you with me? : observing an introductory statistics class

by paula wellings

This is a day like any other Monday, Wednesday or Friday at 11am in a room with no windows. Except for the gradual attrition of students, the room differs little from one lesson to the next. Near forty students sit in rows of computer workstations, facing towards a large projection of Power Point, mirrored once again in the forty smaller screens in front of each student. Occasionally one of the screens will meander to web-mail or the news like an errant minnow and then drift back to the Point with casual indifference. The professor gestures towards the projection, “These slides are really a draft. [The TA] hasn’t reviewed them so don’t trust anything on them.” And with this warning the class, ever timely begins.

“Our dear instructor,” so named by the TA, enquires if there are any questions from the previous lecture. Dressed in kakis and a plaid shirt, he is relaxed, yet professional. A renowned leader in his field, he is surprisingly patient in his efforts to point the way to the beginning of this practice.

After fielding remnant queries, he announces, “Today is the most important day of your life in statistics. If you catch on to what I say you’ve got it made.” And with that he begins to explain statistical inference, the mean of the means, the null hypothesis. He says, “Here is the idea in a nut shell,” and begins to sketch on the white board. And while drawing and explaining, he punctuates his statements with a refrain of “You with me?” You with me? You with me?

The students regard the professor, the drawings, the formulas, the normal distributions scattered across two whiteboards. They do not take many notes, but their appearance is watchful. The professor is playful in his explanation. At one point he begins to explain and simultaneously draw with a marker that has dried out. Realizing that he is describing an invisible diagram, he says ‘oh this one is going to be especially hard’. Students laugh easily. There are many small jokes mingled into a cycle of explanation that meanders between descriptions, diagrams, and formulas.

One or two students waiver in this activity though.

Close to me, one student appears oblivious to the classroom. First checking email, he now scrolls through screens filled with smiling young women. I wonder, in the midst of the mean and the central tendency, is he perhaps looking for a different kind of significance? His search continues page by page , scrolling from top to bottom over again, until finally a larger picture of a single woman appears on screen. I glance at the name of the web site. It is thefacebook.com, a social network site for college students. I wonder if he browsing for love or professional advancement.

In that moment, he looks up from his quest, awakened to the topic at hand. He asks aloud, “And you are dividing by radical N because it is biased? “.

In this class of forty, there are eight students who ask questions, although more students may have questions that are not always asked, not always answered. In the case of the web surfer’s question, the professor leads the class through the process of first understanding the question and then comprehending the answer. He says, “I want to give you this idea, if I can”.

On this day, a group of students is clustered about the table in the back of the room. They met there before class and remained. While once there was an effort to gather by the computer workstations, the event of work at station has not occurred in sometime and one place to sit has become as good as the next. Also these students share an affinity. On occasion they will pass surreptitiously glances between them. Did you understand that? Yes. No. That is a good question. I wonder that too. Ask him.

Questions bubbles up from this cauldron in the back of the class.

”This may not be relevant. If it is, you can throw it out like the null hypothesis...What if you wanted to find out something you didn’t know?”

“On the middle distribution I’m stuck...”She points in reference to the current diagram.

“Why do we call it the standard error?” A question now from the front of the room.

The professor replies, sometimes circling back through the material. “I don’t mind repeating this—that’s the game. You see the difference then of what I’m talking about”

Other times he teaches instead the attitudes of the field.

“It’s based on prior knowledge that we have.”

“I haven’t really thought about it, cause that’s not how we think about it.”

Each reply is intermingled with minutes of drawing, explaining, and the ever refrain of “ you with me?”

Responding to the question of the standard error of the mean, the professor draws an equation on the whiteboard. I am unsure of the meaning of the symbol in the equation and become patiently fixated.

I believe that if I wait he will cycle through the explanation once more and my question will be answered. But he catches me waiting, looking too carefully. His eyes lock on mine. “You with me?” he asks not us, but me. My heart is suddenly beating quickly. The soft edges of the monologue sharpen. I shrink away from this actor who has broken the plane between performer and audience. I nod intently. I am with him. The moment does pass. His gaze now traveling past me, his eyes softening to take us all in. We bob along as he darts back and forth, creating a current that slowly propels us forward into the field.