Technological Leadership in the Digital Age

Tatiana Nanaieva
Corporate & Government Affairs Director in U/CIS
Tatiana.Nanaieva@intel.com

Robert Fogel
Principal Education Architect for Intel
robert.fogel@intel.com
Education Transformation is a Global Phenomenon
“Job 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
Четыре императива великих лидеров

- Назначение команды
- Внушайте доверие
- Развивайте таланты
- Настраивайте системы

![Diagram](image.png)
LEARNING is social

* Other names and brands may be claimed as the property of others.
MOOC

EDX

Coursera

Open2Study

Iversity

UDacity

NovoED

Canvas Network

ESRVO

ASSIVE

ONLINE

NEP
eLabs or vLabs

safe, affordable
new way of
teaching practical skills
of science

*Other names and brands may be claimed as the property of others.
### Virtual Physics Labs

- Remote, sharable physical apparatus
- Available 365/24/7 online

<table>
<thead>
<tr>
<th>Simple Pendulum</th>
<th>Simple Harmonic Motion</th>
<th>Tangent Galvanometer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinematics</td>
<td>Buoyancy</td>
<td>Electromagnetic Induction</td>
</tr>
<tr>
<td>Force Table</td>
<td>Calorimetry</td>
<td>Faraday’s Law</td>
</tr>
<tr>
<td>Dynamics Track</td>
<td>Ideal Gas Law</td>
<td>Lenses and Mirrors</td>
</tr>
<tr>
<td>Circular Motion</td>
<td>Sound Waves</td>
<td>Refraction &amp; Reflection</td>
</tr>
<tr>
<td>Work and Energy</td>
<td>Electrostatics</td>
<td>Slit Diffraction</td>
</tr>
<tr>
<td>Momentum</td>
<td>Electric Field Mapping</td>
<td>Half-Life</td>
</tr>
<tr>
<td>Torque</td>
<td>DC Circuits</td>
<td></td>
</tr>
</tbody>
</table>
LEARNING SCIENCES + FUN

ATLANTIS Remixed

= Game-Based Learning

*Other names and brands may be claimed as the property of others.
What is Fun?

- Collaboration
- Surprise
- Exploration
- Discovery
- Role Play
Augmented Reality (AR)
merging the digital world
with the physical world

*Other names and brands may be claimed as the property of others.
Virtual Reality (VR)

- Low Latency
- 360° Head Tracking
- Stereoscopic 3-D View
- Real immersion
- Ultra Wide Field of View
- Relatively low cost

Sony targeting PS4

Oculus cross platform

*Other names and brands may be claimed as the property of others.*
3-D Printers Reshaping “Reality”

- Turn theory into practice
- Validate and Test
- Simplify complexity
- Hands-on
- Math, Science, Engineering
- Historical artifacts
High Quality Apps & Digital Curriculum Content

- Immersive & Interactive
- Multisensory & Personalized
- Relevant to Culture & Language
- Align to Curriculum Standards
- Online and Offline

Media Camera
Lab Camera
Classroom Management
Intel Education Software
Teacher Preparedness
Digital Curriculum
Skills Assessments
Right Device
New Form Factors in Education
Selecting the “Right” Device

- Appropriate to Age
- Appropriate to Usage
- 1:1 or Mobile Lab
- Internet Independence
- Content Creation
- Manageability
- Performance
- Security
- TCO
Education Technology Solution

Teaching & Learning Environment

- Leadership Development for Administrators
- Teacher Professional Development
- Assessments
- Personalized Learning
- Online Education Community
- LMS/CMS/SIS
- Tools & References
- Internet Content
- Community Generated Content
- Core & Supplemental Curriculum

ICT & Infrastructure

- Teacher & Student Devices
- Security
- WLAN/LAN/Wi-Fi Networks
- Datacenter/Cloud
- Theft Deterrence
- Manageability
- School Servers
- Charging & Storage
- Intel Education Software
- Virus Protection
- Internet Filter
- Peripherals
- Classroom Management
- Backup & Restore
- Accessibility Models

Policy (vision & objectives)

Monitor & Evaluation

- Direction & Expectations
- Metrics
- Feedback
Системный подход к внедрению ИКТ программ

Образовательная политика
- Чёткое представление того, что хотим получить
- Цели и задачи

eLearning Solution
- Учитель, учащиеся, администрация, родители
  - Педагогическая и профессиональная подготовка (тренинги и пр.)
  - Образовательное сетевое взаимодействие

eСодержание и Оценивание
- Учебные программы (инвариантные и вариативные)
- Формирующее и итоговое оценивание
- eКонтент в интернете, доступный в любое время, в любом месте
- eКонтент созданный самостоятельно или в сообществе
- Онлайн средства обучения и справочная информация

ИКТ и инфраструктура
- Устройства учителя и ученика
- Школьный сервер
- Сеть WLAN/LAN
- Дополнительные устройства (SMARTдоски, проекторы, 3D принтеры, пр.)

