

Student Evaluations as a Predictor of Teaching Effectiveness

Meichai Chen, advised by George Bizer, PhD and Roger Hoerl, PhD
UNION COLLEGE

BACKGROUND

- The usage of Student Evaluation of Teaching (SET) first started at the University of Washington in the 1920s, and later spread across North America in the late 1960s to early 1970s (Murray, 2005).
- Some prior studies have shown that SET and teaching effectiveness is positively correlated (Bryson, 1974; Centra, 1977; Costin, 1978; Ellis et al., 2003; Frey et al., 1975; Galbraith et al., 2012; Marsh & Overall, 1980; Stehle et al. 2012), others have found no correlation between the two variables (Braskamp et al., 1979; Fenderson et al., 1979; Weinberg et al., 2000), while a few even discovered negative correlations (Yunker & Yunker, 2003; Rodin & Rodin, 1972).

STUDY 1

PURPOSE

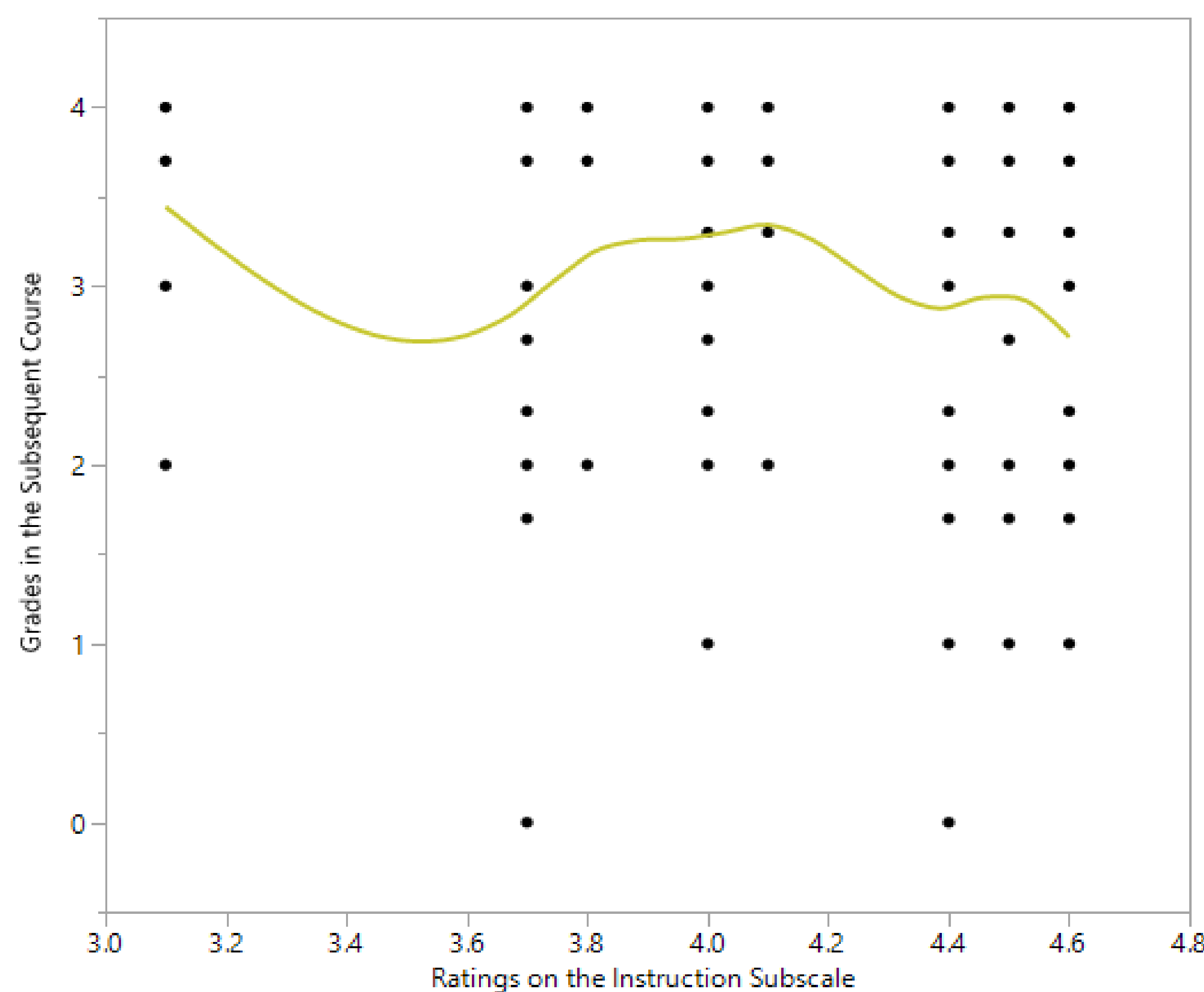
Investigate whether students who take introductory courses with higher-rated professors earn higher grades in subsequent courses.

