Teaching Statement & Course Evaluations

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Teaching Statement

> *"It is the supreme art of the teacher to awaken joy in creative expression and knowledge."*
> – Albert Einstein

The Merriam Webster Dictionary defines teach as "to cause to know something," but in reality, anyone who has taught knows that the process is much deeper than that. At the conclusion of a lesson or course, it is rarely as black and white as if I caused something to be known. But through gathering evidence and feedback, I can reflect on my own strategies and determine the strengths and weaknesses of the varying approaches to teaching. However, I do think Einstein is much closer to the true definition in the quote above than the Merriam Webster's definition. The joy of teaching comes from facilitating students' own discovery of knowledge in authentic ways. My perspective is rooted in the constructivist perspectives of Piaget (see e.g. Piaget & Inhelder, 1969) and Vygotsky (1978). That is, this approach to teaching has helped me infuse the joy of learning into the topics I love.

In practice, differentiating instruction given the wide variety of students' prior knowledge, learning styles, rate of learning, and efficacy is one of the most challenging, but rewarding, parts of teaching. I utilize a variety of teaching strategies including small group activities (e.g. think, pair, share; fish bowls), lectures, projects, and labs. Regardless of the class format, I have found students learn best when they are self-reflective about their own learning. This includes challenging them on what they already know, what they don't know, and setting goals for reducing the gap in their knowledge. This is also useful feedback for myself as I can shape the curriculum and lessons to focus time in the areas where students need the most help. One strategy I regularly use is *One-Minute Papers* (Angelo & Cross, 1993). At the end of class students are asked to answer two questions: (1) What was the most important point or argument made in class today? And (2) What question remains uppermost in your mind now at the end of this class? This simple activity provides a moment for students to reflect on their learning in that class while providing me with feedback about students' current state of learning.

For some classes this approach can be challenging when there are competing goals. For example, in teaching the master's level intro statistics course at the University at Albany, students enter with a wide variety of backgrounds and goals for the course. For instance, the classes have been roughly equally split between master's degree students and doctoral students. Moreover, this is confounded by the fact that the course is also split between students who are in more quantitative fields (e.g. Educational Psychology, Counseling Psychology) and qualitative fields (e.g. Educational Theory and Practice). Because of these divisions, there are clearly two competing goals for students: (1) To become consumers of statistics, or (2) to be prepared for more advanced statistics. One approach to address these two goals is to utilize labs, lectures, and class activities that include both interpreting and estimating/calculating statistical results. My goal for the course is for students to be critical consumers of statistics, but also provide opportunities and make clear for students who will advance in statistics the details they need to know.

Teaching statistics requires the additional consideration of students' math efficacy. I am extremely sensitive to the fact that many, if not most, students have some form of math anxiety or phobia. Moreover, research suggests that fear of mathematics often originates from a single teacher or parent. My goal is to never be one of those teachers that turns a student off from statistics (or mathematics more generally), especially given the consequence of possibly causing a student to become quantitatively illiterate. In my courses I follow the advise of Tobias (1994) and address math anxiety up front. On the first day of my statistics courses, students complete the Math Anxiety Scale Survey (MASS; Bai, Wang, Pan, & Frey, 2009). The results from this survey are collected anonymously and shared with the class. This serves a number of purposes. First, it

allows students to identify their own efficacy and anxiety towards math. Second, for students who have low efficacy and/or high anxiety, it ascribes a reason to why students may think they are "bad at math" and reveals that they are not alone. Third, the MASS provides concrete statements for which students and the class can develop goals to overcome. And finally, it provides a meaningful dataset for which I can use to teach statistical concepts.

To be a good teacher I must also consider what I am teaching in addition to how I am teaching. For instance, I believe that statistics curricula must adapt to the overwhelming proliferation of information and data students are expected to process. I have responded to these changing needs by adopting data science principles within my statistics courses (see e.g. Nolan & Temple Lang, 2010; Horton, Baumer, & Wichkam, 2014). This relates to my overall belief that students, especially in introductory courses, should be exposed to what practitioners actually do. For child development courses, this involves observing children, making observations, and determining patterns in behavior. For statistics courses, this involves analyzing real data. For example, I have integrated labs into my intro statistics course analyzing the *Programme of International Student Assessment* using R. This, I believe, exposes students to the challenges faced by researchers and provides a solid foundation for their own research.