Мониторинг и оценка эффективности
- Обратная связь
- Результаты KPI
- Ключевые индикаторы успеха
- Dashboard
Solution Framework

Maximize education value and outcomes while mitigating risks and lowering costs and time to implementation
Assessing 21st Century Skills

Academics are not the only measure

- Collaborative Problem Solving (CPS)
- Peer and Self-Assessment for Students
- Scoring and Interpreting Student Performance
- Link to Teaching
Preparing Teachers

Teacher readiness, capacity building, change management

- On-going Teacher Professional Development
- Leadership Development
- Teacher Community
- Mentoring
- Sharing
Technology is a strategic tool for empowering teachers and students

ANYtime / ANYwhere learning

ENGAGE and MOTIVATE students

DEEPER and RICHER learning experiences

SPARK intrinsic desire to learn
Technology enables new and innovative usage models in education
At the International Symposium on ICT in Education held last year (13-14 September 2011, Mongolia), Central Asian countries reported on their policies, promising practices and lessons learnt in the use of ICT in education. It was evidenced in this symposium that Central Asian countries shared common issues and would need to be provided a regional platform where government officials and experts can share and discuss practices in using ICT in education, related policy options and potential solutions to the common challenges faced by their respective education systems. To this end, UNESCO Bangkok (Asia-Pacific Regional Bureau for Education) will be holding the Central Asia Symposium on ICT in Education (CASIE) in Almaty, Republic of Kazakhstan on 28-30 January 2013, with financial support from Government of Japan and in collaboration with the Ministry of Education of the Republic of Kazakhstan.
Intel Corporation

*The World’s Largest Semiconductor Manufacturer*

- Leading Manufacturer of Computer, Networking & Communications Products
- Founded by Gordon Moore and Robert Noyce in 1968
- Headquartered in Santa Clara, California
- $52.7B in Annual Revenues - 25+ Consecutive Years of Positive Net Income
- 170 Sites in 66 Countries
- Over 107,000 Employees – 84,600 technical roles, 10,200 Masters in Science, 5,400 PhDs, 4,000 MBAs
- Named one of the Top Ten Most Valuable Brands in the World by Interbrand
- Ranked #42 on Fortune’s World’s Most Admired Companies
- Largest Voluntary Purchaser of Green Power in the United States for 7 years in a row
- Invests $100 Million Each Year in Education Across More than 100 Countries
- 4 Million Hours of Volunteer Service toward improving education over the past decade
Intel® Education
Empowering Youth. Transforming Communities.

150M Students Learning with Technology
13M Teachers Empowered with Professional Development
7M Students in Affiliated Science Competitions
4M Employee Volunteer Hours for Education

$100M Annual Investment
to Improve Education in
100 Countries
INTEL Education Initiatives

Intel® Education

Tags: EDU Education

Inspiring Student Success
Intel® Education helps passionate education professionals transform education. In turn, education transforms their students into dreamers, doers, and the leaders of the future.

Choose the Right Device for Learning
Intel® architecture offers fewer disruptions and a feature-rich educational experience for today's 21st century students.

Join Our Community
Become part of the journey with 50,000 global educators transforming the K-12 classroom.

www.intel.com/education

EduGalaxy.Intel.Ru
INTEL ISEF 2015

Find an affiliated fair
Intel ISEF is the world's largest international pre-college science competition with affiliated fairs around the globe

About Intel ISEF

Upcoming Events
MAY 10, 2015
Intel International Science and Engineering Fair 2015
Intel for Programming in Education

Intel for Programming in Education

Intel for Programming in Education

“Makers”

*Other names and brands may be claimed as the property of others.
12TH ANNUAL LONDON | DECEMBER 2015

EDUCATION SUMMIT
GAMING AND EDUCATION

SUPPORTED BY
MAYOR OF LONDON
ukie

Bringing together national and international thought leaders in education, gaming and technology to explore the impact of gaming on the future of

https://summit.intel.co.uk
Transforming the Classroom, Inspiring Student Success

We have a proven holistic model for transforming education for today's learners. Start with your vision and use our practical insights to help lead your students to success.

