

Drawing Conclusions III: Using Student Drawings to Inform Teaching and Learning in a University Setting



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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?

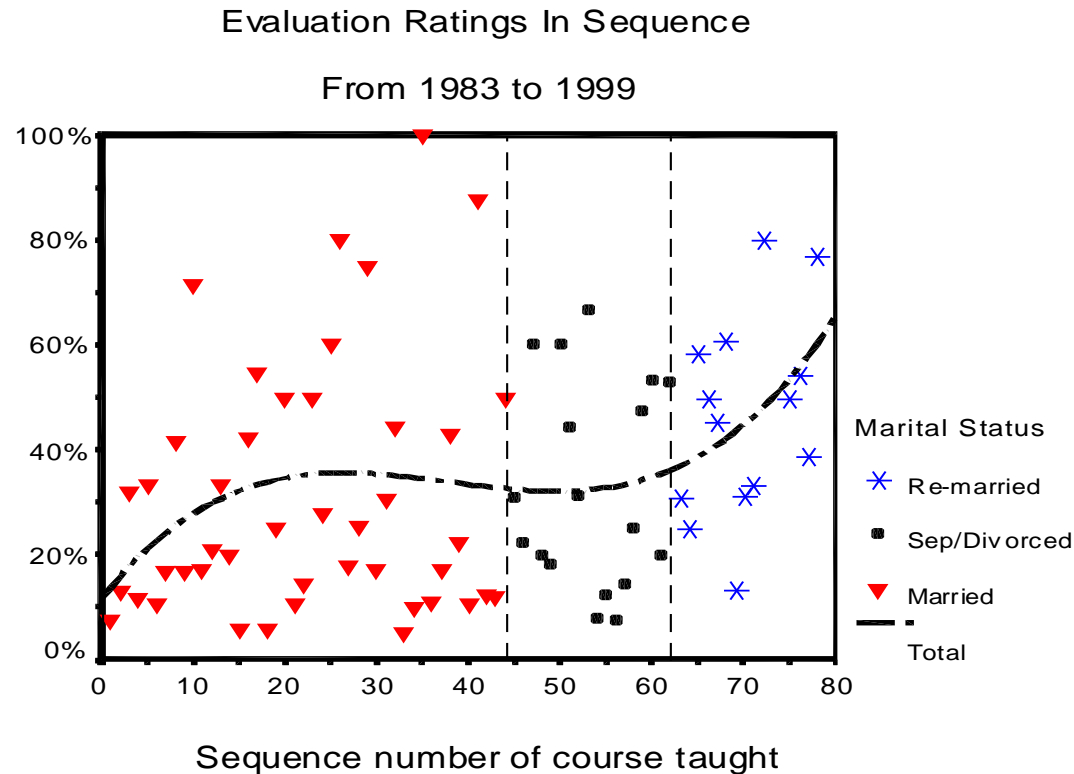


Our On-going Research

- 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

