Faculty evaluations of teaching: A link between standardized ratings and student-centered drawings

Larry Ludlow
Boston College
Lynch School of Education
Educational Research, Measurement and Evaluation Department

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Background

- Problem with traditional end-of-course evaluation forms
- Classroom drawing technique as a way to gather feedback

Drawing Prompts

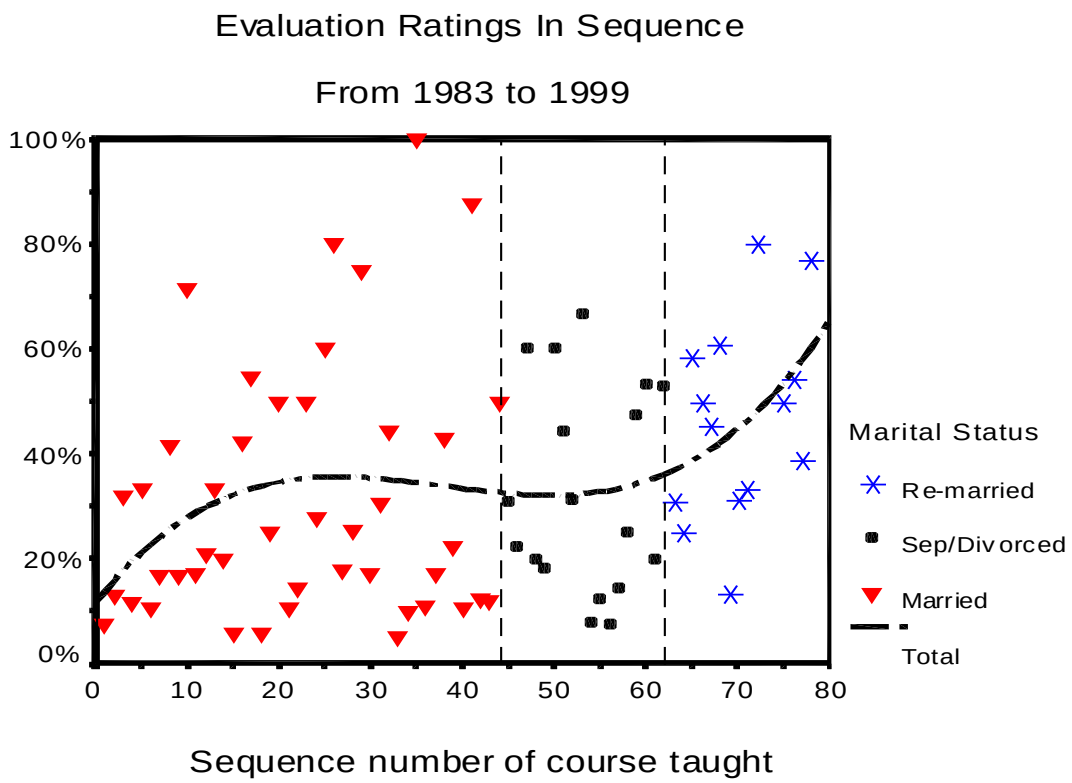
- What visual image of a classroom experience comes to mind when you think of this course? Now draw as best as you can, that classroom experience. Include me, yourself, and anything else that represents for you that classroom experience. Ideally, someone else could look at your drawing and could then form a reasonable impression of your experience.
- On the back of your drawing write a full description of the scene you have drawn. Be as explicit, open, and as comprehensive as you can.
- Finally, what “course evaluation” information does your drawing provide that your responses to the traditional scannable form do not contain?

On-going Research

- Traditional Course Evaluation
  - Course-level summary evaluations tracked over time
- Drawing Course Evaluation
  - Extraction of themes in the individual drawings as perceived by the instructor
  - Quantitative relationships among the individual-level drawing codes
- Linking Traditional and Drawing Evaluation Data
  - Quantitative relationships between the drawing codes summarized at the course-level and the traditional course evaluation data
  - Quantitative relationships between the individual-level course evaluations and the qualitative drawing codes attached to their individual drawings

