Overall Workshop Evaluations

I. Strengths: What were the strengths of this session?

1. Networking - Meeting other biochemistry instructors
   Hearing many different ways of (ideas) teaching same biochem topics

2. Small group discussion of concepts and foundational pre-requisites.

3. S. Dunham’s plenary was excellent in terms of objectives and useable, practical materials with demonstrable validity.

4. People from a variety of institutions, good networking, Shari’s talk was great.

5. People from variety of educational institutions (small college…. med school) interacting. (Also across biology and chem divide).

6. The visualization talks
   Networking
   Hal’s discussions during intro and wrap-up
   Size of meeting – just right
   Meeting organized
   Concept driven learning ideas

7. Keynote/Wish there was hands-on time to work on activities like this.
   Lunchtime discussion with other educators.

8. The plenary talk on visualization tools.

9. Meeting undergraduate educators interested in developing new approaches to teaching.

10. Networking opportunities
    Acquiring an appreciation of the current trends in biochemical education.
    Focus on concept inventory type pre and post testing.

11. Discussing techniques and content at different universities.
    Networking
    Meeting colleagues in similar teaching situations.
    Learning new methodologies to incorporate in classroom
    Speakers were very receptive to discussion.

12. Good networking experience
    Important goal- identifying what students really need to know, and what’s the best way to teach them. Always good to talk about these things.

13. The structure and organization, the chosen speakers. Some time to network
14. Very interactive, good participants, face atmosphere to change ideas and opinions.
   Nicely scheduled, easy access for most participants. (location and time)
15. Small group, Active involvement, Specific /realistic examples

16. Introducing new teaching ideas
   Networking

17. The presentation of visualization and what it means to students especially once they are used a
   lot to relay biochemical content.
   Working with others on core concepts and learning objectives helped.
   The idea of pre-assessments be part of assessments to be how you validate these assessments.

18. Working in groups to define core concepts, outcomes, and foundational knowledge enabled me to
   learn from colleagues who have more experience in teaching undergraduate biochemistry.
   Seeing examples of visualization PBL exercises and examples of pre-test assessment was helpful.

19. Identified where professional education in biochemistry is headed. The objective is to prepare a
   more competitive work force driven from the college university system in the U.S.

20. No doubt that the opportunity to gather with regional colleagues who share an interest in
   improving biochemistry education was useful and stimulating! I liked the mix of presentations
   and small group sessions. Very nice site.

21. Small group brainstorming.

22. Networking and brainstorming – always useful to have these meetings.

23. It was a pleasure to interact with other faculty who teach biochemistry. I found that we have a lot
   of common goals and learned some new ways to achieve them.

24. Talking with others and brainstorming important concepts — Hearing about some good activities.

25. Great to meet & renew contacts with local colleagues interested in same issues, questions, etc.

26. Shari’s talk on visualization gave me some good ideas
   Chance to network

27. A good, cohesive group of participants that seemed to embrace the activities.
   Stimulating plenary presentation by Shari – thought provoking
   Well organized in terms of activities, but perhaps a little over ambitious in terms of the number of
   break-out sessions.
   Hal served as a particularly good moderator of the meeting.

28. Practical examples – the alpha helix isn’t a hole was great, H2O, too.
   Meeting other biochemists – some right down the street, literally!
   Hearing the challenges others face at their institutions.

29. Great networking opportunities
   Very well led by Hal
   Coffee, food, handouts – all great!
30. Networking interactions
   - Sharing values or different approaches
   - Discussion of importance/relevance of biochem learning goals.

II. Improvements: How Would this Session be Improved?

1. Provide a few (or one?) select handouts before arrival – perhaps on Bloom’s Taxonomy(?) or background on Core Concepts (?) with a single pr very few questions to answer regarding own teaching of a specific topic with which students have difficulty.

2. Ways to share discussions from each group. I felt I didn’t get a chance to hear enough of the discussion that occurred in other groups during the “wrap-up” at the end of these sessions.

3. Bring someone like Trevor Anderson to discuss the overall objectives of the process and to help the group stay focused. If the ultimate goal is assessment instruments, it would be useful to have guidance from someone who knows the process from conception to implementation.

4. More ideas shared, maybe have more “pre-homework” for meeting so that more teaching/assessment ideas can be shared.
   Have some textbook/resource based sessions for people to discuss what info is critical for a biochem course.

5. The afternoon workshop was a little tricky because I felt the core concepts we were working around were not well developed. – Going from underdeveloped core concepts to learning objectives was not that efficient although we still had interesting discussions.

6. I think I misunderstood the workshop objectives. I was expecting to talk more about the specifics of what to cover in a series of courses, and talk about ways to teach those concepts. I did not expect to spend the afternoon trying to specify wording of very general concepts that were previously (?) determined. We submitted a survey about difficult topics and various assessments, but we never addressed any of these.

7. Send attendees home with copies of assignments they could use in class.

8. More explanation of the afternoon goals.

9. Narrowing the gap between the core concepts and developing learning outcomes. Introducing a middle level of identifying content areas within a core concept would help in the developing learning goals.

