Pilot Study of Instrument Proposed for the Student Evaluation of Teaching

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Executive Summary

In January 2014, the Task Force on the Student Evaluation of Teaching (SET) recommended a new instrument, comprised of 11 Likert-type items and one open-ended item, to replace the various SET instruments currently used by Santa Clara University's schools and the college. Subsequently, the Provost's Office launched a pilot study of the proposed instrument. SCU faculty volunteered 52 classes for this endeavor. Five hundred seventy-six students completed the pilot instrument in the final week of the winter quarter or spring semester (See Table 1).

A series of analyses—procedures standardly employed when testing a new measurement instrument—were conducted on the pilot data. Goals of these analyses were to examine interrelationships among the 11 Likert-type items, to determine whether the data provided evidence that the items are measuring related aspects of teaching, and to estimate the reliability of the instrument.

Key findings based on procedures known as item analysis and estimation of reliability were as follows:

1. **Items 1-9 form the basis of a coherent and psychometrically sound instrument**.
    a. Responses to Items 1-9 were strongly and directly related to each other, an important initial finding for demonstrating that each of the nine items contributes to the coherent measurement of a common construct (See correlation coefficients in Table 2).
    b. Collectively, the nine items form a highly reliable instrument. Reliability was estimated to be 0.94, a value that is considered quite high in psychometric realms.
    c. Based on an analysis of the pilot data, there would be significant value in computing an overall mean response to the nine items. Specifically, the strong coherence and high reliability of Items 1-9 justify including an overall mean response to Items 1-9, in addition to the mean value for each individual item, within an instructor's SET report. To minimize measurement error, users are urged to focus on a composite score representing the mean response to multiple items, rather than focusing exclusively on responses to any individual item. The Task Force is still exploring whether any subgroups of items should also be reported with a composite score.

2. **Items 10 & 11 appear to measure a construct different from that measured by Items 1-9.**
    a. Responses to Item 10 (course more conceptually challenging than others) and Item 11 (course required more time than others) were unrelated to responses to Items 1-9 (See correlation coefficients in Table 2). This finding indicates that Items 10 and 11 should either be revised or set aside.
    b. Upon review of the results of the pilot study, the Task Force chose to revise the language for Item 11. The revised item is shown on page 2, where it is labeled Item 2.
    c. The Task Force is still exploring the relative merits of either revising Item 10 or removing it from the list of items included on all SETs across the University. Any departments/school would still retain the option of incorporating this item or any other supplementary item on the SETs issued for all courses within the department/school.

Items Proposed for SET Instrument

For items 1.1 through 1.9 below, please mark the response category that most closely describes your experience.

		Strongly disagree				Strongly agree
1.1	The instructor communicated clearly the expectations for the course.	O	O	O	O	O
1.2	The instructor organized the course effectively.	O	O	O	O	O
1.3	The instructor designed a course that challenged me to think rigorously about the material.	O	O	O	O	O
1.4	The instructor helped students to reach a clear understanding of key concepts.	O	O	O	O	O
1.5	The instructor managed class time in a manner that advanced my learning.	O	O	O	O	O
1.6	The instructor fostered a mutually respectful learning environment.	O	O	O	O	O
1.7	The instructor provided useful oral or written feedback.	O	O	O	O	O
1.8	The instructor was available and willing to help students outside of class.	O	O	O	O	O
1.9	Overall, the instructor is an excellent teacher.	O	O	O	O	O

For Item 2 below, please mark the response category that most closely describes your experience.

2. In an average week, the approximate number of hours I spent doing work for this course outside regularly scheduled class time was:

0-1	2-3	4-5	6-7	8-10	11-14	15+
O	O	O	O	O	O	O

<Items that a department or school/college might want to include would be added here.>

3. Is there anything else you would like to add about this instructor or course?

Table 1
Participants in Pilot Study of Proposed SET Instrument

	Classes		Students	
College of Arts & Sciences				
Natural Sciences	7		136	
Social Sciences	10		105	
Humanities	6		76	
Arts	6		37	
Subtotal	**29**	**56%**	**354**	**61%**
School of Business	8	15%	81	14%
School of Engineering	5	10%	28	5%
School of Education & Counseling Psychology	4	8%	17	3%
School of Law	6	12%	96	17%
Total	**52**	**100%**	**576**	**100%**
Lower Division Courses	22	42%	243	42%
Upper Division Courses	12	23%	144	25%
Graduate Courses	18	35%	189	33%
Total	**52**	**100%**	**576**	**100%**
Enrollment ≤ 20	24	46%	127	22%
Enrollment 21 – 29	19	37%	256	44%
Enrollment ≥ 30	9	17%	193	34%
Total	**52**	**100%**	**576**	**100%**

Table 2
Correlation Matrix for Proposed SET Items
(N = 576)

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11
Item1. communicated clearly…expectations	-	.78	.56	.74	.67	.58	.65	.59	.78	.19	.05
Item2. organized course effectively	.78	-	.60	.76	.72	.57	.59	.53	.78	.20	.05
Item3. designed course that challenged me	.56	.60	-	.59	.57	.53	.48	.44	.58	.52	.31
Item4. helped reach clear understanding	.74	.76	.59	-	.76	.60	.66	.56	.82	.11	.00
Item5. managed class time	.67	.72	.57	.76	-	.62	.58	.51	.76	.28	.10
Item6. fostered respectful learning environm't	.58	.57	.53	.60	.62	-	.57	.63	.66	.23	.09
Item7. provided useful oral or written feedback	.65	.59	.48	.66	.58	.57	-	.64	.71	.16	.04
Item8. available and willing to help students	.59	.53	.44	.56	.51	.63	.64	-	.62	.21	.08
Item9. overall, instructor excellent teacher	.78	.78	.58	.82	.76	.66	.71	.62	-	.19	.04
Item10. more conceptually challenging than most	.19	.20	.52	.11	.28	.23	.16	.21	.19	-	.59
Item11. required more time than most	.05	.05	.31	.00	.10	.09	.04	.08	.04	.59	-