



United Nations
Educational, Scientific and
Cultural Organization



UNESCO Institute
for Information Technologies
in Education

POLICY ADVOCACY
AND RESEARCH

TECHNICAL ASSISTANCE

TEACHER
PROFESSIONAL
DEVELOPMENT

DIGITAL PEDAGOGY

OPEN EDUCATIONAL
RESOURCES AND
LEARNING MATERIALS

NETWORKING AND
PARTNERSHIP



CASIE 2016

Astana, Kazakhstan June 27-29, 2016

Promotion of equitable access to education and skills development by means of ICT

Natalia AMELINA, PhD

UNESCO IITE

n.amelina@unesco.org

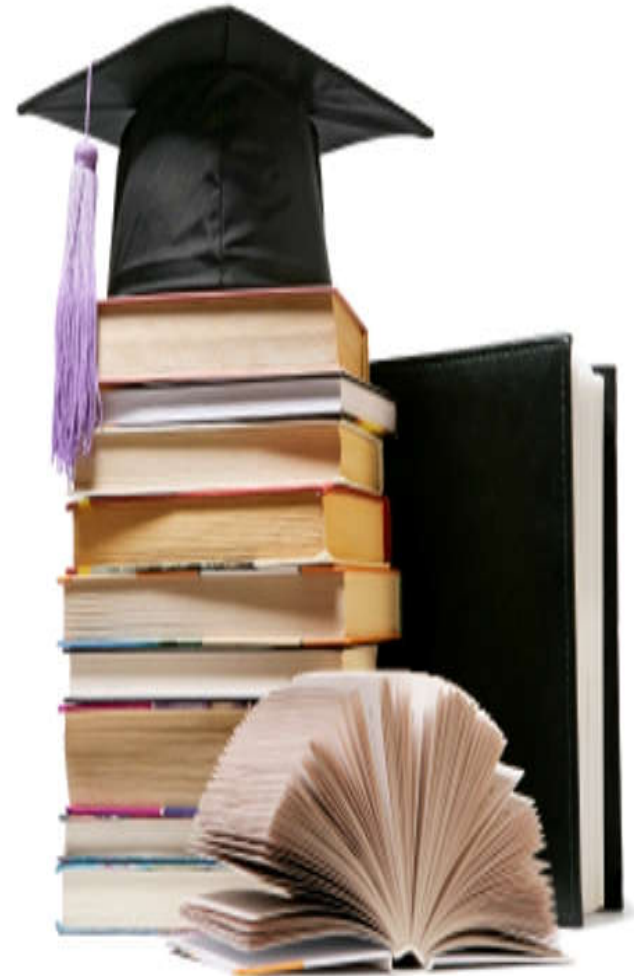
<http://iite.unesco.org>

UNESCO ED, IITE GB and Staff

WELCOME YOU!



Nowadays the main
economical and social
forces of the world are
concentrated around fields
directly connected to
KNOWLEDGE
what means to
EDUCATION
first of all

