

CAUSE Workshop Planners' Handbook

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This handbook provides advice for those who plan to organize a professional development workshop for teachers of statistics. Our primary goal is to help workshop organizers to consider all of the relevant issues in conducting a successful workshop. In many cases we raise questions that workshop organizers should consider, but we do not necessarily try to offer advice about the answers to all of them, as the “optimal” answers will depend on the individual situation. This handbook is naturally based on our own experiences with planning workshops, and so we have no doubt failed to include some issues that may arise for others but haven't yet for us. This handbook can be updated as you provide feedback on its omissions and other suggestions.

Initial Planning

- ***Decide on focus, audience, length, and location of workshop.***

Focus: Some workshops have a broad focus such as “teaching introductory statistics,” while other have a more narrow focus such as “using web-technology to teach post-calculus statistics courses.” Will the focus be on content or on pedagogy or both? How strong a goal is developing the collegiality of the participants? The demand for workshops aimed at the general introductory course remains great, and we recommend that these focus on teaching the course in a manner consistent with recent recommendations such as the Cobb report and the forthcoming GAISE report.

Audience: One decision to make is whether to aim the workshop at college instructors or high school instructors or both. Will a more specific audience, such as two-year college instructors, be targeted? How much “experience” do you expect the participants to have? Will you advertise for participants nationally, regionally, or locally? Will there be a limit on the number of participants that you can accept?

Length: Workshops vary widely in length, from a few hours to a day to several days to a week. The choice of length should depend on the scope of workshop goals, availability of facilities and presenters, travel logistics, and time of year. Workshops of more than two days should be held in the summer when most faculty are not teaching courses.

Location: Some factors to consider when choosing a workshop location are the proximity of the location to large numbers of statistics teachers, ease of travel to the location, weather, facilities, cost, and handicap accessibility. Related to this location issue is the question of whether the workshop will be “residential” or commuting. We strongly recommend holding the workshop on a college campus as opposed to a hotel or convention center that is typically much more expensive. It is not required that the workshop be held in the same location as the organizer. Dormitory lodging and food are often quite sufficient for workshops that are not extensive in length (over one week). We suggest aiming for costs of no more than \$80-100 per participant per day for room and board. The workshop organizer may want to visit the site early in the process.

- ***Invite presenters and other staff members.***

When extending these invitations, the organizer should be very clear about the roles and responsibilities that each person is to fill for the workshop.

On-site coordinator: For longer workshops, we recommend that the organizer consider hiring a separate on-site coordinator to handle all of the local arrangements and logistical details. For a one-day workshop, a stipend of \$500-\$1000 would be appropriate; for a

week-long workshop, a reasonable stipend would be \$2000. This person's responsibilities could include:

- Securing the workshop facilities (e.g., classroom, computer lab) in accordance with the organizer's specifications
- Making arrangements for participants' and presenters' room and board if the workshop is to be "residential"
- Arranging for audio-visual equipment and communicating with presenters about this
- Communicating with participants about travel to the location, on-site facilities, and local arrangements

Presenters: We recommend having at least two presenters even for short workshops, and we recommend up to four presenters for week-long workshops. The organizer should give guidelines to the presenters about what they should present, but we recommend giving the presenters considerable latitude to use their own professional judgment in deciding what to present in order to accomplish the workshop goals. The presenters should also be advised on the focus of the workshop, whether the sessions should be primarily lecture or activity-based, and the types (and timing) of handouts expected. In addition to covering room and board, reasonable stipends would be in the range of \$500/presenter for a one-day workshop up to \$2000/presenter for a week-long workshop. CAUSE will maintain a list of potential workshop presenters and their areas of expertise.

Student assistant: For longer workshops we recommend that the on-site coordinator hire a student assistant to assist with the many logistical details associated with the workshop. These details could include airport runs and photocopying.

Guest speaker: For a longer workshop, you might consider having an after-dinner speaker for one evening, who might be a local applied statistician who could give participants a view of the discipline from a non-academic.

Evaluator: If the workshop is funded through a grant, then hiring a workshop evaluator is probably expected. CAUSE will maintain a list of potential workshop evaluators with experience/interest in this area.