Teaching is an incredibly difficult and rewarding activity. Although I believe I have a lot to learn about teaching, I greatly value what I have learned and will continue to learn from my students. I have been a student for the vast majority of my life, and one of the greatest results of being a teacher is that I can continue to be a life-long-learner, except now students are my teachers.

References

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Tobias, S. (1994). *Overcoming Math Anxiety.* New York: W.W. Norton & Company.

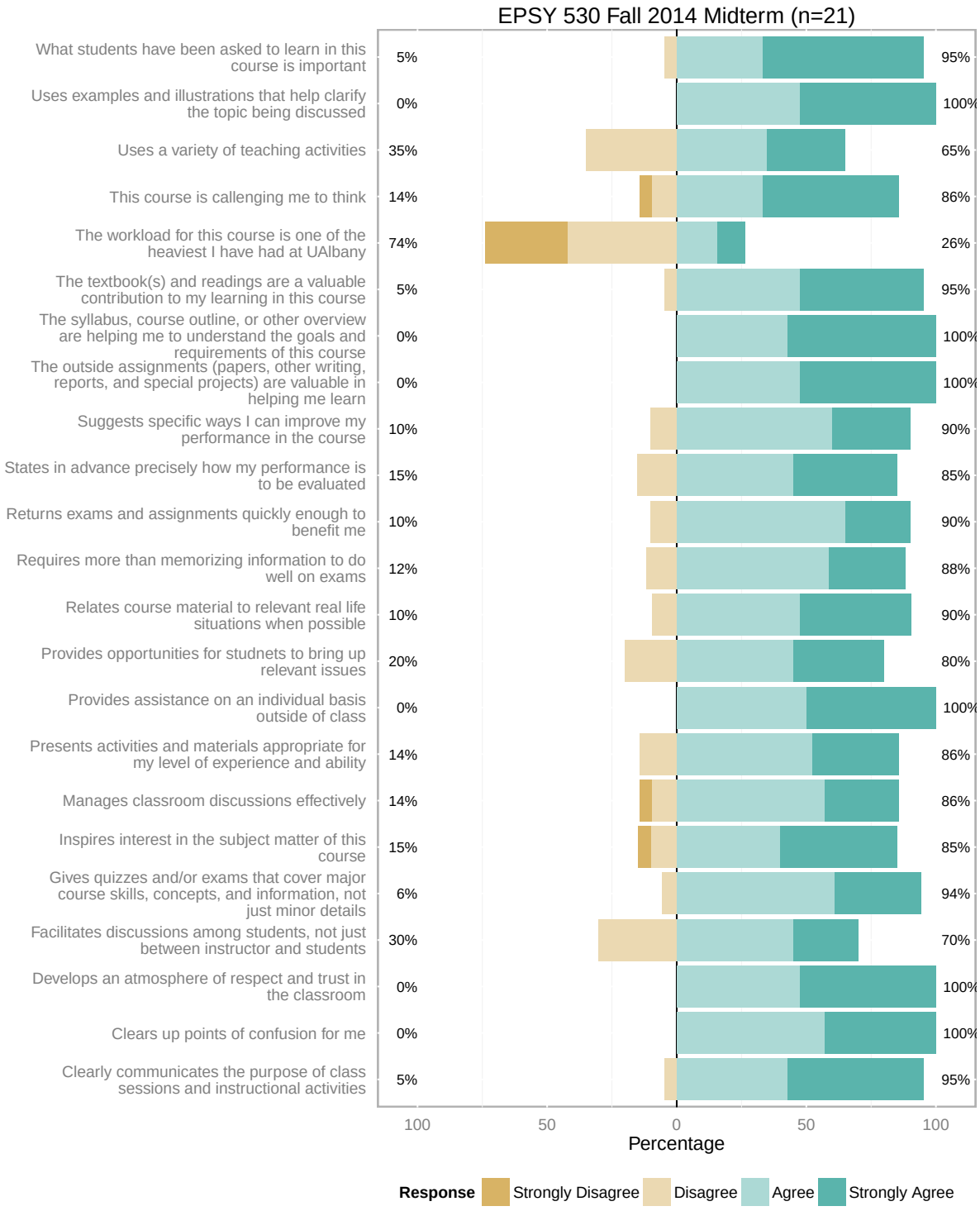
Vygotsky, L.S. (1978). *Mind in Society: Development of Higher Psychological Processes.* Cambridge, MA: Harvard University Press