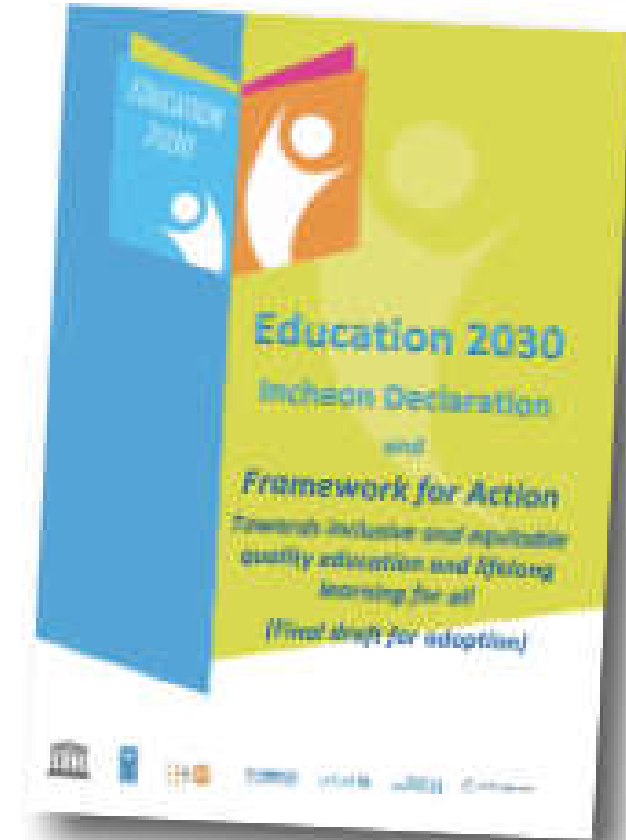


SDG 4 on Education



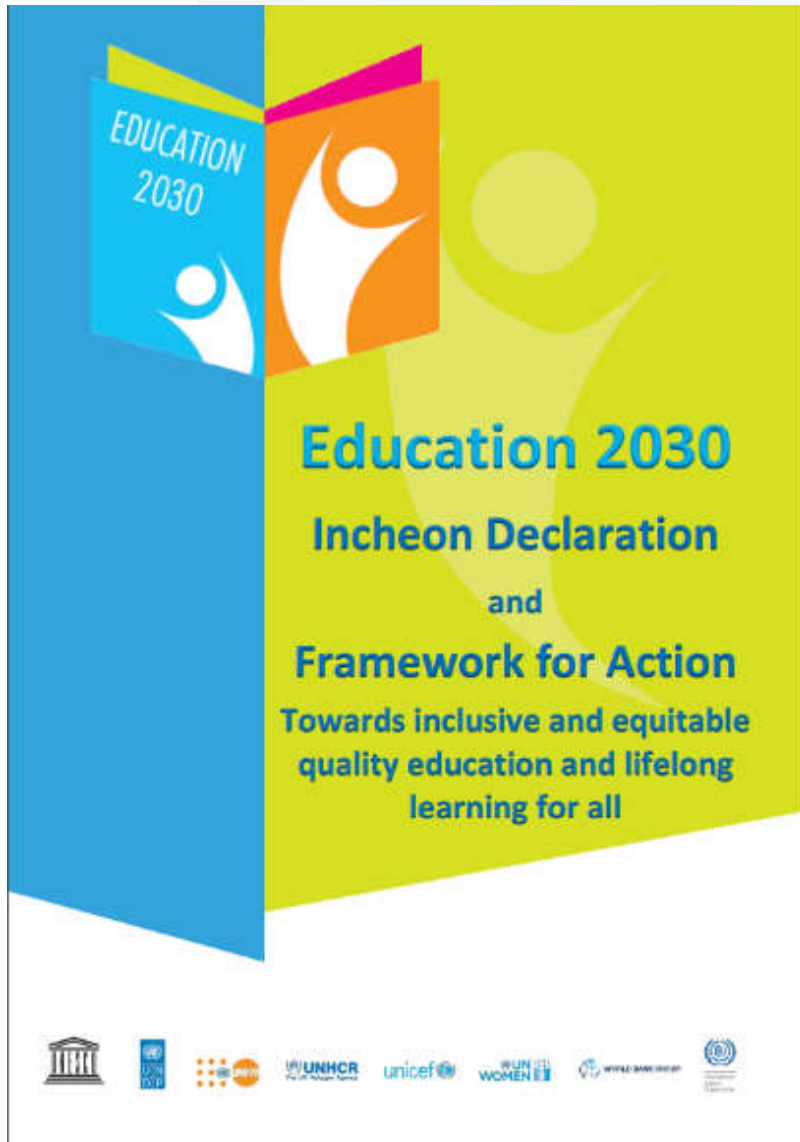
- SDG 4 - **integral part** of the 2030 Agenda for Sustainable Development.
- All SDGs **interdependent**
- **Education** is at the heart of the 2030 Agenda for Sustainable Development and essential for the success of all SDGs
- **Sustainable Development starts with Education**

SDG 4 on Education : Incheon Declaration and Framework for Action “Education 2030”



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

SDG4 on Education



7 SDG4 Targets:

- Primary and secondary education
- Early childhood and pre-primary education
- Technical/vocational and tertiary education
- Relevant skills for employment
- Gender and equal access
- Literacy and numeracy
- Sustainable development and global citizenship

3 Means of Implementation:

- Education facilities and learning environments
- Scholarships
- Teachers

ICTs and Sustainable Development

ICTs are most important factor of sustainable development. Today ICTs are intruding dramatically into all fields of human being activities including education, learning and pedagogy

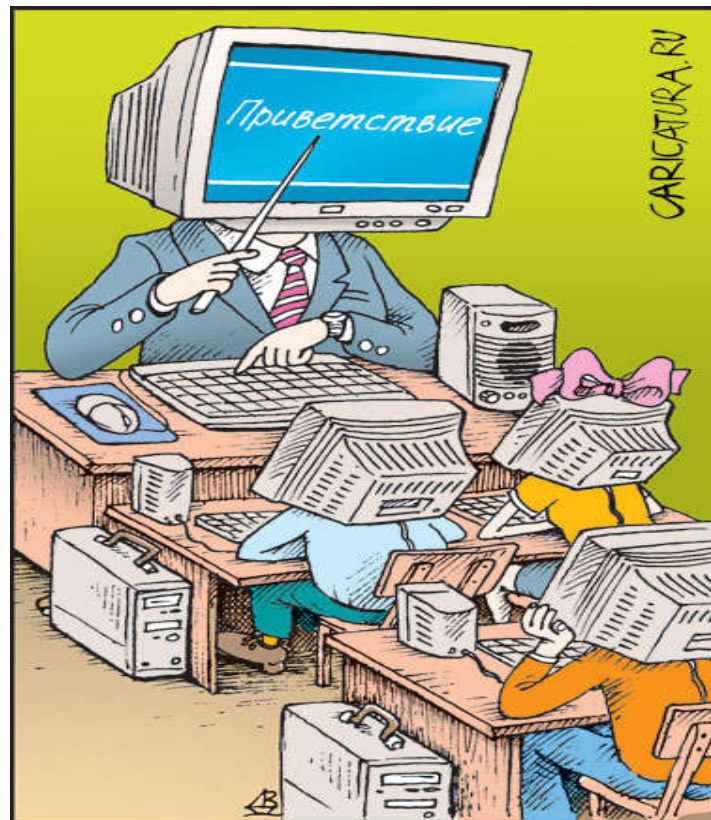


Challenge 1: Which should be school in the 2030?

Social or Technological ?



[<http://radodar.ru/?p=1025>].



[<http://caricatura.ru/art/dubinin/url/parad/dubinin/5023/>]

Challenge 2: What college or university will meet them?

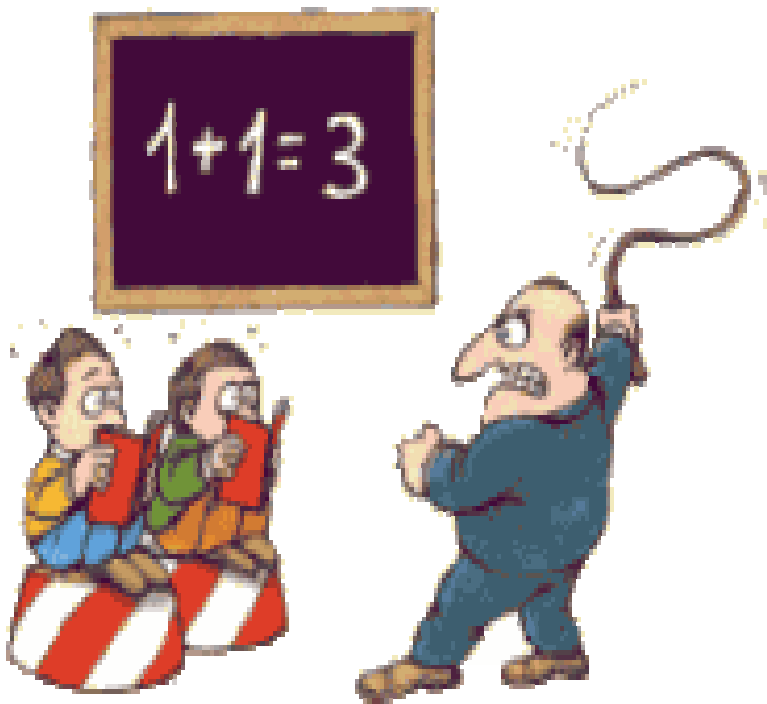


Challenge 3: This is a book! Is this a book?



