

# Educational Technology & Charter Schools

Presented by:  
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Developed by: ETCC

## Objectives

- Common Understanding of Educational Technology
- Identify Educational Technology Support for Standards, Teacher Effectiveness and the Model Curriculum
- Strategic Planning Considerations
- Options for Funding Educational Technology Initiatives

## Objective

1. Common understanding of Educational Technology

## Activity

Review the “thought to ponder” and “projection to the future” items on the worksheet.

Record your response.

**Thought to Ponder:** In your daily activities how does technology enhance your performance? Is it used independently or embedded to enhance performance, *similar to the way lights illuminate a room.*

**Projection to the future (it has arrived):**  
Can you identify any employment which does not use technology?

## Essential Question

What should learning in the  
21<sup>st</sup> century look like?



“Transforming American Education: Learning Powered by Technology.” (2010, March 5). *National Educational Technology Plan 2010*. Retrieved March 13, 2010, from [www.ed.gov/sites/default/files/NETP-2010-final-report.pdf](http://www.ed.gov/sites/default/files/NETP-2010-final-report.pdf)

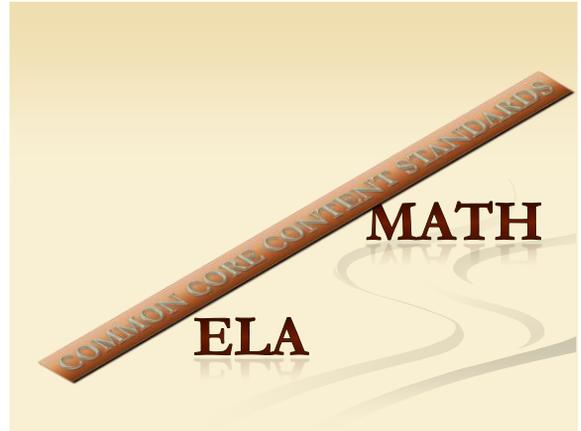
## Technology Integration

Examples: <http://www.edutopia.org/node/2971>

**IT IS NOT ONE MORE THING TO DO!**

## Objective

2. Identify Educational Technology Support for Standards, Teacher Effectiveness and the Model Curriculum



### Geometry 7.G

Draw, construct, and describe geometrical figures and describe the relationships between them.

- Draw (freehand, with ruler and protractor, and with technology)

\*\*\*

Work with radicals and integer exponents.

4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

### Mathematics | High School—Modeling

- Modeling links classroom mathematics and statistics to everyday life, work, and decision-making. Modeling is the process of choosing and using appropriate mathematics and statistics to analyze empirical situations, to understand them better, and to improve decisions. Quantities and their relationships in physical, economic, public policy, social, and everyday situations can be modeled using mathematical and statistical methods. When making mathematical models, **technology is valuable for varying assumptions, exploring consequences, and comparing predictions with data...**
- Diagrams of various kinds, **spreadsheets and other technology**, and algebra are powerful tools for understanding and solving problems drawn from different types of real-world situations.

& more !

### Mathematics | High School—Statistics

- Technology plays an important role in statistics and probability by making it possible to generate plots, regression functions, and correlation coefficients, and to **simulate many possible outcomes in a short amount of time.**

**MODEL CURRICULUM**

State of New Jersey  
DEPARTMENT OF EDUCATION

Governor Chris Christie • U.S. Governor Kim Guadagno  
Secretary Joseph P. Depina • U.S. Secretary of Education DeVos

Search NO DOE

NJDOE Home Families Students Educators Community

**Welcome to the New Jersey Department of Education's Model Curriculum!**

**Subjects**

- English Language Arts (K-12)
- Mathematics (K-12)
- Social Studies (HS)
- Career/STEM
- Science (HS)
- Visual Performing Arts (K-12)
- World Languages
- PE/Health (K-6)

**Why a model curriculum?**

The purpose of providing a "model" is to assist districts and schools with implementation of the Common Core State Standards and New Jersey Core Curriculum Content Standards by providing an example from which to work and/or a product for implementation. Each unit contains targeted student learning objectives (SLOs) that elucidate what students need to know and be able to do within the unit. The six-week formative assessments included in the model curriculum help clarify the level of rigor expected from the standards and provide a great set of assessment tools that are often difficult for districts and schools to create on their own.