- ***Recruit participants.***
 - Will there be an application process through which participants will be selected, or do participants just need to sign up? When feasible, we recommend having an application and selection process, so that participants may have a more vested interest in participating fully in the workshop. The number of applicants that can be accepted should be determined in advance, based on the funding/budget, the availability of facilities, and the goals of the workshop.
 - Will there be a fee associated with the workshop, above and beyond travel expenses? We recommend keeping fees to a minimum and ideally obtaining funding so that no fee is necessary.
 - The advertisement of the workshop should be very clear about the workshop goals and intended audience. We recommend providing a bullet list of the workshop goals in the advertisement, so that the participants are very clear about what they are signing up for. If known, also list the presenters in the advertisement. The advertisement should also be very clear about what the workshop provides (room & board? materials?) and what it does not (travel expenses?).

- The advertisement of the workshop can be circulated through many outlets, depending on the intended audience. These include the ASA Section on Statistical Education and the SIGMAA (Special Interest Group of the MAA) on Statistics Education, both of which have e-mail distribution lists and newsletters. Additional options include local chapters of the ASA and local sections of the MAA. Other options include the “isolated statisticians” e-mail list and the ASA’s e-mail list of chairs of statistics programs. The American Mathematical Association of Two-Year Colleges (AMATYC) provides links to that community, and the National Council of Teachers of Mathematics (NCTM) offers connections to high school teachers.
- If the workshop uses an application/selection process, we recommend having a web-based application form. The application form should indicate not only the application deadline but also the expected date for notifying applicants whether they are accepted (ideally no more than one month after the deadline but several months before the beginning of the workshop). On the application form, applicants can be asked to describe their background in statistics, teaching experience and philosophy, goals for attending the workshop, and anticipated outcome of the workshop on their courses. Responses to such questions can form the basis of the selection process. You may want to have 2-3 people rate each application and combine their ratings in some reasonable manner. If you have more applicants than available slots, you may want to create and prioritize a waiting list in case accepted participants decline or later cancel.

Leading Up to the Workshop

- ***Finalize the workshop schedule.***

The workshop organizer will want to work with the on-site coordinator to finalize the workshop schedule. This includes the timing of breaks and meals as well as the workshop sessions. Some of the scheduling decisions to be made include:

- *Presentations vs. discussions:* We recommend that most workshops contain a mixture of presentations and discussions. The form of the mixture should depend on the specific workshop goals. Typically, there will be more presentation sessions because the goals often focus on participants’ learning from leaders in the field. But it is also important to schedule discussion sessions so that participants have opportunities to share their own ideas and learn from each other. It is often useful to break these discussions sessions into smaller groups of, say, 8-12 participants. In this case, it is helpful to have a brief session with the entire group, where a representative of each discussion group reports on the main ideas that were discussed.
- *Evening activities:* For multi-day workshops, decisions should be made about how to use the evenings as well. For example, working sessions could be scheduled in the evenings, or optional excursions could be planned, or the evening time could be left completely unstructured. We’ve found that having structured evening activities, even if they are completely social and optional, can help to build camaraderie and collegiality among participants.
- *Meals and breaks:* We recommend scheduling 20-30 minutes for a mid-morning break and for a mid-afternoon break. For multi-day workshops, we also

recommend that one dinner be more of a sit-down style (as opposed to through a cafeteria line), perhaps with an after-dinner speaker.

- *Flexibility*: It is important to build some flexibility into the schedule (e.g., for sessions running slightly over time, for technology glitches, for travel time between sessions, for bathroom breaks, and for making logistical announcements and reminders).

- ***Order workshop materials.***

The workshop organizer and/or on-site coordinator need to order any materials (books, supplies) for the workshop. We have found that publishers are often willing to donate complimentary copies to be distributed to workshop participants. Other books may need to be purchased, as well as supplies such as three-ring binders. If workshop participants are to be supplied with several books, the on-site coordinator may want to be prepared to describe/arrange options for participants to ship books back to their home institutions.

