The Future of Technology in Education

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Objectives

- Setting the Stage
- A Vision of the Future
- Connecting to the Future
- Discussion
Setting the Stage
What are the biggest challenges your education system faces?
What are the biggest challenges your students face?
How are you using technology to overcome these challenges and to transform learning for your students?
Office of Educational Technology

Works with states, local districts, and institutions to develop educational technology policy and establish a vision for how technology can be used to transform teaching and learning and make everywhere, all-the-time learning possible for early learners through K-12, higher education, and adult education.
A Vision of the Future
National Education Technology Plan (2017)

tech.ed.gov/netp
THE NETP IS...

- a call to action
- a vision for learning enabled through technology
- a collection of recommendations & real-world examples
WRITTEN FOR...

Teachers

Policymakers

Administrators

Teacher preparation professionals
MAKING POSSIBLE ...
EVERYWHERE, ALL-THE-TIME LEARNING
FITTING THE PIECES TOGETHER

- Learning
- Teaching
- Leadership
- Assessment
- Infrastructure
“The NETP focuses on using technology to transform learning experiences with the goal of providing greater equity and accessibility.”

- connectivity
- access
- accessibility
DIGITAL USE DIVIDE

While essential, closing the digital divide alone will not transform learning. We must also close the digital use divide by ensuring all students understand how to use technology as a tool to engage in creative, productive, life-long learning rather than simply consuming passive content.

PASSIVE USE

Simply consuming media or completing digitized worksheets falls short.

ACTIVE USE

- Media production
- Interaction with experts
- Global connections
- Immersive simulation
- Design
- Coding
- Peer collaboration
Parkway Mobile Makerspaces

Empowering Librarians as Technology Leaders

Parkway School District (Chesterfield, MO)

- Empowering librarians
- Developing capable, curious, caring, and confident learners

tinyurl.com/mobilemakerspaces
Stories of EdTech Innovation

Use this tool to browse stories of innovation happening in schools across the nation. By sharing these stories, we hope to connect districts, schools, and educators trying similar things so that they can learn from each other's experiences.

Browse Stories

- All
- P-12
- Postsecondary
- State
- Level

Search stories...

Topics:

- Openly Licensed Educational Resources (tsg)

Featured Story:
Highline Public Schools: Personalized Learning as a Pathway to Equity
Highline Public Schools, Washington

Highline Public Schools is a richly diverse school district located just south of Seattle that serves over 20,000 students. The district’s promise to families, students, and the community is that ev...

[link to stories page](tech.ed.gov/stories)
“However, to be transformative, educators need to have the knowledge and skills to take full advantage of technology-rich learning environments.”
Four Guiding Principles

The four guiding principles developed by the OET are:

- **Focus on the active use of technology to enable learning and teaching through creation, production, and problem-solving.**

- **Build sustainable, program-wide systems of professional learning for higher education instructors to strengthen and continually refresh their capacity to use technological tools to enable transformative learning and teaching.**

- Ensure pre-service teachers’ experiences with educational technology are **program-deep and program-wide**, rather than one-off courses separate from their methods courses.

- Align efforts with research-based **standards, frameworks, and credentials** recognized across the field.
Columbus Municipal School District (Columbus, MS)

- Traditional textbooks failed to meet standards and not cost effective
- Do not lead with technology; develop new instructional model first
- K-16 Instructional Technology Integration Model (K-16 ITI Model)

https://tech.ed.gov/stories/columbus
#GoOpen Launch Districts
- Decatur City Schools, AL
- Athens City Schools, AL
- Cajon Valley Union School District, CA
- Carlsbad Unified School District, CA
- Coachella Valley Unified School District, CA
- Coronado Unified School District, CA
- Fallbrook Union Elementary School District, CA
- Grossmont Union High School District, CA
- Huntington Beach Union School District, CA
- Leadership Public Schools, CA
- Madera Unified School District, CA
- Mountain Empire Unified School District, CA
- Napa Valley Unified School District, CA
- Panama Buena Vista Unified School District, CA
- Riverside Unified School District, CA
- San Antonio Union School District, CA
- San Diego Unified School District, CA
- Colorado Digital BOCES, CO
- Connecticut Technical High School System, CT
- Colonial Public Schools, DE
- Red Clay School District, DE
- Broward County Public Schools, FL
- Orange County Public Schools, FL
- Forsyth County Public Schools, GA
- Cedar Rapids Community School District, IA
- Council Bluffs Community Schools, IA
- Lewis Central CSD, IA
- United Community School District, IA
- DeKalb CUSD #428, IL
- Illini Bluffs CUSD #327, IL
- Macomb CUSD #185, IL
- Urbana School District 116, IL
- Noblesville School District, IN
- MSD Warren Township, IN
- MSD Southwest Allen County, IN
- Topeka Public Schools, KS
- Burlington Public Schools, MA
- Medfield Public Schools, MA
- North Reading Public Schools, MA
- Anne Arundel Public Schools, MD
- Howard County Public Schools, MD
- Dryden Community Schools, MI
- Marlette Community Schools, MI
- Marysville Public Schools, MI
- Mona Shores Public Schools, MI
- Wayland Union Schools, MI
- Grain Valley School District, MO
- Hancock Place School District, MO
- Harrisonville Cass R-IX School District, MO
- Kearney School District, MO
- Lee’s Summit R-VII School District, MO
- Parkway School District, MO
- Pattonville School District, MO
- Ritenour School District, MO
- Mooresville Graded School District, NC
- Northwest Public Schools, NE
- Zuni Public Schools, NM
- Jamesburg Public Schools, NJ
- Lavallette and Bay Head School District, NJ
- Spotswood Public Schools, NJ
- Ballston Spa Central School District, NY
- Middletown City School District, NY
- Mineola UPUSD
- Avonworth School District, PA
- Bethel Park School District, PA
- Carlynston School District, PA
- Centennial School District, PA
- Deer Lakes School District, PA
- Duquesne City, PA
- Downingtown Area School District, PA
- Ephrata Area School District, PA
- Fox Chapel Area School District, PA
- Garnet Valley Area School District, PA
- Hampton Township School District, PA
- Mars Area School District, PA
- Plum Borough School District, PA
- Steel Valley School District, PA
- Charlottesville City Schools, VA
- Department of Defense Education Activity, VA
- Henry County Public Schools, VA
- Loudoun County Public Schools, VA
- Virginia Beach City Public Schools, VA
- Chief Leschi Schools, WA
- Sun Prairie Area School District, WI
- Weston County School District #7, WY

