

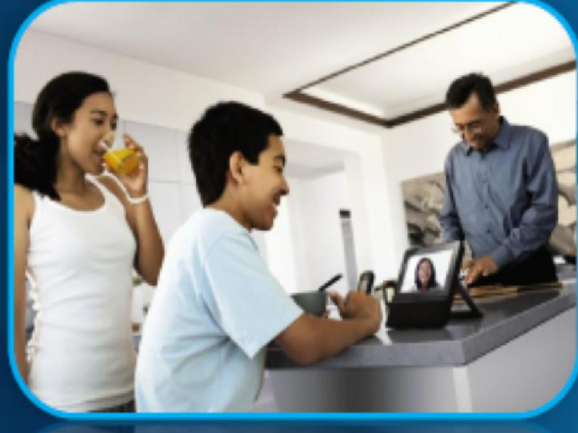
**ITU Regional Workshop for CIS on the Issues of  
Organizational and Technical Development of  
Telecommunications/ICT  
Odessa, Ukraine, 23-25 September 2015**

# **ICT in Education - Smart Learning**

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# Intel's Vision

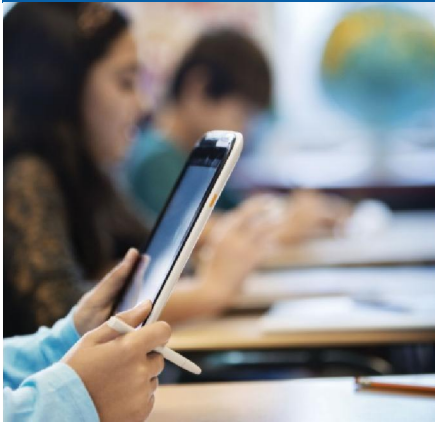
This decade we will create and extend computing technology to connect and enrich the lives of every person on earth.



# Intel® Education Solutions



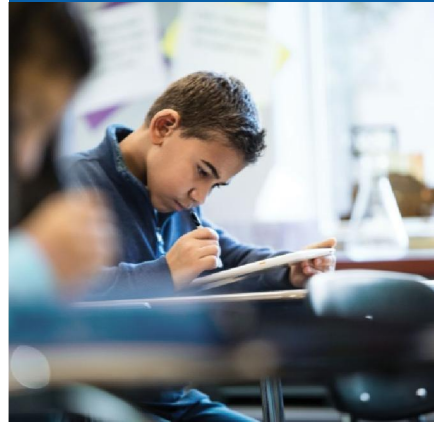
*Hardware*



*Software & Services*



*Content Ecosystem*



*Implementation Support*



*Flexible, holistic education technology solution*



# Intel Teach Program

- Reached to more than 10 million teachers in over 70 countries through public-private partnerships with government ministries and teacher education institutions.

“You can fill all the classrooms with computers but if you don’t train the teachers on how to use them effectively, the computer investment you made will lose all of its purpose”  
Dr. Huseyin Celik, Former Minister of Education, Turkey.



# Intel® Learn Easy Steps (Digital Literacy Program)

- Program addresses the needs of adults and youth around the world who seek to learn basic digital literacy skills.
- Teaches basic computer literacy, which is a key 21<sup>st</sup> century skill, enabling enhanced social and economic self-sufficiency.
- Intel Learn Easy Steps curriculum includes a Basic Course, Activity Cards, and a Help Guide.
- The first five modules provide training in practical skills such as word processing, spreadsheets, Internet, and email.
- Additional optional modules focus on Internet-based tools, and how to apply basic software applications to employment and entrepreneurship. The full course has fourteen modules.



# Intel Education Programs for Girls and Women

**Intel believes education is a fundamental right for everyone, and technology opens doors to opportunity.**

**Through the Intel Global Girls and Women Initiative, we are working to empower millions of girls and women around the world by:**

- Closing the gender gap in education access
- Inspiring more girls and women to become creators of technology
- Connecting them to opportunity through technology access

**Educating girls and closing the Internet gender gap also has an important multiplier effect—expanding opportunities for families, communities, and nations.**

More information at: <http://www.intel.com/content/www/us/en/technology-in-education/programs-for-women-and-girls.html>

## Education STEM Resources for K-12 Education (STEM: Science, Technology, Engineering and Math)

- Intel believes that young people are the key to solving global challenges, and a solid foundation in science, technology, engineering and math (STEM) is critical for their success. To help educators foster the next generation of innovators, Intel provides a wide array of STEM centered online tools and resources.
- Stem Resources: [www.intel.com/content/www/us/en/education/k12/stem.html](http://www.intel.com/content/www/us/en/education/k12/stem.html)
- Free Education tools and resources for teachers-students for 21th Century Skills. [www.intel.com/content/www/us/en/education/k12/teachers.html](http://www.intel.com/content/www/us/en/education/k12/teachers.html)



## University Programs

- Investing over 670 million US\$ in University programs since 2001.
- From teaching resources and student courseware to world-class research collaboration and technology competitions, Intel is positioned to foster and promote the next generation of technology innovators and leaders.



