ICT and Pedagogy: Traditional and New Approaches

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UNESCO Institute for Information Technologies in Education

- Established in Moscow by the General Conference of UNESCO at its 29th session in November, 1997 as a part of an operational network of UNESCO structures
- Supports the achievement of the strategic objectives of the UNESCO Medium-Term Strategies and priorities
- Design and implementation of the programmes aimed at the application of ICT in education
- Programme-driven, responds to global and country-level needs
- Bridging the digital divide in education and building inclusive knowledge societies
- Reinforcing national capacities in promoting e-environments for increasing access to education and life-long learning
- Policy dialogue and support to the development of national strategies on application of ICT in education
- A centre of excellence and provider of expertise and technical support in ICT in education
UNESCO IITE OER Project

Since 2010 - **Open Educational Resources in non-English-speaking countries** - to advocate the OER movement and build the capacity in production, sharing and use of OER in UNESCO Member States, in particular, in the countries of the CIS, Baltic States and other non-English-speaking countries.

The project builds on the results of examination of the needs, capacities, opportunities and challenges for the production and use of OER in the selected countries. Emphasis is placed on the exploration and dissemination of best practices, raising awareness of open licenses and development of recommendations for a wider use of OER in educational practice.
OER in Non-English-Speaking Countries

1st stage - educational content in the Russian language and national languages - in CIS and Baltic States: Azerbaijan, Armenia, Belarus, Kazakhstan, Moldova, the Russian Federation, Ukraine, Uzbekistan, as well as in Latvia and Lithuania. The surveys covered national policy for ICTs in education with a focus on OER-related issues, the current state of advancement of educational content, major achievements, challenges, and obstacles, including technological and IPR aspects.
OER in Non-English-Speaking Countries

2nd stage (2011-2012): Japan, People’s Republic of China, Brazil, Mongolia, Turkey and Vietnam. The surveys provided a further insight into how OER-related patterns vary in non-English-speaking countries. IITE published the case studies on OER in Brazil, China, Lithuania and Russia. Surveys in 18 non-English speaking countries have been completed.
Russia Federal-Level Projects

Federal Portal "Russian Education" (www.edu.ru)

Single-Entry Window Portal (window.edu.ru):
- catalogue of Internet resources (> 50,000);
- digital library (> 30,000)
Russia Federal-Level Projects

Integrated Collection of Digital Educational Resources (school-collection.edu.ru):
- more than 110,000 resources for school disciplines

Federal Centre for Informational and Educational Resources (fcior.edu.ru):
- over 20,000 interactive multimedia educational modules
OER in Poland

Central Asia Symposium on ICT in Education 2014: Embracing Technologies, Empowering Teachers

27-29 May 2014, Tashkent, Republic of Uzbekistan
OER in Poland

First conclusions of the “Digital School” Programme: In addition to investments into the production of electronic content and efforts to introduce open licenses, more consultations are needed with all stakeholders, including teachers and instruction designers, to ensure proper acceptance and active use of the open educational materials and involvement in production of educational content.
OER, IPR and Open Licenses

IITE organized an international workshop “Open Educational Resources and Intellectual Property Rights” on May 31 – June 1, 2011 in cooperation with the National Research University “Higher School of Economics”. The workshop brought together experts in ICT in education, OER and IPR from Azerbaijan, China, Latvia, Russia, Turkey, UK, Ukraine and South Africa. The participants discussed the following issues:

- Global tendencies in OER
- OER in CIS, China and other non-English speaking countries
- IITE gateway to OER in CIS
- IITE online course on Open Educational Resources
- UNESCO CI Sector OER Community and OER Platform
- Open licenses and Creative Commons under different jurisdictions
- Russian/CIS legislation and Creative Commons licenses
- Strategies for the promotion of open licenses
In December 2011, IITE together with the Institute of the Information Society organized the International seminar on the use of open licenses in CIS. Experts in IPR issues from Azerbaijan, Armenia, Belarus, Kazakhstan, Russia, and Ukraine, representatives of Creative Commons, the Russian State Duma and Private Law Center under the Russian President, the Supreme Arbitration Court, state authorities in the field of law, mass communications, education, science and culture, as well as members of creative and scientific communities, delegates of international organizations and mass media discussed the legal aspects of application of CC licenses in the Commonwealth of Independent States. Recommendations on introduction and wider use of open licenses in Russia and CIS were developed.

UNESCO

Creative Commons at an International Seminar and Expert Meeting in Moscow

Aleks Oerberg, December 14th, 2011
OER, IPR and Open Licenses

creativecommons.org

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CC NAMES RYAN MERKLEY AS CEO

“A public commons, enabled by the open web, is the most powerful force to foster creativity, inspire innovation, and enhance human knowledge around the world. Those who believe in its potential need to join together in a global movement to ensure its success.”

Creative Commons names Ryan Merkley chief executive officer

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HOW CAN I LICENSE MY WORK?
LOOKING FOR CREATIVE WORKS?

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OER, IPR and Open Licenses

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производение за основу для произведных в некоммерческих целях при условии, что они
указывают ваше авторство и лицензируют свои новые произведения на тех же условиях.
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только загрузку ваших произведений и обмен ими с другими людьми при условии,
что указывается ваше авторство, однако ваши произведения нельзя изменять каким-либо
образом или использовать их в коммерческих целях.
Ознакомиться с условиями лицензирования | Ознакомиться с текстом лицензии
OER Networking

IITE OER gateway was launched on 1 June 2011. Its user-friendly interface facilitates navigation through the repositories of Open Educational Resources in Russia and other CIS countries. The gateway provides hundreds of links to OER in national languages of CIS.