Challenge 4: The role of teacher – what's a difference?

XIX Century Teacher



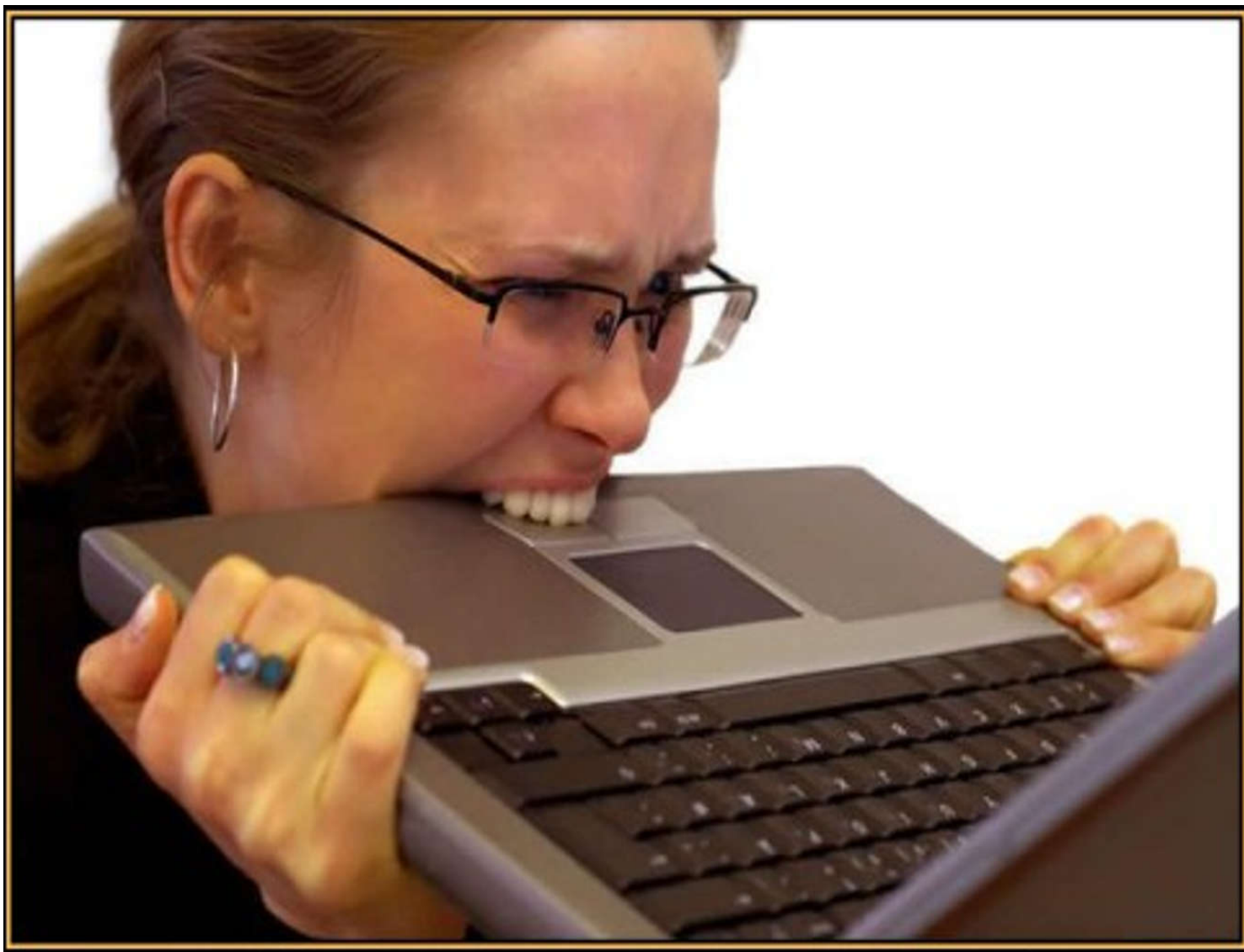
http://andreytv.blogspot.ru/2014/11/blog-post_30.html

XXI Century Teacher



<http://allwantsimg.com/wars-obo>

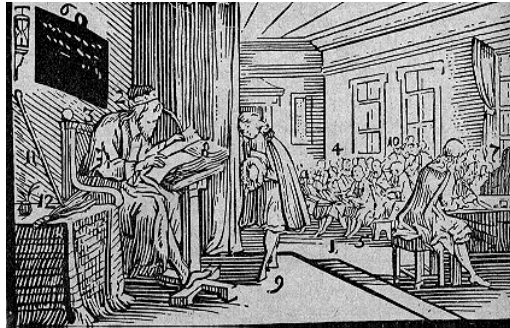
Challenge 5: Teacher ICT/Digital Competency



Challenge 6: Innovations in pedagogy - from/to personalization



Socrates,
1:1 but just for a few



XVIII Century
1:M but for Elite



IXX Century
1:M and for many



XX Century
1:MM and massive



XXI Century
1:MMM and super massive
but not personalized yet



PERSONALIZED LEARNING



IS DIFFERENT

*Solution: Changing the role of teacher and teaching staff
from “Dictatorship” to “Democracy”*