**What is the model curriculum?**

The model curriculum (version 1.0) includes all standards of the grade-level content organized into five units of study, each with targeted SLOs, intended for six weeks of instruction each. Each unit contains the content of the grade that can be reasonably taught to proficiency in a six-week time period. The sequence of units in the model curriculum is a purposeful sequence of the target skills for each unit in each grade or course. The included formative assessments allow for measuring student proficiency of those target skills as the year of instruction progresses.

[Common Core Standards Model Curriculum](#)

[Timeline for Model Curriculum](#)

Development and Implementation

**Educational Technology is the HOW to implement the Model Curriculum!**

# 2009 New Jersey Core Curriculum Content Standards

STATE OF NEW JERSEY DEPARTMENT OF EDUCATION

Academic Standards  
2009 New Jersey Core Curriculum Content Standards

HJ World Class Standards  
Standards Resources  
Professional Learning  
Search Standards

Preparing New Jersey Students to Connect, Collaborate and Compete in a Global Society

<http://www.njcccs.org/>

# Standard 8.1 Educational Technology

STATE OF NEW JERSEY DEPARTMENT OF EDUCATION

Core Curriculum Content Standards

Technology, Standards Learning Progressions

Download from Core Learning Standards Overview

Standard 8.1 Educational Technology

- A. Technology Operations and Concepts
- B. Creativity and Innovation
- C. Communication and Collaboration
- D. Digital Citizenship
- E. Research and Information Literacy
- F. Critical Thinking, Problem Solving, and Decision Making

Standard 8.2 Technology Education, Programming and Design

- A. Nature of Technology, Creativity and Innovation
- B. Design, Critical Thinking, Systems Design, and Decision Making
- C. Technological, Chemical, Ethics, and Society
- D. Research and Information Literacy
- E. Communication and Collaboration
- F. Resources for a Technological world
- G. The Design Process

Download Teaching and Learning Standards of Quality (PDF)  
Classroom PDF

<http://www.njcccs.org/>

# NJAC – administrative code

SUBCHAPTER 1. GENERAL PROVISIONS

6A:8-1.1 Purpose

(a) To prepare students for success in life, future education, and work in an economy driven by information, knowledge, and innovation requires a public education system where teaching and learning are aligned with 21st century learning outcomes. These outcomes move beyond a focus on basic competency in core subjects and foster a deeper understanding of academic content at much higher levels by promoting critical thinking, problem solving, and creativity through:

1. The Core Curriculum Content Standards ...
2. Cumulative progress indicators ...; and
3. Twenty-first century themes and skills integrated into all content standards areas as follows:

i. Themes:

- (1) **Global Awareness;**
- (2) Financial, Economic, Business and Entrepreneurial Literacy;
- (3) Civic Literacy; and
- (4) Health Literacy;

ii. **Learning and Innovation Skills:**

- (1) **Creativity and Innovation;**
- (2) **Critical Thinking and Problem Solving;**

and

- (3) **Communication and Collaboration Skills;**

iii. **Information, Media and Technology Skills;**

and

iv. Life and Career Skills:

- (1) Flexibility and Adaptability;
- (2) Initiative and Self-Direction;
- (3) Social and Cross-Cultural Skills;
- (4) Productivity and Accountability; and
- (5) Leadership and Responsibility.

# Technology Integration

Examples: <http://www.youtube.com/watch?v=X5xFMmK5Ujs>

**IT IS NOT ONE MORE THING TO DO!**

# Technology Integration Discussion

Volunteers to share responses.

## Objective

### 3. Strategic Planning Considerations

## From 2013 The Leadership and Learning Center

Sustained on-task discussion amongst students accounts for 1.7 minutes/60 minute class

Lowest level of engagement is when teachers lecture or when students watch television

Yair (2000) found students spend 85% of their time listening (or pretending to listen) to a teacher.