#GoOpen Ambassador Districts
- Deer Valley Unified School District, AZ
- Vista Unified School District, CA
- Williamsfield Community School District, IL
- Lawrence Public Schools, KS
- Hollister R-V School District, MO
- Liberty Public Schools, MO
- North Kansas City School District, MO
- Columbus Municipal School District, MS
- Brooklyn Laboratory Charter School, NY
- Mentor School District, OH
- Broken Arrow Public Schools, OK
- Central Valley School District, PA
- Upper Perkiomen School District, PA
- Bristol Tennessee Schools, TN
- Tullahoma City Schools, TN
- El Paso Independent School District, TX
- Mountain Heights Academy, UT
- Chesterfield County Public Schools, VA
- Hampton City Schools, VA
- Bethel School District, WA
- Puyallup School District, WA
- Kettle Moraine School District, WI
- Central Valley School District, PA
- Upper Perkiomen School District, PA
- Bristol Tennessee Schools, TN
- Tullahoma City Schools, TN
- El Paso Independent School District, TX
- Mountain Heights Academy, UT
- Chesterfield County Public Schools, VA
- Hampton City Schools, VA
- Bethel School District, WA
- Puyallup School District, WA
- Kettle Moraine School District, WI
20 #GoOpen States

- Arizona
- California
- Connecticut
- Delaware
- Georgia
- Illinois
- Indiana
- Maryland
- Massachusetts
- Michigan
- North Carolina
- Oklahoma
- Oregon
- Rhode Island
- Tennessee
- Utah
- Vermont
- Virginia
- Washington
- Wisconsin
Obstacles to Opportunities

#GoOpen - Digital Learning Conversion

Bristol Tennessee City Schools (Bristol, TN)
- There are no unicorns
- Don’t forget content creation
- Focus on short term goals
- Create a small core of tech evangelists

https://tech.ed.gov/stories/bristol
“Technology-enabled assessments support learning and teaching by communicating evidence of learning progress and providing insights to teachers; administrators; families; and, most importantly, the learners themselves.”
“For these systemic changes in learning to occur, education leaders need to create a shared vision for how technology best can meet the needs of all learners and to develop a plan that translates the vision into action.”
Fulton County School District (Atlanta, GA)

- Device in itself is not personalized learning, but a tool to facilitate personalization
- Two-tiered professional learning strategy
- 7 instructional principles

https://www.thinglink.com/scene/785128426003496961#
Choice and Voice
Students express their learning styles and preferences as learners in the lesson.

Choice for Demonstrating Learning
Students have multiple ways to demonstrate mastery of standards. They can leverage both technology tools and traditional tools.

Mastery Based Assessment
The students drive the curriculum rather than the curriculum driving the students. Assessments are guided by proficiency and competency.

Varied Strategies
Students are given more than one way or modality to learn the material or access content.

Flexible Pacing
Students move through the curriculum at a pace that fits their individual abilities and allows for mastery of learning rather than a time-bound learning schedule.

Co-planning Learning
Students, parents and community are involved in planning and setting goals, demonstration of learning, pace, and mastery level.