Explore the model ›
Teacher as coach, mentor, facilitator
Education Transformation

- Leadership
- Policy
- Professional Development
- Research & Evaluation
- Curriculum & Assessment
- Sustainable Resourcing
- Information Communications Technology

Student Success
Intel® Education Transformation Policy Tool

Policy Development Process


Intel seeks to support ICT policy and education transformation by providing government agencies with an extensive, flexible, and extensible set of policy development tools.

Envision the Future
- Create long term shared vision
- Define government & stakeholders' mission
- Analyze the socio-ecosystem
PROFESSIONAL DEVELOPMENT – INTEL® TEACH

• Empower teachers to successfully integrate technology in the classroom
• Develop 21st century skills in students
• Online courses and resources

TRAINED 13M TEACHERS, 75 COUNTRIES
Intel® Teach Program Portfolio

Intel® Teach provides flexibility through delivery options (face-to-face, online, or hybrid courses) and course levels (beginning through advanced experience). All courses enable teachers to introduce, expand, and support 21st century learning in any subject using their existing curricula.

Intel Teach Elements Courses

Professional Development for Anyone, Anywhere, Anytime in 24 Languages. A series of high interest, visually compelling short online or CD-based courses that provide deep exploration of current learning concepts.

K-12 CLASSROOM TEACHERS (ALL SUBJECTS)

- **Project-Based Approaches**
  Helps teachers improve their understanding and application of Project-Based Approaches to engage students.

- **Assessment in 21st Century Classrooms**
  Participants learn to plan, develop, and manage student-centered assessment to benefit students’ learning.

SCHOOL LEADERS

- **Educational Leadership in the 21st Century**
  Educators explore and discuss school leadership in students’ technological world and develop strategies to better support teachers.

- **Collaboration in the Digital Classroom**
  Helps teachers develop students’ 21st century skills, deepen content understanding, and prepare for the globally connected world.

- **Thinking Critically with Data**
  Participants learn to help students develop specific skills necessary for analyzing, interpreting, and displaying different kinds of data.
Intel Teach Courses

A Network of Sustained Support through a Train-the-Trainer Model, used in more than 60 Countries since Inception in 1999.

**K-12 CLASSROOM TEACHERS (ALL SUBJECTS)**

**Getting Started Course**
Introduction to classroom software productivity tools and student-centered approaches.

**Essentials Course**
Develop units that integrate technology into existing classroom curricula to promote student-centered learning.

**Essentials Online Course**
Develop units that integrate technology into existing classroom curricula to promote student-centered learning in an online course.

**Thinking with Technology Course**
Develop project-based units using online thinking tools to enhance students’ higher-order thinking skills.

**Advanced Online Course**
Collaborate with other teachers to build communities to advance integration of technology and 21st century learning.

**SCHOOL LEADERS**

**Leadership Forum**
Network with other leaders to focus on leadership in promoting, supporting, and implementing effective technology integration in schools.

**ICT TEACHERS**

**Skills for Success**
Training on a student curriculum that develops digital literacy, problem solving, critical thinking, and collaboration skills.

**Intel Education Resources**

**Global Online Community**
Teachers Engage is a personal learning network for anyone interested in the core concepts of Intel Teach Program courses: instructional design, project-based approaches, effective use of technology, assessment of 21st century skills, and open-ended questioning.

**Free Teaching Tools and Resources**
The Intel Education Web site offers robust, practical, easily integrated content and resources including exemplary lesson plans, assessment strategies, technology-enriched project ideas, and higher-order thinking tools, in more than 18 languages. Find out more at www.intel.com/teachers.
Intel Teach Elements
Intel Teach

Engage

Preparing Teachers & Administrators

Assessing 21st Century Skills

Digital Curriculum Content

Selecting the “Right” Device

BEST PRACTICES

ISTE

ATCS

ASSESSMENT & TEACHING OF 21ST CENTURY SKILLS

THE UNIVERSITY OF MELBOURNE

CISCO | INTEL | MICROSOFT
Leadership in the XXI century

Module 1: Technology Leadership

School leadership is a critical component of 21st century teaching and learning. Innovative teachers require supportive leaders who understand that technology integrated into well-designed, standards-based instruction improves student achievement. In this module, you consider your own strengths and challenges as a leader. You also explore strategies for fostering a learning environment that leverages technology to help develop students’ 21st century skills.

1. Roll over each lesson title to read the lesson objective.
2. Click Next to continue to Lesson 1.
Extension Topic

Essential Conditions

The ISTE Essential Conditions serve as a scaffold to assist leaders in effectively leveraging technology to improve teaching and learning. They offer a broad classification of criteria for implementing NETS-A and establishing goals and outcomes for technology in schools.