## Students' Learn by Good Teaching that includes...

1

• Motivating the Student

2

• Actively Engaging the Student

3

• Formatively Assessing the Student

## Active Engagement/Active Learning

### ■ Meyers & Jones, 1993

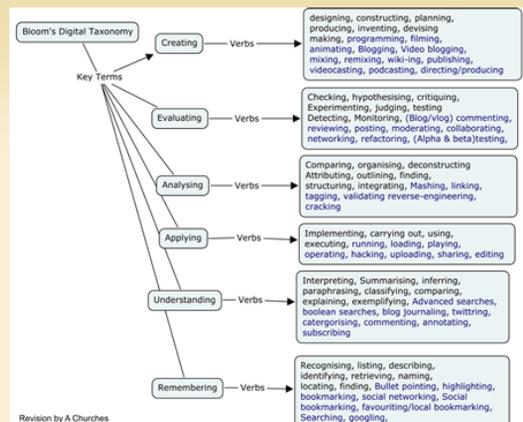
Active learning involves providing opportunities for students to meaningfully talk and listen, write and read and reflect on the content, ideas, issues and concerns of an academic subject.

*Do the students have to be in the same room?*

## Teacher Effectiveness Evaluation

[The Danielson Model] tells "how well they do the work of teaching"  
Charlotte Danielson

Educational Technology is **doing the work!**  
(Sometimes doing it *differently* than in the Past)



## UDL Principles and Guidelines

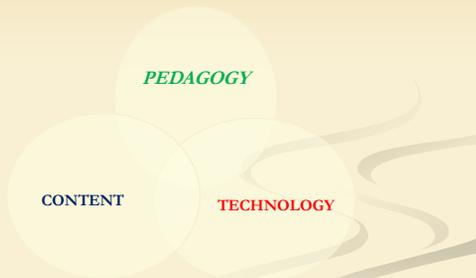
I. Provide Multiple Means of Representation	II. Provide Multiple Means of Action and Expression	III. Provide Multiple Means of Engagement
Perception	Physical action	Recruiting interest
Language and symbols	Expressive skills and fluency	Sustaining effort and persistence
Comprehension	Executive function	Self-regulation

Resourceful, knowledgeable learners	Strategic, goal-directed learners	Purposeful, motivated learners
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*Does effectively using educational technology help the teacher to do this?*

## EFFECTIVELY = TPACK



## Leadership!

<http://www.youtube.com/CoSNLeader>

Educational Technology

## PARCC, Broadband and Online Readiness



Office of Educational Technology  
[April 27, 2012]

29

## Historical Context

- In 2010, New Jersey adopted the Common Core Standards for English Language Arts and Mathematics.
- To assess these Common Core Standards, New Jersey joined the PARCC consortia.
- These assessments will be online for the 2014-2015 school year for grades 3-11.

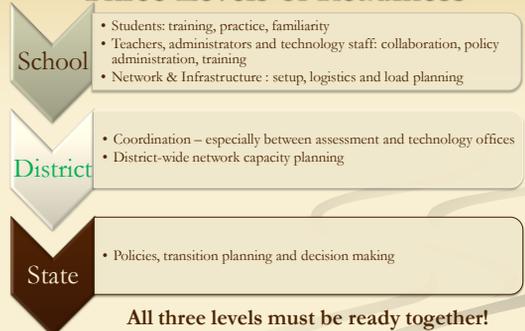


## Historical Context

- To meet the 2014-2015 deadline - states, districts, schools, staff and students must be prepared.
- To assist in the preparation, PARCC and Smarter Balanced (the other assessment consortia) contracted with Pearson to develop a Technology Readiness Tool (TRT).
- This tool will be used for six data collections between 2012 and 2014.



## Three Levels of Readiness



Becoming Tech Ready for the 2014 Online Common Core Assessments  
[http://www.assessment4ed.net/sites/default/files/conn\\_presentation\\_becoming\\_tech\\_ready\\_for\\_the\\_2014\\_online\\_common\\_core\\_assessments.pdf](http://www.assessment4ed.net/sites/default/files/conn_presentation_becoming_tech_ready_for_the_2014_online_common_core_assessments.pdf)

## Historical Context

- The intent is to eventually determine technology readiness for online assessments and to provide gap analysis.
- The first administration of the TRT was designed to collect technology and bandwidth information to establish a local, state and national technology snapshot that identifies the current status of technology in schools.
  - This information helps inform the planning process for PARCC, states and schools in administering the online assessments in 2014-2015.

