

Harnessing Theory in the Service of Engineering Education Research

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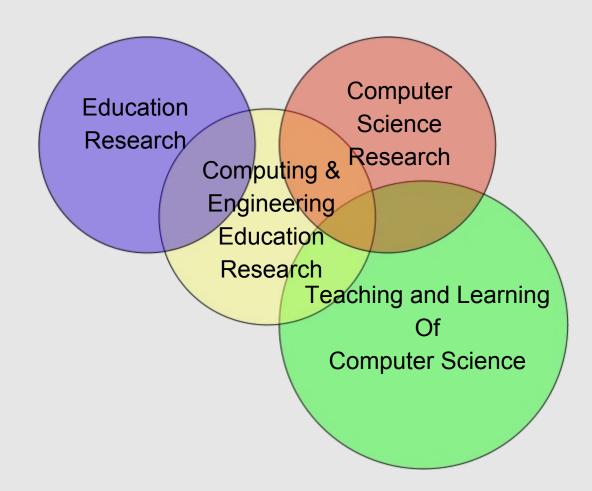


Agenda

- Goals and structure of empirical study
- Role of theory in systematic investigation
- Discussion



What are we doing?





What is the goal

Introspection

Scholarly discourse

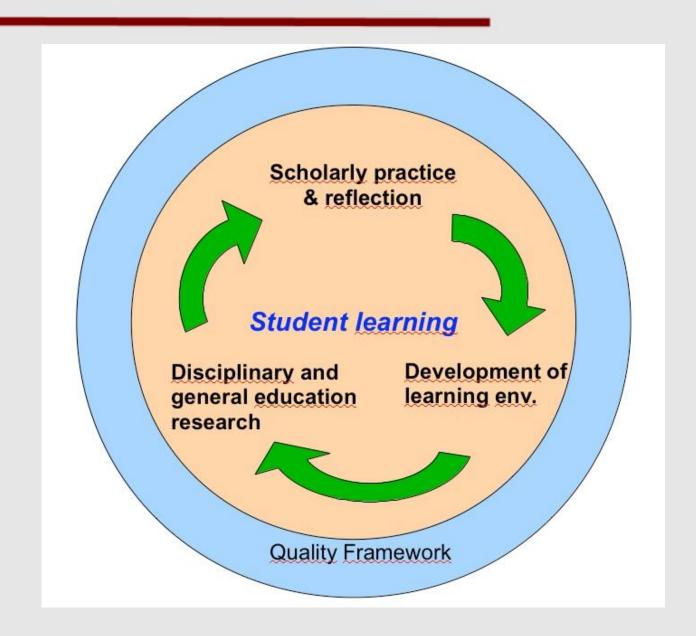
Teaching Practice in our Discipline

Intuition

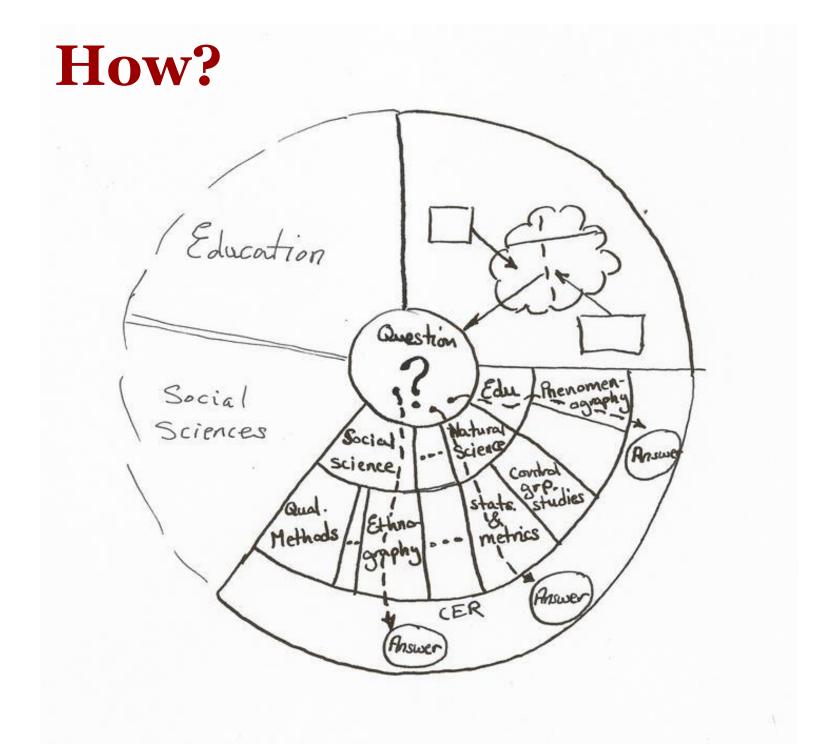
Evidence



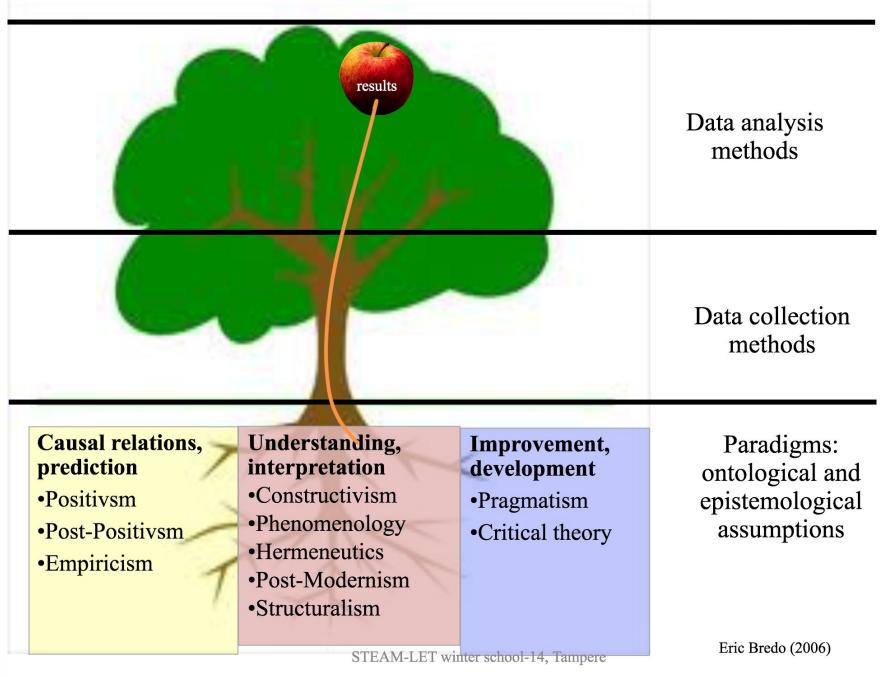
