

# ANNUAL FACULTY REVIEW, 2015

Faculty Member's Statement  
(Minor typos corrected 5/19/17)

Doug Bullock

Department of Mathematics

---

## TEACHING

### Course Load

Spring 15: Math 175-001, Calc II 4 credits 33 enrolled

### Issues from 2014 Evaluations and Proposed Actions for 2015

One issue emerged from 2014 evaluations: An unmet, or under-met, desire from students to receive more direct instruction. Proposed actions were:

- Work on Math 170 course structure so that active learning will be more successful, thus lowering demand for direct instruction. (I was not scheduled to teach Math 170 in 2015, so this intervention could not impact my teaching. However, it was within my role as leader of the common Calculus I project.)
- In my own teaching of Math 175, be more aware of the need for direct instruction and be willing to include it more readily.

### Actions Taken in 2015 and Observed Results

I organized and led a working group to study the Math 170 course structure during the summer of 2015. We identified potential improvements and developed a change plan. Some changes were implemented in all fall 2015

sections. Others were piloted in a single fall 2015 section and then propagated to all sections in spring 2016. Effects of this are, of course, not visible in my teaching evaluations.

My own Math 175 section, as expected, incorporated much more direct instruction than I would normally use, because the active learning materials were still under development.

Interestingly, the effect of additional direct instruction on teaching evaluation data is “no change.” There is clear evidence in evaluation comments that:

1. Students were aware of the direct instruction when it happened.
2. They were appreciative of it, and appreciative of the balance between DI and active learning.
3. But there were about the same number of comments/complaints requesting more direct instruction.

It is possible (and there is some evidence for this in the 2015 evaluation comments) that the latest round of commentary about direct instruction is more about wanting clear “how to” instruction *after* a student attempts a discovery process, and not so much a desire for *a priori* instruction. If so, then this represents a small improvement from 2014.

### **Recap and Review of 2015 Evaluations**

Full results are linked in Digital Measures. Numerical results are summarized in Table 1, including comparisons to benchmarks for all 175, all Math, and all COAS. The response rate was 91%, so this is an excellent capture of the class as a whole.

Numerical scores are good. I see nothing to comment on or respond to, except that perhaps the timely return of assignments is something to pay more attention to.

There was only one concern that emerged from the written comments. As noted above, there is a persistent desire for more direct instruction. If anything, the inclusion of more than my usual level of lecture, typically in the form of a mini-lecture that would cover only one example, seems to have created a desire for this to be a regular part of every lesson. There were many comments that specifically singled out clear explanation of how to do

Spring 2015	Math 175		n = 30 of 33 (91%)		
Question	Max	My score	M175	Math	COAS
Prepared	5	4.8	4.6	4.4	4.6
Fostered learning	5	4.7	4.3	4.2	4.4
Clear assessment plan	5	4.5	4.3	4.2	4.3
Clear objectives	5	4.5	4.4	4.2	4.4
Class organization	4	3.8	3.6	3.4	
Effective use of time	4	3.8	3.5	3.4	
Clear presentation	4	3.6	3.3	3.2	
Student questions	4	3.6	3.5	3.5	
Critical thinking	4	3.8	3.6	3.5	
Grading system	4	3.8	3.6	3.5	
Feedback	4	3.5	3.2	3.1	
Homework returned	4	3.3	3.5	3.4	
Fairness	4	3.8	3.5	3.6	
Classroom atmosphere	4	3.6	3.4	3.3	
Assignments	4	3.8	3.5	3.3	

Table 1: Spring 2015 Calc II Evaluation Scores

something as a positive, and there were comments that specifically asked for more mini-lectures.

### Proposed Actions for 2016

- I am already much of the way through spring 2016 teaching, with much less direct instruction than I used in spring 2015. Class seems to be going *very* well, so I'm not worried. The course materials are in their third revision, so they are more reliable as a purely active learning structure.

However, much of the success this semester may be due to simply lucking into a very competent group of students. It will be important to keep the direct instruction portion of the model in mind.

**Action:** Observation only: No change to the level of direct instruction for now.

- In the fall of 2015 there was a plan to begin creating targeted how-to videos that would supply the direct instruction component, at least in

the form of showing students the way through a particular example, which seems to be the most desired thing.

That project went dormant when the project leads departed Boise State, but it remains on the to-do list for future and would be an excellent 2016 response to the 2015 evaluation data.

**Action:** If time permits, begin video creation.

- My recap of evaluations from 2015 included this action item:

“It is clear that this process of review and response to evaluation data must occur on a semester-to-semester basis, and more immediately after evaluation data are available. I will begin every semester reviews at the conclusion of the Spring 2015 term.”

This did not occur. Immediate review is preferred because the experience of teaching is still immediate. But more importantly, review is most valuable if it informs subsequent course offerings, so the deadline needs to be early enough to be useful for the next term.

**Action:** Complete review of Spring 2016 evals before June 30, 2016, so that my review can inform decisions about fall 2016 courses. Complete review of Fall 2016 courses before Jan 7, 2017.