## What is Online Readiness?

- Online Readiness is more than devices and online assessments!
  - It's *digital learning*, which includes assessments
- It is a multi-year transition process.
- Involves an in-depth needs analysis, planning, communication, involvement of stakeholders, as well as training and hands-on experiences for students and staff.

## Student Online Readiness

- **Students have skills and experience to learn and be assessed online.**
  - It is different than watching an online video, playing an online game or working with online programs.
  - Students need to practice taking online assessments.
  - Use educational technology to actively learn the content and to demonstrate understanding of the content.
  - Use to not only gather, remember and understand information but to also analyze, evaluate and create information incorporating what was learned.

## Student Online Readiness

- **Students have access to educational technology and the Internet.**
  - Not occasionally use educational technology
  - Students use educational technology to learn throughout their day.
  - Sufficient Internet and network bandwidth
- **Students are technologically proficient** - understand how technology devices and programs operate and use the most appropriate tool comfortably as part of their learning.

## Teacher Online Readiness

- Teachers need skills and experience.
  - Can facilitate active learning and demonstration of understanding the content.
  - Use it to inform instruction.
  - Be comfortable with a classroom of students using devices...includes ability to assist with troubleshooting
  - Have experience with online assessments

## Administrator Online Readiness

- Administrators facilitate online readiness.
  - Facilitate conversations with stakeholders (community, Board, families)
  - Actively participate in the development of an overarching implementation plan that is aligned to curricular and infrastructure needs
    - Ensure that students and staff have the necessary resources for digital learning and online assessments
    - Provide a unified vision and implementation for all schools within the district – everyone has a role
    - Ensure that the logistics, environments and technical support services are components of the implementation plan

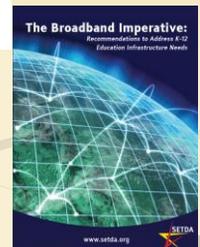
## Bandwidth Readiness

- What is the current bandwidth for each student/user on the network/Internet when the network/Internet services are at full capacity?
  - How many students can be on the network/Internet at the same time when it is at full capacity?



## Bandwidth Recommendation

- NJDOE supports SETDA's recommendation of 100 kb/ps per student for digital learning
- This should also address the bandwidth needs for online assessments



<http://www.setda.org/web/guest/broadbandimperative>

## Location and Time Readiness

- What locations would be used for online assessments?
- What devices will be used for online assessments?
- How much time is needed to address:
  - Internet and Network capabilities
  - Location preparation and break down
  - Device acquisition, preparation and deployment
- Remember, the goal is the 2014-2015 school year!



## PARCC Technology Guidelines

The technology requirements:  
<http://www.parcconline.org/technology>



## PARCC TRT



- Each district/charter school/testing center has to identify a PARCC Coordinator and a PARCC IT Contact Person to NJDOE.
  - They are the main liaisons between NJDOE and the district for PARCC.
  - They are responsible for ensuring that the district and school information on the PARCC TRT site is updated and current.
  - The contact information for these two people (name, position, telephone, email) needs to be emailed to [parcctrt@doe.state.nj.us](mailto:parcctrt@doe.state.nj.us).



## PARCC TRT

- NJDOE will create user accounts in the PARCC TRT for the PARCC Coordinators and PARCC IT Contacts.
  - The PARCC Coordinator and PARCC IT Contact are able to manage the information/users for their district and schools on the PARCC TRT site.
    - They are able to create additional users as needed to assist them with the site.
- When a user account is created, an email *from Pearson* is sent with login details.
  - Follow the directions to activate your account.

