

Science of Learning Centers

Nanoscale Science and Engineering Grantees Conference

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Science of Learning Centers Program

National Science Foundation

Science of Learning Centers

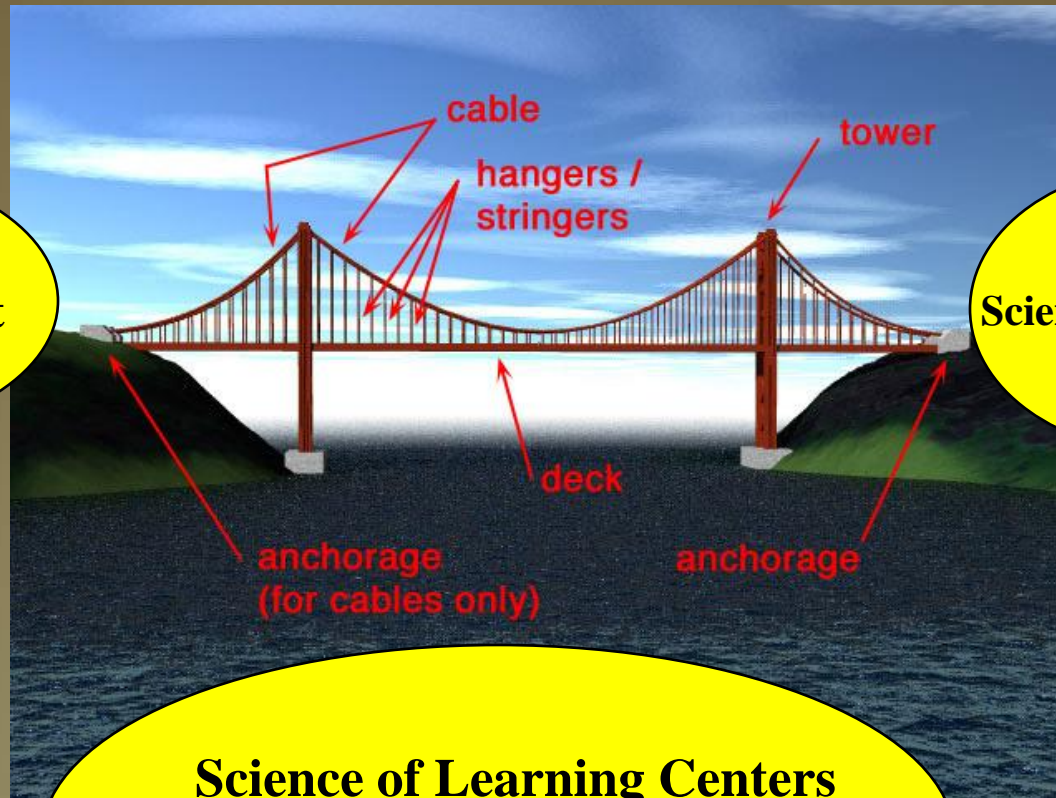
Transformative advances through interdisciplinary research on learning; connections to educational, technological and workforce challenges.



An integrative approach to innovation...

- ✓ **Discovery and knowledge**
- ✓ **Application**
- ✓ **Workforce preparation and training**

Building Bridges



Evidence-based Knowledge about learning

Science of Educating

Science of Learning Centers
- structural supports
- people/intellectual, facilities etc.



Science of Learning Centers

SCIENCE OF LEARNING CENTERS

Discovery and Knowledge...

How people learn

- ✓ Complexity, multidisciplinary
- ✓ Scope and scale
- ✓ Breakthroughs and innovations at intersections of disciplines

Centers provide intellectual, organizational and physical infrastructure

Application...

Each SLC offers “bridge supports” to translate knowledge into practice

- ◆ **Stable, long term partnerships of researchers and teachers that:**
 - ✓ **Better align research agendas to education issues**
 - ✓ **Bring teacher input to research - and encourage new ideas**
 - ✓ **Build capacities of a new breed of researchers and teachers**
- ◆ **Evaluation over long term and development of standards for quality control.**

A NATIONAL RESOURCE FOR ALL!!!



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Workforce Preparation and Training...

- ◆ **ENHANCED EDUCATION** - Richly multidisciplinary environment, shared mentoring
- ◆ **KNOWLEDGE TRANSFER** - A new breed of researchers and teachers for innovations in education – ideas as well as implementation
- ◆ **CYBER-ENABLED RESEARCH** - data collection and sharing, analysis and synthesis
- ◆ **CAREER DEVELOPMENT** - student leadership and governance, teamwork – iSLC student workshop
- ◆ **GLOBAL MOBILITY AND ENGAGEMENT**



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Current SLC Portfolio

2004 Cohort

- ◆ **CELEST:** Center for Cognitive and Educational Neuroscience (Boston U)
- ◆ **LIFE:** Learning in Informal and Formal Environments (U of Washington)
- ◆ **PSLC:** Pittsburgh Science of Learning Center (Carnegie-Mellon U)

2006 Cohort

- ◆ **SILC:** Spatial Intelligence and Learning Center (Temple U)
- ◆ **TDLC:** Temporal Dynamics of Learning Center (UC-San Diego)
- ◆ **VL2:** Visual Language and Learning Center (Gallaudet U)

Locations of SLC Centers & Partner Institutions



SLC Network of Six Centers

Another Level of Collaboration, Synergy & Synthesis

- ◆ Across centers in research, training, knowledge transfer and dissemination
- ◆ Increased access to experts, materials and training opportunities
- ◆ Timely exchanges coordinated via a web of:
 - 30 + academic institutions
 - 60 + non-academic institutions
 - More than 450 participants
- ◆ Framework that sustains continuous education and training in interdisciplinary Science of Learning

Recent Program Activities

◆ Program Development – Workshop Series

- ✓ Transfer, Expertise, Innovation and Creativity
- ✓ Science and Engineering of Learning
- ✓ Language Learning and Education
- ✓ Educational Neuroscience
- ✓ Art, Creativity and Learning
- ✓ Student Workshop

◆ Program Evaluation

- ✓ Including evaluation guidance for SLCs

◆ Funding Opportunities:

- ✓ Supplements to NSF awards (non-SLC)
- ✓ Small Grants for Exploratory Research (SGER)
- ✓ Workshops

Funding Opportunities...

- ✓ Supplement requests
- ✓ Workshops
- ✓ Small Grants for Exploratory Research