1. Roll over each word to learn more about the Essential Conditions.

2. Open Essential Conditions to save a copy to your Course Folder.

3. Open Essential Conditions Progress and save a copy to your Course Folder. Take a few moments to rate your progress on the Essential Conditions.

4. When you are finished, click Next to continue to Lesson 2
1. Visionary Leadership/ Стратегическое лидерство
   a. inspire and facilitate
   b. engage in an ongoing process
   c. advocate for policies, programs, and funding to support implementation of a technology-infused vision and strategic plan

2. Digital Age Learning Culture/ Образовательная культура цифрового мира
   a. ensure instructional innovation focused on continuous improvement of digital-age learning
   b. model and promote the frequent and effective use of technology for learning
   c. provide St-centered environments equipped with technology and learning resources to meet the individual, diverse needs of all learners (1:1 eLearning)
   d. ensure effective practice in the study of technology and its infusion across the curriculum
   e. promote and participate in local, national, and global learning communities that stimulate innovation, creativity, and digital-age collaboration

3. Excellence in Professional Practice/ Успешные педагогические практики
   a. allocate time, resources, and access to ensure ongoing professional growth in technology fluency and integration
   b. facilitate and participate in learning communities that stimulate, nurture, and support administrators, faculty, and staff in the study and use of technology
4. Systemic Improvement/ Системный прогресс

a. lead purposeful change to maximize the achievement of learning goals through the appropriate use of technology and media-rich resources

b. collaborate to establish metrics, collect and analyze data, interpret results, and share findings to improve staff performance and student learning

c. recruit and retain highly competent personnel who use technology creatively and proficiently to advance academic and operational goals

d. establish and leverage strategic partnerships to support systemic improvement

e. establish and maintain a robust infrastructure for technology including integrated, interoperable technology systems to support management, operations, teaching, and learning

5. Digital Citizenship/ Цифровое гражданство

a. ensure equitable access to appropriate digital tools and resources to meet the needs of all learners

b. promote, model, and establish policies for safe, legal, and ethical use of digital information and technology

c. promote and model responsible social interactions related to the use of technology and information

d. model and facilitate the development of a shared cultural understanding and involvement in global issues through the use of contemporary communication and collaboration tools

Technology for Professional Development

Gloria shared her professional development ideas with Frank to help her teachers meet their goals. Now, she is interested in hearing his suggestions. Review Gloria’s ideas and then select Frank’s suggestion that you think corresponds best to each idea.

1. Review the chart to see Gloria’s ideas for meeting each goal.
2. Drag Frank’s suggestion to its corresponding idea to show other ideas to support each goal and Submit.
3. When you are finished, click Next to continue.

<table>
<thead>
<tr>
<th>Goals</th>
<th>Gloria’s Ideas</th>
<th>Frank’s Suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn new technologies</td>
<td>Send some teachers to a conference or district workshop.</td>
<td></td>
</tr>
<tr>
<td>Integrate Web 2.0 tools</td>
<td>Provide a list of tools and links to the tools for teachers.</td>
<td></td>
</tr>
<tr>
<td>Collaborate with another class</td>
<td>Organize a common planning period for teachers.</td>
<td></td>
</tr>
<tr>
<td>Use digital portfolios</td>
<td>Have teachers visit another school to see how other teachers and students use digital portfolios.</td>
<td></td>
</tr>
</tbody>
</table>
Meeting Challenges

School leaders face many challenges when implementing change. Review some challenges that may be faced by leaders who are changing a school’s or district’s approach to technology use in schools. Consider which NETS-A indicator would best help the administrator for each challenge.

1. Drag the challenge to the most relevant NETS-A indicator that it could help address.
2. When you are finished, Click Next to continue.

Feelings that social media is inappropriate for schools.

Too many students with different needs.

District staff not convinced that technology integration can make a difference.

Lack of interest in technology from staff.

Promote, model, and establish policies for safe, legal, and ethical use of digital information and technology

Facilitate and participate in learning communities that stimulate, nurture, and support administrators, faculty, and staff in the study and use of technology

Provide learner-centered environments equipped with technology and learning resources to meet the individual, diverse needs of all learners

Collaborate to establish metrics, collect and analyze data, interpret results, and share findings to improve staff performance and student learning

© Intel Corporation. *Other names and brands may be claimed as the property of others.
Effective Professional Development

High quality professional development is critical when trying to integrate technology and improve teaching and learning. An in-depth study demonstrated that instructional technology professional development, integrated into a comprehensive professional development program, may lead to effective technology integration that can have positive outcomes for students.