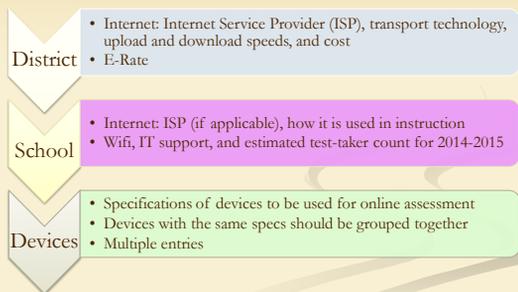


## PARCC TRT

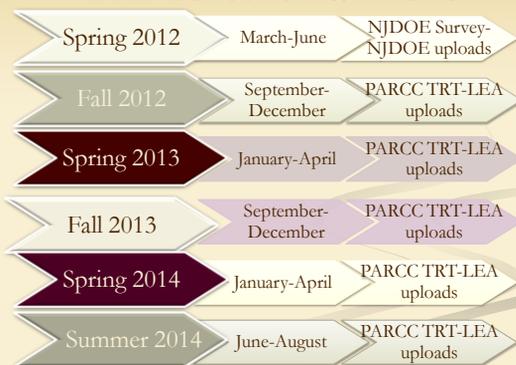
- If you are not a PARCC Coordinator or a PARCC IT Contact but want a user account to the PARCC TRT site –
  - Contact the PARCC Coordinator or PARCC IT Contact for that district/testing center and request access.
    - They can create the user account for you.
  - **Do not request a user account from NJDOE!**
    - NJDOE respects the role of the district/testing center in deciding who from the district/testing center has access to the TRT site.



## NJ Broadband/PARCC Survey



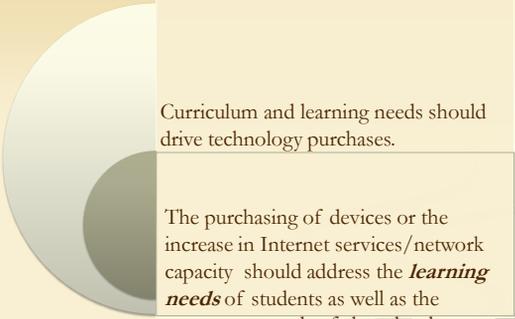
## Data Collection Windows



## Considerations

- **Focus on student learning – think of time, space and situational factors (what happens when students finish early?)**
- **Don't just consider putting students in a computer lab (take computers to the student)**
- **Everything bought should be considered useful for online testing.**

Excerpts from webinar 3-7-2013: Technology and Common Core sponsored by Ed Week



Curriculum and learning needs should drive technology purchases.

The purchasing of devices or the increase in Internet services/network capacity should address the *learning needs* of students as well as the assessment needs of the school.

## Objective

### 4. Options for Funding Educational Technology Initiatives

## E-rate Discounts

<http://www.universalservice.org/si/>

- Closes on March 14, 2013.
- Download Tools, Review Training Site

## *District/Nonpublic School/Charter School Technology Plan Checklist*



## Options

- Existing federal funding to support students in Title I, Title III, IDEIA programs for students
- Title IIA professional development of teachers and administrators
- Proposed federal Bill – Transforming Education through Technology
- Partnerships – higher education, businesses-tax credits, community entities and parents
- Grants and contests
- Google search: <http://tinyurl.com/bzzuwxq>

## What's next?

Develop a Plan of Action outlining how you will share the content reviewed during this workshop.

## EDUCATIONAL TECHNOLOGY

Effective implementation of technology across all curriculum areas in a learner-centered environment to support **ALL** students and teachers in the learning process.

## Essential Question

What should learning in the 21<sup>st</sup> century look like?



► Transforming American Education: Learning Powered by Technology. (2010, March 5). *National Educational Technology Plan 2010*. Retrieved March 13, 2010, from [www.ed.gov/sites/default/files/NETP-2010-final-report.pdf](http://www.ed.gov/sites/default/files/NETP-2010-final-report.pdf)

## Presenter Contact

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- 609-292-1414

## Resources

- "Mr. Winkle Wakes ." *YouTube - Broadcast Yourself.*, 20 Mar. 2008. Web. 25 Aug. 2010. <<http://www.youtube.com/watch?v=lm1sCsl2MQY>>
- Transforming American Education: Learning Powered by Technology. (2010, March 5). *National Educational Technology Plan 2010*. Retrieved March 13, 2010, from [www.ed.gov/sites/default/files/NETP-2010-final-report.pdf](http://www.ed.gov/sites/default/files/NETP-2010-final-report.pdf)

## Resources

- APPS:
  - There's an APP For That
    - <http://www.techlearning.com/magazine/0007/theres-an-app-for-that/53332>
    - <http://app-list.posterous.com/>
    - <http://techinspecial.com/apps/free-apps-for-ipad-iphone.php>
    - <http://freeappaday.com/ipad.php>
  - Arizona Matrix for Technology Integration (measures the skill level of technology integration of teachers)
    - <http://www.azk12.org/tim/>
  - Bring your own device (BYOD) Toolkit:
    - <http://k12blueprint.com/byod>
  - Early learning & technology research:
    - <http://www.ed.gov/oii-news/digital-engagement-home-increases-early-math-skills>