Critical Aspects of CER



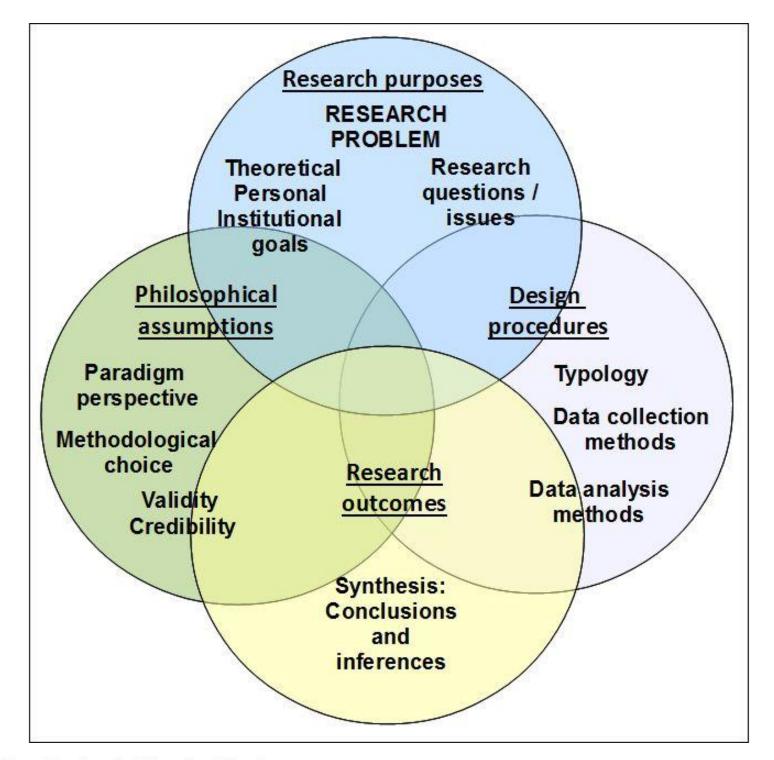






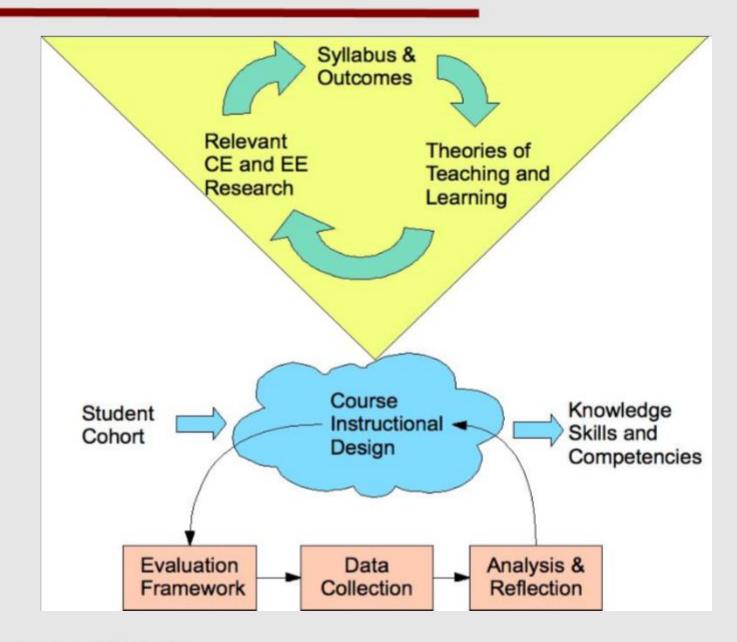








Crafting a CER Study



Educational Theories Cognitive tool Disciplinary Theory What is to be learned and How does learning what skills are valued take place Expanding conception of the Learning in Context How are disciplinary content and concepts learned. role Research Epistemology of theory Guiding purposeful investigation Interpretation Empiricism Relating results to each other and Informing