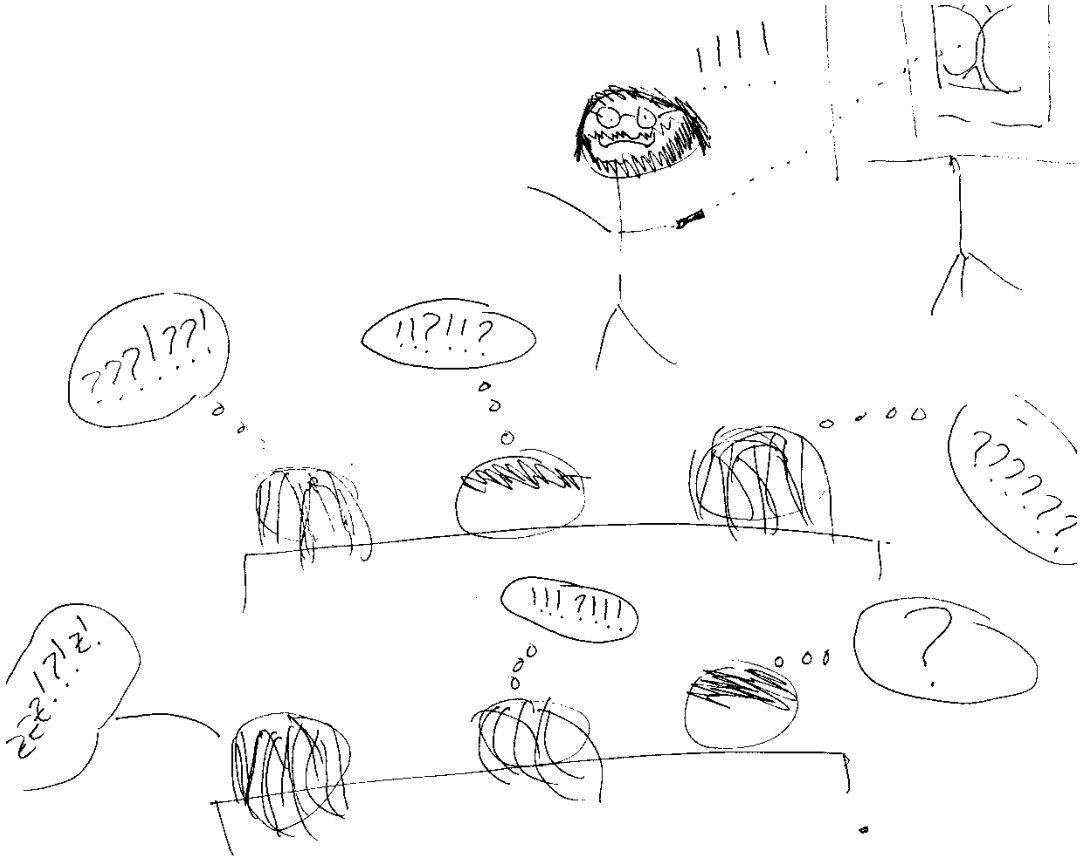
Course-level summary evaluations tracked over time

Example: What is the pattern of course evaluations during different stages of marriage?



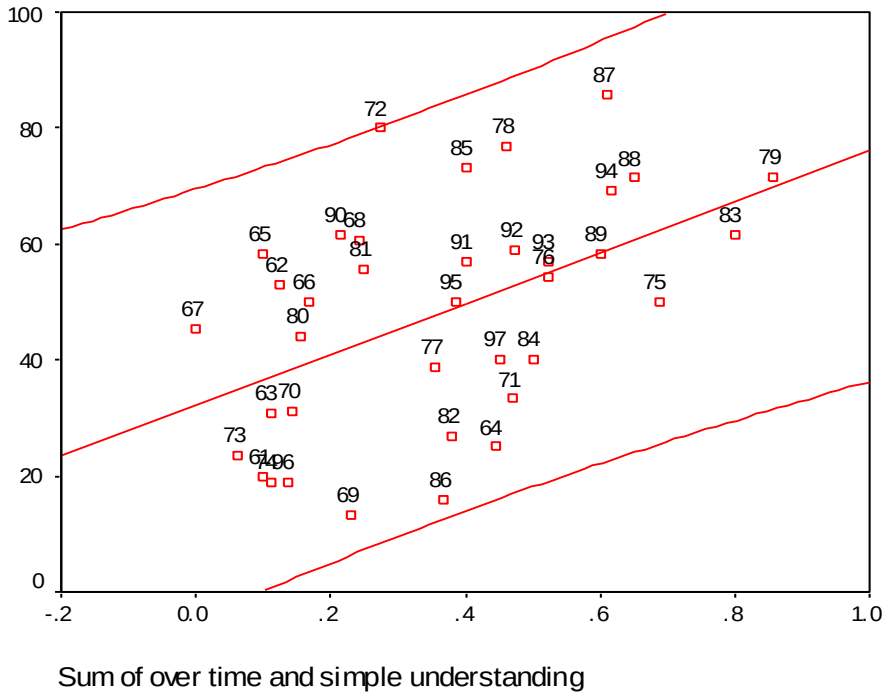
Themes in the drawings as perceived by the instructor