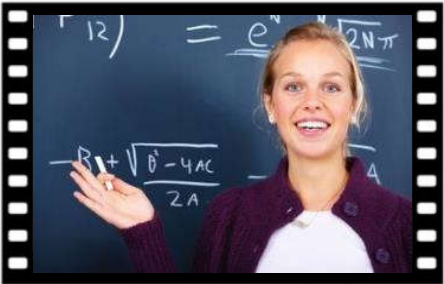


Solution: New generation of Textbooks

Good Textbooks



Placed in context videos of the best teachers

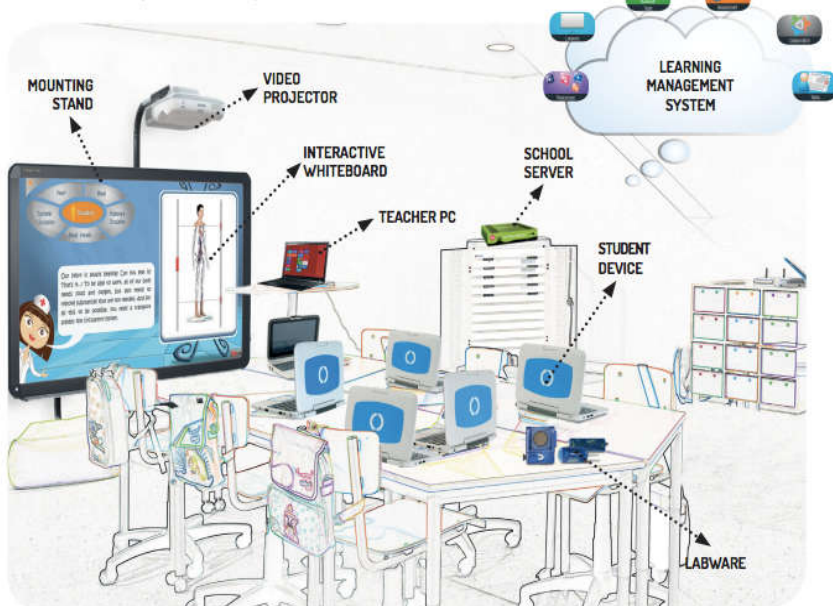


Teaching concept from the “flipped” classroom



**Highly interactive
New Generation
Multimedia
e-Textbooks
(The “Active” Text-Books)**

Solution: Collaborative Environments, Flipped Classrooms, Networked Virtual Labs



*General Solution: To integrate ICT and Pedagogy
at the all levels of education*



UNESCO priorities in TVET

TVET is a part of lifelong learning of every country taking into account social and economic conditions of every country and with regard to the global technological development



UNESCO priorities in TVET

- TVET shall help the person to keep in line with prompt progress in area of information and communication technologies



UNESCO priorities in TVET

- TVET shall be accessible for persons with disabilities and to other vulnerable groups (immigrants, refugees, representatives of minorities, the demobilized soldiers, marginal youth etc.)



UNESCO priorities in TVET

- In order to maximise the positive effects of ICT usage, a reliable strategy should be developed and implemented, guided by policy makers in government, business and civil society

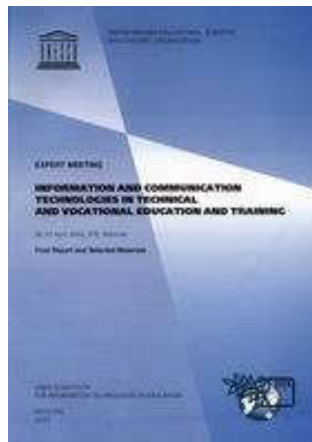






**POLICY, RESEARCH
and TECHNICAL
ASSISTANCE**

**TEACHER
PROFESSIONAL
DEVELOPMENT
and NETWORKING**

**DIGITAL
PEDAGOGY, OER
and LEARNIG
MATERIALS**



Policy Brief

 November 2011

UNESCO Institute for Information Technologies in Education

ICTs IN TVET

CONTENTS:

- The UNESCO approach
- TVET and ICTs in the Knowledge Societies and the Social Age-Entrepreneurship
- Skills acquisition process
- From e-Learning experiences towards blended learning
- Summary and recommendations
- References

THE UNESCO APPROACH

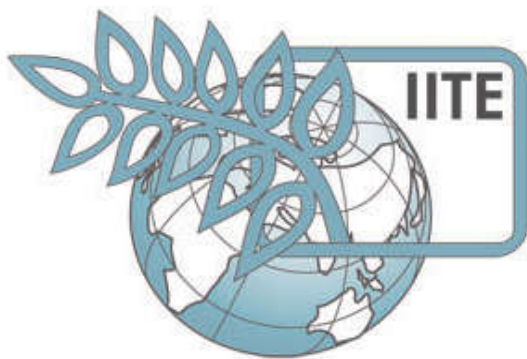
Major research projects by different international organizations concentrate on the "21st century competencies" in our knowledge economy driven by technology. The efforts aim at finding indicators, criteria, and benchmarks for international comparisons in order to assess the effects of Information and Communication Technologies (ICTs) in education.¹ Recent documents emphasize innovation strategies for education and training. Attention is given to skills and needs used by modern firms, working population, and also in the arts and science education.² In Technical and Vocational Education and Training (TVET) there is a tendency to emphasize the "learning by doing" approach.

UNESCO facilitates a collaborative access to existing free training courses and promotes open licensed resources to contribute to the development of specific groups and local communities. The objective behind this platform is to empower trainers and/or trainees with free resources and with a structured and collaborative space to share their experience. In addition, UNESCO promotes the use of "open" training materials that are freely and openly accessible for trainers and self-learners to use and reuse for non-commercial purposes such as teaching, learning, and research.³