Special efforts are taken to develop the capacity of educators in OER production and re-use: an online training course, including a special tool for OER development has been elaborated and made openly available at the IITE website. These activities are supported by networking and building a community of experts in the international OER communities and networking.
Policy Advocacy for OER

Policy briefs:
“Global trends in the development and use of open educational resources to reform educational practices”
“Open educational resources and intellectual property rights”
OER at International IITE Conferences

Sessions on OER were organized at International IITE Conferences IITE-2010 and “ICT in Teacher Education: Policy Development, OER, and Partnership” (St. Petersburg) and IITE-2012 “ICT in Education: Pedagogy, Educational Resources and Quality Assurance”
Policy Advocacy for OER


Recommendations:
• to promote OER, open education and penetration of ICT in education and include them in the Government educational policy for 2014-2024;
• to develop a competency model of the teachers in line with the international experiences and national context;
• to promote initiatives in implementing projects on new pedagogical practices, development of mobile learning, OER, MOOC and other areas;
• to develop and implement EMIS based on the MUST experience of implementing a credit-based curriculum.
IITE-2014 (October 21-22, 2014)

New Challenges for Pedagogy and Quality Education: MOOCs, Clouds and Mobiles

Objectives:
• To analyze the policy-level implications and the challenges of ICT integration into educational practices and promoting quality and accessible education for all;
• To discuss promising initiatives on ICT potential for enhancement of teacher professional development;
• To exchange information on new forms and methods of ICT-enhanced education, including application of MOOCs, cloud and mobile technologies;
• To identify priority areas for intervention and research, in order to contribute to the full use of ICT potential for modernization of educational system for future students and teachers.
IITE OER Project 3rd Stage - MOOC

UNESCO IITE and University of London launch MOOC "ICT in primary education" on May 27, 2014

Why and how are teachers integrating ICT (Information and Communication Technology) into primary education? In this course we analyse examples.
The UNESCO Institute for Information Technologies in Education (UNESCO IITE) offers the Russian-language course "ICT in Education" for teachers. The 72-hour online course includes learning materials and tests for each module to obtain an IITE community member certificate. The course is available at the RUSERE website and is supported by an electronic textbook developed on the basis of the monograph "ICT in Education" published by UNESCO IITE to summarize analytical results obtained during the past 5 years. We invite all interested teachers to study online, self-study in the public domain or on a contractual basis as an additional training course of the Academy of Professional Development and Retraining of Educators.

The partner of UNESCO IITE for certification of the course is the Academy of Professional Development and Retraining of Educators (http://apkpro.ru). The course will be launched for all interested students on 1 September 2014 under the CC-BY license. UNESCO IITE will set up a network of vendors to ensure the accreditation procedures on contractual basis for all interested participants.
IITE OER Project 3rd Stage - Pedagogy
IITE OER Project 3rd Stage - Pedagogy

Theories of learning associated with the traditional model of learning

- Behaviorism
- Cognitivism

Learning as an active and reflective process combines experience through practice and thought (reflection)
Social interaction introduces multiple perspectives through reflection, collaboration, negotiation and shared meaning

- Constructivism - Piaget (social constructivism - Vygotsky)
- Constructionism
- Connectivism
<table>
<thead>
<tr>
<th>Traditional Teaching</th>
<th>Collaborative Learning</th>
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</thead>
<tbody>
<tr>
<td>A teacher centred environment</td>
<td>A student centred environment</td>
</tr>
<tr>
<td>Teacher is in control</td>
<td>Students are in control of their own learning</td>
</tr>
<tr>
<td>Power and responsibility are primarily teacher centred</td>
<td>Power and responsibility are primarily student centred</td>
</tr>
<tr>
<td>The teacher is the instructor and decision maker</td>
<td>The teacher is a facilitator and guide and the students are the decision makers</td>
</tr>
<tr>
<td>The learning experience is often competitive in nature</td>
<td>Students work together to reach a common goal</td>
</tr>
<tr>
<td>Series of smaller teacher defined tasks organized within separate subject disciplines</td>
<td>Authentic, interdisciplinary projects and problems</td>
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<tr>
<td>Learning takes place in the classroom</td>
<td>Learning extends beyond the classroom</td>
</tr>
<tr>
<td>The content is the most important</td>
<td>The way information is processed and used is the most important</td>
</tr>
<tr>
<td>Students master knowledge through drill and practice</td>
<td>Students master knowledge by constructing it</td>
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</table>
IITE OER Project 3rd Stage - Pedagogy

Challenges and opportunities

• Computer-based ‘instructional’ programmes: learning broken down into small steps, the role of the tutor: input - ‘drill-and-practise’ - test - feedback

• Impact on interactions and relationships: teacher-pupil
  pupil-teacher
  pupil-pupil

• Individualisation possible – individual learning trajectories

• Importance of interpersonal (social) exchanges during learning
Thank you

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Full-texts of all IITE publications are available at
http://www.iite.unesco.org/open_educational_resources