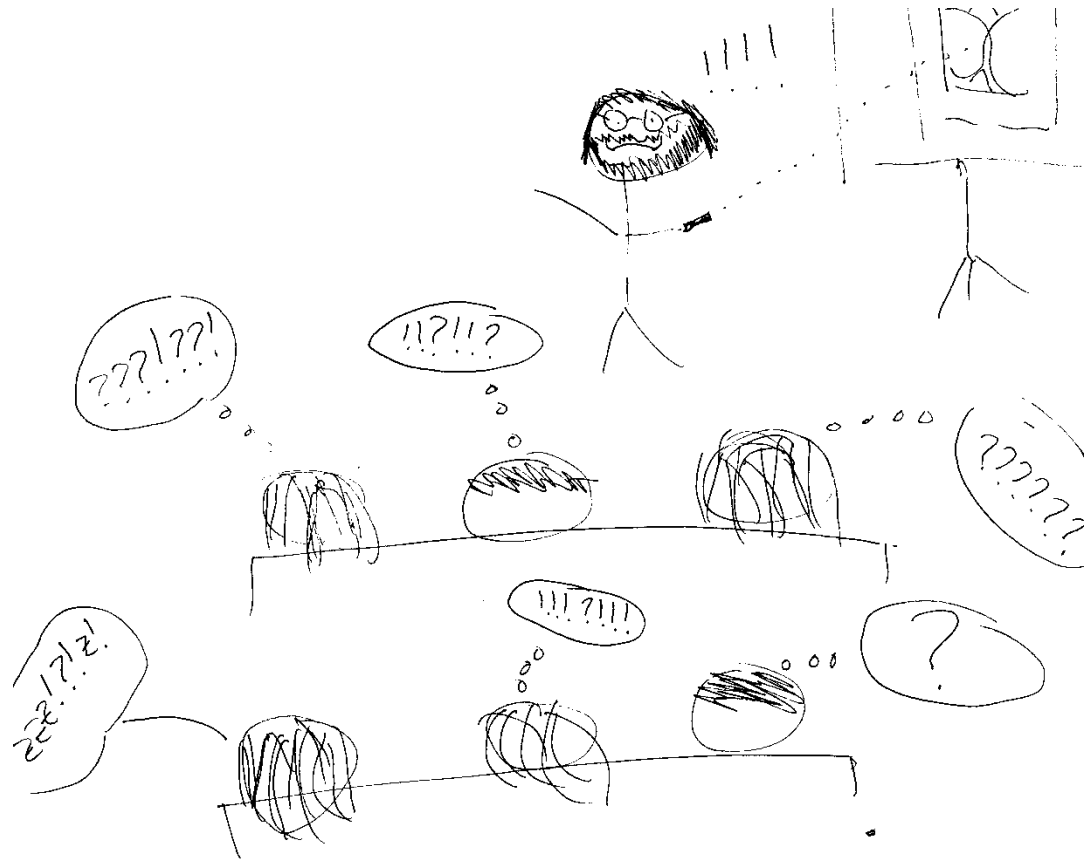
Course-level summary evaluations tracked over time

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



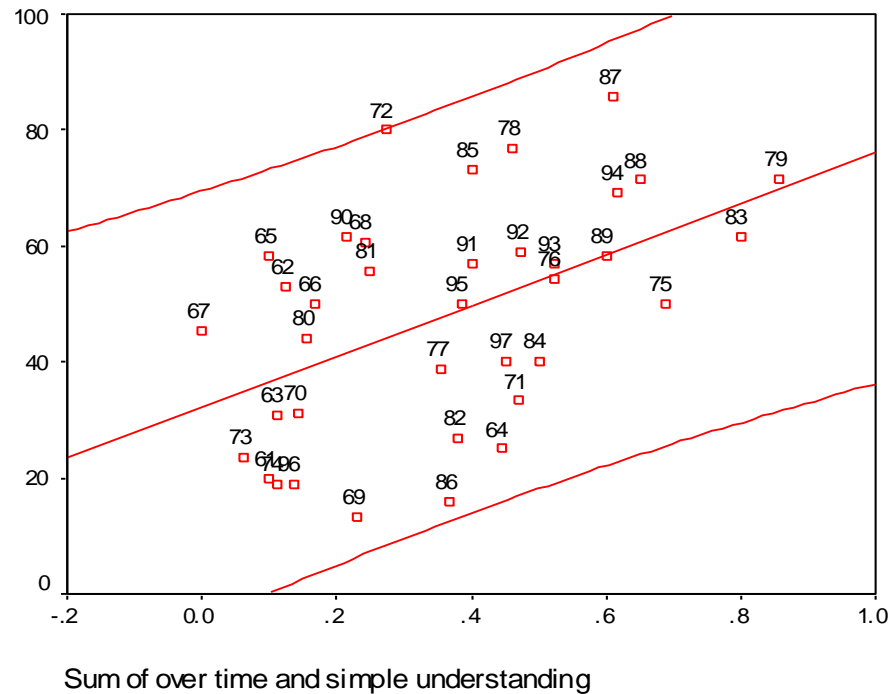
Themes in the drawings as perceived by the instructor

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?