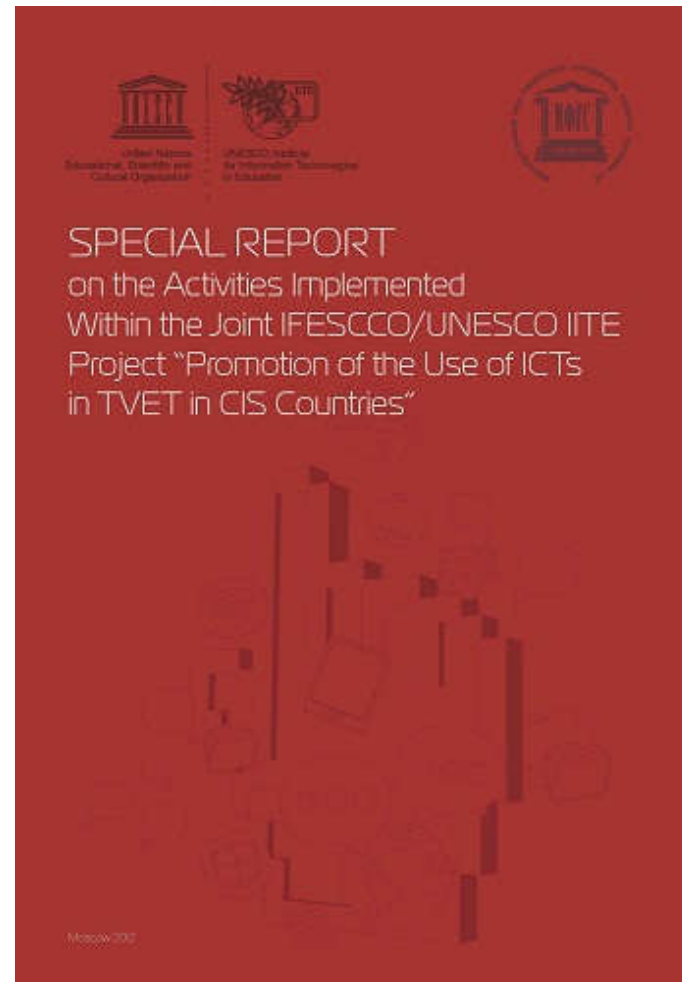
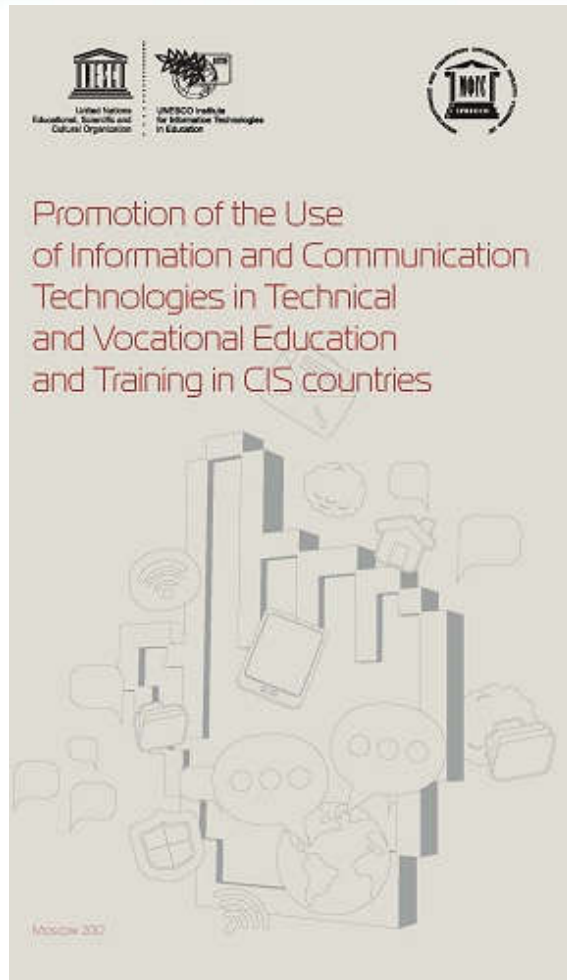


The Joint IFESCCO/UNESCO IITE Project “Promotion of the Use of ICTs in TVET in CIS Countries”

The project overall objective was to promote the use of Information and Communication Technologies (ICTs) in Technical and Vocational Education and Training (TVET) in 10 countries: Kyrgyz Republic, Republic of Armenia, Republic of Azerbaijan, Republic of Belarus, Republic of Kazakhstan, Republic of Moldova, Republic of Tajikistan, Republic of Uzbekistan, Russian Federation and Ukraine



Project reports



<http://ru.iite.unesco.org/publications/3214701/>

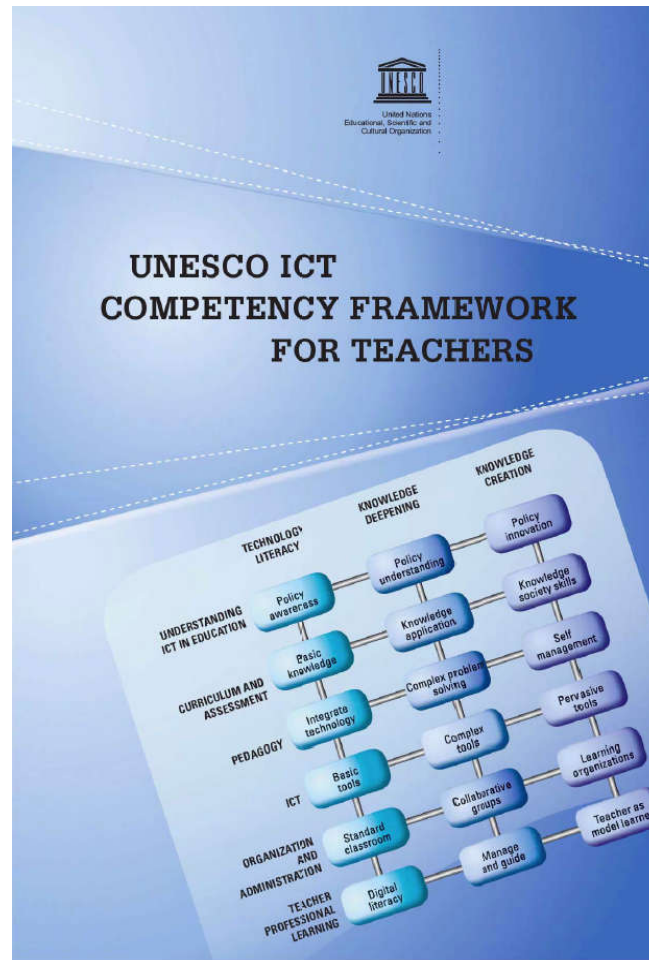
Solution : Teacher ICT Competency Standards based on UNESCO ICT-CFT

ICT-CFT v 1.0



ICT-CFT v 3.0 – 2017!

