Effective Practices of Workshop Design, Planning, and Delivery

- Active engagement of participants during the workshop: Nothing is deadlier or less effective
 than a workshop where participants do not participate. The goal is to give people an
 opportunity to participate actively in every session using a variety of techniques: small group
 discussion, large group discussion, short problem-solving tasks, involvement of participants in
 trying out activities, individual or paired work at the computer, and scheduled thinking and
 writing time.
- Modeling effective pedagogy: The most successful workshop sessions are those taught with good pedagogy in mind and that least successful sessions are those where a presenter simply stands up and talks. Be vigilant about how presenters structure sessions with the goal of using effective pedagogy in all sessions.
- Giving participants time to interact and share experience/knowledge: Participants bring valuable experience and ideas to workshops. Structured mechanisms for sharing experiences and expertise must be an integral part of every workshop program. Support this aspect of the program with unstructured social time that supports the development of networks that will last beyond the workshop.
- Emphasizing practical applications: An emphasis on practical applications and strategies is an
 important aspect of effecting change in teaching practice. Workshop participants frequently
 comment on the value of examples of what works and what doesn't. Future workshops will
 continue to provide practical examples.
- Giving participants time to make progress on a specific task that connects the workshop topic to their teaching: Time to work individually during the workshop allows participants to reflect and to make progress on adapting workshop content to their own needs. This can be effectively supported during the workshop by providing opportunities for participants to work one-on-one or in small groups with workshop leaders. Workshop programs will include scheduled work and reflection time for participants.
- Making sure that participants leave the workshop with specific plans for future action: Workshops can produce a wide variety of results ranging from changes in teaching practice and development of new learning resources to department-level planning and community-wide action. In all cases, workshop time devoted to planning next steps is critical. Posters and oral presentation of plans have proven to be an important motivator in developing realistic plans and in encouraging follow through. Feedback from other participants facilitated through poster sessions or small group discussion is also extremely valuable as a mechanism for sharing practical experience. Continue to emphasize specific plans for future action and use a variety of techniques for presentation and feedback in workshops.
- **Providing materials and examples:** Examples of how the workshop topics can be applied in the classroom and field have been particularly valuable resources for participants. We emphasize the template character of the examples, stressing that participants are unlikely to adopt an

individual activity wholesale, but rather to pattern something after one of the examples provided. These materials could be made available online.

- Requiring some preparation in advance of the workshop: Coming prepared is as important for
 a workshop as it is for a class. A variety of approaches should be used to prepare participants for
 the workshop including reflection on their goals for the workshop, development of project ideas
 for completion at the workshop, assembling materials for sharing (e.g. course syllabi, learning
 resources, topical papers), pre-workshop discussion, and participating in surveys of participant
 needs.
- Having workshop presenters from a variety of types of institutions and/or disciplines:
 Participants from a variety of kinds of colleges and universities and from a variety of disciplines greatly enrich any workshop experience by providing multiple viewpoints and approaches.

 Retain an emphasis on diversity of presenters and participants in future workshops.
- Thorough minute-by-minute planning of workshop sessions: Good workshops that appear to flow spontaneously reflect extensive planning by leaders and a common understanding of the program and its objectives. In the months before each workshop, leaders must flesh-out the workshop schedule through a series of email discussions, phone conversations, conference calls, and, when possible, a meeting. This is especially crucial for modeling effective pedagogy when there are many leaders or presenters. Continue to do this kind of detailed planning with a preworkshop run-through in future workshops.
- Implementing post-workshop practices: Presenters should reflect on what worked and what didn't during the workshop; identify failures and successes, and determine what will be done differently next time. Presenters may also choose to follow up with participants.
- Drafting workshop descriptions: The description could include specific details of the event, agenda (if possible), intended audience, and previous positive feedback on workshop.
 Workshop goals and activities (what the participants will be doing) could also be included.

Adapted from On the Cutting Edge: Professional Development for Geoscience Faculty, Carleton College, http://serc.carleton.edu/NAGTWorkshops/conveners.html#effective