Design Research Exploring Transformative Frameworks for Learning and Education

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AERA’2011 Presidential Session
Basic Message

- **challenge:** students need to be educated for a diverse, technical, and problem-oriented world that does not yet exist
  → it is imperative that students become self-directed, lifelong learners who can thrive and participate in collaborative environments with ever-changing disciplinary boundaries

- **our contribution:** articulation, design, and assessment of
  - transformative conceptual frameworks
  - innovative new media and technologies
  to foster the **social imagination** and **participation** of all stakeholders
The Individual Presentations and their Respective Focus

- **Gerhard Fischer**, University of Colorado: “*Cultures of Participation, Long Tail Learning, and Energy Sustainability*”

- **Sharon Derry**, University of Wisconsin (and **Daniel Zalles**, SRI International): “*Scientific Literacy in the Context of Civic Reasoning: An Educational Design Problem*”

- **Michael Eisenberg**, University of Colorado: “*Mind and Hand, Re-introduced: or Educational Technology in the Physical World*”

- **Alexander Repenning**, University of Colorado: “*Social Computational Thinking Tools*”

- **Discussant:**
  - **Allan Collins**, Northwestern University
Contribution to the AERA’2011 Theme “Inciting the Social Imagination: Education Research for the Public Good"

- focus on design and change in response to the objective:
  - “Philosophers interpret the world in various ways; what matters is to change it!” — Karl Marx

- basic assumptions underlying our shared research agenda:
  - school is a designed artifact (and not a immutable organization shaped by nature)
  - interest-driven and passion-based learning can and should serve as anchor points for standard curriculum units
  - informal learning should complement formal learning
  - the role of teacher and learner that was historically associated with a person should be associated with a context
  - new technologies and media should transcend “gift-wrapping” approaches