Student Course Evaluations

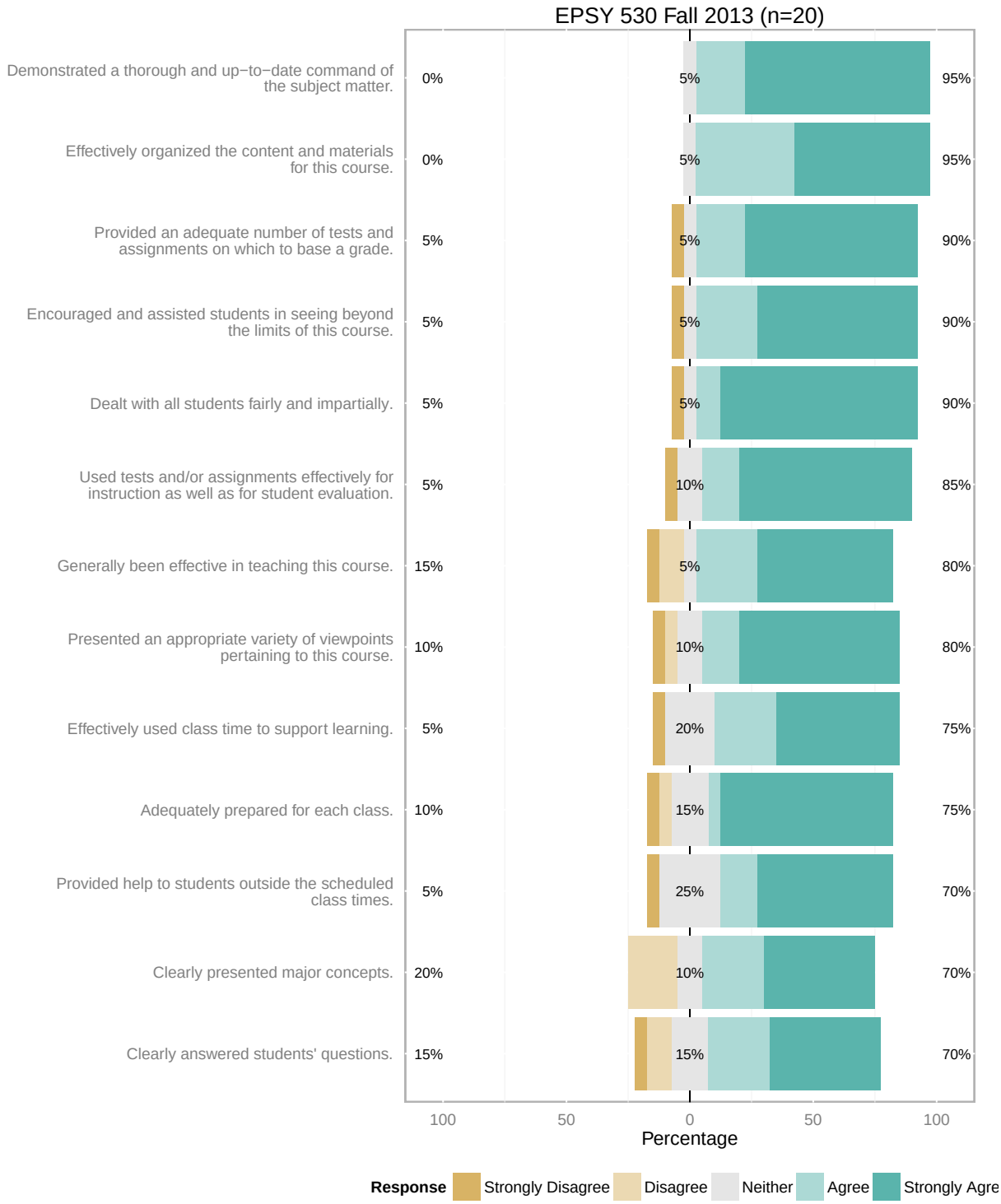
The following pages include the quantitative results from the student course evaluations for the courses I have taught. Due to a transition in the summer of 2014 in course evaluations at the University at Albany, no quantitative results are available. Qualitative data is available upon request.