Just-in-time Direct Instruction
Direct instruction is available to students when it is needed regardless of the availability of an in-person teacher.
Everywhere, All-the-Time Infrastructure

- Quality Digital Content & Resources
- Digital Citizenship & Responsible Use
- Home Internet Access
- High-Quality, Low-Cost Devices
- High-Speed Connectivity to Schools
- Data Privacy & Security
- High-Speed Wifi Throughout Schools
88% of school districts meet FCC’s minimum connectivity goal - 100 MBPS/1000 students

34.9 million students (75%) are connected to high speed broadband

Challenge: 11.6 million students still lack high speed broadband access

Cost, lack of physical infrastructure pose challenges for rural schools

Infrastructure Guide
Building Infrastructure for Learning

https://tech.ed.gov/futureready/infrastructure
Key Questions

Important considerations as you plan to bring and increase connectivity

1. Getting Started: Assess Your Current Situation and Set Future Goals (Section 1)
2. Getting High-Speed Internet to Schools (Section 2)
3. Getting High-Speed Internet Throughout Schools (Section 3)
4. Getting Devices to Students and Teachers (Section 4)
5. Determining Responsible Use, Student Privacy, and Other School Policies (Section 5)
Future Ready Schools: Quick Reference Guide of Key Questions for Planning Technology Infrastructure

The questions listed below address many of the important considerations as you plan to bring and increase connectivity throughout your district and schools. Each set corresponds to further guidance within Future Ready Schools: Building Technology Infrastructure to Support Learning at tech.ed.gov/infrastructure.

1. Getting Started: Assess Your Current Situation and Set Future Goals (see Section 1)
   1. What is the vision for learning that technology will be supporting?
   2. What digital learning resources will be needed?
   3. What kind of professional development will teachers need to become proficient with digital learning?
   4. What is your current network capacity?
   5. What is the current state of your physical infrastructure?
   6. How many and what type of devices does your network support now? What is planned for the future?
   7. What resources are available to fund the transition?

2. Getting High-Speed Internet to Schools (see Section 2)
   1. What are the options for high-speed Internet access in your area?
   2. Which of the connectivity path is best for your district’s needs?
   3. What are the elements that will affect cost in your area?
   4. What funding sources are available to get Internet to schools?
   5. What resources are available for rural schools?

3. Getting High-Speed Internet Throughout Schools (see Section 3)
   1. What are the steps in planning a wireless network inside a school?
   2. What physical infrastructure considerations will impact the network?
   3. How should the network be provisioned, configured, and managed?
   4. How should security risks to the network be managed?

4. Getting Devices to Students and Teachers (see Section 4)
   1. Why are devices important?
   2. Which factors should be considered when selecting devices?
   3. What about BYOD programs?
   4. How will you pay for devices?
   5. What funding sources are available?
   6. How often will devices need to be replaced?
   7. How will devices be maintained?
   8. Should your school allow devices to be taken home?
   9. How should devices be rolled out?

5. Determining Responsible Use, Privacy, and Other School Policies (see Section 5)
   1. How should devices be managed?
   2. How can schools ensure and encourage responsible use of devices?
   3. What are school obligations for protecting the privacy of students?
   4. How should content filtering on devices work?
   5. Which policies for lost or damaged devices make sense?
When Bus Rides Become Hotspots

Reducing the Homework Gap

Sunnyside Unified School District (Tucson, AZ)

- District-provided devices to do homework before and after school
- Partnership with Tohono O’odham Indian Reservation

https://tech.ed.gov/stories/internet-access-to-low-income-homes
Connecting to the Future
How do you know what technology is right?
Rapid Cycle Evaluations for Ed Tech

ED TECH RCE COACH beta

Is your Educational Technology moving the needle in the classroom?

The Ed Tech Rapid Cycle Evaluation Coach helps you evaluate educational technology use in your school so that you can make better, more informed decisions and improve student outcomes.

GET STARTED
“The RCE Coach” Workflow

The Ed Tech RCE Coach will guide you through the following steps:

1. **GETTING STARTED**
   - The Coach will recommend an approach to evaluate your technology.

2. **PLANNING YOUR RESEARCH**
   - The Coach will help you design an evaluation based on the outcomes you are interested in and your unique context.

3. **PREPARING YOUR DATA**
   - The Coach will use your data to create two comparable groups—technology users and non-users.

4. **ANALYZING YOUR DATA**
   - The Coach will automatically conduct the analysis and give you the results.

5. **SUMMARIZING YOUR FINDINGS**
   - The Coach will compile your results and all of the information you have entered into one succinct document or presentation.
Districts that are interest in joining a pilot: edtechrrce.org
What is your vision?
Does this vision provide learning experiences for all students?
Do your existing resources allow you to achieve this vision?
What **partners** do you need?
What can OET do to support you in your transition to digital learning?
Student Support and Academic Enrichment (SSAE) Updates
FY 2017 SSAE Funding & Timing

» FY 2017 Consolidated Appropriations Act includes a total of $400 million for SSAE

» Funds distributed to SEAs in July 2017

» The Act made important changes to SSAE for FY 2017
New Option for FY 2017: Competitive Subgrants

Whereas the SSAE statutory authority only provides for formula grants, the appropriations law adds an option for States to distribute Title IV, Part A funds competitively.

Minimum Allocations for Competitive Subgrants

» If a State distributes funds competitively, the minimum expenditure requirements are moved up to the State level

» In addition, LEAs receiving competitive subgrants are not subject to the minimum expenditure requirements applicable to formula subgrants
Percentage of Funds for Technology Infrastructure

An LEA that receives a competitive subgrant only for activities under the effective use of technology content area may use up to **25 percent of funds** for technology infrastructure.
Thank you!

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