

## MEMORANDUM

**DATE:** September 29, 2010

**TO:** Myron Gutmann, Assistant Director, SBE

**FROM:** Soo-Siang Lim & Joan Straumanis, SLC Program Directors

**SUBJECT:** Update of Response to SLC COV Review conducted FY 2009

The COV review for the Science of Learning Centers Program was carried out March 9-11, 2009. The nine-person committee was chaired by Dr. John Leslie King, a member of the SBE Advisory Committee.

### **I. COV Recommendations (quoted from the Cover Letter to the COV Report)**

1. Continue and expand the program.
2. Do not hold another competition until the results of the current efforts have been more fully assimilated.
3. Do not merge the SLC Program with other center programs.
4. Rethink the nature of “evaluation” as applied to SLC Program participants.

### **II. Program Staff Responses to the Recommendations**

#### Responses to Recommendation 1: *Continue and expand the program.*

The SLC staff is encouraged by the recommendation, and by the committee’s recognition of the fact that the SLC program represents a long-term investment by NSF in a new interdisciplinary field, the Science of Learning. Because of reduced funding in FY 2009 and FY2010, *maintenance* of the program at a high standard has been the primary activity; *expansion* remains an objective for the future.

#### *Activities for FY 2010 included:*

- Critical site visit reviews of the six centers in SLC portfolio – 2 centers (LIFE and CELEST) will go before the NSB for extension of renewal funding beyond the previously approved 18 months; all 3 centers in cohort #2 submitted renewal applications for another 5 years of funding and are scheduled for NSB action in FY11. The maximum duration of funding for all centers is 10 years.
- Annual PI meeting, scheduled for October 14-15, 2010 – this meeting will include sessions on international collaboration and translation of research to practice, in addition to the usual scientific and administrative topics. A special afternoon

session is scheduled before the PI meeting to discuss team-based collaborations with students/postdocs. This is to invite reflections from the center members about their experiences, for engagement in discussions with experts about relevant research findings in interdisciplinary collaborations and team science, and for assessment of needs to facilitate cross-disciplinary collaborations. This is part of the Program's efforts to learn from current practices in center management (as well as the Program's management of centers) to improve future efforts.

- Annual Inter-SLC (iSLC) student conference in spring of 2011 – this will be held in Washington DC, with Gallaudet University as host.
- Annual Meeting with Evaluators was held in February, 2010.
- SLC Program Retreat in March, 2010 for strategic planning to coordinate and prioritize Program activities.
- EAGER, RAPID, workshops and supplement awards: Because of reduced funding, the program was able to support only one RAPID and two small supplements.

*Planned Future Activities:* Following the FY09 COV, several activities for expansion of the SLC program were planned to include the following:

- Contracts to produce an SLC-wide management database, and a network website for coordination, outreach and dissemination
- New cyberinfrastructure for scientific research and communication, large-scale sharing and data-mining of scientific results
- Infrastructure development and analysis of best practices for transfer of research results to implementation in education and technology
- Dissemination of SLC research objectives and results through public media
- New program partnerships and resources, including planned collaborations with other Federal agencies and other NSF directorates, as well as new center partnerships with universities, school systems and businesses
- Expanded international cooperation by the program and the centers
- Enhanced interdisciplinary training opportunities for undergraduates, graduate students and post-docs through REU, IGERT, and cross-center partnerships and exchanges
- New models of support to prepare centers for post-award sustainability, including planned collaborations by the presidents of center-hosting universities
- Strategic planning for the future by the SLC program

Because of significant budget constraints, the Program staff was able to move forward in only some of the above activities. Progress was made in the following areas:

*International Cooperation:* Cooperation with University of Queensland's newly-founded Science of Learning Center are creating opportunities for student education and training; The SLC Program received support by NSF-OISE for a conference/workshop in Finland to capitalize on a major investment by University of Washington's establishment of a state-of-the-art MEG facility affiliated with the LIFE center. The international workshop convened researchers within the SLC Network to learn more about advances in this technology, and to explore collaborative opportunities amongst themselves and with European counterparts; one of our centers (VL2) are partners in a successful PIRE award funded by NSF/OISE; and the SLC Program is planning a joint NSF- OECD/CERI conference/workshop about how technology affects learning and the learner, and how to better use technology to create innovative environments that enhance learning.

*Enhancement of Cross-disciplinary Activities for students and postdocs:* One of our centers (TDLC) successfully competed for a REU-SITE award; the Engineering Directorate provided support for a supplement to the SLC-Program's Telluride Neuromorphic Engineering Workshop, to enhance student experience at this workshop through additional experts on issues related to engineering of learning; as a follow-up to discussions of team-based collaborations at the upcoming PI meeting, the spring 2011 student conference (iSLC) will incorporate elements of this theme to encourage wider discourse and self-reflection of student/postdoctoral experiences in the centers and how they can be improved or leveraged.

*Connecting basic research with practice:* Sessions on this theme at the annual PI meetings for the last two years have resulted in significant exchange of information and collaboration on these efforts among the centers. At the Program level, SLC staff in collaboration with E&HR staff will be leading a session on this topic at the 2011 AAAS meeting

*Dissemination of SLC objectives and results through public media:* Results from centers have been picked up by media including New York Times (social robots at TDLC), Charlie Rose Show (social influences on learning at LIFE) and the upcoming Ultimate Block Party event in October 2010 (the importance of play in learning, in Central Park, NYC) is also expected to garner wide media interest.

*Strategic Planning for the SLC Program* – efforts towards this end were initiated during the SLC retreat in March 2010.

Response to Recommendation 2: No new competition in 2010.

No Centers competition was held in 2010.

Response to Recommendation 3: No merger with other center programs.

As planned, and beginning in FY 2010, SLC activities and budget were managed by SBE. In addition, program funds were partially distributed to other relevant directorates to increase visibility and recognition of the program throughout NSF. The SLC Program is not merged with other center programs.

Responses to Recommendation 4: *Rethink evaluation.*

Program staff members agree that multiple layers of evaluation have created burdens for the program as well as the centers. This issue remains a priority for the program, and is the subject of a discussion with the PIs at the October 2010 Annual PI meeting. Much remains to be thought through on this front, and full attention to this issue has not been possible this year because the critical review of all 6 centers in the SLC portfolio has taken up the bulk of staff time and other resources.

**Summary of New Actions Taken by NSF and the Program**

Reorganization of the management of SLC; beginning October 1, 2009 it is an SBE activity

New and expanded modes of cooperation with NSF directorates, such as budget distribution, participation in the PI meeting, and co-funding of centers and supplements

Expanded collaboration with Federal agencies (NEA and Department of Education in addition to NIH)

Increased international collaboration by the program and the centers, incorporation of a session on international activities at the annual PI meeting

Experimental “assistive” format for the 2009 site visit—judged by most center participants to be more helpful and less stressful than the standard review format; while not used in the 2010 critical site visit review, the expectation is that the Program will use this format on a regular basis.

**IV. Actions Remaining to be Taken**

As a result of encouragement from the COV and their report, the SLC Program is pursuing the activities designated above as “*Planned future expansion activities*” (p. 2).