data collection and Philosophical stance on investigating learning analysis learning context

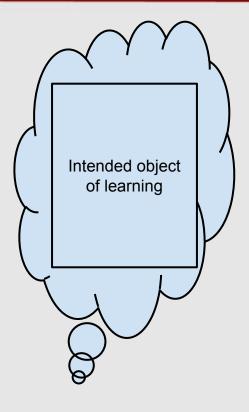


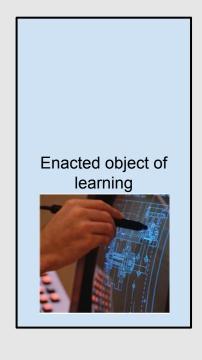
Questions and Discussion

Thanks for your attention!

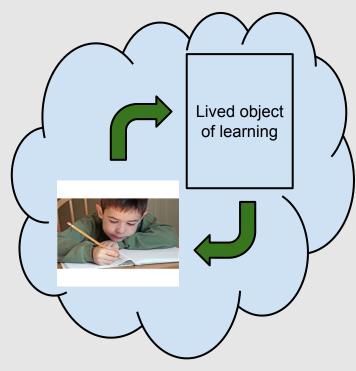


Application





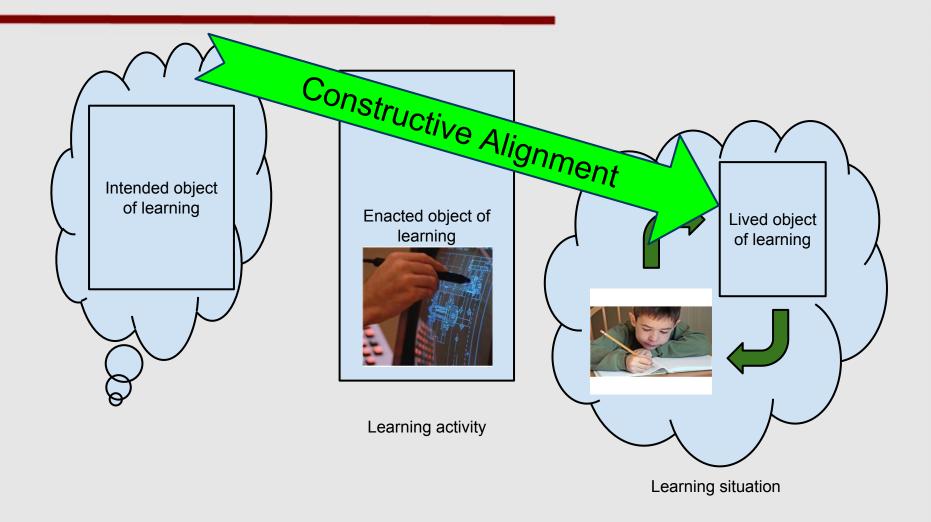
Learning activity



Learning situation

Course and curriculum design

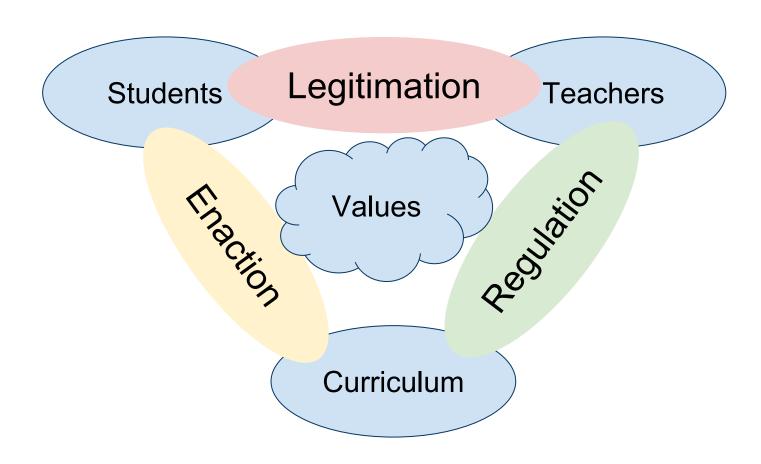




Course and curriculum design



An Example





Why? Quality and Sustainability?

