Teaching Statement

My essential goal in teaching is to enable students to reasonably perceive and explore the world. To achieve this, I help my students acquire knowledge, develop application skills, and raise their awareness of social issues. During the five years of teaching practice, I have gradually learned how to create an effective and inclusive learning environment for students with diverse backgrounds. This is largely reflected in the students' rising evaluations of my teaching effectiveness in the five undergraduate and graduate courses listed below in Table 1. In the following, I will illustrate my teaching methods and evidence of their effectiveness based on my recent teaching experience in the course *Econometric Theory and Applications*.

Table 1. Summary of Teaching Experience and Effectiveness

Course name	Role*	Level	Offering year(s)	#Students (avg.)	Evaluation(s) (out of 5.0)**
Managerial Economics	TA	undergraduate	2018, once	43	3.9
Intermediate Microeconomics	TA	undergraduate	2018, once	60	NA***
Financial Management of Firm	TA	undergraduate	2019, twice	45	4.1 → 4.5
Time Series Econometrics	TA	Ph.D.	2019, 2021	13	4.6 → 4.9
Econometric Theory and Applications	TA	undergraduate	2022, twice	48	4.0 → 4.4
	AI	undergraduate	2022, once	35	4.8

Note: *TA and AI represent "teaching assistant" and "associate instructor", respectively. **The evaluation scores below reflect the students' average assessments of my overall teaching effectiveness in each course. ***Something emergent happened to the teacher; hence, they did not arrange students' evaluations for this course.

The Course and Students

Econometric Theory and Applications is a high-level undergraduate course. Students should meet the prerequisite in economic theory and statistics. Students enrolled in my class, however, have diverse backgrounds. More than one-third of them transfer from community colleges; some others are returning students, part-time workers, or parents. One returning student even has two off-campus jobs and a baby at home to take care of! These students either do not feel comfortable dealing with math and statistics or do not have enough time to study. They really need extra help to digest the theory part of this course.

This course also requires using R, the open-source statistical software widely adopted in academia and industry, to conduct regression analyses for homework. This requirement is supposed to help students build application skills. However, many students struggled with using R, and some even got lost in the past. The background survey conducted at the beginning of my class shows that over 60% of students have never used R before, and 20% of students do not even know R. So, it is pretty challenging to help them get through the application part of this course as well.

Teaching Methods and Their Effectiveness

Flexible Assessment. Students may perform poorly in some assignments or one exam simply because of bad health or mental conditions. This is not uncommon in my class, e.g., more than one-fourth of students have been infected by Covid or other diseases during the one and half months. Thus, I give enough flexibility to students when assessing their performances. The assessment consists of three parts: (1) real-time lecture quizzes, (2) weekly homework assignments, and (3) one midterm exam and one final exam. I allow students to drop the lowest one-third of their scores on part (1) and miss one-fourth of the available score on part

(2). Many students have taken this option due to either Covid infections or lack of time. I also allow them to make up a low score in the midterm with a high score in the final (but not the other way around). As expected, most students who perform poorly in the midterm do perform better in the final!

Multilayered Assistance. As mentioned above, many students may struggle with using the software R as they have not used it before. To assist their learning, I first provide them with practical guidance on how to install and lay out R using a 5-minute YouTube video. Then, I introduce several basic R commands in each lecture using concrete examples. In the following discussion section, my TA teaches students how to apply these new commands in detail. I also show them how to apply the commands to one question for each homework. With this multilayered assistance, none but one returning student complains about using R. Nevertheless, he is also fine under my guidance during office hours. It turns out that students in my class perform better than the previous ones in exams, where I test their abilities to read R commands and outputs to answer application questions. Another encouraging news is that in the last class survey, all the students self-report that they know how to use basic R commands to conduct regression analyses!

Daily-life Examples. It is pretty common that students are not comfortable studying math and statistics. To get around this issue, I heavily use daily-life examples to illustrate econometric concepts. One essential concept is hypothesis testing which enables us to say something about the object of interest, say whether a new driver is good at driving or not, based on observations, say the one-month commuting experience of that driver. Almost all the students immediately understand that the new driver is unlikely to be good at driving, given that a car accident happens to that driver during a month. I can clearly tell this from their smiling faces all over the classroom! I also use real-time lecture quizzes to check students' understanding of key concepts. In the last class survey, they self-report that it really helps!

Awareness of Social Issues. What impresses me the most is not students' good performances but their shared interests in socioeconomic issues like the gender gap in income. I introduce the gender gap in income in the U.S. when we talk about the dummy variable, say whether a worker is female or not. Students express their sincere curiosity about this issue by showing me pondering faces at each corner of the classroom. One student is so excited that immediately after class, he tells me that it is such a great idea to introduce the dummy variable using such an interesting example! So, I go one step further by guiding them to explore the reasons behind it in the following homework. Through this exercise, they quickly understand the meaning of an interaction term, say the female dummy interacted with years of schooling. Hence, raising students' awareness of social issues has become the most effective approach to attract students' attention and boost their learning in my class!

The Conclusion and Courses to Teach in the Future

Overall, I really appreciate the effort and enthusiasm that my students and TA have put into this class. They have made teaching this course easier and more interesting than I expected. Some students even send their best regards to me after the final exam and express their strong interests in learning econometrics and economics. In sum, I enjoy teaching this course so much! And I look forward to teaching this course or similar courses like time series econometrics and program evaluation methods in the future! I can also teach intermediate microeconomics and undergraduate finance, given my teaching experience and educational background in economics and finance.