## PROFESSIONAL DEVELOPMENT WORKSHOP $\cdot$ FALL 2005 ASSIGNMENT 5

JOHN KERL

## Observations

Start and end of class: I observed two instructors, Instructor A and Instructor B, both in the PAS building. In this building, there are bells at the start and end of class. When the start bell rang, Instructor A had been passing out papers already for a few minutes, and continued doing so. The class was talking quietly, and stopped once he got underway with a clear "What I want to talk about today is ...." Instructor B started talking at the bell. The students were very loud before the bell, and the instructor shushed them repeatedly. (I acknowledge that there was a sudden rainstorm, and many students had the novelty of coming in wet. Maybe this was not a normal day.) Instructor B shushed the students throughout the class, reminding them to raise their hands, etc. At the end of both classes, students were up and leaving when the bell rang. Some were packing up a few minutes early in B's class, but the instructor reminded them they weren't done yet.

I don't have a hand-raising policy — students may address me directly, but nonetheless many of them do raise their hands. Instructor A and I both have a quieter room than Instructor B, without a hand-raising policy. I'm not sure how much of this has to do with the different students in each classroom, vs. the different instructors. (This is relevant to me: things are going well for me this semester, but I don't know to what degree to attribute this to my good classroom management, and to what degree to attribute it to a fortuitous selection of students in my class.)

Instructor A spent some time passing back one assignment, then another. Whenever I have more than one paper to hand back (e.g. a homework and a quiz), I always collate them before class. This takes less than a minute, and gets the papers back in half the time.

I don't have a bell in my building, and I am now glad for it. Ahead of class, I write the homework assignment on the board, along with a list of main points to be covered that day. (Instructor B does this as well.) When the Student Union bell tower sounds, I know it's time to start class. I start handing out papers ahead of the bell, but usually have a few more to finish by the time the bell sounds. The students are simultaneously passing in their homework. My class is already quiet (silent!) and I have their attention when I start talking. I end the class right at 8:50, keeping track using my watch. The last thing I say is, "OK, then I'll see you next time" and they are conditioned to leave at that point. The nice thing is that I get to end my sentence. If there were a bell, it seems I'd get cut off mid-sentence, and I would not like that.

I don't chit-chat much with the students before class starts. (At most, I ask them how the homework is going.) I've often thought that doing so would increase rapport, but now I'm not certain that would be the only effect. It looks like some classrooms are just plain *loud*. I don't want to encourage that.

Boardwork: Instructors A and B both wrote main points on the board, but did not write down everything they said. I thought this was about right — I write down just a bit more than they do. They both had a relatively narrow whiteboard. Instructor A did what I call "iterative boardwork" — write something, erase a bit, change one example into another, etc. This was nice because he could re-use the same graph, etc. but I don't think it translates well into what the students are going to write down. Instructor B did "blocked-out boardwork" — one panel at a time, with the board divided into two panels. However, he also had several

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pre-written overheads. This is good because it saves him the time of writing, but nonetheless, he still had to wait for the students to copy down the overhead. This was like dead air on the radio; I didn't like it. (Perhaps he does overheads so that he can re-use them in later class sessions?) Instructor B wrote clearly and quickly, then spend most of his time facing the classroom. One of my biggest issues is not facing the classroom enough, so this is a learning opportunity for me.

I like my chalkboard in the Education building — it's fully twice as wide as the whiteboards in PAS. I use blocked-out boardwork, with the board divided into 4-6 panels. When I'm in PAS next semester, I won't have the luxury of so much space. I asked Tina for something closer — I like the 8 a.m. time slot but it's hard to get to my 9 a.m. analysis class on time. In the future, though, I think I'll try to avoid PAS as much as possible. The rooms are crowded and deep (vs. in my Ed. room, everyone is at most two rows away from me), and the whiteboards are too small.

Mistakes: I only saw one. Instructor A wrote something down wrong, then caught it. He smiled and laughed it off; he didn't treat it as a catastrophe. He reddened a bit and looked at me, though. I didn't see Instructor B make any mistakes.

I do things similarly to Instructor A, except I am even more calm about it. I expect mistakes; I ask the class if things make sense, and regularly talk about how we can see if our work is reasonable. (E.g. can the kayaker really paddle upstream at 2000 miles per hour?) I think this involves them. Also, if I stumble about what to say next (lesson plans are never perfect!), instead of panicking, I think out loud and decide the correct course of action. Again, I think it's good for them to see this.

Inappropriate talking and other distractions: Instructor B had ongoing conversations in the room — some about math, some not. The only other distraction was the rainstorm. Several people (including myself) were startled by a loud thunderclap.

I often think I'd like my students to be talking about math with one another, but here too, I think not. There is no line between "Psst, what's an asymptote?" and non-classroom topics. When people talk in my class, I turn around and find out if it's about math or not. If so, usually it's something we should all talk about — something I wasn't making sufficiently clear. If one student is unclear about what an asymptote is, surely there are others. If it's not about math — for my current class, a brief, stern glare suffices. In the future, I may need to do more than that.

Involvement and rapport: Instructor A had good rapport. Students seemed to feel comfortable talking. When a student said something incorrect, Instructor A drew the student out by saying "OK, why do you think that?" This gave student a chance to realize his error for himself. Instructor B also had pretty good rapport. One thing I didn't like was the pattern of asking a question, waiting for a response, and then saying "The answer is . . . ." I felt this reinforces the notion that math comes down from on high, rather than being something the students can do themselves. Instructor B had more of a question-and-answer format; Instructor A had more ongoing, thinking-out-loud dialogue with the students. I prefer the latter.

Extra-bad things: (\*) The ongoing yik-yak in B's class. Again, it's not clear to me to what extent this can be controlled. (\*) Both instructors left the hallway door open in their PAS classroom. For A's class, there was another class going on across the hallway. I would shut it, to keep the second-hand noise down.

Extra-good things: (\*) Instructor A had absolutely beautiful handwriting. This was a pleasure to watch. (\*) Instructor B's neat and fast handwriting — again, enabling him to face the class as often as possible. (\*) Instructor B dressed professionally, while not overdressing. (\*) Instructor A's tone of voice is very calm and non-threatening. (\*) Instructor B had "named problems", e.g. the Cricket Problem, the Driving Problem. I usually do pure-math stuff (e.g. finding asymptotes) separately from word problems. Instructor B integrates the two, and makes problems memorable for his students. (\*) Instructor A assigns homework problems almost exclusively from the workbook! Something to think about. (\*) Instructor B used cold-calling — once. I know cold-calling might increase involvement with some of my quieter students, but I've shied away from it — it makes me uncomfortable. Maybe I could try using it intermittently. An idea — instead of

blindly cold-calling, make eye contact and see if there's someone who looks like they might	have something
to say, but just needs a little prod.	