Example: Confusion is a common experience in statistics classes.



Relationships between the drawing codes and traditional evaluations at the course level

Example: Percent of students who gave an "excellent" rating and the proportion of drawings depicting students "understanding the material"



Current Investigation

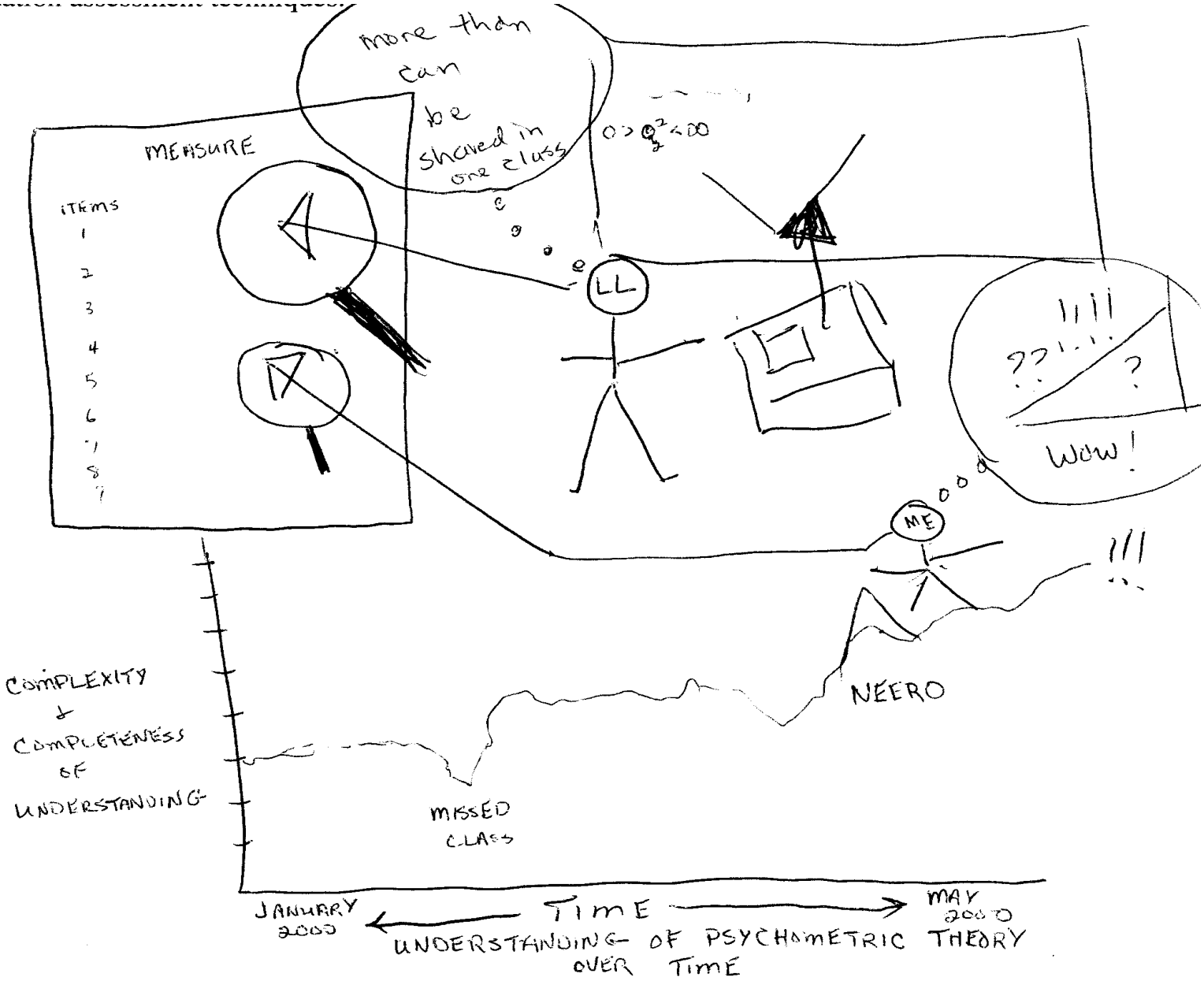
- Research Question:

  What information do the students say the drawing evaluation provides that is not communicated via the traditional evaluation form?

  Or—what is the “value added” by the drawing exercise?

Student Development/Growth

"Both the professor and I look at a measure using different magnifying glasses- his is larger and more powerful. He uses the blackboard and the overhead projector to begin to convey some of what he knows - which is considerably more than can be shared in one class. Over time, the students' understanding grows - but has set-backs when classes are missed, and is greatly enhanced by the opportunities to hear presentations (at NEERO) of different scales analyzed. Finally, the effort to complete the two assignments results in a surge of improved (hopefully) understanding."



Psychometrics: ED669: Spring 2000: BC: Ludlow

AS A FUNCTION OF CLASS ATTENDANCE & PARTICIPATION

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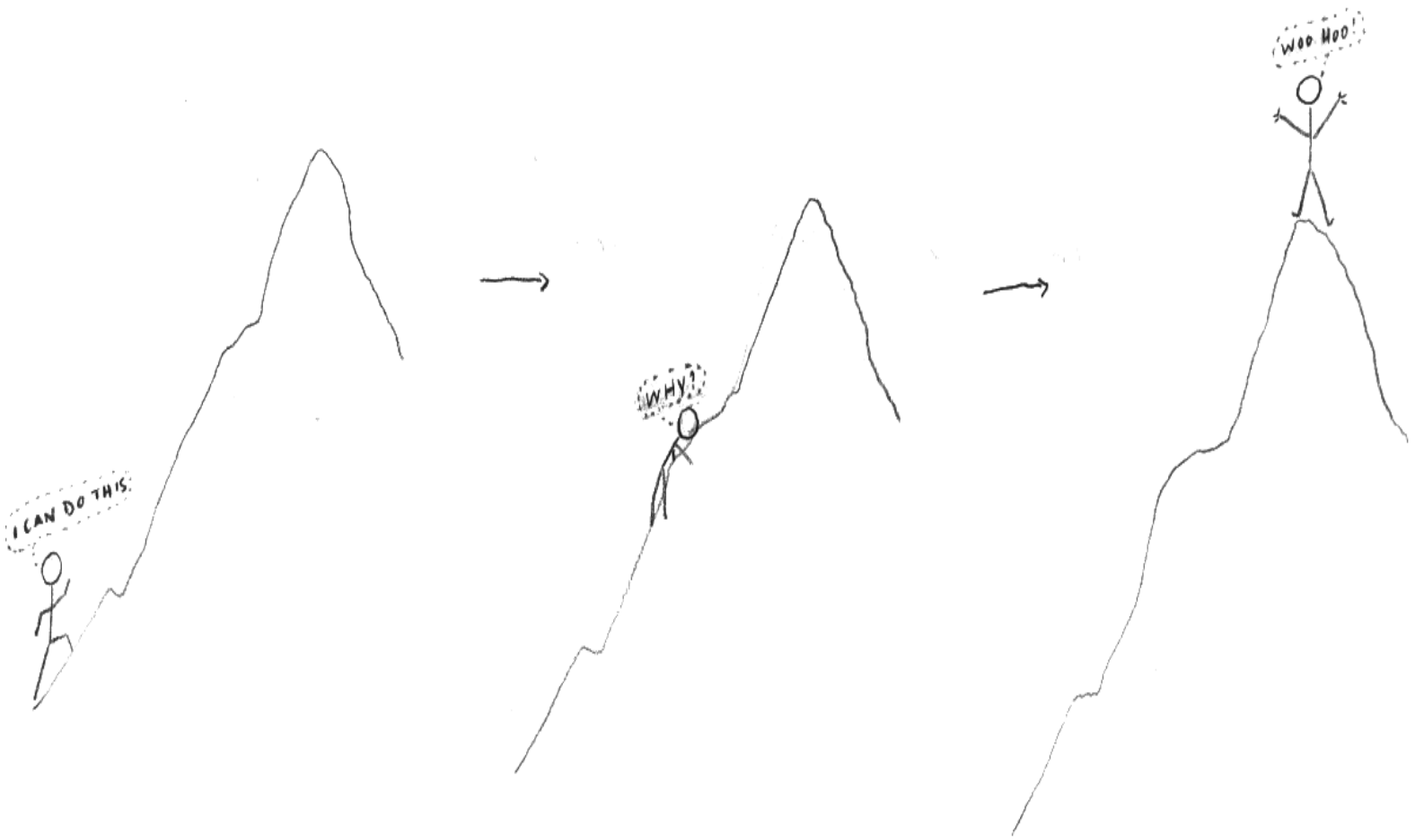
Student Accomplishment