According to the research, high-quality professional development for technology integration has several essential characteristics. These characteristics should be addressed in any type of professional development, face-to-face or virtual.

(Research from Rodriguez, G., & Knuth, R., 2000, and EDC, 2010)

- **Connection to Practice**
- **Hands-on Technology**
- **Peer Collaboration**
- **Ongoing Process**
- **Adequate Resources**
- **Evaluation**

1. Click **each characteristic** of high-quality professional development for technology integration.
2. When you are finished, click **Next** to continue.
Intel Teach Goals

Intel® Education offers professional development opportunities for teachers to help become 21st century practitioners.

1. Roll over the computer to see what participants learn to do in Intel courses.

2. When you are finished, click Next to continue.
Elements Courses

Intel® Teach Elements courses are self-paced, or can be facilitated, e-learning courses, that offer just-in-time professional development for busy teachers. The courses include interactive learning experiences and offline activities.

1. Click each image to learn more about the Elements courses.

2. Open Intel Teach Elements to help you get started exploring the courses.

3. When you are finished, click Next to continue.
Thinking Tools

The Intel® Education teaching and learning resources help educators play a critical role in facilitating 21st century learning activities, pose questions, and encourage students to think deeper.

Online thinking tools help teachers develop technology-rich lessons. The tools are:

- Customizable—teachers bring their content into open-ended tools
- Designed for K-12 teachers of all subjects
- Based on research that demonstrates the value of visual representation in constructing and retaining new information

1. Roll over each caption to read about the online thinking tools.

2. Click the Next button under the image caption to see more tools.

3. When you are finished, click Next to continue.
Project-Based Approaches

Project-based learning is a student-centered instructional model. Through this approach, students develop content area knowledge and skills through an extended task that promotes student inquiry and authentic demonstrations of learning in products and performances.

Designing Effective Projects includes a collection of over 60 exemplary Unit Plans that integrate technology into classroom projects, align to standards, promote higher-order thinking, and engage students in authentic project tasks.

1. Roll over the highlighted areas to learn about the elements of a project-based unit.

2. When you are finished, click Next to continue.
Assessment

Assessment in 21st century classrooms is student-centered, ongoing, and embedded throughout instruction. With the focus on developing students’ 21st century skills, new assessment strategies are needed. Assessing Projects helps teachers create assessments that address 21st century skills and provides strategies to make assessment an integral part of teaching.

1. Roll over the tabs to learn more about the Assessing Projects Web site.
2. When you are finished, click Next to continue.
Other Resources

Additional resources are available from Intel® Education to support and model best practices.

1. Roll over the caption to learn about more resources.

2. Click the Next button under the image to see more sections.

3. Open Intel Tools and Resources for an overview of the Web site and links to the tools and resources. Explore the site.

4. When you are finished, click Next to continue.
Module 2: Collaboration with Technology

In Module 2, you investigate how web-based tools enable administrators, teachers, and students to collaborate and communicate with each other and the world. You also consider how online communities can create a positive environment, discuss and learn best practices to protect against online threats and misuse, and explore how technology and policy can work together.

1. Roll over each lesson title to read the lesson objective.
2. Click Next to continue to Lesson 1.
The Collaborative Web Defined

As with most technology, the Internet is constantly evolving. Some call the current generation of tools available on the Internet Web 2.0 or the read-write Web. Collaboration is the common feature of new Web applications, and it is what distinguishes the current Web from the static Web of the past. In order to “inspire...a shared vision of purposeful change that maximizes use of digital-age resources,” educational leaders need to understand the powerful collaborative resources available on the Web. (NETS-A, 2009)

1. Click the computer screens to learn the differences between the “old” Web and today’s collaborative Web.

2. Click Next to continue.
Benefits and Purposes for Educators

The collaborative Web provides numerous ways to communicate and participate. Web 2.0 resources:
- Bring together creative and communal practices (such as image sharing sites)
- Push content to users (such as podcasts and other RSS feeds)
- Allow for electronic invitations, group subscriptions, and features that allow communities to create, share, and track the work of others in the same field
- Provide knowledge through a variety of modes to share and advance what is known
- Support social, multimodal, and multimedia literacy

(Coughlin & Kajder, 2009)

1. Roll over each image to see educator benefits for using online collaborative tools.
2. Click Next to continue.
A Look at a Few Collaborative Tools

While one Web 2.0 application collection site (Feedlyapp, 2009) has documented over 8,000 collaborative tools in 74 categories, a few specific categories of tools are used by millions of people daily and in classrooms around the world. Through these tools, students are drawn into extended educational conversations with peers, experts, and others in the discovery, exploration, and clarification of knowledge (Hargadon, 2009).

