

Frequently Asked Questions about hosting a Mobile Summer Institute

1. What is a Mobile Summer Institute (MoSI) and how does it differ from a regional Summer Institute.

The Mobile Summer Institutes (MoSIs) are modeled after the successful National Academies Summer Institutes (NASIs), a five-day, immersive, project-based workshop that brought the science of teaching to the teaching of science in an approach called Scientific Teaching (Handelsman, et al., 2006). MoSIs combine the pedagogical approach of the NASIs, that became the Regional Summer Institutes on Scientific Teaching, with four new elements: 1) a peer mentoring and evaluation workshop, 2) a scholarly teaching workshop, 3) a strategic planning workshop, and 4) an administrator's workshop. These new elements are based on Charles Henderson's 4 Categories of Change model that highlights the need for surrounding educators with an environment that supports them while they implement engaged teaching strategies which improve student learning and success.

MoSIs are week-long project-based, interactive workshops that model the strategies being taught. Interactive sessions on the elements of Scientific Teaching - Inclusivity, Backward Design, Active, Student-Centered Learning, Assessment and Evaluation - are combined with small project-based, working group sessions where participants design teaching modules using their newly acquired teaching methods. The groups then present their modules for peer-review to the larger group near the end of the week. Thereby, participants leave with new knowledge and skills in evidence-based teaching strategies AND peer-reviewed teaching materials that they can use in their classes.

The MoSI program was developed for campuses to host two MoSIs in consecutive summers with the second year operating in a train-the-trainer format. This model leaves behind the capacity for each host institution to offer its own future summer institutes promoting continued diffusion of engaged teaching strategies across the campus. The first year, a 2-person team travels to the host campus to lead the workshops and facilitate working groups along with local SI alumni. The second year, a 1-person team travels to the campus to provide coaching and feedback for the local SI alumni while they lead the workshops and facilitate working groups. After the first two years, the host campus will have the capacity to run their own local SIs. While this is the recommended model, our approach is flexible and we can work with campuses who wish to host a single MoSI or who wish to bring back a MoSI trainer for a third year to aid in the transition to a local, sustainable model.

Terms:

MoSI trainers: A national team of approximately 20 SI alumni with leadership experience and specific training to run Mobile Summer Institutes. MoSI trainers (two in the 1st year and one in the 2nd, aka train-the-trainer, year) travel to the host institution to lead workshops, facilitate working groups and coordinate with the host leader during planning of the MoSI.

Facilitators: people who guide working groups through backward design and scientific teaching during the working groups sessions. Typically these are SI alumni, however, people with pedagogical training, specifically experience with Backward Design and active, student-centered, inclusive, teaching strategies, are suited to fill these roles. Each MoSI working group requires a facilitator.

Host leader/organizer - the person or person[s] at the host institution who are responsible for leading the effort - including planning, organizing and coordinating with the MoSI team - to bring a MoSI to their campus. Frequently these people have some kind of SI experience and can serve in a facilitation role, as well.

2. What is a typical schedule for a mobile SI?

Below is a sample agenda. While this is the most common order of events in a Mobile Summer Institute, there is flexibility in the schedule to meet special needs of your campus.

Day Time	Monday <i>Insert date</i>	Tuesday	Wednesday	Thursday	Friday
9-9:30	Facilitator Training	Backward Design in Action	Scholarly Teaching	Presentation Preparation	Strategic Planning II Backward Design plans
9:30-10				Peer Mentoring/ Evaluation	
10-10:30					
10:30-11					
11-11:30					
11:30-12	Lunch and Prep time for facilitators	Lunch	Lunch	Lunch	Group Reports
12-12:30					
12:30-1					
1-1:30	Introduction/ Welcome	Optional lunch activity	Optional Lunch activity	Presentations cont'd	Administrator lunch/ workshop

1:30-2		Group Work I	Group Work II		
2-2:30	Inclusivity/Diversity			Group Share	Wrap-up/Resources
2:30-3					
3-3:30					
3:30-4	Scientific Teaching in Action	Fac. Debrief (can move)	Fac. Debrief (can move)	Strategic Planning I Visioning, Goal-setting & Consensus Forming	
4-4:30					
4:30-5					
5:00	Reception (if applicable)	Dinner on own	Dinner on own	Dinner on own	

3. Who can attend?

This choice is up to the host campus. The Summer Institutes started in Biology in 2003, then expanded to serve STEM disciplines in 2008 and has more recently extended further into non-STEM disciplines. We have had success with both STEM and non-STEM audiences, as well as current and future faculty. When planning your MoSI, let your training team know the disciplinary make-up of your participants and they will incorporate examples from those disciplines into the workshop materials. While the majority of our MoSI trainers hail from STEM disciplines, we work with educators from a variety of disciplines to incorporate content that is appropriate for many disciplines.

4. What is the size limit?

The average MoSI attendance is ~25, however we have successfully served audiences of up to 50+. By the end of a two-year period, a campus can expect to have on average, fifty educators newly trained in Scientific Teaching who can build on efforts into the future. Since the active learning strategies employed by the MoSIs scale effectively, size primarily is constrained by two logistical, rather than pedagogical, factors:

- 1) space -two types of working spaces are required for the MoSI, a large room for whole-group working sessions and breakout rooms for the smaller group-work sessions, so numbers are limited by the size of the large available large room and the number of the smaller breakout rooms; and
- 2) facilitators – each small working groups requires a trained facilitator to guide them through the process. Ideally, facilitators have attended an SI previously (central, regional or mobile), however, people experienced with backward design and evidence-based

teaching strategies can also serve as facilitators. The MoSI team will provide training for facilitators on the first morning of the workshop. If necessary, the MoSI team will work with the host leaders ahead of time to find facilitators if candidates are not available. This will add to the budget as a stipend and expenses will be required for external facilitators. The SIs have a large network of potential trainers, so every effort will be made to find regional candidates to reduce travel costs.

