# Professor, Student, and Course Attributes that Contribute to Successful Teaching Evaluations 

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#### Abstract

This study examines eight professor, student, and course attributes that affect four specific areas of teaching evaluations. All eight attributes significantly affect at least one of the four groups of student evaluation of teaching (SET) questions. The extant literature has previously ignored the fact that more than one factor exists. This has resulted in contradictory or inconclusive findings. Our study uses a more sophisticated methodology that allows for the delineation of all these intricate relationships. As a result, more clear and robust results emerge.[JEL: I20, I22, A00]


Universities and colleges recognize more than ever the need to achieve high levels of teaching performance in the classroom. Accordingly, this desire is being reflected by promotion and tenure ( $\mathrm{P} \& \mathrm{~T}$ ) committees who have adjusted their criteria across all business majors (Accounting Education Change Commission, 1990; Bures and Tong, 1993; Burnett, Amason, and Cunningham, 1989; and Schultz, Meade, and Khurana, 1989). Yunker and Sterner (1988) found that student evaluations of teaching (SET) is the primary instrument used to evaluate teaching effectiveness in almost every college and university in the country. Moreover, Tompkins, Hermanson, and Hermanson (1996) find that the percentage of time spent teaching can be as high as $50 \%-70 \%$. Because so much time and importance is associated with teaching, P\&T committees should make sure they are able to evaluate a professor's teaching effectiveness as accurately as possible.

The purpose of this study is to examine a SET survey in order to assess how accurately universities are measuring professor performance in the classroom. More specifically, we examine eight professor, student, and course attributes that affect SET evaluations in

[^0]four distinct areas. This has never been done before.
The data used in the current study is from a single university. However, it is representative of the SET surveys used around the country. For example, studies using SET surveys that ask the same questions as the survey under examination include Tenant and Lawrence (1975)-(time of day), Howell and Johnson (1982), and Stout, Bonfield, and Battista (1987)(class meeting time), Brandenburg, Slinde, and Batista (1977), Marsh (1987), and Wright, Whittington, and Whittenburg (1984)-(required course versus elective), Rayder (1968)-(major), Deberg and Wilson (1990), McKeachie (1979), and Wright, et al. (1984) (professor characteristics), Mulford and Schneider (1988)-(undergraduate versus graduate), Bell, Frecka, and Solomon (1993), and Kinney (1989)-(research versus non-research oriented), and -(professor specific characteristics). Hence, the results in this study are generalizable to the extent that SET surveys across institutions measure the same general variables.

## I. Data

All teaching evaluations are from the Department of Finance, Spring 1996, at a mid-sized American Assembly of Collegiate Schools in Business
(AACSB) accredited university in the mid-west. The university's College of Business offers both undergraduate and graduate degrees in business. Hence, the survey consists of both classifications of students. A total of 17 classes are studied with a student response rate of $62.3 \%$ ( 467 enrolled, 291 completed questionnaires). There is no difference in response rates between graduates and undergraduates. Of the 17 classes, eight are undergraduate, and nine are Masters in Business Administration (MBA). Of the classes, 11 are taught at night, while six are offered during the day. Elective classes total ten, and required classes equal seven. There are ten teachers involved in this study. Half of them are full-time, six are tenured, and seven are research-oriented. ${ }^{1}$ It is not the case that all tenured professors are full-time or research-oriented.
Classes are taught by various combinations of tenured professors, part-timers, and doctoral students. ${ }^{2}$ Exhibit 1 provides the actual teaching evaluation survey used by the university. The survey is a standard 34 item questionnaire and employs a seven-point semantic difference scale with one representing the lowest score possible and seven being the highest.
The first six questions in the survey are asked to gain information concerning the responding student's background. Questions 1 through 3 are to be filled out by both undergraduates and MBA students, while only graduate students are to complete questions 3 through 6. Questions 7 through 34 are to be answered by all students and will be the focus of our analysis.

