The NMC Horizon Report: 2015 K-12 Edition
• 60 page Full Report
• 11 Page Preview (Summary)

http://cosn.org/focus-areas/leadership-vision/horizon-report
The work behind the *NMC Horizon Report Interim Results: 2015 K-12 Edition* is jointly conducted by the New Media Consortium (NMC) and the Consortium for School Networking (CoSN). CoSN’s critical participation in the production of this report and their strong support for the NMC Horizon Project is gratefully acknowledged.

*The NMC Horizon Report Interim Results: 2015 K-12 Edition* is a publication of the New Media Consortium
Key Trends Accelerating Technology Adoption

Movement / Impact

- Long Term (>5 years)
- Mid Term (3-5 years)
- Short Term
  - Impact Now
  - Only 1-2 years

Discussion Focus

- Policy
- Leadership
- Practice
Important for more than 5 years
Long-Term Trends
Rethinking How Schools Work

- Reinvent the traditional classroom paradigm
- Rearrange the entire school experience
- Project- and challenge-based learning
- Flexible Schedules for authentic learning
- Multidisciplinary approach
Long-Term Trends
Shift to Deeper Learning

➢ Rich core content in innovative ways
➢ Students apply what they have learned
➢ Project-, problem-, inquiry-, and challenge-based learning
Important for 3-5 years
Mid-Term Trends
Increasing Use of Collaborative Learning Approaches

- Teamwork & cooperative learning bolster engagement and performance
- Project- and challenged-based learning
- Teacher collaborative PLOs
Mid-Term Trends
Shift from Students as Consumers to Students as Creators

- Pedagogical shift
- Learning through Creation rather than consumption
- Hands-on learning / maker communities
Important NOW
Only 1-2 years
Short-Term Trends
Increasing Use of Hybrid/Blended Learning Designs

- Shift in perceptions of online learning
- Rapid rise & burnout of MOOCs (fads?)
- Learning analytics, adaptive learning
- Asynchronous & synchronous tools
Short-Term Trends
Rise of STEAM Learning

- Science, Technology, Engineering & Math sifts to stimulate innovation to include Humanities & Arts
- Multi- & cross-disciplinary learning show interconnection of STEAM
Topics from the NMC Horizon Report > 2015 K-12 Edition

CHALLENGES

SOLVABLE
> Creating Authentic Learning Opportunities
> Integrating Technology in Teacher Education

DIFFICULT
> Personalizing Learning
> Rethinking the Roles of Teachers

WICKED
> Scaling Teaching Innovations
> Teaching Complex Thinking

TRENDS

SHORT-TERM IMPACT
> Increasing Use of Blended Learning
> Rise of STEAM Learning

MID-TERM IMPACT
> Increasing Use of Collaborative Learning Approaches
> Shift from Students as Consumers to Creators

LONG-TERM IMPACT
> Rethinking How Schools Work
> Shift to Deeper Learning Approaches

DEVELOPMENTS IN TECHNOLOGY

NEAR-TERM (1 year or less)
> Bring Your Own Device
> Makerspaces

MID-TERM (2-3 years)
> 3D Printing
> Adaptive Learning Technologies

FAR-TERM (4-5 years)
> Digital Badges
> Wearable Technology
Significant Challenges Impeding Technology Adoption

Challenge Types

- Solvable
- Difficult
- Wicked

Discussion Focus

- Policy
- Leadership
- Practice
Solvable Challenges

Those which we both understand and know how to solve
Solvable Challenges
Creating Authentic Learning Opportunities

- Still too uncommon in schools
- Important pedagogical strategy to increase engagement
- Real-life experiences, technology & tools
- Community interactions
Solvable Challenges

Integrating Technology in Teacher Education

- Training in supporting digital competence for teacher candidates
- Lack of formal training on teaching digital literacy
- Professional development & informal learning
- Challenge: more about thinking than tools
Difficult Challenges

Those we understand but for which solutions are elusive
Difficult Challenges

Personalized Learning

- Self-directed & group-based learning designed around each learner’s goals

- 2 paths
  - Organized by and for learner
  - Adaptive learning - intervention-focused machine intelligence
Difficult Challenges
Rethinking the Roles of Teachers

- Technology-based content delivery, learner support, & assessment
- Collaborate with other teachers (in & out of school)
- Routinely use digital strategies with students
- Act as guides & mentors - student-centered
- Learning beyond school day
Those that are complex to even define, much less address

Wicked Challenges
Wicked Challenges
Scaling Teaching Innovations

- Not adept at moving innovation into practice
- Innovation springs from the freedom to connect ideas in new ways
- Aversion to change
Wicked Challenges
Teaching Complex Thinking

- Essential skill to understand our world
- Innovation makes this possible
- Requires communication skills & social intelligence
- Collaborate and leverage data – big picture
- Decisions based on logic, data & instinct
Topics from the NMC Horizon Report > 2015 K-12 Edition

**CHALLENGES**
- SOLVABLE
  - Creating Authentic Learning Opportunities
  - Integrating Technology in Teacher Education

- DIFFICULT
  - Personalizing Learning
  - Rethinking the Roles of Teachers

- WICKED
  - Scaling Teaching Innovations
  - Teaching Complex Thinking

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**DEVELOPMENTS IN TECHNOLOGY**

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  - Wearable Technology
Important Developments

- Consumer Tech
- Digital Strategies
- Enabling Tech
- Internet Tech
- Learning Tech

- Social Media Tech
- Visualization Tech
**Developments in Technology**

**Near-Term (1 year or less):**
- Bring Your Own Device
- Makerspaces

**Mid-Term (2-3 years):**
- 3D Printing
- Adaptive Learning Technologies

**Far-Term (4-5 years):**
- Digital Badges
- Wearable Technology
Time-to-Adoption: One Year or Less

• Bring Your Own Device
  – Reflect the contemporary lifestyle and way of working and learning

• Makerspaces
  – Tools and the learning experiences needed to help people carry out their ideas
Time-to-Adoption: Two to Three Years

- 3D Printing/Rapid Prototyping
  - Authentic exploration of objects & concepts

- Adaptive Learning Technologies
  - Tools learn the way people learn to adapt to students’ progress in real time
Time-to-Adoption: Four to Five Years

• Badges/Microcredentials
  – Formal & informal certifications/achievements, incentives & validation

• Wearable Technologies
  – Jewelry, sunglasses, backpacks, clothing, GoPro
  – Significant for Disabled Students
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<td>1 Year or Less</td>
<td>Cloud Computing</td>
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<td>Mobile Devices &amp; Apps</td>
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<td>Virtual &amp; Remote Lab</td>
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Thank You

Melissa Tebbenkamp
Raytown Quality School