- EPSY 530 - Statistics 1
  - Fall 2014 (Midterm course evaluation provided)
  - Summer 2013 (No quantitative data available)
  - Fall 2013
- EPSY 887 Fall 2014 - Data Science Institute
- EPSY 887 Spring 2013 - Computational Statistics
- EPSY 420 - Child and Adolescent Development
  - Spring 2009
  - Fall 2008

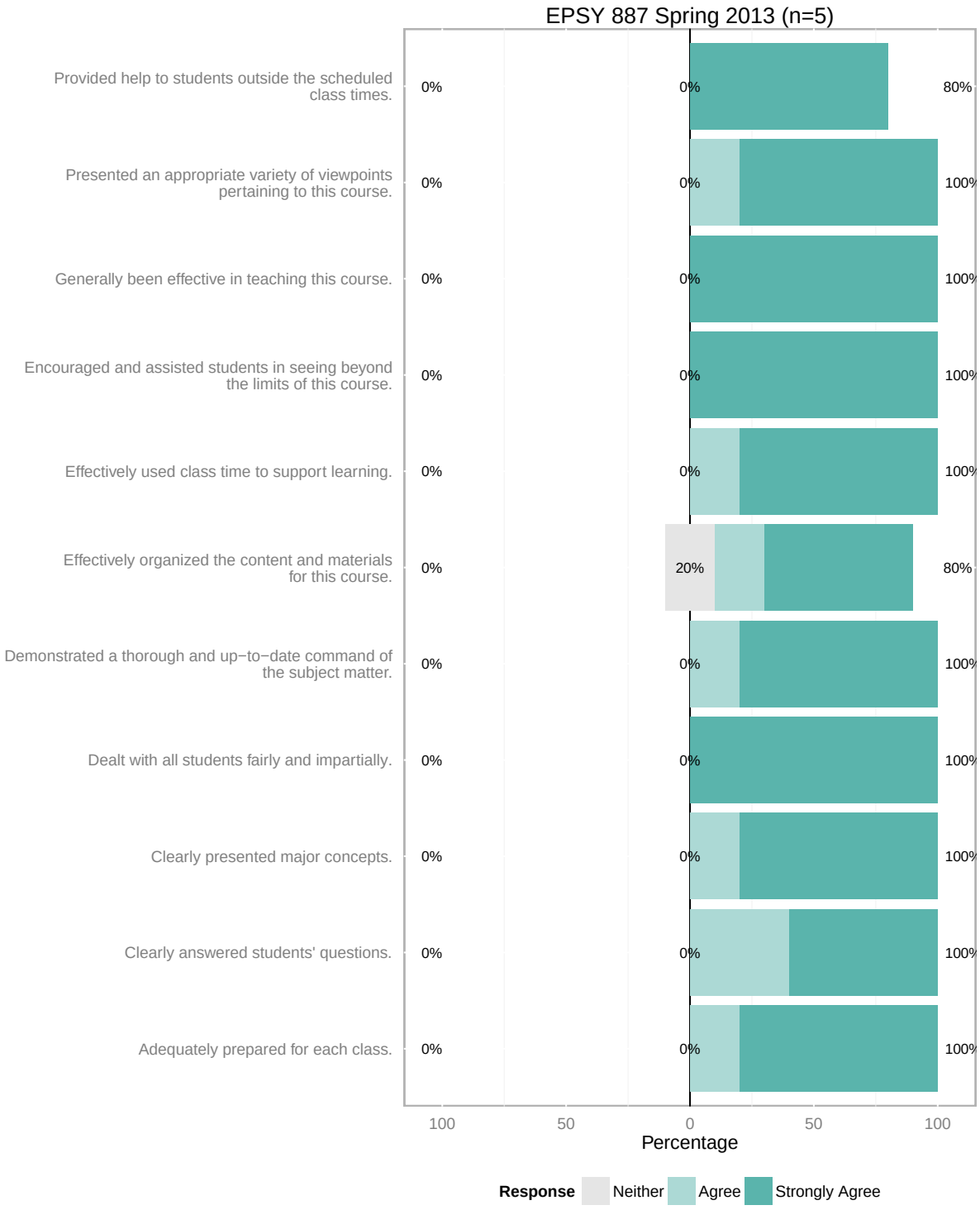
EPSY 530 Fall 2014 Midterm Evaluations



EPSY 530 Fall 2013 Student Course Evaluations



EPSY 887 Spring 2013 Student Course Evaluations



EPSY 420 Student Evaluations