## II. Hypothesis

Based on the extant literature, there are eight hypotheses that will be tested.

## A. Professor Attributes

$\mathrm{H} 1_{0}$ : There is not a significant difference between the

[^1]SET scores of full-time and part-time faculty members.
From a department's point of view, it is much less expensive to hire part-time professors from the industry or use students from the doctoral program. However, full-time professors are expected to perform better in the classroom because this is what they do for a living. There is also a concern for AACSB accreditation. If too many part-timers or non-PhD teachers are used, the university will not meet the minimum accreditation standards. Therefore, the purpose of testing this hypothesis is to determine the extent, if any, to which the employment of less expensive part-time instructors is less effective than using only full-time professors.
$\mathrm{H} 2_{0}$ : There is not a significant difference between the SET scores of tenured and non-tenured faculty members.

The second classification for teachers is whether they are tenured or not. The crux of this examination is whether tenured faculty will relax in their teaching effectiveness (behavior) due to job security or whether their years of extensive teaching experience has readied them to perform better in the classroom.
$\mathrm{H} 3_{0}$ : There is not a significant difference between the SET scores of research-oriented and non-researchoriented faculty members.

Bell, Frecka, and Solomon (1993) argue that in order to be effective in the classroom, one must possess knowledge of what is going on outside the classroom. In theory, research is designed to provide professors with this type of outside knowledge. They further state that many of the skills necessary to be successful in research are required in the classroom. Hence, a third professor attribute to consider is whether or not the teacher is actively involved in research. This hypothesis has been echoed by numerous sources (Dyckman, 1989; Kaplan, 1989; and Kinney, 1989). The general conclusion is that there does exist a significant positive relationship between research and teaching effectiveness.

## B. Student Attributes

$\mathrm{H} 4_{0}$ : There is not a significant difference between the SET scores reported in MBA and undergraduate classes.

Hypothesizing whether MBA students rate higher or lower than undergraduates is not straightforward. Mulford and Schneider (1988) hypothesized that MBA students are more refined and constructive in their evaluations and that their standards are so much higher than those of undergraduates that professors will find it more difficult to appease them. McKeachie (1979), Mulford and Schneider (1988), and Sperry and Olds (1986) have all found a non-significant effect.

Exhibit 1. Student Evaluation Survey

Part I. Background Information
Q1 Year in School
Q2 Undergraduate Major
Q3 Undergraduate GPA
(Graduate Students ONLY)
Q4 Graduate GPA
Q5 Where is Undergraduate Degree From?
Q6 If Graduate, Number of Courses Taken

Part II. Descriptive Items on Professors
Twelve sets of items are listed below. Mark the box on the answer sheet that corresponds to the letter on the scale which best describes your feelings about the instructor for each of the 12 sets. Please indicate only one letter for each set.

Q7 Fair
Q8 Muddled Thinking
Q9 Irresponsible
Q10 Thoroughly Knowledgeable
Q11 Helpful
Q12 Unoriginal
Q13 Enthusiastic
Q14 Encourages Critical Thinking
Q15 Poor Listener
Q16 Humorless
Q17 Likes Teaching
Q18 Lacks Confidence

| A | B | C | D | E | F | G |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | B | C | D | E | F | G |
| A | B | C | D | E | F | G |
| A | B | C | D | E | F | G |
| A | B | C | D | E | F | G |
| A | B | C | D | E | F | G |
| A | B | C | D | E | F | G |

$\begin{array}{lllllll}\text { A } & \text { B } & \text { C } & \text { D } & \text { E } & F & G\end{array}$
A $\quad$ B $\quad$ C $\quad$ D $\quad \mathrm{E} \quad \mathrm{F} \quad \mathrm{G}$
A $\quad$ B $\quad$ C $\quad$ D $\quad$ E $\quad$ F $\quad$ G
A $\quad \mathrm{B} \quad \mathrm{C} \quad \mathrm{D} \quad \mathrm{E} \quad \mathrm{F} \quad \mathrm{G}$
A $\quad$ B $\quad$ C $\quad D \quad E \quad F \quad G$