"At the beginning of the semester (mountain #1) I thought this course would be no problem. I took stats in college and I thought I was pretty fluent in it.

As the semester went on- I realized I didn't know nearly as much as I thought (mountain #2). There were times when I thought it was too hard and wondered why didn't I take Intro- I could be sailing along right now.

By the last week (mountain #3)- I realized that I could do this. I learned a lot and I'm really glad I took this course, even though it was challenging, it was well worth it!"

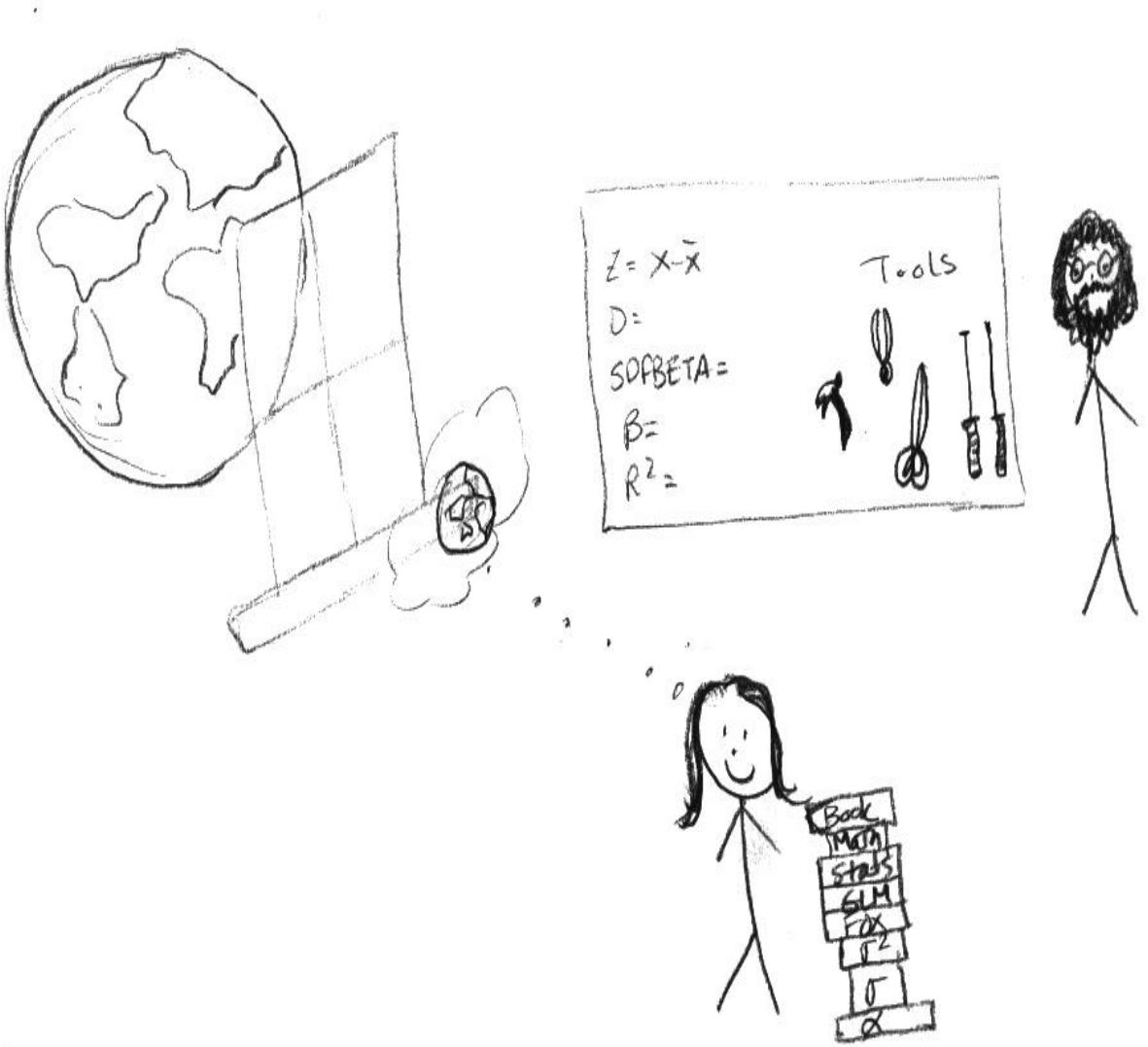
"The course evaluation doesn't allow you to express what the class was like in your own words. It doesn't let you say what you accomplished and what the course meant to you."


