Using TPACK to Build Technology Competencies with Pre-service Teachers

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Agenda

- The current condition
- What is TPACK?
- How do we get future teachers using TPACK?
- How do we integrate TPACK into the COE?

You can find this presentation at:
- http://bcoe.kennesaw.edu/tpack/
“If we teach today as we taught yesterday, then we rob our children of tomorrow.”

- John Dewey
A Call To Action

- A New Generation of Teachers - Arne Duncan

A few questions for you

- You can use your cell phone to text your answer (Text **CODE** to **22333**) *
- You can tweet your answer (@**poll** and **CODE**) 
- Web browser [http://pollEv.com](http://pollEv.com)
- Or you can write your answers on a piece of paper

*texting rates apply*
Which of the following is the most important for a teacher candidate?

Text a **CODE** to 22333  
Submit a **CODE** to http://PollEv.com

- Content knowledge: 142852
- Understanding pedagogy: 142853
- Understanding both content and pedagogy: 142868
- Classroom Management: 188471

Total Results: 0
What technology skills that are most important for a new teacher?

Text a CODE to 22333  
Tweet @poll and a CODE

Submit a CODE to http://PollEv.com

- Being able to use productivity tools: 188948
- Promote student use of technology: 188960
- Model technology use in the classroom: 188951
- Engage students in authentic problems... 188961

Total Results: 0
What are K12 Students Doing?
Among all 8- to 18-year-olds, total amount of media exposure, multitasking and media use in a typical day, over time:

- Total media exposure: 10:45
- Total media use: 7:38

29% Media multitasking

Among 7th to 12th graders, percent who multitask “most of the time” they are using each medium:

- Listening to music: 43%
- Using a computer: 40%
- Watching TV: 39%
- Reading: 27%
- Playing video games: 22%

The Digital Native

http://www.edutopia.org/digital-generation-project-overview-video
So, our students should:

- Create engagement
- Promote and encourage self-directed learning
- Empower students
Pedagogical Content Knowledge

Shulman, L. S. (1986)
Mishra & Koehler (2006)
How do we use this model?

- **PCK**: Do these pedagogical practices make concepts clearer and/or foster deeper learning?

- **TCK**: Does the use of technology help represent the content in diverse ways or maximize opportunities to transform the content in ways that make sense to the learner?

- **TPK**: Do the pedagogical practices maximize the use of existing technologies for teaching and evaluating learning?

- **TPCK**: How might things need to change if one aspect of the lesson were to be different or not available?
ISTE’s Educational Technology Standards for Teachers

- Student Learning & Creativity
- Digital-Age Learning Experiences & Assessments
- Professional Growth & Leadership
- Digital Citizenship & Responsibility
- Digital-Age Work & Learning
NETS for Teachers

1. Facilitate and Inspire Student Learning and Creativity

- Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that **advance student learning, creativity, and innovation** in both face-to-face and virtual environments.

http://voicethread.com/?#q.b116426.i605766
NETS for Teachers

2. Design and Develop Digital-Age Learning Experiences and Assessments

- Teachers design, develop, and evaluate authentic learning experiences and assessment incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS•S.
3. Model Digital-Age Work and Learning

- Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.
NETS for Teachers

4. Promote and Model Digital Citizenship and Responsibility

- Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices.
5. Engage in Professional Growth and Leadership

➢ Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources.
Our Role in Teacher Prep

By Andrew Churches
Learning to teach with technology suggests that pre-service teachers need opportunities to:

- Interconnect and interrelate their knowledge of content, pedagogy and technology

- Plan, organize, critique and abstract their ideas for guiding their particular students’ learning of the subject matter content with appropriate technologies

- Implement their plans that include methods and strategies for applying technology to maximize student learning

- Reflect on the effectiveness of the instruction and students’ learning, refining and refining their plans
So, what about the faculty?

- They need these same skills
- All faculty are from "Missouri"
- Collaborative model – we have to work together
- Technology support teams
- Adopt the NETS (T & S)
Pre-service teachers need:

- Time to build confidence and understanding
- Opportunities to see good teaching modeled
- Assistance in making good technology choices
- Opportunities to develop and teach technology infused lessons
Developing TPACK in the COE

- Recognizing (knowledge)
- Accepting (persuasion)
- Adapting (decision)
- Exploring (implementation)
- Advancing (confirmation)

iPads and Autism

- [http://www.cbsnews.com/video/watch/?id=7385686n](http://www.cbsnews.com/video/watch/?id=7385686n)
Questions?