Unfair
Clear Thinking
Responsible
Unknowledgeable
Not Helpful
Original
Unenthusiastic
Discourages
Critical Thinking
Good Listener
Humorous
Doesn't LikeTeaching
Highly Confident

Q19 In comparison to faculty members outside the College of Business Administration, how would you rate this professor?

| A | B | C | D | E | F | G |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| One of | Very | Below | Average | Above | Very | One of |
| The Worst | Poor | Average |  | Average | Good | the Best |

Q20 In comparison to faculty members within the College of Business Administration, how would you rate this professor?

| A | B | C | D | E | F | G |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| One of | Very | Below | Average | Above | Very | One of |
| the Worst | Poor | Average |  | Average | Good | the Best |

Part III. Descriptive Items Concerning the Course
Fourteen sets of items are listed below. Mark the box on the answer sheet that corresponds to the letter on the scale which best describes your feelings about the course for each of the 14 sets. Please indicate only one letter for each set.

| Q21 Standards Undemanding | A | B | C | D | E | F | G | Standards Extremely Demanding |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Q22 Course Materials Stimulating | A | B | C | D | E | F | G | Course Materials Boring |
| Q23 Course Materials Very Relevant | A | B | C | D | E | F | G | Course Materials Irrelevant |
| Q24 Written Assignments Valuable | A | B | C | D | E | F | G | Written Assignments of no Value |
| Q25 Magnitude of Work Very Heavy | A | B | C | D | E | F | G | Magnitude of Work Extrememly Light |
| Q26 Course is of High Value | A | B | C | D | E | F | G | Course is of Little Value |
| Q27 Course Content too |  |  |  |  |  |  |  | Course Content too |
| $\quad$ much for one term | A | B | C | D | E | F | G | little for one term |
| Q28 Syllabus Highly Useful | A | B | C | D | E | F | G | Syllabus of no use |
| Q29 Course Very Challenging | A | B | C | D | E | F | G | Course offered no Challenge |
| Q30 Teaching Methods Appropriate | A | B | C | D | E | F | G | Teaching Methods Highly Inappropriate |
| Q31 Course Objectives Clear | A | B | C | D | E | F | G | Course Objectives Unclear |
| Q32 Class Well Organized | A | B | C | D | E | F | G | Class Poorly Organized |
| Q33 Course Content Exceeded |  |  |  |  |  |  |  | Course Content Did |
| $\quad$ Expectations | A | B | C | D | E | F | G | Not Exceed Expectations |

Q34 All in all, how much do you feel you learned from this course?
A Great Deal $\quad$ A $\quad$ B $\quad$ C $\quad$ D $\quad$ E $\quad$ F $\quad$ G Nothing at All
$\mathrm{H} 5_{0}$ : There is not a significant difference between the SET scores reported by finance and non-finance majors.

The second student attribute is the distinction between finance majors and other business majors. Clearly the hypothesis here is that finance majors would evaluate professors in finance classes higher because the students are naturally more interested in the course (as indicated by the fact that they chose finance as their major). This notion dates back as early as Rayder (1968).
$\mathrm{H}_{0}$ : There is not a significant difference between the SET scores reported by students with varying GPAs.

It is human nature to take a liking towards those things that we do well. Therefore, there may be a positive relationship between the student's GPA (the thing they do well) and the level of their evaluations. Mulford and Schneider (1988) explain that students are willing to look past many negative attributes the instructor might possess as long as the outcome of the class (grade) is good.

## C. Course Attributes

H7 : There is not a significant difference between the SET scores reported in day and night classes.

