

THE BIENNIAL CONFERENCES ON CHEMICAL EDUCATION

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The Division of Chemical Education's Biennial Conference Committee is responsible for recruiting, identifying, and recommending conference sites for future Biennial Conferences on Chemical Education (BCCE). In addition, the committee is responsible for working with the BCCE planning groups, supporting the efforts of groups preparing conferences, and setting policy for the operation of these conferences.

The Division of Chemical Education (DivCHED) began sponsoring biennial conferences in 1970, holding the first conference at Snowmass-at-Aspen, Colorado. While the list of participants at that initial conference included only invited eminent chemists and educators, conferences since 1972 have been open to all interested persons. To date there have been 18 conferences, the most recent being held at Iowa State University, Ames, Iowa, in the summer of 2004. The 19th BCCE will be held at Purdue University, July 30 to August 3, 2006. Indiana University, Bloomington, Indiana, has been selected and approved as the site for the 20th BCCE for the summer of 2008. The BCCE conferences are the largest gathering of chemical educators in the world. Their emphasis on increasing the effectiveness of chemistry teaching and their reputation for unveiling the most modern developments in chemical education have given the BCCEs a high degree of respect in the chemical education community.

This paper focuses on future BCCE conferences and investigates questions and challenges for those who plan future conferences. The discussion stimulated by this paper should serve as a guide to planning groups hosting future BCCEs. This paper is organized by topics and questions that the Biennial Conference Committee considers most important.

1. Should each BCCE conference have a central theme?

Most previous BCCEs have featured a broadly based program, with symposia covering a wide variety of topics in chemical education. Each conference Program Chair has been responsible for developing a schedule of symposia and for appointing symposium chairs. The conferences have also included general symposia and poster sessions that welcomed papers that did not fit easily into any of the dedicated symposia.

The Biennial Conference Committee and individual BCCE planning groups have been engaged in a discussion of whether future conferences should build on the established program model or whether they should be restricted to a particular theme or topic. It is intriguing to consider a theme-based BCCE, which would allow participants to explore the topic in depth. On the other hand, most BCCE participants are accustomed to presenting their work freely, regardless of designated theme.

A question for debate, therefore, is whether the programming at a BCCE should be broadly-based, following established practice, or whether a theme-based BCCE should be considered, at least for one trial as an experiment. The Biennial Conference Committee would welcome views on this issue.

2. What is the optimum size of a BCCE?

The first "open" BCCE, held in 1972 at Mt. Holyoke College, South Hadley, Massachusetts, had a small enrollment. The conference program consisted of single sessions; virtually all participants could attend each lecture and presentation. Since then, registration has grown steadily. Currently, attendance figures range from 1300 to 1500 participants. The complexity of the program has increased correspondingly. The most recent BCCE, at Iowa State University, featured a program with eight plenary and keynote speakers, 109 symposia, and three poster sessions, for a total of 643 symposium papers and 96 posters. Each day's program included multiple parallel sessions. It is clear that management of a conference of such complexity requires large teams of volunteers; the organizing committee for the Iowa State BCCE included 34 individuals.

It is expensive to organize and present a BCCE. The operating budget for the 18th BCCE (Iowa State) was approximately \$340,000. As conference budgets grow, there is an increased pressure on successful fundraising, in order to keep conference registration fees low. The 18th BCCE budget included approximately \$47,000 in sponsorship income.

A question for debate, therefore, is whether limits should be placed on registration for future BCCEs or whether the conferences should be allowed to grow freely. Should the Division of Chemical Education and the Biennial Conference Committee be concerned about the size of a BCCE? If limits should be placed on conference registration, what criteria should be applied in order to impose these restrictions? Are there sources of funds that could be tapped to support future conferences? Suggestions for practical means of controlling conference participation would be welcome.

3. Where should future BCCEs be located?

When the approved sites for the 19th and 20th BCCE conferences are included, all but seven BCCEs have been held at sites east of the Mississippi River. Only two conference sites have been in states that border on the Pacific Ocean. The most recent conference sites are concentrated within a fairly narrow geographical area (Michigan, Iowa, Indiana).

At the same time, the membership of the Division of Chemical Education is also concentrated in the eastern portion of the United States. Over half of the DivCHED membership is in states east of Michigan.

A potential discussion question would be how could we develop BCCE sites from the Far West, Deep South, or Southwest of the United States? Is it important to locate BCCEs at sites that are spread across the country, or would it be better to have conference sites concentrated in the eastern half of the nation?

The Biennial Conference Committee is especially active in recruiting sites for future conferences. If there are any participants in this on-line conference who might be interested in preparing a proposal to host a future BCCE conference, they should contact the chair of the committee. Participants may also suggest the names of persons at other institutions whom the committee should contact.

4. What can be done to improve the comprehensiveness of BCCEs?

The typical distribution of conference attendees is approximately 80% faculty from four-year

colleges and universities, 10% from two-year institutions, and fewer than 10% from middle and secondary schools. There is a perception among middle and high school teachers that the BCCE is a conference aimed at college and university educators. The ChemEd series of conferences, which are biennial conferences not affiliated with DivCHED held in odd-numbered years, are able to attract a very high percentage of secondary school teachers. The proportion of higher education faculty who attend the ChemEd conferences is much lower. Somehow, the ChemEd series is seen as a conference that is aimed better at secondary school faculty.