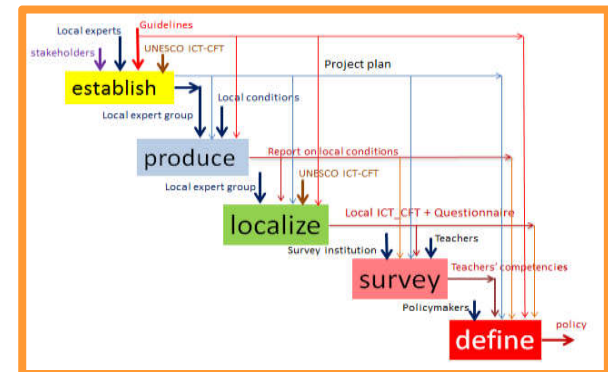
ICT-CFT v 2.0



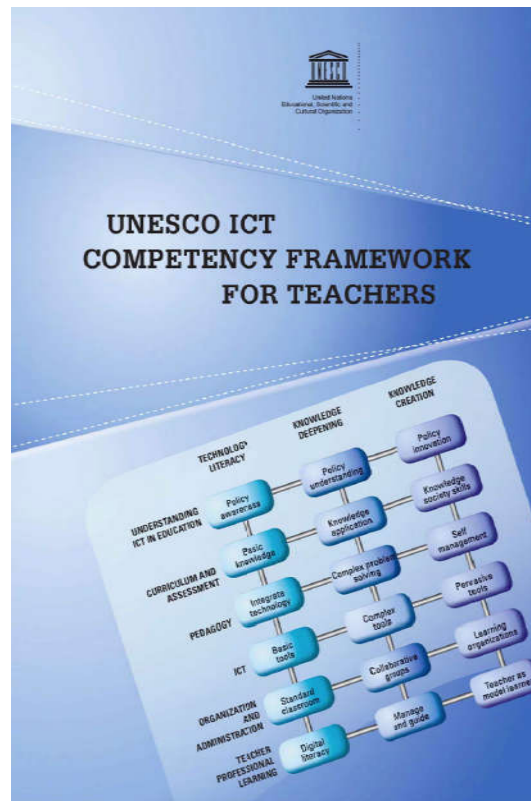
GUIDELINES ON ADAPTATION OF THE UNESCO ICT COMPETENCY FRAMEWORK FOR TEACHERS



METHODOLOGICAL APPROACH ON LOCALIZATION OF THE UNESCO ICT-CFT



IITE Experience. Adaptive Translation



December
2011

RUS Version

UNESCO IITE
Russian experts
Microsoft Russia



December
2013

MNG Version

UNESCO IITE
Mongolian experts

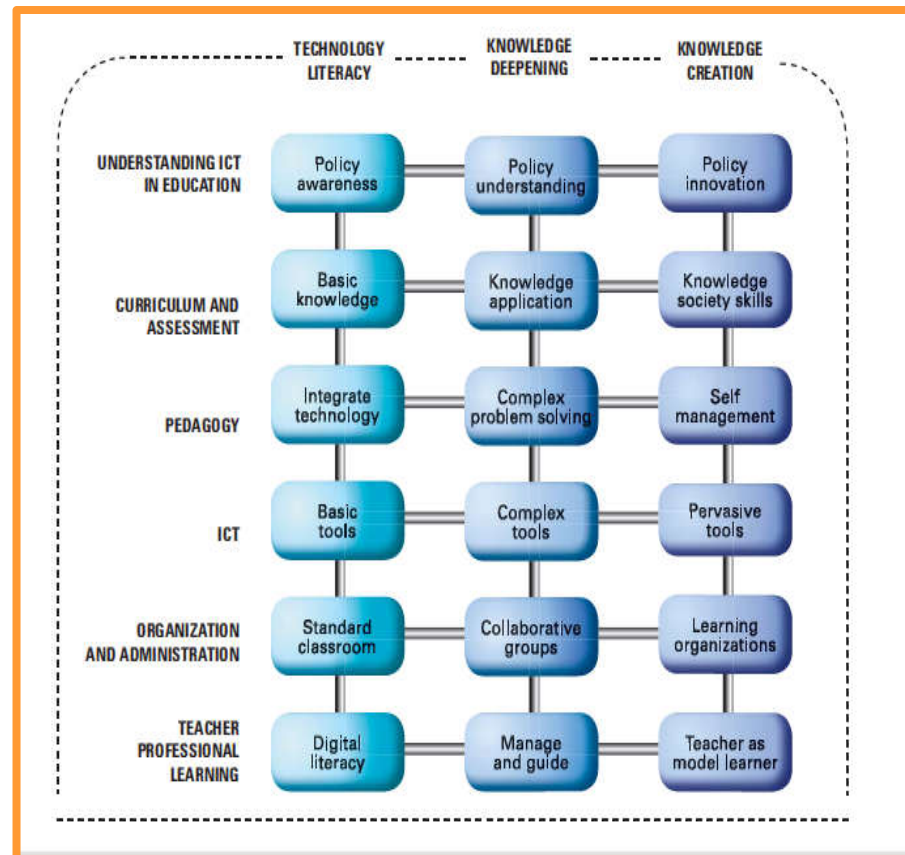
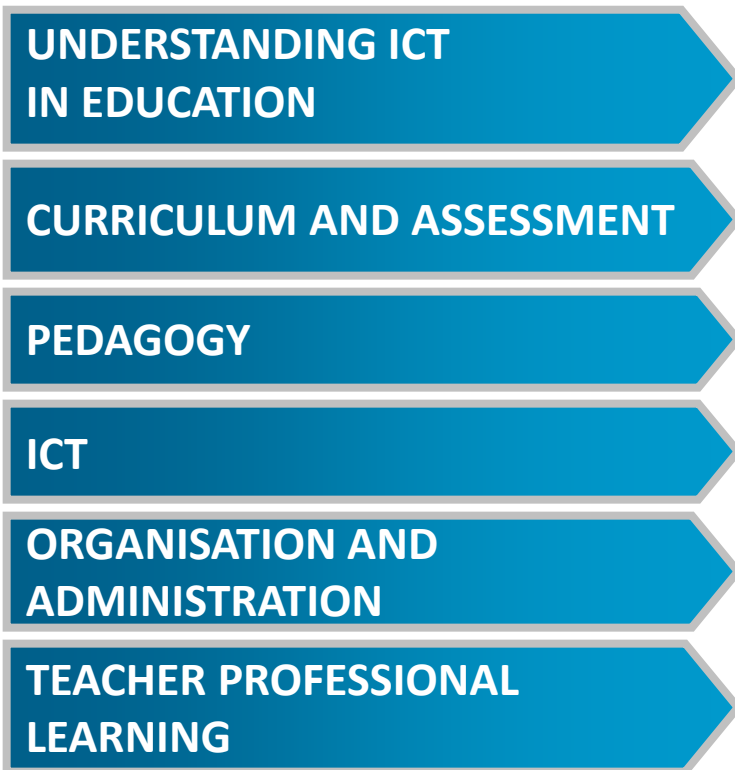


