"Worksheet" Rendezvous with Destiny

In this, our last class, I'd be grateful if you'd consider some non-math questions. They all come down to:

How can we improve DHSP?

Here are several categories. I hope each group will consider at least one category in depth.

1. **Brochure.** Take a look at the brochure and application that get mailed to DHSP prospects. The questions are:

    (a) Is the brochure honest?

    (b) Will it give students a good idea whether DHSP is a good choice for them?

    (c) What else could be there?

    (d) Can you think of a better essay question for the application, that might help distinguish who is a good fit for DHSP?

2. **Summer Recruiting.** I meet with a lot of students over the summer—a lot more than actually end up in DHSP. Attached find my talking points. Same questions as above:

    (a) Are they honest?

    (b) Will they give students a good idea whether DHSP is a good choice for them?

    (c) What else should I say?

3. **Mechanics of the class.** Here are some things that needed to be decided once. Should the decisions be revisited?

    (a) *Class time.* DHSP was 3–5 for section 1 and 1–3 for section 2 this year. Would it work better at another time?

    (b) *Selecting groups.* In the fall, I dictated groups until everyone had been in a group with everyone else. Then we used a pseudo-random method. Was this a good choice? Would you have liked more or less freedom in picking your groupmates? How could we speed up the process?

    (c) *Working on the board.* The pros of working on the board are: everyone can see and comment on the work so far, including me. The major drawback is that we never produce anything permanent. Is it still a good idea?

    (d) *Food.* Did it make a difference having snacks this term?

    (e) *Control.* One of the categories on which instructors are rated is how much control they have over the classroom. I never want to have too much control, because I want you to own the experience. Also, I'd always rather listen to you than talk. Is this a good approach? Were there times when you wished I would exert more control?

4. **Problem choice.** We do a lot of different types of problems in DHSP, and I struggle a lot with finding the right mix. Major categories include:

   (a) Problems which use the techniques of 115/116, but go beyond the scope of the classes, and climax in some beautiful result (e.g., soap bubbles, sound synthesizer).

   (b) Non-calculus math problems (e.g. probability).

   (c) Problems which show how calculus can be applied in science (e.g., population dynamics).

   (d) Puzzles (e.g. cake, record player).

   (e) Old exam problems, and others straight from 115/116.

   The question is, was the mix a good one? Can you suggest other categories?

5. **Alternatives to worksheets.** Some things we could do/have done occasionally, for a break from the worksheet routine:

   (a) *Guest speakers.* (Suggest topics.)

   (b) *Exam review.* (Should the review sessions have more structure?)

   (c) *Jeopardy.* (Is once per semester the right amount?)

   (d) *Lecture by me about related topics.* (Boring?)

   Did we break the routine not often enough, or too often? Other suggestions?

6. **Outside events.** Everyone was required to go to three outside events this year. Questions:

   (a) Could the system for picking events be improved?

   (b) Was there a wide enough variety of events that you could find something you were interested in?

   (c) Do you think presentations were a good use of class time?

7. **Mentoring.** We have DHSP alumni in all four years at UM, plus a number of college graduates. I am fortunate to know all of them (except the first year). We used that resource more than ever before this year, with 8 alumni panels and 26 interviews. A total of 41 alumni participated in one or both, and quite a few more volunteered. Questions:

   (a) Did those things work?

   (b) Thoughts on which alumni make good subjects?

   (c) How else could we involve alumni? More to the point, how would you like to be involved next year?