Sample

- 7 classes were selected
 - 1 general research methods course
 - 4 intermediate statistics courses
 - 2 upper-level statistics courses
- The classes vary in terms of content, teaching methods, rigor and type of student



Methodology

- Code development
- Coding of students' written responses
- Most prevalent themes were extracted based on the percent of courses in which the code appeared
- Seven themes emerged

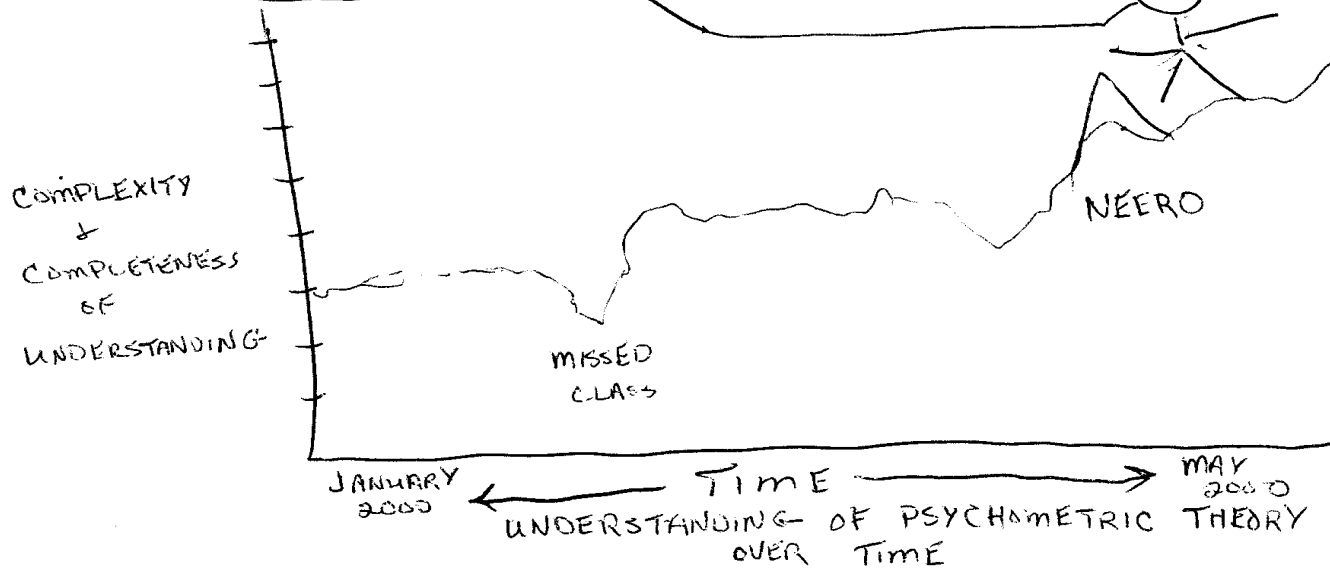
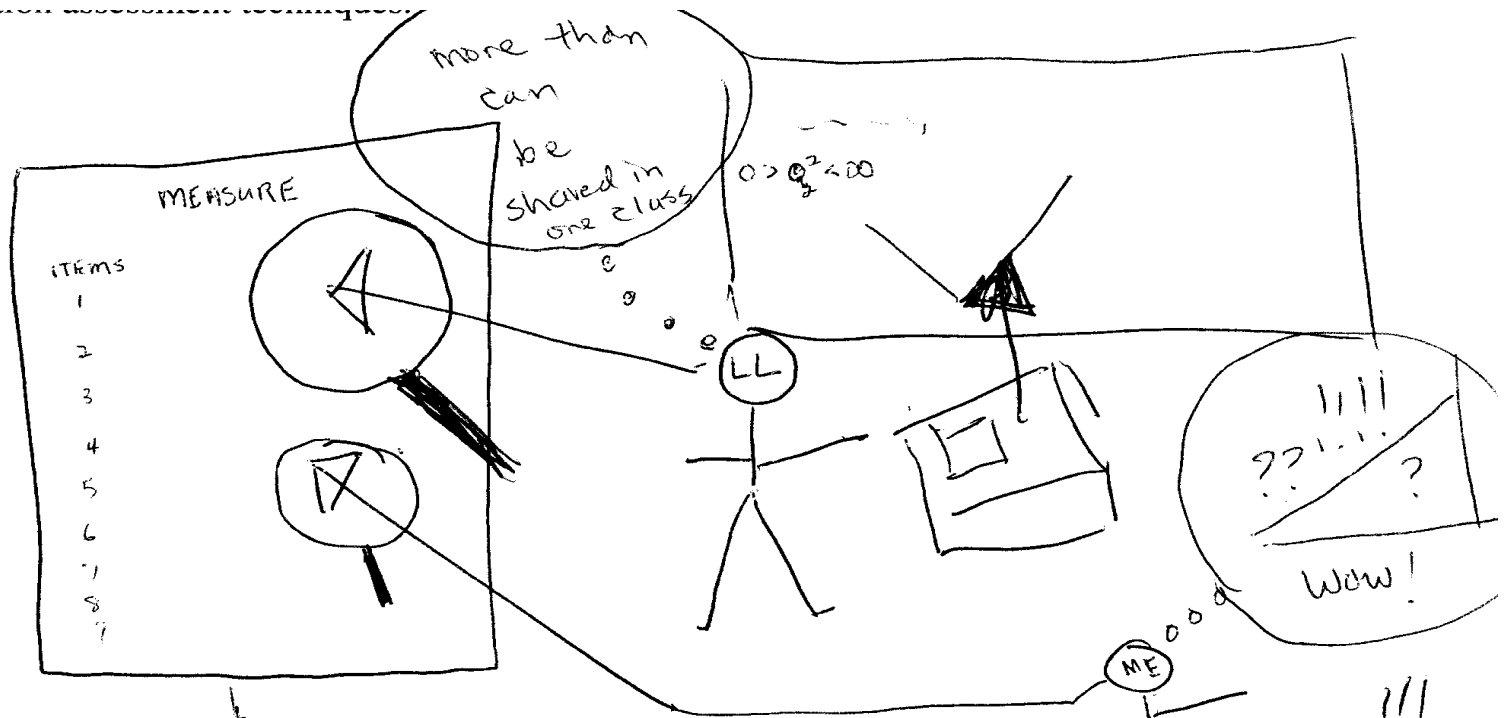