METHODS

- 139 Union College students
- Teaching effectiveness was operationalized as students' grades in a subsequent course that was based on the introductory course
- The predictors of teaching effectiveness were the three subscales of the SET: Instruction, Challenge, and Availability

RESULTS

- For the final linear regression model, the instructor for the subsequent course, students' GPA, the instruction subscale, and the availability subscale were entered as predictors of students' grades in the subsequent course.
- The results revealed no evidence for a correlation between the challenge subscale and students' grades in the subsequent course.
- Students who had higher grades in the subsequent course had introductory course instructors who were rated as being more available on the SET ($\beta = 0.87, t = 2.15, p = 0.03$).



- The instruction subscale was negatively correlated with students' grades in the subsequent course ($\beta = -0.43, t = -2.56, p = 0.01$).
- A plot of **instruction** versus **students' grades in the subsequent course** on the left revealed a **nonlinear** pattern such that students who had higher grades in the subsequent course had introductory course instructors whose instruction ratings were somewhere in the middle of the spectrum while students who had lower grades tended to have introductory course instructors whose instruction ratings were on the two ends of the spectrum.

STUDY 2

PURPOSE

Explore students' opinions of SET in a small liberal arts college setting.

METHODS

- 81 Union College students (19 first-years, 21 sophomores, 19 juniors, and 22 seniors)
- Students were instructed to fill out an online survey that asked for their demographic information (personality, gender identity, year in college, GPA, and major), the amount of thought they put into completing the SETs and their perceptions of the importance of the evaluations.

RESULTS

- The five personality traits, gender identity, year in college, GPA, and major (coded into divisions) were entered into the linear regression as predictors of students' perceptions of the importance of SETs and their self-report of the amount of thought they put into filling out the evaluations.
- First-years reported investing less thought than the students in the other years ($\beta = -0.24, t = -2.24, p = 0.03$).
- Males reported investing less thought than females ($\beta = -0.14, t = -1.56, p = 0.12$).
- Students with a major in Division 2 ($\beta = -0.41, t = -2.00, p = 0.05$) and Division 3 ($\beta = -0.28, t = -1.45, p = 0.15$) reported investing less thought than students in the other divisions.
- Introverted students reported investing less thought than extraverted students ($\beta = -0.21, t = -2.06, p = 0.04$).

	First-Years	Others	Males	Females	Division 2	Division 3	Others	Introverted	Others
Mean (Standard Deviation)	3.28 (0.75)	3.57 (0.80)	3.39 (0.77)	3.61 (0.82)	3.39 (0.75)	3.45 (0.86)	3.67 (0.76)	3.24 (0.75)	3.57 (0.80)

CONCLUSIONS

The findings from the two studies not only shed new light into the analyses used in the investigation of the relationship between SETs and teaching effectiveness; it also provides the administration of colleges and universities with new knowledge that could help them utilize SETs more effectively in instructors' hiring and promotion decisions.