# USAID and Intel Partner to Advance IoT (M2M) Innovation in Jordan

- Public-private partnership to support education and entrepreneurship in Jordan's science and technology sector.
- Intel will support the program by providing 1,500 hardware IoT development kits to Jordanian universities and technical training to students in preparation for careers in technology.
- A support network put in place by USAID will enable students to find jobs that will apply their new skills after graduating.



John Davies, Intel Vice President; "Intel is helping transform education, foster research and development, and empower youth with employability and entrepreneurial skills."



# ICT in Education is a Global Phenomenon



**CIS:** Almost all countries have their own projects on ICT in education. Some of them have national programmes

# ICT in Education – Key for Broadband Success

-ICT in Education is key to increase the broadband usage and applications.

- Connect all schools, classrooms with broadband.
- Provide interactive smart boards at classrooms.
- Provide subsidized computers for students and teachers.
- Educate all teachers and students regarding the use of ICT.
- Provide digital content for education.
- Provide subsidized home broadband connectivity for low income student families.
- Provide public internet access at schools (community access centres).

# WHY INVEST ICT IN EDUCATION

- Government are already using billions of US dollars each year for classical education systems. They usually **ineffective, inefficient and inconsistent** if not updated and improved by technology.
- Due to lack of standardization of resources, **the classical system cause more differentiations, inequalities in opportunities**. Rich always learn more and better than Poor; they receive bigger share from the Pie.
- Digital learning can help to **close the gap** in Digital Divide.
- ICT based education system is for the future generations, gives them **new skills and intelligent knowledge**.
- With e-content, they learn as they play and they play as they learn. Whatever learned stays with them since they enjoy the learning process – **Good learning experience**
- Education Transformation is in reality an Education Based ICT Transformation. Students will teach digital skills to their friends – families; **whole society benefit**, not just students.
- Digital Literacy is key to increase the **Broadband Penetration, Internet Usage and e-inclusion**

# Benefits of Education Transformation

## Employment and Economic Development

- Build 21<sup>st</sup> century workforce
- Reduce unemployment

## Competitiveness

- Equip every student for success
- Increase academic rigor and achievement

## Citizenship and Social Equity

- Unlock student potential
- Prepare students for social leadership and citizenship



**W**ork losses and earnings losses have been concentrated in low-skilled, low-income households. ...Many workers remain trapped in low-paid, insecure jobs with little social protection...Young people continue to face record unemployment levels. //

— OECD



# Checklist of Policies to Promote Demand for Broadband

## Infrastructure

- Connect schools to broadband networks
- Make government an anchor tenant
- Expand access to underserved communities with universal service fund support
- Construct community access centres

## Services, applications, content

- Undertake government-led demand aggregation
- Provide e-government applications
- Promote creation of digital content
- Implement reasonable intellectual property protections
- Ensure non-discriminatory access sider expanding universal service to include broadband

## Users

- Provide low-cost user devices in education
- Develop digital literacy programs for citizens
- Address content and security concerns
- Facilitate affordability of broadband devices
- Monitor service quality
- Support secure e-transactions
- Provide training to small and medium enterprises

**Source: World Bank, Broadband Strategies Handbook;**

<http://broadbandtoolkit.org/Custom/Core/Documents/Broadband%20Strategies%20Handbook.pdf>



# Political Support

## UAE Smart Learning (ITU-Awarded Project)



## Turkey Fatih Project (Largest of its kind)



# Common Characteristics of projects in UAE and Turkey

- Political support at top level
- Coordination between different government organizations (ministries).
- Usage of Universal Service Fund
- Tablets to all students-teachers
- Smart Classrooms

# Korean Economic Growth

10 fold GDP growth in



What Made Korea to Get there, Education



# South Korea - Smart Learning



5

## ARB4: Smart learning

**Objective:** To bring about a shift from traditional methods of teaching in schools and universities, using books and paper-based sources, to smart learning with the use of tablet computers, the latest software and modern telecommunication/ICT techniques to provide access to a range of academic information, resources and subject matters.