## Resources

- How to Stay Safe
  - [www.onguardonline.gov/netcetera](http://www.onguardonline.gov/netcetera)
- iPad/iPod user wiki
  - <http://wiki.canby.k12.or.us/groups/ipodusergroup/>
- PARCC Online:
  - <http://www.parcconline.org/technology>
- Passion Based Learning – download lessons, see lesson videos
  - <http://www.ste.org/membership/pbl-contest.aspx>
- Personalized Learning Tools:
  - <http://www.personalizedlearning.com/2012/12/the-personalized-learning-umbrella.html> &
  - <http://www.personalizedlearning.com/2012/12/student-centered-learning-in-action.html>
- Teacher Professional Development Strategy:
  - [http://blogs.edweek.org/teachers/teaching\\_ahead/wanted-tech-savvy-teachers/?cmp=ENL\\_TU\\_NEWS1](http://blogs.edweek.org/teachers/teaching_ahead/wanted-tech-savvy-teachers/?cmp=ENL_TU_NEWS1)

## Universal Design for Learning (UDL)

- <http://udl-irn.org/>
- <http://smartinclusion.wikispaces.com/Smart+Inclusion+Home>
- <http://www.bcsc.k12.in.us/page/341>
- [http://www.cec.sped.org/AM/Template.cfm?Section=CEC\\_Today1&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=18526](http://www.cec.sped.org/AM/Template.cfm?Section=CEC_Today1&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=18526) (article on iPads and UDL)
- <http://www.youtube.com/watch?v=ljTrkRfzPE> (video based on article)

- Immersive Learning for Grades 5-8. Create storytelling avatars
  - [www.avatarsstorytellers.com](http://www.avatarsstorytellers.com)
- The Shout Tree Banding Project to help learn more about how trees respond to the climate
  - [www.shoutlearning.org](http://www.shoutlearning.org)
- ISTE Research & Evaluation
  - [www.iste.org/research](http://www.iste.org/research)
- Students explore future careers in science, technology, engineering and math (STEM) through stimulating project-based learning
  - [www.noboundaries-stemcareers.com](http://www.noboundaries-stemcareers.com)
- C-Span classroom for middle and high school civics and government educators
  - [www.c-span.org](http://www.c-span.org)
- critical thinking skills and apply them to understanding advertising
  - [www.admongo.gov](http://www.admongo.gov)

## Resources

- **NJDOE PARCC TRT**
  - <http://www.nj.gov/education/sca/parcc/tech/survey/>
- **Start Your Online Testing Engines**
  - [http://www.nassp.org/Content/158/PLSept11\\_fletcher.pdf](http://www.nassp.org/Content/158/PLSept11_fletcher.pdf)
- **Becoming Tech Ready for the 2014 Online Common Core Assessments**
  - [http://www.assess4ed.net/sites/default/files/cosn\\_presentation\\_becoming\\_tech\\_ready\\_for\\_the\\_2014\\_online\\_common\\_core\\_assessments.pdf](http://www.assess4ed.net/sites/default/files/cosn_presentation_becoming_tech_ready_for_the_2014_online_common_core_assessments.pdf)
- **Technology Section of the PARCC website**
  - <http://www.parcconline.org/technology>
- **Next Generation Roadmap**
  - [www.PearsonAssessments.com/NextGenRoadmap](http://www.PearsonAssessments.com/NextGenRoadmap)

## REPORTS

- Alliance for Excellent Education issued report that identifies four key challenges that public school district leaders should consider in the next two years and outlines the essential elements for developing a comprehensive digital strategy
  - [http://www.all4ed.org/publication\\_material/reports](http://www.all4ed.org/publication_material/reports)
- The Report of the NASBE Study Group on the Role of Technology in Schools and Communities called "Born in Another time: Ensuring Educational Technology Meets the Needs of Students Today-and Tomorrow"
  - <http://www.nipsa.org/agr/news.aspx?id=1837>