UNESCO ICT-CFT

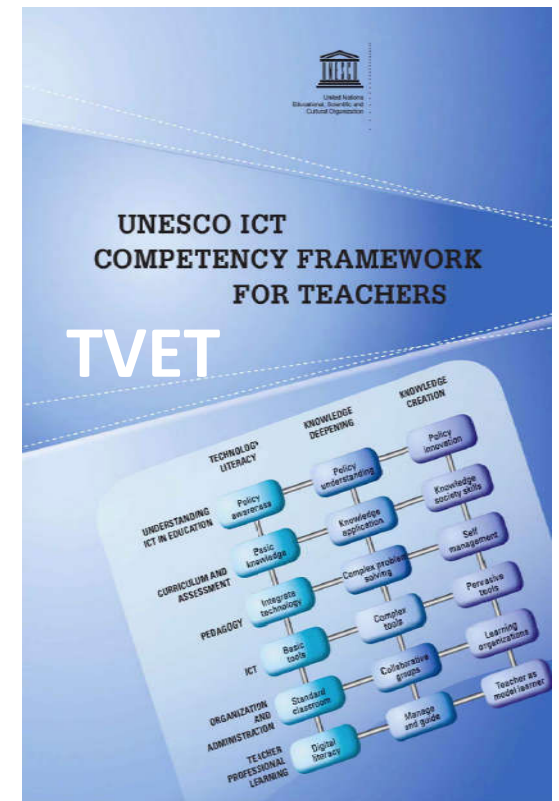
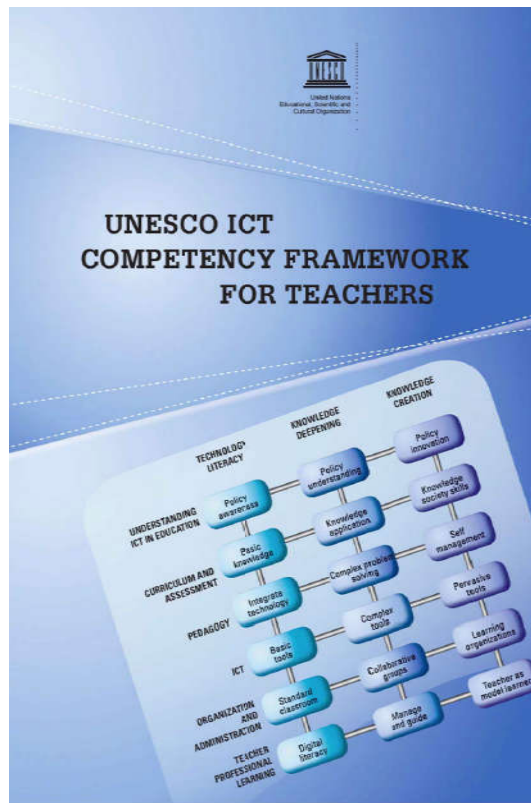
THREE APPROACHES/STRANDS



SIX AREAS OF A TEACHER'S WORK

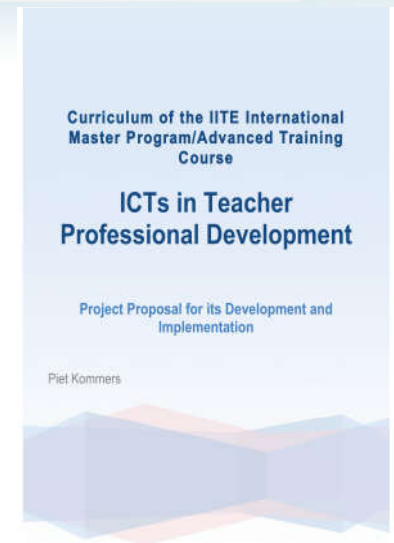
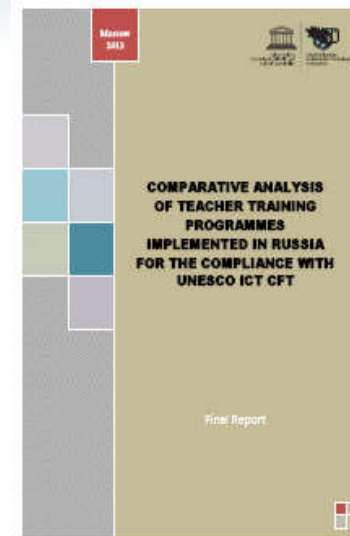