1. Roll over the caption to see an explanation of a collaborative tool.
2. Click the Next button under the image to see the next collaborative tool.
3. View Online Collaborative Tools to see the list of tools referenced in this course.
4. Click Next to continue.
Online Collaborative Tools

Online collaborative tools can be organized into eight main categories. Click a category or tool type to access links and information about sample tools and resources. Additional tools may be found in the Intel® Teachers Engage Online Community (http://engage.intel.com), a community for educators that focuses on core topics of the Intel® Teach Program. Explore the Topic by Content folders for the categories of tools.

**NOTE:** This icon means the Web site has no age restrictions, and the tool is appropriate for younger students. Other tools may be appropriate for elementary grade use with the teacher’s facilitation.

<table>
<thead>
<tr>
<th>Category</th>
<th>Tool Type</th>
<th>Classroom Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research &amp; Search</td>
<td>• Bookmarking</td>
<td>Teachers and students save, comment on, organize, and share research resources.</td>
</tr>
<tr>
<td></td>
<td>• File sharing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Photo sharing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Source citation</td>
<td></td>
</tr>
<tr>
<td>Collaborative Writing</td>
<td>• Blogs</td>
<td>Teachers and students write, share, and collaboratively create online content.</td>
</tr>
<tr>
<td></td>
<td>• Collaborative documents (word processing, spreadsheets, charts, databases, graphs, presentations, and so on)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Wikis</td>
<td></td>
</tr>
<tr>
<td>Communication &amp; Messaging</td>
<td>• Instant messaging</td>
<td>Teachers and students communicate with each other, other classrooms, community members, and experts.</td>
</tr>
<tr>
<td></td>
<td>• Microblogging</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Video and audio conferencing</td>
<td></td>
</tr>
<tr>
<td>Visual Creation</td>
<td>• Drawing</td>
<td>Teachers and students design, share, and collaboratively create online visual content.</td>
</tr>
<tr>
<td></td>
<td>• Graphics creation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Image editing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Mind mapping/graphic organizers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Vodcasting/video editing</td>
<td></td>
</tr>
<tr>
<td>Audio Creation</td>
<td>• Audio creation and editing</td>
<td>Teachers and students design, share, and collaboratively create audio content.</td>
</tr>
<tr>
<td></td>
<td>• Podcasting</td>
<td></td>
</tr>
</tbody>
</table>
Educational Leader Communities

Ascd edge
http://ascdedge.ascd.org/
An online community to connect with colleagues, peers, and mentors. Share video, audio, photos, blogs and more with other members and comment on community and ASCD content.

Classroom 2.0
http://www.classroom20.com/forum/topic/listForTag?tag=administration
Social network for those interested in Web 2.0 and social media in education. Free membership. Includes forums, special interest groups, and online events, such as webinars. This Web address brings up all discussions that have been tagged “administration.”

Connected Principals
http://connectedprincipals.com/
A blog comprised of a group of school administrators who share their views on education. The site serves as an organized resource with categories relevant to school leaders. The purpose is to share best practices by principals.

Education World: Message Board Center
http://community.educationworld.com/forum
Discussion boards on topics such as professional development, technology integration, school administrators, and school issues.

The Educator’s PLN
http://edupln.ning.com/
A Ning site that facilitates connections between educators. It features a variety of resources such as downloadable podcasts with education leaders, discussion groups, and links to relevant blogs, videos, resources, and events.

Intel® Teachers Engage Online Community
http://engage.intel.com
Discussion boards on core topics of the Intel® Teach program: effective use of technology, instructional design, project-based approaches, assessment of 21st century skills, and open-ended questioning.

LinkedIn
www.linkedin.com/
Join any number of educational groups on LinkedIn. Connect and collaborate with
Eight Collaborative Tool Categories

A wide range of collaborative online tools are available for students and educators. Eight online tool categories are each identified by a puzzle piece.

1. Click each **puzzle piece**.

2. Roll over the **connected puzzle piece** to view a brief description of tools in that category and sample classroom uses.

3. Click **Next** to continue.
Overview of Safety Needs in a School

Internet-connected computers present a unique challenge to schools. Teachers want students to access educational content, collaborate with experts, and share ideas and knowledge, but the Internet can pose security risks for privacy, safety, and unlawful use.

