

APLU LAUNCHES A DISCUSSION: TOWARDS A NATIONAL NETWORK OF UNIVERSITY-BASED STEM EDUCATION CENTERS

APLU has launched a national discussion on university-based STEM Education Centers through a generous grant from the Alfred P. Sloan Foundation. Our goal is to foster communication and interaction among STEM Education Centers to enhance their capacity to support effective undergraduate science, technology, engineering, and mathematics education. The project runs from May through October 2013.

While more than 150 “centers” in STEM education with various structures and functions exist, this project involves centers that are discrete campus units with research and faculty activities that focus on the *transformation of undergraduate teaching and learning of STEM disciplines*. This subset of centers is a critically important group to engage initially, since universities (with undergraduate education at their core) will potentially serve as the catalysts for broader national educational transformation in STEM, including research on teaching and learning STEM disciplines at all levels.

This summer we will conduct a survey of centers in order to create a preliminary taxonomy of center structures (e.g., how they were established; their mechanisms for working across campus and other organizations) and functions (e.g., the problems or issues the centers were established to address, and how they are being addressed). Simultaneously we will create a technology infrastructure that showcases programs, allows for communication among centers, and makes these programs and networks accessible to a broad array of constituents.

Building on that work, we will convene a 1.5-day workshop in September of current leaders of STEM education centers to engage in a conversation about topics such as:

- Sharing available evidence and best practices about the impacts of centers on STEM undergraduate teaching and learning, including the mechanisms of their impact (directly with undergraduate students, or indirectly with the informal or K-12 communities, graduate students or faculty, or research on teaching and learning STEM disciplines).
- Synergies among centers and STEM learning goals that may emerge by working with other types of centers.

- The preliminary taxonomy developed from the survey results. Such a taxonomy may be useful for centers to self-identify, and for centers or others (e.g., foundations) to connect with centers having similar interests.
- Initiating planning for enhanced communication among the larger group of centers nation wide, for example, a larger conference of STEM Education Centers to highlight how they conduct their work on campus vis-à-vis other campus structures, and the value these organizations might have in advancing national imperatives to improve science and mathematics education.

By mid-fall 2013, the project’s outcomes will include

- An initial community of STEM Education Centers;
- A centralized mechanism for showcasing centers and their outcomes;
- A workshop report that includes a preliminary taxonomy of center attributes, findings and recommendations for future action;
- Initial plans for a proposal to create a new network of STEM Education Centers with the purpose of sharing information, resources and strategies that support transforming undergraduate education.

STEM ED CENTER PLANNING COMMITTEE MEMBERS

Co-chairs

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Cathryn A. Manduca, PhD, Director, Science Education Resource Center, Carleton College

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