A goal of the Biennial Conference Committee is to develop a strategy to improve the participation from chemical educators who represent two-year colleges and high schools. This on-line conference presents an opportunity for participants to debate whether or not it is important to attract chemistry teachers from the secondary schools and community colleges. If it is decided that this is important, means of making the conference more attractive to these faculty should be discussed.

5. How important are workshops?

Workshops for chemistry faculty have long been an integral part of every biennial conference. Workshops can vary from demonstrations of new products by vendors to opportunities for participants to receive "hands-on" training in new techniques. Including workshops in the conference program, however, can be a serious challenge to the host organizing committees. Organization of workshops, preparation of materials, registration, and financial management of workshops consume a great deal of time and resources from the host institution. It can be difficult to schedule workshops in the program, and often host institutions may not have the type of space available that fits well with the objectives of the workshop. Recent organizing committees have identified one, and often two, dedicated individuals to coordinate workshops. These persons have often found this role to be excessively challenging.

The question of whether or not to include workshops as a part of the conference program has been an ongoing subject of discussion within the Biennial Conference Committee and with conference organizing groups. Apparently, there is a substantial body of conference attendees who attend specifically in order to participate in workshops; an equally large number of attendees do not participate in workshops at all.

As a part of this on-line discussion, the Biennial Conference Committee would like to sample the opinions of ConfChem participants regarding the workshops. Do you attend workshops? If you sign up for workshops, how many workshops do you typically attend? Do you feel that they are an important or necessary part of the program? What would happen if a BCCE organizing committee decided not to offer workshops? Would you still attend?

6. What is the optimum size for the vendor exhibition?

As BCCEs have grown larger and more complex, so have the vendor exhibitions. Having a significant participation by vendors and exhibitors is a benefit to the organizing committees who plan and stage a conference, as the fees charged to vendors represent a significant income to the conference. This income allows the conference to keep registration fees low and to add extra features and amenities to the meeting.

For certain venues, however, staging an exhibition can be difficult. The appropriate space has to be available. For recent conferences, that space has to be capable of holding upwards of 60 exhibitor booths. Often, space of sufficient size is very difficult to identify and secure on college

campuses. There may be competition for that space between the BCCE and other on-campus activities or agencies.

The space also has to be convenient to the other venues of the conference, in order to promote strong participant traffic through the exhibition area. Depending on the space, the vendor area can become crowded, which acts as a disincentive for conference attendees visiting the exhibition booths.

For some conferences, poster sessions have been held at or near the same location as the exhibitor booths. This promotes a greater traffic through the exhibition area and enhances contact between the vendors and the conference attendees.

For discussion at this on-line conference, therefore, are the following questions:

- What is the optimum size for the exhibition at a BCCE? Should there be a limit placed on the number of exhibitor booths? Or, should conferences welcome as many exhibitors as they can? If a conference should set limits, what criteria should be applied to set these limits?
- Are conference attendees satisfied with the way that exhibitions have been staged? Should there be any changes? If so, what changes?
- Is it valuable to hold the poster sessions in the exhibition area? Would it be better to keep these activities separate?
- Should conference set rules as to the *types* of exhibitors who will be welcomed?
- Should sales of merchandise be permitted at exhibition booths?

7. How important is it to have a conference banquet or barbecue?

Another challenge for BCCE planning groups is the conference banquet or barbecue. In the past, these events have ranged from complex events with planned entertainment, to events that required busses to transport attendees to an off-site location, to large-scale meals served in an on-campus field house or arena. Having a special event has become a conference tradition, but that tradition includes the difficulty of feeding 1500 people in one location in a timely manner. It is also expensive to stage such an event, and these costs are reflected in the registration fees that attendees have to pay.

A question for discussion at this conference is whether or not future conferences should plan on hosting a special barbecue or banquet. A sampling of opinions would serve as a useful guide for future conference planning groups.

8. How important are tours and excursions?

Similarly, another challenge for BCCE organizers is to establish a reasonable menu of choices for off-site tours and excursions. It is not always clear how well attended these tours might be. Staging these tours adds to the complexity of conference organization, although some organizers have chosen to turn over the matter of tours to a private vendor. Do participants feel that it is important to continue to schedule tours? If there were no tours, would this have a significant effect on attendance at a BCCE?

9. Conclusion

In this paper, I have attempted to identify some of the major questions and challenges that must

be faced each time a new organizing group begins to plan a BCCE at their site. It is possible that I have not included other issues that readers may find important. I invite readers to add their comments to this on-line discussion, even if the subject of the comments does not fit under the eight headings that I have included here.

The BCCE series continues to be one of the most important and valuable activities of the Division of Chemical Education. With the support of the DivCHED membership and all of those people who faithfully attend the BCCEs, the future of these conferences should be most promising.
