

# INFORMATION ABOUT SETE



## Student Evaluation of Teaching Effectiveness



SETE is a psychometrically valid faculty teaching evaluation instrument that minimizes bias by controlling for student demographic influences.

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## STUDENT EVALUATION OF TEACHING EFFECTIVENESS

### THE NEED

College faculty may be resistant to the use of end-of-course surveys as a measure of their teaching effectiveness because of student bias. Some faculty members maintain that students who perform well in their courses rate them highly, while students who anticipate receiving low grades may indicate much lower ratings. Other factors such as the time of day of the course, faculty age or student course load may also substantially influence student perceptions of faculty effectiveness.

### THE SOLUTION

The University of North Texas recognized the need for a solution that would consist of a psychometrically valid teaching evaluation instrument and a scoring process in which across-departmental-influences and student-demographic-influences are minimized as much as possible in their combined effect on measuring students' perceptions of teaching effectiveness. The items were developed to apply across all delivery systems including on-campus, hybrid and fully online courses.

### THE SERVICE

The University of North Texas partnered with SmarterServices (the provider of SmarterSurveys) as a sole source provider to administer the SETE instrument and process the results. The per-course outcome is a single numerical value of a faculty member's effectiveness on a scale of 1 – 1000. The intent is that the scores can be applied to a continuous improvement model that shows individual instructor growth over time. Faculty members can have confidence in the scale score recognizing that factors of student bias have been controlled.



### VALIDITY

There is both theoretical and empirical support in the academic treatments of teaching effectiveness used in SETE.

## DEVELOPMENT OF SETE

The initial goal of the SETE development project was to develop a psychometrically valid faculty teaching evaluation instrument for inter-departmental usage at the University of North Texas. After achieving that goal at UNT as well as other pilot institutions, the SETE system is now available for usage by other educational institutions. The SETE system was developed across a multi-year, iterative process involving focus-group evaluation sessions which included faculty members, students and administrators. **The eventual goal was to produce a theoretically and empirically based evaluation of the domains of student perceived teaching effectiveness, as indicated by the relevant academic literature, in conjunction with the aggregate experiences and advice of UNT faculty and students.** This collaborative outcome produced an acceptable pool of 28 items that addressed three categories of teaching effectiveness behaviors, with a general effectiveness domain subsuming the three sub-domains. It is important to note that these three effectiveness domains have both prior theoretical and empirical support in the academic treatments of teaching effectiveness. The project was also motivated by the Texas legislative house bill 2504 mandating public web-access to faculty effectiveness ratings (to become legally effective fall of 2011 in the State of Texas).

Extensive efforts were made to find extant surveys and published lists of survey items and to evaluate them for usefulness versus writing new items. Approximately 3,000 survey items were collected and evaluated, including all current UNT department surveys and published surveys and survey item lists that are used by over 100 universities in the United States. A process involving over 400 people evaluated the 3000 survey items using rating scales to measure content, syntax and usefulness. The six-step process resulted in iterations that reduced the item pool from 3,000 to 1,488 to 788 to 346 to 51 and finally to the pool of 28 items.

## CONSTRUCT AND DIMENSIONS BEING MEASURED

The 28 items load on the following three factors: (1) Organization and explanation of materials, (2) Learning environment, and (3) Self-regulated learning. To reduce survey fatigue, four items from each of these categories are selected per-term for a total of 12 items on the instrument. Items are measured using the following four point scale: Strongly Disagree, Disagree, Agree and Strongly Agree.

<b>Factor 1: Organization and Explanation of Materials</b>	<b>Factor 2: Learning Environment</b>	<b>Factor 2: Self-regulated Learning</b>
This score reflects the student's perception of how well the instructor: makes the course requirements and student learning outcomes clear to the students; gives assignments, activities, and materials that are helpful and that contribute to understanding the subject; explains difficult material clearly; shows the relationships among topics and new concepts; and evaluates student work in ways that are helpful to learning.	This score reflects the student's perception of how well the instructor: establishes a climate of mutual respect and encouragement; motivates students to work and engage in learning; is available and encouraging; is skillful in actively engaging students in learning; and provides useful feedback.	This score reflects the student's perception of how well the instructor guides and encourages self-directed learning in which the student is encouraged: to be open to the viewpoints of others; to develop new viewpoints; to connect course topics to a wider understanding of the subject; and to contribute to the learning process.