Consider multiple efforts to protect students, equipment, and information. Educational leaders need to support and establish policies for safe, legal, and ethical use of digital information and technology (NETS-A, 5b).

1. Click the classroom items to view how a school defends against inappropriate use of the Internet.
2. Click Next to continue.
Protecting Student Privacy

Districts are legally bound by law and ethically expected to protect students’ privacy.

When establishing standards for collaboration or publishing student content online, ensure student information is protected.

1. Roll over the pictures to see ways to protect student information and strategies for teaching safe Internet use.

2. Save the Tips for Protecting Student Privacy in your Course Folder for future reference.

3. Click Next to continue.

Tips for Protecting Student Privacy

MODULE 2: LESSON 2 out of 4

© Intel Corporation. *Other names and brands may be claimed as the property of others.
Censorship and Filters

Online collaborative tools are often blocked in schools due to fears of inappropriate use. Educational leaders disagree on the best course of action, especially in the upper grades.

1. Click Filter and Teach to view the pros and cons to Internet filtering.

2. Click Next to continue.
Parents expect educators to educate their children as well as keep them safe. Often, safety concerns draw extreme, overprotective reactions from educators and online use becomes highly restricted. However, most students already participate in online and electronic communication outside of school. Therefore, students are better served when educators help students learn safe behaviors—instead of isolating students from rich learning opportunities online during school hours.

1. Click the **mobile phone** to view how students see social media and technologies.

2. Click the **girl** to view teenagers communicating in various ways.

3. Click the **caption** to see statistics of teenage use of electronic communication devices and tools.

4. Click the **Next** button under the image to see the next example of how students communicate electronically.

5. Click **Next** to continue.
Extension Topic

Copyright and Creative Commons

Educational leaders need to require students and teachers to follow copyright law and respect intellectual property. In supporting collaboration, leaders must "promote, model, and establish policies for safe, legal, and ethical use of digital information and technology" (NETS-A, 5b).

1. Click the terms on the screen to read their definitions and roll over the definitions to see examples.

2. Open and read the Copyright Guidelines and Resources.

3. Click Next to continue.
Benefits of Online Communities

Educational leaders are expected to “promote and participate in local, national, and global learning communities that stimulate innovation, creativity, and digital-age collaboration” as well as “facilitate and participate in learning communities that stimulate, nurture, and support administrators, faculty, and staff in the study and use of technology” (NETS-A, 2009). Online communities can be a tremendous help in bringing individuals together to further knowledge and support change.

1. Roll over each stick figure to view the benefits and uses of online communities for educators.

2. Click Next to continue.
Online Community Features

An online or virtual community is a “social network of individuals who interact through specific media...to pursue mutual interests or goals” (Wikipedia, 2010). Many online communities, such as the Intel® Teachers Engage Community (http://engage.intel.com), have similar features.

1. Roll over the highlighted areas to view typical features of online communities.

2. Click Next to continue.
Communities for Educational Leaders

Several communities exist to support administrators and educational leaders. View one or more sites to see if any fit your situation.

1. Click the **computer screen** to view the reasons an educational leader may want to join an online community.

2. View **Educational Leader Communities** and visit one or more sites.

3. Click **Next** to continue.
Communities for Teachers

When searching for an online community to support the needs of teachers, consider whether the community will "stimulate innovation, creativity, and digital-age collaboration" (NETS-A, 2009).

1. View Teacher Communities and visit one or more sites.
2. Click Next to continue.
Extension Topic

Teachers Engage Online Community

The Intel Engage Community (engage.intel.com) is a global community open to all educators dedicated to transforming the K-12 classroom through effective technology integration. The community provides an environment for educators to focus on core topics that are part of the Intel® Teach Program, such as:

- Effective use of technology
- Project-based learning
- Assessment of 21st century skills
- 1:1 learning
- Science, Technology, Engineering, and Math (STEM) Resources

1. Roll over the **caption** to see what you can do in the Intel Engage Community.
2. Click the **Next** button under the image to see additional features.
3. View **Engage Community Information** for more information.
4. Click **Next** to continue.
Extension Topic

Benefits of Your Own Community

Creating a community specifically for your teachers can help to support and promote change in your school and district.

1. Roll over each block to view the benefits of creating your own online community.

2. View Creating an Online Community for additional ideas and resources for creating and supporting an online community.

3. Click Next to continue.

Creating an Online Community
Lesson Extension

Module 3: Technology Trends

Module 3 provides an overview of topics that are expected to transform teaching and learning in the near future.

