Transforming American Education: Learning
Powered by Technology

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Context
“By 2020, America will once again have the highest proportion of college graduates in the world.”

President Obama
Interagency Connections

• NSF - The Cyberlearning Challenge and Opportunity
• FCC - Broadband Plan (Commerce and Agriculture)
• OSTP - Health, Energy and Education
• DOD - Interoperability and R&D
Key Concepts for National Broadband Plan and Education

- Online learning systems
- Distance learning & online communities
- Innovation for companies and NGO’s

- Digital resource repositories
- Online textbooks
- Content sharing and peer production

- Electronic Education Records standards
- More transparent commercial markets

- eRate upgrade
- Community Colleges
How?

Process
How the Plan Was Developed

12 federal policymakers
15 experts on Technical Working Group
17 events and focus groups
24 industry leaders
48 school administrators
50 chief technology officers
123 college instructors
153 technology providers
235 classroom teachers
572 reports, examples, and statements contributed to the web site
22,876 users of public Web site
Key Elements of the Plan

• Five goals
• Recommendations
• Grand Challenges
The Five Goals

Teaching

Assessment

Infrastructure

Productivity

Learning
Learning

Increase the opportunity for learning by enabling unprecedented access to high quality learning experiences for all students. Create new ways of understanding what types of learning experiences work - when, how and with whom?
Goal 1.0: Learning

All learners will have engaging and empowering learning experiences both in and outside of school that prepare them to be active, creative, knowledgeable, and ethical participants in our globally networked society.
Teaching

Teachers need to be highly connected with data, experts, professional teams, and resources in order to provide personalized learning. Online environments can ensure that every student has access to effective teaching.
Goal 3.0 Teaching

*Professional educators will be supported individually and in teams by technology that connects them to data, content, resources, expertise, and learning experiences that can empower and inspire them to provide more effective teaching for all learners.*
We can measure what matters and provide closer to real time feedback with new technology enabled assessments that are embedded in classroom instruction. Students with parents and faculty can manage a persistent learning record, enabling continuous improvement at all levels.
Goal 2.0: Assessment

*Our education system at all levels will leverage the power of technology to measure what matters and use assessment data for continuous improvement.*
Infrastructure

Students and teachers need 24/7 access to the modern tools and resources they need to do their work.
Goal 4.0: Infrastructure

All students and educators will have access to a comprehensive infrastructure for learning when and where they need it.
In order to get more students over a higher bar, we need to increase the efficiency of the system and maximize productivity.
Goal 5.0: Productivity

Our education system at all levels will redesign processes and structures to take advantage of the power of technology to improve learning outcomes while making more efficient use of time, money, and staff.
Research and Development
Grand Challenges

1.0: Design and validate an integrated system that provides real-time access to learning experiences tuned to the levels of difficulty and assistance that optimize learning for all learners, and that incorporates self-improving features that enable it to **become increasingly effective through interaction with learners**.

2.0: Design and validate an integrated system for designing and implementing valid, reliable, and cost-effective **assessments of complex aspects of 21st century expertise** and competencies across academic disciplines.

3.0: Design and validate an integrated approach for **capturing, aggregating, mining, and sharing content**, student learning, and financial data cost-effectively for multiple purposes across many learning platforms and data systems in near real time.

4.0: Identify and validate design principles for efficient and effective online learning systems and combined online and offline learning systems that produce content expertise and **competencies equal to or better** than those produced by the best conventional instruction in **half the time at half the cost**.
Open Government
“I can't create my future with the tools from your past.”

— Middle school student
Second Life Session
www.ed.gov/technology