Time of day has been recognized as a significant explanatory variable in numerous studies (Nichols and Soper, 1972; and Tennant and Lawrence, 1975). The literature in this area is not in complete congruency, however, as Mulford and Schneider (1988) and Sperry and Olds (1986) detect no significance. Their hypotheses are summarized as follows. Night classes tend to be less desirable because it is more difficult to pay attention at night (in many cases after working all day).

H 80 : There is not a significant difference between the SET scores reported in required and elective classes.

Most professors would agree that teaching upper level classes in their field is more enjoyable than teaching the principles and other introductory classes. It can be argued that upper-level classes are more rewarding because they are geared towards more specific subjects or sub-fields (which hopefully match the interests of both professors and students alike). Principles classes, on the other hand, are less enjoyable because all students independent of their major are required to take them. When students are required to take a class that they very much do not want to be in, they tend to be much less enthusiastic and much less willing/able to motivate themselves. This experience is usually less satisfying for both professors and students. In sum, our premise is that the more a student desires to be in the class, the higher will be their evaluation of the class. For this reason, we test for a
possible distinction in SET scores between a required class and an elective class. The empirical literature in this area is mixed (Wright, Whittington, and Whittenburg, 1984; and McKeachie, 1979). Gage (1961), for example, concluded that elective classes yielded higher ratings whereas Mulford and Schneider (1988) found no effect.

## III. Methodology

Before the hypotheses can be tested, several of the SET questions (21, 25, 27, and 29) must be re-scaled. Parasuraman, Zeithaml, and Berry (1988) in a discussion on service quality define all services as vector attributes. This simply means that the more of a service we get the more satisfied we are. For example, if customer service representatives respond more quickly to your complaints and solve your problem in less time, the more satisfied you would be. For these types of services, a scale from one to seven with seven being the best is sufficient to rate service quality.

Teas (1993) elucidates this notion by positing that more of an attribute is not necessarily better. For example, if you go to a restaurant and get friendly service, the more friendly the better, but only to a certain point. After you reach saturation, you may perceive the added service as intrusive and bothersome. Teas argues that for these attributes a seven-point scale from one to seven is misleading and will not capture the ideal level of desired service. This appears to be the case in the university's survey question number 27. The question asks the student if the course content is too much or too little for one quarter. Ideally, the answer would be that it is just right. The university, however, assigns professors a higher rating if the student responds that the course content is too much for one quarter. In this case, the ideal point should shift from the current level of seven down to the more appropriate level of four. The same argument/scale should be applied to questions 21, 25, and 29. To correct for this scaling error, we adjust the SET scores of questions $21,25,27$, and 29 by converting SET scores of 1 and 7 to 1,2 and 6 to 3,3 and 5 to 5 , and 4 to 7 .

Previous studies have examined various professor, student, and course attributes to determine how they affect SET scores in aggregate. This is problematic because SET questions do not all ask the same types of questions. For example, many of the questions are directed to assess the quality of the professor (professor characteristics), while others ask about the quality of the course (course characteristics). Because professor, student, and course attributes may affect groupings of SET questions differently, researchers who examine SET questions in aggregate are not able
to reach a definite conclusion concerning which attributes lead to higher SET scores.

The survey under examination asks 28 SET questions. To determine the number of factors or distinct groups to which these 28 questions belong, we perform a factor analysis. The results shown in Part A of Exhibit 2 indicate that there are four distinct factors. ${ }^{3}$ Moreover, these factors explain $69.8 \%$ of the overall variation in the model.

In Part B of Exhibit 2, factor loadings greater than 0.5 are shown. Several interesting results are observed. There are four significantly distinct factors or groups of SET questions. The first consists of questions 7-$11,13-15,17-20,28$, and 30-34. Since all these questions directly refer to specific professor characteristics, we label this factor, "professor characteristics." The second group of SET questions contains questions $21,25,27$, and 29 . Each of these refers to the amount of work required in the course. For this reason, this factor is titled, "course workload." The third factor consists of questions 12 and 16 and is labeled, "superfluous professor characteristics" because although these are definite characteristics of the professor, being humorous and original are not necessary to be a good teacher. ${ }^{4}$ The final factor is "course characteristics" consisting of questions 22-24, and 26.