Each lesson is an extension activity.

Use the Menu to select topics that interest you.

1. Roll over each lesson title to read the lesson objective.
2. Click Next to continue to Lesson 1.
Three Technology Trends

Ray Kurzweil poses the idea that advances in technology are exponential, rather than linear. He claims that in the 21st century we will experience 20,000 years of progress (Kurzweil, 2001)! This rate of change demands that leaders stay abreast of technology trends and think about ways to use new technologies to enhance student learning. Each year, the Horizon Report identifies trends in educational technology (Johnson, L., Adams, S., and Cummins, M. (2012), NMC Horizon). This module will examine three of these trends (Glass, 2009: Office of the Governor, 2008).

1. Roll over the caption to read about a technology trend.

2. Click the Next button under the images to see the next trend.

3. Open 2010 Horizon Report to read more about technology trends.

4. When you are finished, click Next to learn about Evolving Technology Access, or use the course menu to select other trends to investigate.

“People expect to be able to work, learn, and study whenever and wherever they want to” (Horizon, 2010).
Effective One-to-One E-learning

The success of any education reform effort, such as one-to-one e-learning, depends on thoughtful planning and preparation.

Jeff Mao, the technology director for the Maine Department of Education, explains “One to one is not a tech project…” He advises schools thinking of implementing one-to-one e-learning to start the planning process with the academic community (School CIO, 2010). Starting with academic goals, rather than technology tools, will keep a one-to-one program focused on what is important—student learning.

Other stakeholders, such as parents, students, and teachers whose courses may be affected by online offerings, should also be included in the process.

1. Open One to One E-learning Resources to read more about one-to-one e-learning.

2. When you are finished, click Next to continue.
Student and Teacher Roles

It’s “impossible to overstate the power of individual teachers in the success or failure of 1-to-1 computing” (Bebell and Kay, 2010).

Conventional instruction, where teachers are in control of student learning, is not compatible with one-to-one computing environments. Both student and teacher roles must change if the benefits of individual computers are to be realized.

1. Click each arrow to see a photo and roll over the photo to read a teacher’s views.

2. When you are finished, click Next to continue.

Knowledge consumers to knowledge producers

Individual workers to collaborators

Teacher-dependent to self-directed learners
Smartphones

Cell phones that can connect to the Internet as well as access a variety of useful and interesting applications, or smartphones, are quickly becoming a powerful mainstay in today’s digital communication. Teens are especially attached to these devices and use them for a wide range of purposes (Lehman, 2009).

1. Roll over the smartphone to read statistics about young people and smartphones.

2. When you are finished, click Next to continue.
Образовательная Галактика Intel

Мини-ПК с Intel Inside®

Новый тип настольных компьютеров

Важное

Где найти точку опоры, чтобы перевернуть урок?

Сегодня о "перевернутом обучении" мы говорим много, очень много... Но, по-прежнему, мы находимся в поиске этой точки опоры (именно поэтому в качестве эпиграфа взяты слова Архимеда), которая позволит нам перевернуть... Перевернуть ЧТО?...

Что мы надумали со студентами ПТСГА в наших аудиторных дискуссиях?... Дальше »

Автор: Бычева Ольга   Вчера, 3:42   Комментариев: 9
Thank YOU

Tatiana.Nanaieva@intel.com
## INTEL® ARCHITECTURE
### ADVANTAGES FOR EDUCATION

<table>
<thead>
<tr>
<th>FULL-FEATURED PLATFORMS</th>
<th>MANAGEABILITY AND SECURITY</th>
<th>PLATFORM AND SOLUTION INNOVATION</th>
<th>LEGACY CONTENT SUPPORT</th>
<th>OPEN ECOSYSTEM AND ARCHITECTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Support for multitasking</td>
<td>• Security and management tools</td>
<td>• Innovative solutions</td>
<td>• Approved content and curriculum</td>
<td>• Interoperable technologies</td>
</tr>
<tr>
<td>• Online/offline file access</td>
<td>• Classroom collaboration to optimize learning efficiency</td>
<td>• Robust PC performance</td>
<td>• SW Compatibility (Adobe Flash* and JavaScript*)</td>
<td>• Choice of vendors</td>
</tr>
<tr>
<td>• Peripheral compatibility including USB</td>
<td>• Secure content and apps deployment</td>
<td>• Knowledge creation aligned to curriculum</td>
<td>• Easy to integrate existing materials</td>
<td>• Maximize value by leveraging existing infrastructure</td>
</tr>
</tbody>
</table>

*Other names and brands may be claimed as the property of others.