I CAN DO THIS
WHY?
WOO HOO!

Utility/Value/Application of Course

"I have drawn my class experience to reflect the accumulation of resources and tools for understanding the world (the globe outside the window). In particular, tools for understanding things about the world that I am interested in (that is why my thoughts in the drawing also include the globe). The resources beside me, at times were overwhelming, and that is why the stack is almost as tall as me. The tools drawn on the board are literally carpenter's tools (some of them) because they represent the different things needed to get a job done as well as variations for more utility (flathead and Phillips screwdriver)."

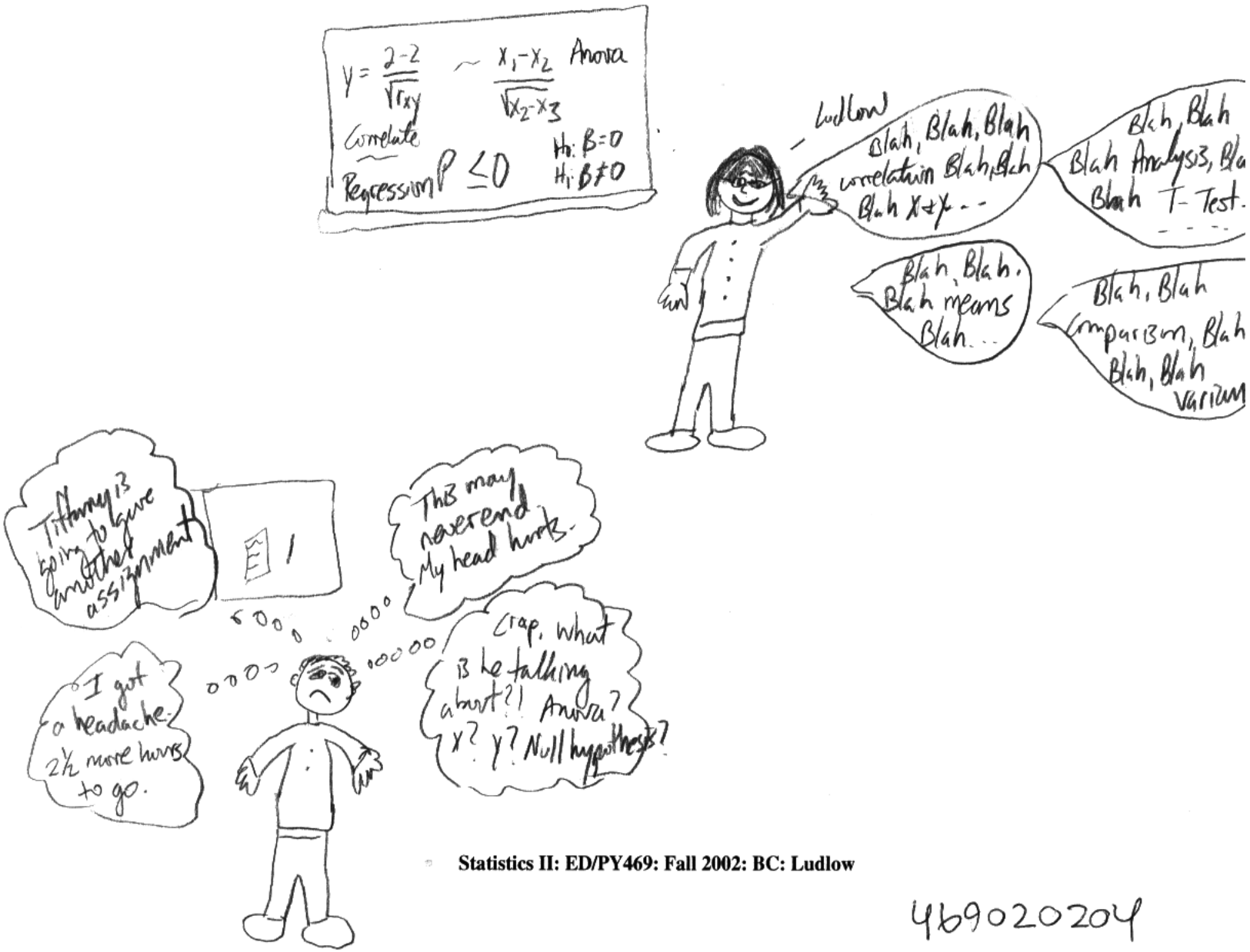
"The drawing exercise allowed me to express my opinion of the course in addition to the qualities and methods of the instructor. This allows me to also express my utility or perceived utility of course material."