Now that we have empirically shown that SET questions ask specific professor and course characteristics, we will examine the relationship between the eight professor, student, and course attributes (full-time versus part-time, tenured versus non-tenured, researched-oriented versus non-research-oriented, MBA versus undergraduate, finance major versus non-finance major, GPA, day versus night classes, and required class versus elective class) and the four SET factors or groups. In previous studies, these eight attributes have only been tested in reference to aggregate SET scores.

Because of the large number of variables present and since many of the relationships are non-recursive (two-way), an advanced statistical procedure known as LISREL (Linear Structural RELations) must be used to identify the various relationships among the
${ }^{3}$ Kreuze and Newell (1987) and Porcano (1984) also performed a factor analysis on SET variables and yielded many of the same factors that we find in the current study. This offers further evidence that the survey under current investigation is representative of that which is used in other institutions.
${ }^{4}$ Originality could be viewed as a necessary characteristic to be a successful. However, consider the professors who teach a principles class. The characteristic of humor being superfluous is a bit easier for us all to agree upon. Even if you do not accept these to be significantly different from the other professor characteristics in theory, the empirical analysis has shown them to be statistically significantly different. For these reasons, they are analyzed as separate professor characteristic groupings.
variables. LISREL is a statistical method that combines features of multiple regression, factor analysis, and path analysis to allow the examination of both observed and latent variables.

## IV. Results

Figure 1 shows a diagram of the relationships tested. The arrows represent directional paths that are significant at the 0.05 level. The results indicate that all professor, student, and course attributes significantly affect at least one of the four factors. Interestingly, when examining each attribute individually, the results reveal that many of the eight attributes affect the four factors differently; some are positively related, while others are negatively related. This is an extremely important finding because it explains how previous studies could reach different conclusions when testing SET scores in aggregate instead of by specific groupings or factors. That is, by combining the four factors together, the significantly positive and significantly negative relationships could cancel each other out causing the researcher to erroneously conclude that no significant relationship existed.
It would be cumbersome to discuss all 23 individually significant paths. For the sake of brevity, we highlight our findings and compare and contrast them to the findings of previous studies. First, for the three professor attributes, the results show that part-time teachers receive better evaluations than full-time teachers. The policy implication is that, barring AACSB minimum requirements, the university should not hesitate to seek working professionals to teach classes part-time. Results surrounding tenured faculty members is mixed. Finally, research-oriented professors score significantly higher in both professor characteristics categories, but significantly lower in the area of workload. That is, they are perceived by students to give too much or too little work in the course. Too much of a workload could be explained by the professors' opinion of how much "too much" is, based on the notion that researchers are quite driven. Too little work required in the course could be explained by the fact that researchers are very busy and the more work they give, the more they have to grade. Overall, the finding of higher SET scores is consistent with the extant literature.
The three student attributes are also different across the four factors. MBA students give more favorable scores on course characteristics, but are harsher on professor characteristics. This finding is consistent with our hypothesized relationship. Finance majors are almost completely indistinguishable from non-finance majors from a statistical point of view. This finding is in contrast