- ***Communicate logistical information to participants.***

Logistical details need to be communicated to participants in a timely manner. We recommend that this communication occur via e-mail and that at most two people (the workshop organizer and on-site coordinator) communicate with participants. The number of distinct messages should be kept to a minimum, perhaps one message with initial acceptance information and logistic details, a later message about one month prior to the workshop and perhaps a third in between as more information becomes known. Some types of information that needs to be communicated could include:

- *Flight arrangements*: which airport(s) to fly into, the latest possible arrival time, and the earliest possible departure time. This should be communicated at least two months in advance so that participants can search for the best airfare deals.
- *Campus map, parking information*: where to park, whether a permit is required, how to get a parking permit if needed. The campus map can also have specific locations highlighted, including the check-in spot and location of the first group meeting.
- *Housing assignments*: including phone numbers, if possible.
- *Dorm life*: If participants are being housed in a campus residence hall, they need to be told what will be provided (e.g., sheets, towels, telephone, laundry facilities) and what they should bring themselves (e.g., soap, shampoo, extra pillow, alarm clock, hangers). The bathroom arrangements (e.g., individual or shared) should also be made clear.
- *Dress recommendations*: Let participants know whether dress will be casual or professional for the entire workshop and whether they might want nicer clothes for one or more dinner events. Also let them know about lengths and difficulty of walks (for example, whether comfortable shoes are a necessity in case the workshop rooms are a sizeable walk from the housing facilities). Also let them know about expected temperatures and rainfall in the area at that time of year (including variability), and whether the workshop rooms are likely to be warm or cool.
- *Other things to bring*: Suggestions for other items that might be helpful, such as an umbrella, a fan, or laundry soap, should be made.
- *Miscellaneous*: Many participants want to know whether internet access will be available from their rooms or on campus (both during the day and in the evenings)

and whether they will be able to use a campus recreation center. (Such facilities may require prior arrangements within the academic institution.) If the workshop overlaps a weekend, participants may also want to know about options for attending religious services.

- ***Get logistical information from participants.***

The on-site coordinator also needs to receive and confirm important logistical information from participants, such as:

- Confirmation that the accepted applicant plans to attend the workshop
- Dietary restrictions and handicapped access requirements
- Detailed flight information
- Whether the participant requires transportation from/to the airport
- Whether the participant needs a parking permit.

- ***Communicate with presenters.***

The workshop organizer and on-site coordinator both need to communicate with the presenters to help them prepare their sessions. The workshop organizer needs to make sure that the presenters are clear about the workshop goals, about how long they have to present, about the expected content and level of their presentations, and whether a paper and/or handouts are expected. The organizer should also coordinate communication among presenters during the planning process, so that their presentations can be well-aligned. We recommend that presenters be encouraged to use a common format for their handouts, providing a consistent look and feel. The on-site coordinator needs to make the presenters aware of the facilities available for their presentations (e.g., computer projection, computer lab, internet access, software packages, audio-visual equipment).

- ***Initiate the workshop discussion.***

For longer workshops, we recommend initiating discussion among participants prior to the start of the workshop. One method is to set up an e-mail listserv through which logistical information can be disseminated. Participants can be asked to send to that listserv a brief biographical sketch of themselves, perhaps along with reasons for wanting to participate in the workshop. Background readings could also be assigned at this stage, and discussion of them could begin via the listserv. Also, the expectations of workshop participants should be clearly spelled out at this stage (e.g., Are they expected to attend every session? Will attendance at evening/weekend sessions be expected? Are spouses encouraged to accompany participants; if so, will they be housed and fed?). One listserv detail to be decided is whether the reply default goes to the entire list or just to the sender.

- ***Finalize the local arrangements.***

The on-site coordinator will need to make sure that all of the local arrangements are finalized in advance of the workshop. For an on-campus workshop, this will probably entail communicating with campus representatives in conference services, housing, and/or catering offices; this includes communicating “final” counts about number of people requiring lodging and meals. The on-site coordinator should make sure that the cost estimates are consistent with the workshop organizer’s budget. Because campus catering offices sometimes charge large amounts for providing break refreshments, an alternative is for the on-site coordinator to provide those refreshments him/herself, perhaps aided by a student assistant.

- *Breaks:* We strongly recommend making healthy refreshment options available to participants, including lots of bottled water at all breaks.

Immediately Before the Workshop

The on-site coordinator, perhaps aided by a student assistant, needs to take care of:

- *Nametags*: Remember to make a nametag not only for participants but also for presenters and any guests who might attend. We recommend putting first names in very large type, easily seen from a comfortable distance. We also recommend listing the person's affiliation and perhaps city/state on the nametag. We suggest using neck loops rather than pins, or at least warning participants to bring their own neck loops if they don't like pins. We also suggest printing the nametags on both sides so that they can still be read if they flip over.
- *Binders*: We strongly recommend giving each participant and presenter a three-ring binder in which to keep their workshop materials. The binder should include a title page (often inserted into the cover sheath and where participants can add their name). Other information at the front of the binder should include the workshop schedule, listing of participants and presenters with contact information, and perhaps another campus map. A compilation of the participants' biographical sketches might also be included in the binder. Information that will be used often, such as a web page address or login password for a computer lab, should also be placed on a prominent page near the front of the binder. As much as possible, make photocopies of presenters' handouts and other workshop materials ahead of time and put them in binders before participants arrive. But if additional handouts are photocopied during the workshop, just three-hole-punch them before passing them out so that participants can put them into their binders.
- *Distribution of materials*: Decide how to distribute materials (e.g., binders and books) to participants. Will they be distributed piecemeal or all at once? As participants check in to the dorm, or at the opening dinner, or at the first regular session, or in some other manner?
- *Transportation*: When feasible, it's very nice to provide workshop participants with transportation from the airport (or bus station or train station) to their on-campus residence. The on-site coordinator may well enlist help from several student assistants in accomplishing this. Often two or three flights can be met at the same time, especially if participants are warned in advance at what time you expect to pick them up. For making these airport runs, it can be helpful to make signs with the name of the workshop in large type, so that participants meet up with their greeters. It's also important to keep in mind the number of passengers that a driver can accommodate and also the trunk size for carrying luggage. It's also important to provide participants with contact information, preferably cell phone numbers, to deal with travel delays that are always inevitable.
- *Check-in information*: As participants check in for the workshop, they should be provided with information such as a campus map and instructions concerning the first event that they are to attend, including of course the time and location of that event. You might also want to consider arranging an "escort" to walk participants as a group from where they are staying to the first event. You can let participants know when they check in the time that the escort will be leaving.
- *Pre-workshop recreation*: If some participants are arriving early, perhaps even a day or two early to take advantage of cheaper airfares or to see the area, it is very

nice to provide them with information such as dining possibilities in the area, and directions to town or other places of interest (including walking and bus options). Participants can be encouraged to use e-mail to begin contacting each other about coordinating planning for those arriving early. You can also let them know at check-in which other participants have arrived, especially if you know of any who arrived by car.

- *Presenters:* The workshop presenters should try to arrive early enough to check out the facilities and make sure that all technological and audio-visual needs are attended to. Presenters should also be clear on time allotments and on who is responsible for calling the session to order and for announcing adjournment. The on-site coordinator should arrange to have an on-site technical support person present during this preview and at the beginning of the initial workshop sessions.

During the Workshop

- ***Set the right tone right away.***

Opening event: The workshop should begin with an event that sets the tone for the entire workshop. One possibility that we recommend is to have an opening dinner with an ice-breaker activity following. Ideally, this activity should allow the participants to start to get to know each other and should also be related to the goals of the conference. We advise reminding participants of the specific workshop goals during this opening event, to make sure that everyone is clear on what those goals are. The on-site coordinator might also want to invite an administrator from the host institution to make welcoming remarks and to describe the background and nature of the institution. All of the staff involved with the workshop should be introduced (or introduce themselves) at this event, and depending on the size of the group it would be nice for participants to introduce themselves as well. At the conclusion of the opening event, participants should be very clear on where they are to be and at what time for the first “regular” session of the workshop and/or if you are providing breakfast. You might even again arrange for an escort.

First session: For the first “regular” session of the workshop, several logistical details should be announced, such as the location of the nearest restrooms and water fountains, and the policy on whether food and drink are allowed in the workshop room. Participants will also be anxious to hear how/where/when they can check e-mail during the day and/or in evenings. We recommend that the on-site coordinator announce the availability of supplies such as a stapler, three-hole punch, post-it notes, notepads/tablets, pens, and computer disks during this session. Another announcement that might be made at this session concerns the times when the campus bookstore is open, and other opportunities and locations for purchasing souvenirs. (You may want to be conscious of these opportunities when you plan the schedule to ensure there will be some time, e.g., over lunch, for making such purchases.) We also recommend being very prompt in starting and ending this session on the time announced in the schedule, to set a precedent for promptness throughout the workshop. We highly recommend starting on time, even if there are still a few “stragglers” (but then try to fill in any information they might have missed during the next break). We feel it is very important to stick to the basic structure of the schedule each day (e.g., starting and ending times, break times) so that sessions

don't stretch into "free time" and to ensure that all presenters are given fair time. This may even require cutting a presenter off when his/her time is up.

