>
<td>Pacific Islands</td>
<td>55.0</td>
<td>55.6</td>
<td>54.3</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>52.3</td>
<td>60.0</td>
<td>44.3</td>
</tr>
<tr>
<td>South Asia</td>
<td>48.4</td>
<td>63.5</td>
<td>32.1</td>
</tr>
</tbody>
</table>

Youth employment to population ratio:

<table>
<thead>
<tr>
<th>Indicator/Region</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>44.6</td>
<td>51.3</td>
<td>37.5</td>
</tr>
<tr>
<td>Asia</td>
<td>48.0</td>
<td>53.8</td>
<td>41.6</td>
</tr>
<tr>
<td>Central Asia</td>
<td>38.7</td>
<td>54.3</td>
<td>22.2</td>
</tr>
<tr>
<td>East Asia</td>
<td>44.6</td>
<td>51.6</td>
<td>57.7</td>
</tr>
<tr>
<td>Pacific Islands</td>
<td>51.4</td>
<td>52.5</td>
<td>50.2</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>44.9</td>
<td>51.7</td>
<td>38.0</td>
</tr>
<tr>
<td>South Asia</td>
<td>43.6</td>
<td>57.2</td>
<td>28.9</td>
</tr>
</tbody>
</table>

In 2009, the male-female gap in terms of labour force participation rate for Asia-Pacific was **25.2 percentage points**, while in Central Asia, it’s **45 percentage points**.
Role of ICT in education strategy: Importance of ICT as a tool for better management and teaching/learning is recognized, viz:

1. to improve quality of education
2. to extend lifelong learning opportunities

Diverse examples of ICT-based management systems
- Integrated database is increasingly used at school, local and central level (bottom-up...)
- Using ICT to improve communication with parents and other stakeholders (students’ achievement, feedback, etc.)
ICT use for knowledge portals:
• Knowledge portals to share e-teaching materials, educational videos, on-line lectures
• Promoting ICT for evaluating efficiency and effectiveness of knowledge portals

Limitation of e-learning/distance education: Quality issues
• Authorization of content (who? and how?)
• Lack of motivation among teachers/professors
• Recognition of prior learning( e.g. non-formal and informal learning)
• Assessment method yet following traditional “testing” to measure quality of students for distance learning
Issues: Emerging Trends (3)

Sharing contents among countries:
• Still nascent
  ✓ Content to be evaluated and approved by national standards (with methodological guidelines)
  ✓ Assessment mechanism follows national standards, and thus, difficult to share content
• Possible utilization of Eurasian Economic Integration Committee

Language issues: Language challenges to make full use of ICT potential for educational management and teaching/learning highlighted (re 2011 symposium)
Efforts are under way:
• For creating educational content with local languages
• Through promoting collaboration of ICT experts, education experts and NGOs
Issues: Challenges

• **Diversity**: How to reflect diversity of the sub-region (within and across countries)
• **Lacking in:**
  - Infrastructure and funding
  - Content development
  - Coordination among stakeholders
  - Potential of private sector
  - Legislation for distance learning
• **Security issues**: for established national database (privacy, robust operation, etc.)
• **Formal vs. Non-formal channel**: Coherence/continuum between formal and non-formal education channels using ICT is lacking
• **New roles of teachers**: As facilitators of learning instead of knowledge transmitter not fully understood/accepted
Lessons learnt (1)

Policy vs. Implementation:
• Clearer linkages between vision, policy, plan and budget
• Building solid national vision is necessary but not sufficient
• Yet gap existing between policy and implementation...

Funding mechanism yet to be clarified:
• Gap between intent and funding
• Content development and learning centers are costly
  ✓ Government initial investment is important
  ✓ Financial commitment to quality content
  ✓ Possible to charge fees to users
  ✓ Establishing international cooperation
Importance of data analysis and utilization for decision making:

- Building a robust EMIS is a foundation of improved education policy planning and management, including to promote better learning throughout life.
- Pilot cases of Open EMIS are noted to address the current shortcoming.
- Use of data needs to go beyond description and to be analyzed for effectively influencing policy and learning at different levels.
Lessons learnt (3)

Importance of solid pedagogy for ICT use
- More attention is to be paid to strengthening the soft power (e.g. capacity building, ICT pedagogy integration)
- “Student-centered approach” is not fully considered when producing e-learning content.

Changing culture
- Use of ICT into teaching/ school management is “changing culture”
  ✓ Requiring time and patience with good understanding of policy
  ✓ Beyond teacher training, more attention to training educational leaders (school principals, local administrators) to support effective ICT use at schools.
- Training on ICT use is more than teaching technology, but also promoting behavioral changes (e.g. communication, collaborating skills)
ICT and “21st century” skills

Static knowledge

Connected: Changing knowledge

New set of skills is needed to be competent in the connected and changing world:
- Critical thinking
- Problem solving
- Collaboration
- Communication
- Technology literacy

Main sources: Book & Teacher
Private tutoring… “shadow” education

Percentage of Pupils Receiving Private Tutoring, 2007

% of Pupils Receiving Private Tutoring

Kazakhstan
Kyrgyzstan
Mongolia
Tajikistan
Japan
Thailand
Rep. of Korea
India (Avg.: Selected States)

Rural
Urban
Nation-wide (2008)

Lessons learnt (4)

Need for Solid Coordination
• Importance of inter-sectorial coordination (e.g. Ed Ministry – Infrastructure Ministry etc.)
• Partnership at all levels (policy-makers, practitioners, and researchers)
• Need for shared vision with stakeholders (checking readiness)

Need for Public-Private Partnership
• Mobilizing resources in context of limited state financial budget
• Diverse e-content is possible with diverse participation (ICT experts, education experts, international partners, etc.)
• Expanding infrastructure (e.g. broadband, etc.)
• Government-private entities-schools
The Role of the State

1. Viable commitment for clear vision and directions
2. Creating an enabling policy framework/environment for public-private partnership
3. Establishing legislative and institutional arrangements for a life-long learning society (including quality of distance education and e-content)
4. Improving use of data/information for better planning/management and decision-making
5. Establishing equivalency system between formal and non-formal/distance learning qualifications
6. Recognizing critical importance of teachers in promoting ICT for life-long learning
7. Ensuring strong linkage between policy and funding through sector-wide development framework
Future Prospect:

Comprehensive policy, legislative and regulatory framework
• need comprehensive plan, matched with relevant budget, support with continuous ICT development**
• Recognition of non-formal/information education*****
• Develop legislation, contents for better implementation for life-long learning
• Earmarked and stable financing*****
Future Prospect: Outline

Contents and educational portal
• Need for good quality educational portal of e-content (local language, ****
• Need for Holistic e-content and technology for teacher development center*

National database and monitoring system
• Need for solid monitoring and evaluation system (criteria,**
• Need for good quality national database (students’ information etc.) ***
Future Prospect : Outline

Implementation: from policy to action

• Improved infrastructure **** (high schools,
• Capacity development of local professionals for implementation****
• Improved private-public partnership *
• Independent and unbiased agency for ICT for life-long learning planning and implementation*
• Establishing school network to improve ICT literacy*

More exchange of experiences and lessons
Thank you