## FACTORS AND STATEMENTS

### Organization and Explanation of Materials

My instructor explains difficult material clearly.  
 My instructor communicates at a level that I can understand.  
 My Instructor makes requirements clear.  
 My instructor communicates clearly the expectations for learning in this course.  
 My instructor assigns activities that are helpful.  
 My instructor gives assignments that contribute to my understanding of the subject.  
 My Instructor provides materials that help me understand the subject.  
 My instructor identifies relationships between and among topics.  
 My instructor explains new ideas by relating them to familiar concepts.  
 My instructor evaluates my work in ways that are helpful to my learning.

### Learning Environment

My instructor establishes a climate of respect.  
 My Instructor is available to me on matters pertaining to the course.  
 My instructor encourages me toward maximum achievement.  
 My instructor is skillful in motivating me to do my best work.  
 My instructor provides useful feedback to guide my progress.  
 My instructor respects diverse talents.  
 My instructor creates an environment of mutual respect.  
 My instructor creates an atmosphere in which ideas can be exchanged freely.  
 My instructor actively engages me in learning.  
 My instructor encourages students to actively participate.

### Self-Regulated Learning

My instructor is skillful in guiding me to be more self-directed in my learning.  
 My instructor encourages me to connect course topics to a wider understanding of the subject.  
 My instructor is open to the viewpoints of others.  
 My instructor encourages me to contribute to the learning process.  
 My instructor gives assignments that are stimulating to me.  
 My instructor encourages me to develop new viewpoints.

My instructor arouses my curiosity.  
 My instructor stimulates my creativity.

## SCORING METHODOLOGY

SETE scale scores are provided on a 1 – 1000 scale. The SETE Scale Score replaces the raw mean score that is typically provided as the feedback on end-of-course surveys. The scale scores are on an interval scale similar to that used by other standardized tests such as the SAT or GRE. By using an interval scale, a growth of ten points anywhere on the scale is the same amount of growth as ten points on another part of the scale regardless of the course taught. Each of the three effectiveness factors has its own unique scale score. A measurement model with appropriate external control variables is used in determining how items should be weighted when calculating individual scale scores. This estimation process provides a reasonably fair and unbiased estimate of the individual scale scores as well as providing a high degree of reliability and generalizability to the scale scores.

For convenience of interpretation at a broader level, SETE sub-factor scale scores can be broken into levels of effectiveness. Any number of levels could be selected, but four levels are recommended because factor ranges are calculated from an analysis of raw score ranking, and there are four points on the survey scale (strongly disagree, disagree, agree, strongly agree) which can be associated on an intuitive level with four effectiveness levels.

**SETE Scale score ranges for effectiveness levels by factors**

	<b>Organization and Explanation</b>	<b>Learning Environment</b>	<b>Self-Regulated Learning</b>	<b>Overall Effectiveness</b>
<b>Highly Effective</b>	710 - 981	659 - 972	747 - 998	702 - 998
<b>Effective</b>	438 – 709	347 - 658	495 - 746	406 - 701
<b>Somewhat Effective</b>	167 - 437	35 - 346	243 - 494	111 - 405

**Factors Scores and the General Factor Score:** Course means are computed for each of the three effectiveness sub-factors: Organization and Explanation of Materials, Learning Environment, and Self-Regulated Learning. An overall (general factor) effectiveness mean is computed for each course. The overall mean for each course should be used to infer the degree to which an instructor’s teaching is perceived by students to be effective. The overall mean is the score to use for making inferences about teaching effectiveness and can be used to compare individuals and groups.

**ADDITIONAL STATISTICAL INFORMATION**

Additional information about SETE can be provided upon request in the SETE Information Handbook and includes statistical information such as general modeling considerations, target populations, sample populations, bias, sample selection bias & invariance, assessing reliability and generalizability, assessing dimensionality & goodness of fit, short form item selection, Ant Colony Optimization, Inverse probability weighting, external control variables, multi-level ANOVA, scale score development, and missing values.

**PRODUCT DEMONSTRATION**

For a free, one-hour demonstration of SETE and SmarterSurveys contact:

**SmarterServices**

**[info@SmarterServices.com](mailto:info@SmarterServices.com)**

**Toll Free: 877 499 SMARTER (7627)**

**SmarterSurveys.com**



Do Your Faculty Have  
Confidence in your End-of-  
Course Evaluation System?

Are your course evaluations  
skewed because of student bias?



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