Themes

- Student Development/Growth
- Student Accomplishment
- Teaching Methods/Styles
- Effectiveness of Teaching Methods
- Speed and Pace of Class
- Utility/Value/Application of Course
- Learning Experience



Student Development/Growth



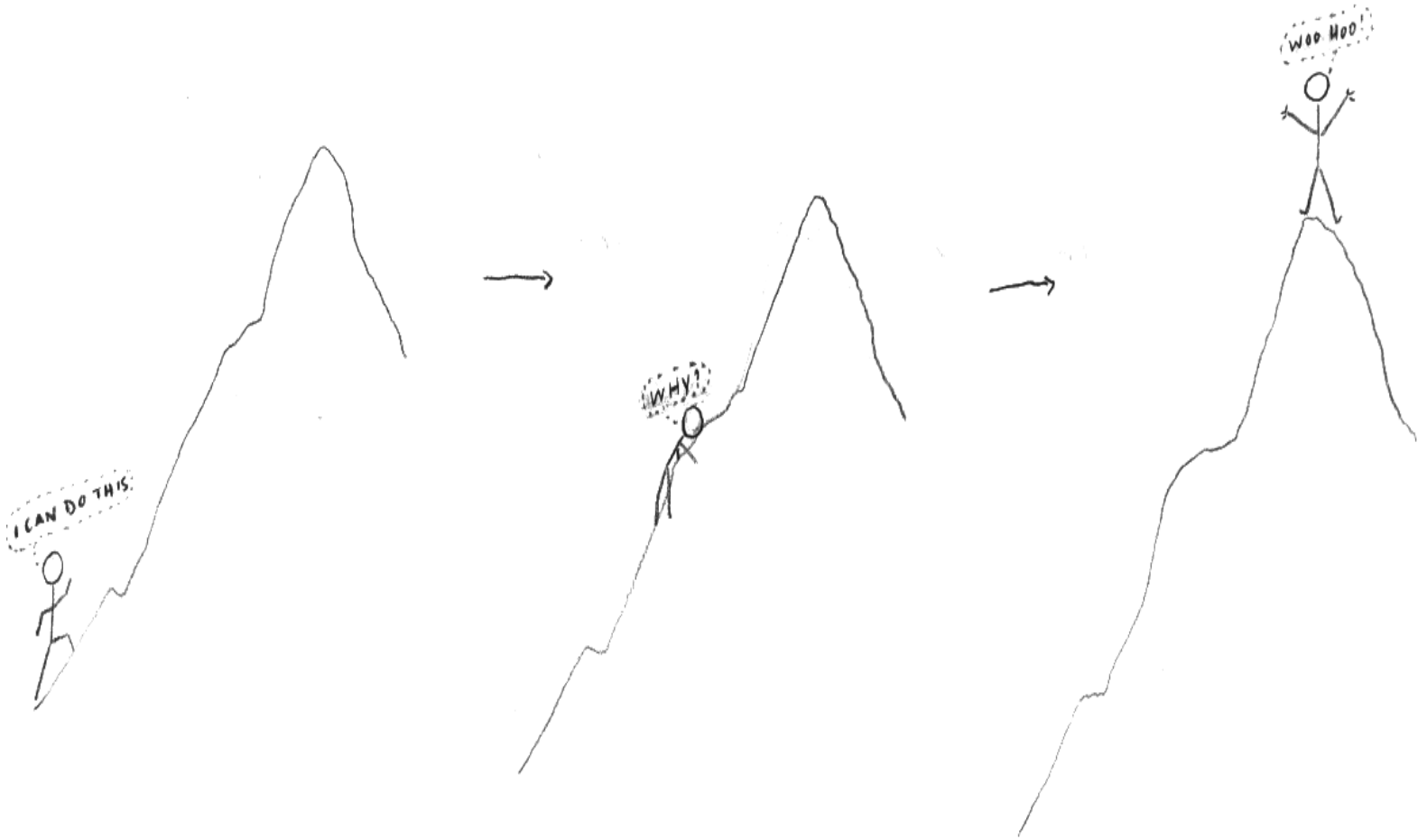
Psychometrics: ED669: Spring 2000: BC: Ludlow

AS A FUNCTION OF CLASS ATTENDANCE + PARTICIPATION

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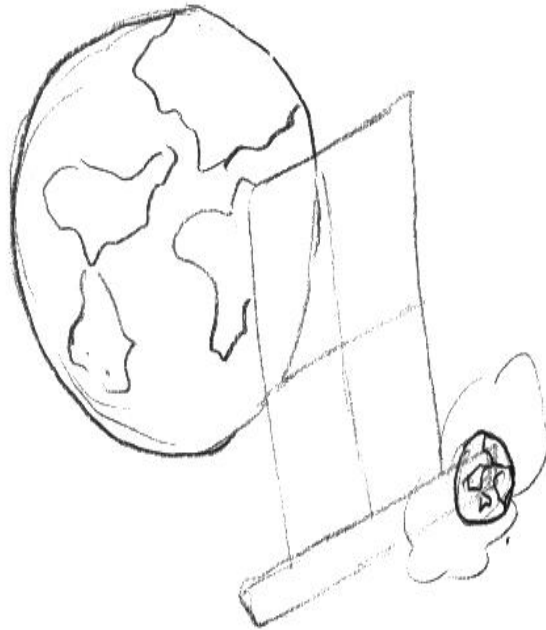


Student Accomplishment



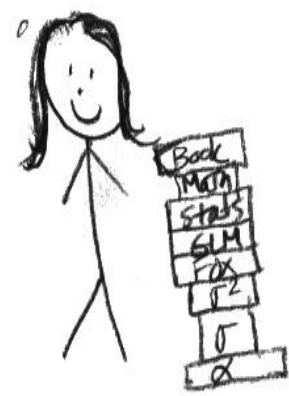


Utility/Value/Application of Course



$Z = X - \bar{X}$
 $D =$
 $SD\beta =$
 $\beta =$
 $R^2 =$

Tools





Learning Experience



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.