$z = x - \bar{x}$
D=
SOFBETA=
B=
R^2=
Tools
Back
Math
Stats
GLM
ANOVA
T2
T
α

Learning Experience

“My drawing depicts a typical lecture experience in which Dr. L is in a zone lecturing and I have no idea what is going on and how to organize the stream of information that is coming at me like fire hose. A lot of thoughts enter my mind, none of which deal with actual statistics. I also wanted to state the physical aspect of the class in that I get a headache every class.”

“The drawing shows that the course evaluation doesn’t show an actual lecture experience.”


$y = \frac{2-2}{\sqrt{r_{xy}}}$ ~ $\frac{x_1 - x_2}{\sqrt{x_2 - x_3}}$ Anova
Correlate
Regression $P \leq 0$
$H_0: B=0$
$H_1: B \neq 0$
Ludlow
Blah, Blah, Blah correlation Blah, Blah Blah X+Y...
Blah, Blah Blah Analysis, Blah Blah T-Test
Blah, Blah, Blah means Blah...
Blah, Blah Comparison, Blah Blah, Blah Variance
Tiffany is going to have another assignment
This may never end. My head hurts.
I got a headache. 2½ more hours to go.
Crap. What is he talking about?! Anova? X? Y? Null hypothesis?

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Conclusions

- Allows students to communicate information they cannot provide via the traditional form.
- Questions on the traditional form are summative in nature and do not capture the learning process and development over time.
- The themes represent areas that could be addressed on the traditional form.

Conclusions

- The drawings clearly demonstrate the development and accomplishment that students experience throughout the semester.
- Through the act of drawing their picture, students are able to develop their overall thinking about the course more thoroughly:
  - Facilitates a more unique and creative form of communication
  - Results in a more thoughtful and critical evaluation

What have we learned?

- Many of the drawings portray initial confusion, frustration and struggle with the material.
- However, there is a point at which students understand (e.g. light-bulbs) and feel a sense of accomplishment (e.g. climbing mountains).
- Drawings illustrate that struggling with the material is part of the learning process.
- Instructor should not be frustrated if it appears that the students do not immediately understand the material.
- Students often realize that “It’s not as bad as I thought” at the end of the semester.