### Expected results

Assistance to the countries in the following:

- 1) Eradication of digital illiteracy in the Arab region
- 2) Finding smart and low-cost computing devices, either with the support of Arab governments or by concluding agreements with manufacturers to provide such devices
- 3) Development of Arab educational e-content for schools and universities in the Arab region.

# ITU WTDC-2014 CIS REGIONAL INITIATIVES

**CIS1: Creating a child online protection centre for the CIS region**

**CIS2: Ensuring access to telecommunication/ICT services for persons with disabilities**

**CIS3: Introduction of training technologies and methods using telecommunications/ICTs for human capacity building** (Objective: To assist ITU Member States in the CIS region in setting up and developing national programmes for introducing telecommunications/ICTs into education)

**CIS4: Development of broadband access and adoption of broadband**

**CIS5: Building confidence and security in the use of ICTs**

# European Union – Digital Agenda

## Pillar IV: Fast and ultra-fast Internet access

### Action 46: Member States to develop national broadband plans

The Member States should develop national broadband plans operational by 2012. These plans should meet the coverage, speed and take-up targets defined in the Digital Agenda for Europe.

## Pillar VI: Enhancing digital literacy, skills and inclusion

### Action 68: Member States to mainstream e-Learning in national policies

Member States should mainstream eLearning in national policies for the modernisation of education and training, including curricula, assessment of learning outcomes and the professional development of teachers and trainers.

### Action 58: Develop a framework to recognise ICT skills

We need skilled ICT practitioners who can take the economy forward.



# CIS Statistical Information (Source ITU, penetration rates)

Fixed Broadband: 13%

Mobile Telephone: 138%

Mobile Broadband: 47%

Households with a computer: 57%

Households with internet at home: 57%

Individuals using the internet: 57%

## **We also need information for ICT in education?**

- What percent of schools/classrooms connected with broadband and data rates?
- What percent of schools are using modern ICT technologies (smart classes, smart boards)?
- What percent of students/teachers are using ICT technologies at school, at home?
- What percent of schools are using digitized textbooks and digital content?

# CIS - ICT Agenda

- **National ICT/Broadband and Education Plans**
- **Regional Commonwealth in the field of Communications:**  
**<http://www.en.rcc.org.ru/index.php/rcc/about-rcc>**

**We need to include and prioritize “ICT in Education” in:**

- **National Country Plans**
- **Plan of RCC (Regional Commonwealth in Communications)**
- **Plan of Council on Cooperation in Education of CIS countries (Ministers of Education)**

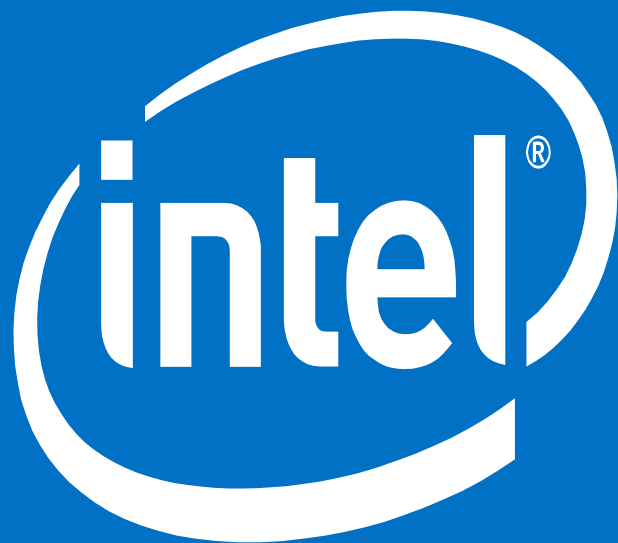
# Key Factors for Smart Learning Success

- Political Support from President-Prime Ministers.
- A regional and national plans with time bounded goals.
- Coordination between Ministries (especially ICT and Education).
- Universal Service Fund and other source mechanisms.

# Recommendations

- Develop National ICT/Broadband Plan with time bounded goals and an implementation plan.
- Prioritize the usage of ICT in Education and digital literacy programs (both in National and Regional plans)
- Get political support and provide coordination between different Ministries.
- Establish a national committee for the implementation of National Plan.
- Provide financial source through USF and other sources.





## Contact Persons

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