- ***Make adjustments as necessary.***

As much as possible, those involved with the workshop should try to assess how the workshop is going and be ready to make adjustments on the fly. One device that we recommend is asking participants to submit "minute papers" through which they provide informal feedback about how the workshop is going and suggestions that they have for improvements. These could be very small but important matters like making sure that a presenter repeats questions asked by participants in case they are hard to hear, or adjusting the amount/proportion of coffee and water at breaks, or they could involve more substantial matters like devoting more workshop time to group discussions.

- ***Provide social opportunities.***

Especially during longer, residential workshops, social time provides good opportunities for participants to discuss issues and form networks. We recommend arranging some optional social excursions for participants, such as a hike or an outing to a nearby park or attraction. You could also investigate whether participants can use campus facilities such as tennis courts and ping-pong tables. Perhaps there is a lounge where a card game could break out.

- ***Encourage mixing and sharing.***

You might want to ask participants to sit with a new person each day so that they get a chance to meet and work with more people. If the workshop is in a computer lab, we recommend having participants work together, making sure that each partner gets a turn at the controls. Also encourage participants to share their own ideas and experiences, which we have found that participants enjoy very much. One possibility for encouraging this sharing is during meals, where you might have "theme tables" that discuss issues suggested by participants.

- ***Keep attending to logistical details.***

- During any sit-down meals, you may need to help make sure the dietary needs are met. This could mean helping catering identify the individuals with dietary restrictions or even announcing which entrée is the vegetarian option if there are only a few servings.
- Circulate a listing of the participants' names, affiliations, and contact information, so that they can verify or correct this information. The revised list can then be re-distributed at the end of the workshop.
- Consider creating a workshop web page on which you post links to information that comes up during the workshop. These could include links to web sites and datasets, and also links to presenter handouts, which participants could use after the workshop to obtain a "clean" copy after they write on their workshop copy.
- Be prepared to make photocopies of additional handouts/materials on the fly. For instance, you might distribute summary notes from discussion sessions.
- You may want to have someone take pictures during the workshop to provide a visual record that could be posted on the web. This applies to both technical and social aspects of the workshop.
- Toward the end of the workshop, make sure that all participants are clear about procedures for checking out and travel arrangements (e.g., rides back to the airport). Again these airport rides can be grouped together, but we recommend

not asking participants to go to the airport more than an hour earlier than the airline recommends.

- ***Administer evaluation form.***

Participants should be given ample time to fill out a workshop evaluation form at the end of the workshop. You may want to distribute this form ahead of time so that participants have an opportunity to think more carefully about their responses. Their responses can be anonymous. We recommend that this form include the following components:

- *Goals:* The evaluation form could start by listing the workshop goals, exactly as they were stated prior to the workshop, and having participants rate how well the workshop achieved those goals.
- *Impact:* The evaluation should ask about the expected impact of the workshop on the participant's teaching in the year(s) ahead.
- *Presentations/materials:* Participants should be given a chance to evaluate and comment on the quality of the presentations and materials from the workshop. This could include asking participants which sessions (or types of sessions) were most/least valuable to them.
- *Logistics:* Participants should comment on how well the logistical details were carried out and make suggestions for improvement. You may also want to ask participants how they learned about the workshop.
- *Suggestions:* The evaluation form should include ample opportunities for participants to make suggestions on how future workshops could be improved.
- *Overall:* We recommend asking for an overall rating of the participant's workshop experience, perhaps including whether he/she would recommend the workshop to others.

- ***Acknowledge contributions.***

Be sure to thank all of the presenters, participants, and others who contributed to the success of the workshop. You may want to provide small gifts for presenters and/or "door prizes" to be awarded to participants.

Following the Workshop

- Some participants, particularly high school teachers, may benefit from your providing a certificate of attendance. This certificate should indicate how many hours of professional development they invested in the workshop and should be produced on official letterhead.

- ***Continue the discussion.***

- We recommend using the e-mail listserv to facilitate continuing conversations among participants. We especially encourage participants to share their own teaching experiences and reflections, particularly as they make changes.
- You may also want to arrange for "reunion" meetings of the workshop participants at future conferences, such as the Joint Mathematics Meetings, Joint Statistical Meetings, and meetings of NCTM and AMATYC. These can be very informal and may consist simply of meeting and going for a meal together, which can be arranged through e-mail conversations prior to the conference.

- ***Rest! ☺***