

Steve,

My colleague Adrienne Williams and I have been discussing demos and how to make them most pedagogically useful. In our recent iterations, we have been trying to answer the following questions about our demos to evaluate why we are doing them and what the effect is. In doing this it made us reexamine some and adjust others. I think with these questions answered clearly it is likely to be useful to faculty who identify similar concepts that need addressing and give them ideas about how to implement and evaluate that go beyond what one can see from just watching the demo.

Let me know what your answers to these are for the video link you sent me.

- 1) What is the concept addressed in the demo that you have not been able to convey in didactic lecture
- 2) Articulate at least 3 learning goals using the following format: Students should be able to.... describe, predict, draw, connect.....
- 3) What pedagogy is used to engage the class (instructor questions to the class required to move demonstration forward, or....?)
- 4) What instructions are given to students during the demo to help them focus on the important aspects
- 4) How was effectiveness of demonstration in achieving learning goals assessed (examples of pre post questions and change in % correct, exam questions related to demo and change in % correct with/without demo.)
- 5) How did this affect student attitude (survey, comments on course evaluations..)

Thanks

Diane O'Dowd

Thanks, Diane. I will attempt to provide some answers here below. There are a few that I will need to think about more. In the meantime, see what you and your team think of these.

I might also note (if I have not previously) that I thought the nudge from you to capture this by video was very helpful. I now have a record that I am about to post for students. Equally important, however, the video has allowed me to see some flaws and some potentials way to improve the demo next time. A couple of my colleagues have also contributed suggestions, which I thought very helpful. It is so hard to see yourself in these things. I hate my voice and it turns out that I am balder than I even realized! Still the experience was formative, and it gave me a way to get some peer feedback. There is not a lot of peer feedback in this business.

**#1: CONCEPT:** The complement system: Convergence of 3 initiating pathways leads to one final common pathway in which the terminal components of complement are deposited into membranes and soluble pro-inflammatory mediators are released.

**#2: LEARNING GOALS:**

List and then very briefly explain the 3 separate ways in which the complement cascade can be activated.

Describe how the pathways converge to deposit complement onto and/or into a membrane, thus forming the membrane attack complex.

Describe how cleavage of complement releases soluble mediators and list their cumulative effects.

#3: PEDAGOGY: Not sure, I completely understand this question, but I suspect this is an area that could be improved. The instructor did ask questions of the class. These could be better used to move things forward and there should have been more time allowed for answers. The students could also been given better instructions to help them focus. The instructor did take a moment to show and briefly explain the key elements of the demo (e.g. corn stickers, etc.), but these may have been difficult for the class to see. This is a difficult room to use the document camera, but it would have been simple to take some images of the demo components and show them on the PowerPoint projection behind.

#4: EFFECTIVENESS: This is another question that can be improved. The exam is still a few weeks off (this demo was actually 1 day after the first exam). I will use 1-2 exam questions that have been used the past 2 years. Confounders include student access to old exams and the inevitable variation of veterinary classes from one year to the next. I am not sure a 1-year change can have true meaning.

#5: STUDENT ATTITUDE: We will survey students specifically at the end of the year on the demos I used this year. Immediately after the class, I solicited input and there was very broad and vocal support for continuing demos. One student (warning: anecdote) told me: "I took a great immunology course as an undergrad, but never understood the complement system because I always got bogged down in the details of 'all the C's'. This is the first time I understood how it really works. I wish someone had done this before." If you have suggestions on some specific questions we might to ask on our online survey, I would love to see them, Diane.

Does that help? Let me know what I can do so that my experience here can serve the good work you are doing at UCI.

Edited video; <http://vimeo.com/37320919> Link to if as you care to.

Best wishes, S