New task to be solved through cooperation and partnership



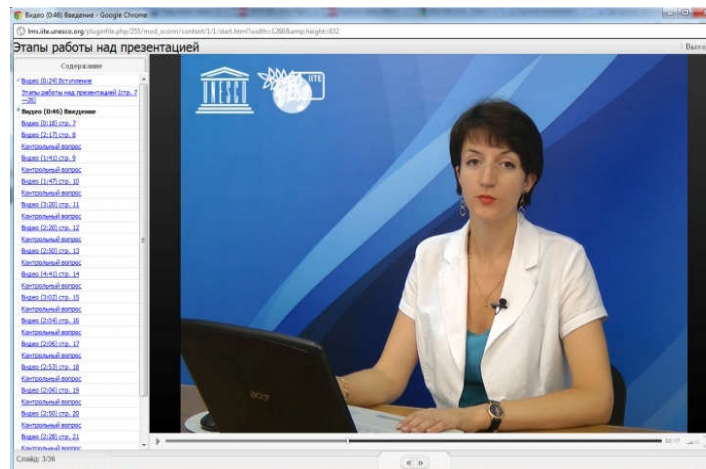
IITE Experience. Research and Publications

- UNESCO ICT-CFT (Russian Version)
- Comparative analysis of teacher training programmes implemented in Russia for the compliance with UNESCO ICT-CFT (ENG/RUS)
- Master Programme Curriculum (ENG/RUS)
- Policy Brief “ICTs And Teacher Competencies” (ENG/RUS)
- Guidelines on Adaptation of the UNESCO ICT CFT



IITE Experience. Curriculum Development and Training

- International Master Programme “ICT in Teacher Professional Development” (ENG/RUS)
- Joint training course for teachers with IT partners
- IITE on-line training courses for teachers



IITE Priority: Cooperation With Global UNESCO Networks, National Commissions, Field Offices, Institutes and Centers



UNESCO
Associated
Schools

LFF



Network of Chairs
on ICT in Education
and Innovative Pedagogy



ICT IN TVET



IITE. Policy advocacy and technical assistance based on research



- Research and Publications
- Workshops
- Conferences
- High Level Meetings



CLOUD COMPUTING IN EDUCATION

CONTENTS:

Context and outline of the problem
Types of cloud computing
The difference between cloud computing and Web 2.0
How is cloud computing being applied in education?
Benefits of cloud computing for institutions and students
Risks of cloud computing
Guidelines for selection and deployment of cloud services
Policy implications
Future scenarios

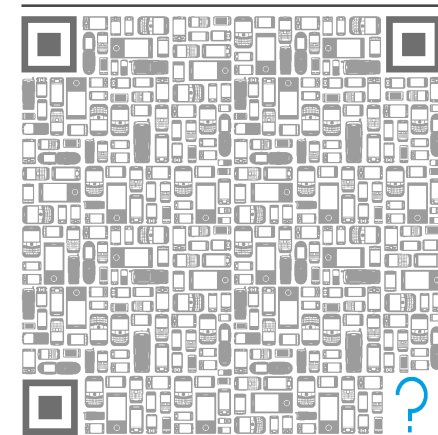
CONTEXT AND OUTLINE OF THE PROBLEM

Educational institutions throughout the World have become highly dependent on information technology to service their business requirements. Procuring and maintaining a wide range of hardware and software require substantial, ongoing investment and the skills to support them.

The economies of scale and other features of cloud computing are likely to mean an increasing shift away from institutionally-hosted services. These services are increasingly provided using internet technologies to staff and students and accessed from web browsers. The services are offered cheaply or freely to education, often with much higher availability than can be provided by the educational institution.

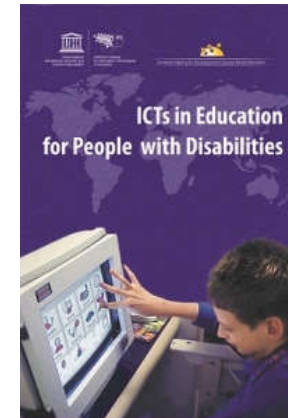
Are we therefore facing a future where the majority of educational services will be hosted in the cloud and institutions no longer host their own data centres with expensive hardware, power bills, staff salaries and computing resources which are rarely fully utilized?

This policy brief has analyzed some of the emerging benefits and challenges of cloud computing for the educational sector.



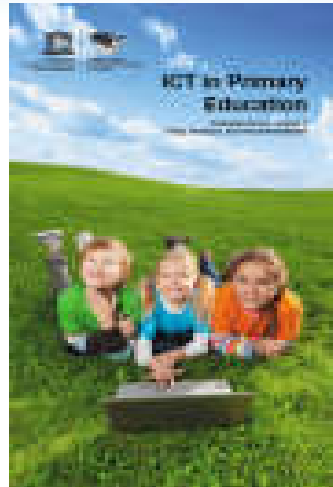
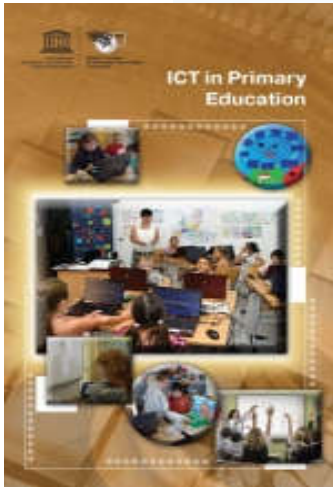
Рекомендации
по политике в области
мобильного обучения

IITE. Pilot projects and training



UNESCO IITE in cooperation with ITU opened 4 IT centers for persons with disabilities

IITE. Learning Materials and MOOCs



MOOC ICT in Primary Education was included into the list of 50 best courses for professional development of educators accredited for use by teachers of the USA upon the recommendation of the President Obama



United Nations
Educational, Scientific and
Cultural Organization



UNESCO Institute
for Information Technologies
in Education



Благодаря!

UNESCO IITE invites you for cooperation in the field of ICT-integrated pedagogy to reach the targets of Education-2030

**Welcome to IITE-2016 International Conference
“ICT in Education: Innovation for Quality,
Openness and Inclusion”
Saint-Petersburg, Russian Federation,
September 5-6**

<http://conference2016.iite.unesco.org/en/>

Natalia AMELINA, PhD

UNESCO IITE

n.amelina@unesco.org

<http://iite.unesco.org>