Room needs: Large whole-group room: a flipped classroom design with tables/moveable chairs is preferable to stadium-style room. Typical classroom features such as projector, speakers, computer, internet access, whiteboards or large post-its. Small, breakout rooms - projection features are nice, but at the least participants will need whiteboards or large post-its.

5. What is the strategic planning workshop and who should attend?

The MoSI program includes a strategic planning workshop whose objective is to facilitate changes on the host campus that will support participants as they implement Scientific Teaching. The workshop lasts roughly a day and consists of 4 stages - visioning, needs assessment, consensus forming and planning - that help local educators identify issues related to policy, infrastructure, culture, etc., that are barriers to their efforts to create active, inclusive, student-centered environments for their students.

People who attend the pedagogy portion of the MoSI do not necessarily have to attend the strategic planning session. Strategic planning participants should represent a variety of perspectives, motivations, experiences and agencies. Participants should have interest in driving system-level change that fosters educational improvement or transformation on the host campus.

6. What is the administrator workshop and who should attend?

The goal of this workshop is to foster awareness and support by local administrators for MoSI-related efforts to improve teaching and learning on the host campus. The workshop is short to accommodate the busy schedules of administrators. Briefly, there is a 15 minute presentation to make administrators aware of what the MoSI brings to the host campus. This is followed by a very short report out (5 minutes per committee) on the strategic plans (from the strategic planning workshop). This typically occurs over lunch on the last day. While the administrators eat lunch, the presentation occurs, followed by the strategic plan reports ending in a discussion between the administrators and participants around the issues raised. The host leader should invite the administrators whose approval and support would be most important for the success of the strategic plans as well as the efforts by participants to transform their teaching. When determining the invitation list, identify the administrators who would be most

helpful in supporting or advocating for the types of reforms efforts that you would like to see happen on your campus as a result of the MoSI, e.g. Department Heads, Deans/Assoc. Deans, Vice Provost of Academic Affairs, new administrators (they'll be around for awhile)...

7. Do participants get some sort of certificate or recognition letter for taking part in the MoSI?

Yes, participants who successfully complete the MoSI will get certificates that distinguish them as Scientific Teaching Fellows and facilitators will get certificates as Scientific Teaching Mentors.

8. Is there any follow-up after the MoSI?

Yes. Early in the spring term of the following year, the MoSI training team will work with the host campus to schedule a virtual follow-up meeting via Zoom. This will last for an hour and will allow the training team to check in on progress - successes and challenges - and provide resources and/or recommendations, as necessary.

9. What is the cost of a Mobile SI?

While there are several variables that can influence the cost of running a MoSI (choices of venue, food and the need for external facilitators), a good ballpark for the first year is \$13-18k depending on whether or not you have local facilitators. There are two primary expenses for a MoSI, the stipends for the training team (and external facilitators if you don't have local people who can serve in that capacity) and their travel-related expenses. Therefore, the costs vary based on the transportation and lodging costs associated with the training team's travel. Some institutes have SI alumni at their campuses who can serve as facilitators. If this is not the case for your campus, you will need to bring in external facilitators. We have a list of potential facilitators and can help you find facilitators in your region to reduce costs.

For the training team, a reasonable estimation is \$9-10K for the first year and \$4-5K for the second year. The second (train-the-trainer) year is more economical because a single trainer travels to the host campus and facilitators can typically be drawn from local alumni of the preceding year.

Year 1: (2-person training team and external facilitators, if necessary)

Trainer stipends: \$3.5K/trainer = \$7K

Trainer travel/lodging: ~\$1-1.5K/trainer (varies depending on location distance) =~\$2-3K

External facilitator stipends: \$1K/facilitator + expenses

Supplies: ~\$300 (name tents, markers, small/large post-its,

Food: varies by campus. We recommend providing lunch and a coffee break. Since participants are local, they have breakfast and lunch at home. Providing lunch keeps

participants from leaving for lunch and being tempted to go back to their office or laboratory. Simple salad/sandwich/soup lunches are sufficient.

Meeting spaces: ~\$0 Most institutions use classroom spaces that are free. Room needs are 1 large, whole group meeting space, equipped like a classroom, and some smaller breakout rooms for group work.

Year 2 (train-the-trainer year, 1-person training team, facilitators are typically local)

Trainer stipends: \$3.5K

Trainer travel expenses: ~\$1-1.5K

Supplies: ~\$300

Food: varies by campus

Meeting spaces: \$0

10. What are options for finding funding?

There are multiple ways to find funding to host a MoSI.

1. Internal funds: Often, institutional leaders have funds set aside for faculty development workshops, or enrollment/retention efforts. Data on student outcomes can be very powerful in making a case for the need for professional development.
2. External funds: Requesting money in a grant proposal is another way to acquire funding for MoSIs. The SIs have long been funded by both Howard Hughes Medical Institute (HHMI) and the National Science Foundation and are thus known and valued by these two funding organizations.
3. Cost-sharing: Finally, you can collaborate with an[other] institution[s] in your area to share costs and hosting duties.

We can supply information about the MoSIs that can be used for any of these approaches.

11. How does the scheduling of dates work?

MoSI leaders work with the host institutions to arrive at the best dates for their campus. We recommend starting to work with faculty to determine best dates starting late fall term or early spring term before the MoSI. Find three potential dates and work with Michelle Withers (mwithers@binghamton.edu) to identify a MoSI training team based on availability.

12. What are our next steps as hosts/leaders/organizers?

Here is a [link](#) to a Host Leader Checklist to provide guidance in planning for your MoSI.