10. More direction/guidance for break-out sessions. More details of how content evaluation can be done (examples). (i.e., instead of saying “it is part of confidential study”)

11. The “core concepts” seemed to be more aimed at general and organic chemistry than biochemistry. Not much discussion of what the students’ goals are in learning this information.

12. One or two examples of the 3 tasks from another discipline might be helpful.
13. Better preparation. Prior to the workshop, send out the final program out to participants so they can come to workshop with some homework. May make sense to define the course contents and course time for a course when discussing approaches to teach.

14. Bring out more conclusive results from discussions.
   More networking.
   Can also discuss more about general teaching techniques (?)

15. No complaints – very well organized meeting.

16. The first “core concept” workshop assignment was unclear. – An online core website where we can communicate and place all our information. – Every talk should have learning goals and objectives; the first one did, and I’m not sure about the 2nd.

17. Understanding more clearly what the goal/outcome of the group discussions should be would be helpful. – Sometimes our group was not entirely clear about the scope of the task before us.

18. I came with little preparation. Sharing the specific objectives and history of the group (and perhaps some literature references) would bring me to the meeting with a better prepared mind.

19. I would have liked to have a mechanism for “comparing notes” on the results of our workshop sessions -- hear what others came up with; find out what others think of our ideas.

20. Link to a “class” website to post comments in real time.

21. Maybe a bit more directions on what the break out activities should involve.

22. I can’t think of anything… perhaps some more examples of methods.

23. I would like to learn more about assessing learning without reinventing the wheel. – Maybe I will next year since that is the topic.

24. A little less clear to me here how our work fits into the big picture – for example, how will the assessments to be developed next year connects t concept inventory already worked on by Seattle and Florida colleagues? How will this relate to accreditation?

25. Maybe an evening or half day addition to workshop where we can share resources, things we’ve tried that worked/didn’t work, idea sharing, brainstorming.

26. Perhaps 2 instead of 3 break outs, or shorter session introductions.
   Much better method needed for recording and sharing break out group activity reports. More efficient and faster consolidation and dissemination.

27. More practice examples – If we could be assigned groups ahead of this to think about our topic, that would be helpful.

28. Perhaps more group mixing and time not working to network. With -30 people and an all day event it would be nice to get the chance to meet everyone.
29. More time likely needed to further refine concepts/ideas discussed. Perhaps intro to specific goals shared in advance of workshop could facilitate productive exchanges at workshop.

III. Insights: What Insights did you have about Teaching and Learning During this Session?

1. Importance of identifying and teaching toward core concepts versus coverage of broader curriculum.

2. Looking forward to seeing shared learning objectives to help guide my curriculum.

3. I feel very encouraged about concept driven curricula with focusing on problem solving skill development. Thanks so much for a great meeting!

4. I met some people to share ideas with.

5. I am the only biochemist in my school and I am trying to convince others how important biochemistry is and adding theses visualization tools. Here I got the support that I am thinking correctly.

6. There needs to be a conversation between undergraduate and graduate deans regarding the expectation of the upper levels of education.

7. I really need to develop or find pre- and post tests for my courses.

8. New approaches to attempt in the classroom.

9. I was reminded of the importance of a strong foundation in chemistry for a full understanding of biochemistry. PBL and POGL great ideas, but hard to implement in large classes.

10. Not sure that I heard anything that was new to me but conferences such as these reinvigorate my teaching nonetheless.

11. Complex but manageable.

12. I’m going to have one lecture on protein structure visualization in my teaching (biochem). Include a self-exploratory, discovery-type topic for my students.

13. The idea of what “visualization” means plus that textbook figures may be very misleading and actually aiding misconceptions.

14. I appreciated seeing detailed examples of the concepts assessed on the pre-test for UCSB’s gen. biochem course (Sears’ presentation). I like the outline format, as this enables more extensive assessment.

15. I do a good job. I can use more tools and potentially do a better job. My institution is an extreme, very large initial classes, and a huge inventory of additional offering. When I compare
my experience with those colleagues from smaller institutions the problem set changes substantially.

16. Too many to list – tons of interesting ideas about concepts/content and methods.

17. Good ideas about teaching some concepts that I have problems in teaching.

18. Concept inventories as a way to set feedback.

19. One thing that really popped out was the use of figures by students. I didn’t realize how much prior knowledge I bring to them.

20. Importance of specifics in visualization --- Potential utility of pre/post tests.

21. Need to continue to explore peer learning strategies in different formats.

22. Nice to know there are like-minded individuals out there.
   Going to investigate use of POGIL to see if I can use in large classes.

23. Reminder of how hard this process still is. Hopefully, we weren’t all feeling like we have to each reinvent the wheel!

24. I need to be cognizant of the things I can visualize in my head, but my students can’t. I need to use tools like Jmol! Thank you for a wonderful day!

25. Making concept inventories and objectives is hard! Kudos to those who work on this staff.

26. Have heard about most of these issues previously
   Always valuable to learn how colleagues at other institutions address these issues.