

A 10-Step Recipe for Starting a Partnership Program

By Bruce Alberts

The University of California at San Francisco "Science and Health Education Partnership" (SEP) was started by myself and David Ramsay, the UCSF vice chancellor for academic affairs. I had accidentally discovered David's interest in the schools when he and I were seated together during one of those interminable, official university dinners, which I was once obligated to attend as chairman of the Department of Biochemistry and Biophysics. The fact that David and I held positions of authority at UCSF was a great help in getting the UCSF program off the ground quickly. Because other individuals who attempt to start such a program might lack the advantages that the two of us had, I have written this "how-to" essay. If you are energetic, tenacious, and believe that the reinvigoration of public education is of critical importance for the future of our democracy, you might find satisfaction by exploiting the following plan:

1. **Find six or more outstanding teachers in a local school district.** Nothing can be done in a partnership program without first recruiting a small team of dedicated and talented teachers to provide informed leadership. You and your colleagues will be both educated and inspired by your interactions with these energetic individuals from the "front lines." Ask the first outstanding teacher you find for the names of others.
2. **Get the superintendent of the teachers' school district to support the formation of your new partnership.** Use the advice of your teacher group concerning how to proceed with the superintendent. Sell your idea for a partnership by citing the success of partnerships elsewhere. Get the superintendent's office to provide you with the names and school addresses of all of the district's science teachers. Home addresses and phone numbers are particularly useful.
3. **Organize a meeting between your outstanding teachers and a few department chairs or other recognized leaders in your organization.** Have an agenda so that something significant will be decided. Hold the meeting in a nice room and provide some food. Teachers are not used to being treated well and will appreciate small courtesies! If you have found the right teachers, they will inspire the leaders of your organization and enlist their commitment for you. Use these leaders as the core of an "executive committee" that enlists your organization's support for the program.
4. **Find the resources to support the salary of a half-time partnership coordinator to organize the program and raise funds for the partnership.** The person chosen should be energetic, organized, able to write well, and deeply caring about improving the schools. He or she will need a small budget for food, mailing, and so on. The executive committee described above will find the necessary funds. You can point out the long-run benefits to your organization's local reputation and contrast the small cost of the half-time position with the much greater resources that are spent on public relations. But do not let the PR people get anywhere near the program for several years, not until you have something that is really worth advertising to the community.
5. **Start your partnership program with a well-advertised event.** Have the leadership teachers meet with a few interested scientists as a teacher-dominated "steering committee" to plan an after-school event. The partnership coordinator will be responsible for mailing invitations to all the science teachers in the school district, for advertising the event throughout your organization with mailings and posters, and for arranging the room and the food. Our first event was a "mixer" during which we divided into small groups to introduce each other and to develop suggested program

elements that were reported back to the entire assembly. This mixer resulted in a program focus on forming and nurturing one-on-one partnerships between teachers and scientists. Teachers and volunteers were invited to write down what they personally might seek in a partner. Teachers and scientists who had formed partnerships registered with the program coordinator.

6. **Establish and nurture at least one core activity.** One-on-one partnerships formed SEP's initial core activity. This focus helped us bridge the abyss separating practicing scientists from precollege science teachers. The partnership coordinator helped find scientist partners for all those teachers desiring one, encouraged the volunteers to visit his or her teacher's classroom within the first month of their pairing, and found new matches for those teachers or scientists whose partners turned out to be inappropriate or inaccessible. The partnership coordinator also made a list of available sources for dry ice, petri dishes, flies, and so on. for each scientist partner to use, as well as organized the donation of surplus equipment for the classrooms of interested teachers. The book entitled *Science Education Partnerships: Manual for Scientists and K-12 Teachers* describes a variety of activities that can form your initial program core. The one-on-one partnerships fulfilled this role very well for SEP.
7. **Write grants to obtain more funding.** The operation of a substantial partnership program will require resources for program expansion, including salaries for several full-time personnel. With the aid of the partnership coordinator and of the development office (if such exists), funds should be sought from a variety of sources interested in public education, mainly local philanthropists and industries. Several sources will be necessary, since these first grants are likely to average \$5,000 to \$40,000 each.
8. **Use meetings of the teacher-dominated steering committee to plan new activities.** The "Science Education Partnerships" book lists many possible activities. Teachers are overworked, and it is crucial that everything done by the partnership be at their suggestion and have their full support. We have had particular success with our annual student lesson plan contest, which generates a tremendous amount of activity in the schools for a relatively small amount of prize money. It also gets many UCSF scientists into the schools for the first time each year as contest judges.
9. **Encourage the teachers to work within the school district for systemic change.** By themselves, teachers often feel isolated and powerless to effect needed changes. By bringing teachers together and treating them as professionals, the partnership should have the long-term effect of giving teachers the confidence to work together to push for more support for science in their schools. Reaching this stage will take several years. Ideally, it will encourage the school district to organize a leadership team of outstanding science teachers that can be relied upon to make consistent, intelligent decisions about science curricula on behalf of the school district.
10. **Work with the district leadership teachers and administrators to obtain major funding to meet important district science education needs.** Collaboratively identify major obstacles to bringing about systemic change in science education. Identify solutions that the partnership can help develop and implement to overcome these obstacles, and target funding sources that are appropriate. One important area is the need, particularly at the elementary and middle school levels, to help teachers become more science literate and better trained in leading exploratory, hands-on lessons in their classrooms. Programs that address this need usually take the form of multiyear staff development summer workshops complemented by support in the classrooms during the academic year. Multiyear grants to support these activities are generally only available to school districts through partnerships with science-rich institutions, such as universities and museums. Other articles in the "Science Education Partnerships" book describe funding sources and strategies.

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