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# North American Council for Online Learning


- **NACOL** is the premier K-12 nonprofit organization in the field of online learning.
- Provides leadership, advocacy, research, training and networking with experts in K-12 online learning.
- “Ensure every student has access to the best education available regardless of geography, income or background.”
- National Conference: Virtual School Symposium (VSS): Louisville, KY on November 4-6, 2007



# Innovation

## World Future Society

- By the year 2020, computing power will come closer to matching the human brain, enabling artificial intelligence, capabilities in smart robots, speech recognition, intelligent agents, and other uses that will permit huge advances in telemedicine, virtual education, e-government and all other facets of life.”
- ”Technology’s Promise: Highlights from the TechCast Project” William Halal



# •The Futurist: Top 10 Breakthroughs Transforming Life over the next 20-30 years

*Best forecast data ever assembled*

1. Alternative energy
2. Desalination
3. Precision farming
4. Biometrics
5. Quantum computers
6. Entertainment on demand
7. Global access
8. Virtual education or distance learning
9. Nanotechnology
10. Smart Robots

# How quickly will innovations evolve?


- E-learning training accounts for 30% of corporate training and is expected to exceed 50% soon
- Virtual Education will enter mainstream about 2015.
- 2010: Intelligence – advanced in information systems and e-commerce (sets the stage)
- 2020: Breakthrough – computing power matches the brain
- 2030: Challenge. Industrialization in most developing nations. Next Gen quantum/optical computing should emerge; society's ongoing problems will persist.
- 2040-2050: Maturity. Challenges facing globalization are likely to be resolved into a fully modernized, fairly harmonious globe.

# Global Workforce

- Competitiveness: Science, Technology, Engineering, Math
- Innovation, Risk-taking, Creativity
- China, India and Russia: 3 billion
- Intel Science Competition 2004
  - 65,000 Americans entered
  - 6 million Chinese students
- Mexico Digital Curriculum and Instruction
- International E-Learning
  - China, India, Japan, Korea, European Union, Singapore, Australia, UK, Ghana, etc.
  - Developing a new education strategy centered, powered by online learning

# NACOL International Survey 2006

- Singapore has 100% of their secondary schools using online learning
- Mexico Digital Curriculum and Instruction
  - Laptop for every teacher
  - All K-12 content and curriculum is digital
- China digitizing curriculum (1% = 100 M)
- European Union Online IB Program
  - 26+ countries



# **What Students Need to Know: 21<sup>st</sup> Century Skills and ICT literacy**

The future will demand people who can express themselves effectively with images, animation, sound, and video, solve real world problems that require processing and analysis of thousands of numbers, evaluate information for accuracy, reliability, and validity; and organize information into valuable knowledge, yet students are not learning these skills in school.

# Defining 21<sup>st</sup> Century ICT Literacy

- The Partnership for 21<sup>st</sup> Century Skills defined 6 key elements of 21<sup>st</sup> Century Learning
  1. Emphasize core subjects.
  2. Emphasize learning skills.
  3. Use 21<sup>st</sup> Century tools to develop learning skills.
  4. Teach and learn in 21<sup>st</sup> century context.
  5. Teach and learn 21<sup>st</sup> century content.
  6. Use 21<sup>st</sup> century assessments that measure 21<sup>st</sup> century skills.

# 21<sup>st</sup> Century Learning

- The *Redesigning the American High School* initiative championed by former Virginia governor Mark Warner and supported by the Gates Foundation and the National Governors Association takes a comprehensive look at high school teaching and learning in the 21st century.
- The study concludes that public education must:
  - be academically rigorous;
  - enforce academic standards statewide;
  - challenge *all* students to complete college-preparatory curriculum that includes advanced math and science proficiencies—*whether they go to college or not*;
  - apply these same academic standards to technical education programs, and
  - dramatically expand opportunities for high school students to take college-level courses for college credit.

# Resources for K-12 Online Programs

- Virtual School Symposium 2007
  - NACOL hosts annual conference: **November 4-6, 2007 Louisville, KY**
- K-12 Online Learning Reports
  - NACOL National Primer on K-12 Online Learning (2007)
  - NACOL and P21: Virtual Schools and 21<sup>st</sup> Century Skills
  - Keeping Pace with K-12 Online Learning
- Identifying Online Needs of States
  - NACOL State Needs Assessments Project (9 states)
- Quality Issues in K-12 Online Learning
  - NACOL publishing National Standards of Quality for Online Courses, Teachers and Programs (2007)
- Credit Recovery and Graduation
  - NACOL working with PLCs and CIS to advise on online solutions
- NACOL Advocacy, Consulting and Expertise
  - Membership forums, job posting, grants, policy development, training, advice and networking