Where is Penn State?
Where is Penn State?
Design-Based Research

Design as inquiry

- Family of methods
- Iterative implementation and refinement
- Contextual contingency and tentative generalization
- Continuous methodological alignment

http://www.designbasedresearch.org/
Describing Design

- Developing a methodology for directly studying design practices and knowledge
- Comparative synthesis of literature on empirical studies of designers in architecture, engineering, and education (instructional design)
- Empirical analysis of “teachability” of design methods
- Frameworks for characterizing design knowledge
TELS Education Accelerator

- K-12 project-based science learning on the Internet
- Collaboratory uniting research agendas, technologies, instruments, testbed
- Partnership model for teacher professional development and curriculum design
- Sociotechnical support design and refinement for lifecycle of both education and research

http://www.telscenter.org
http://www.edaccelerator.net
Exploring Social Capital

- Measuring social capital among teachers and administrators, researchers
- Social network and human capital analysis; bibliographic or textual analysis
- Consequential validity of an evaluation method
- Design and refinement of tools for identifying not only expertise, but access to expertise
Socially relevant representations

How cognitive processing of social cues in interfaces can facilitate learning

• Design and refinement of representations
• Mechanisms for cognitive facilitation
  – Ideological coherence
  – Mnemonic facilitation
  – Social navigation, etc.