Exhibit 2. Factor Analysis For Survey Questions 7 Through 34

| Factor | Eigenvalue | Percentage of Explained Variation | Cumulative Percentage of Explained Variation |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 14.78 | 52.8\% |  | 52.8\% |  |
| 2 | 2.28 | 8.1\% |  | 60.9\% |  |
| 3 | 1.38 | 4.9\% |  | 65.8\% |  |
| 4 | 1.13 | 4.0\% |  | 69.8\% |  |
| Panel B. Average Answer of Each Question By Factor |  |  |  |  |  |
| Question |  | Factor 1 | Factor 2 | Factor 3 | Factor 4 |
| Q7 Fair |  | 0.63314 |  |  |  |
| Q8 Clear T | inking | 0.81685 |  |  |  |
| Q9 Respon |  | 0.92556 |  |  |  |
| Q10 Know | dgeable | 0.72377 |  |  |  |
| Q11 Helpfu |  | 0.82751 |  |  |  |
| Q13 Enthus |  | 0.76562 |  |  |  |
| Q14 Encou | ges Thinking | 0.57863 |  |  |  |
| Q15 Good | istener | 0.74407 |  |  |  |
| Q17 Likes | eaching | 0.89607 |  |  |  |
| Q18 Confid |  | 0.76926 |  |  |  |
| Q19 Univer | ity's Best | 0.91434 |  |  |  |
| Q20 Colleg | s Best | 0.91312 |  |  |  |
| Q28 Useful | Syllabus | 0.51559 |  |  |  |
| Q30 Appro | riate Methods | 0.73091 |  |  |  |
| Q31 Course | Objective | 0.62507 |  |  |  |
| Q32 Class | bjective | 0.75685 |  |  |  |
| Q33 Course | Content | 0.55919 |  |  |  |
| Q34 Amoun | Learned | 0.61808 |  |  |  |
| Q21 Stand | ds Demanding |  | 0.75963 |  |  |
| Q25 Heavy | Workload |  | 0.78140 |  |  |
| Q27 Conten | Too Much |  | 0.61752 |  |  |
| Q29 Course | Very Challenging |  | 0.77182 |  |  |
| Q12 Origina |  |  |  | 0.63298 |  |
| Q16 Humo |  |  |  | 0.74670 |  |
| Q22 Materi | Is Stimulating |  |  |  | 0.83163 |
| Q23 Materi | Is Relevant |  |  |  | 0.71374 |
| Q24 Assign | ents Valuable |  |  |  | 0.68297 |
| Q26 Course | of High Value |  |  |  | 0.74948 |

to what was expected. Finally, GPAs are significantly positively related to all but one group of SET scores. This is very much in line with previous findings.

The first course attribute, time of day the class was offered, also results in different SET scores across factors. Day classes are associated with higher course characteristic scores, but lower professor characteristic scores. Concerning required courses, students who must take the class do rate the course lower than in elective classes. This notion is consistent with previous works.
In addition to measuring the effect of the eight attributes on the four factors, LISREL also makes it
possible to examine the relationships, if any, amongst the four factors. This is an area that has been completely untouched by previous researchers. As expected, professor characteristics affect the scores that professors get in the areas of workload and course quality (factors 2 and 4, respectively). For example, "good" professors also tend to be "good" at keeping the workload at an appropriate level (factor 2) and making the course beneficial to the students (factor 4).

In addition to demonstrating the significant relationships amongst the variables, LISREL also allows the researcher to assess the model's overall fit. A summary of these measures are shown in Exhibit 3. ${ }^{5}$

Figure 1


In short, the robustness of this model lends further support for the results discussed above.

## V. Conclusions

This study examines 291 teaching evaluations to determine which professor, student, and course attributes contribute to high teaching evaluations. Several contributions are made to the literature. First, we show that some SET questions may have to be rescaled in order to avoid biasing results. Second, we use factor analysis to demonstrate that four significantly different groups of SET questions exist. Third, we use an advanced statistical procedure, LISREL, to identify that these distinct groups of questions, or factors, are affected differently by

[^2]professor, student, and course attributes. Previous studies have ignored this by aggregating SET scores, which have resulted in mixed and contradictory findings over time.
Overall results from testing the eight hypotheses reveal the following. Research oriented professors, part-time professors, MBA students, students with high GPAs, and elective classes yield higher SET scores. The results are mixed in the areas of time of day the class was offered, student major, and whether or not the professor is tenured.

Although the results are quite robust, we are quick to point out that these results were gathered from just one university, thus we should be careful to not necessarily generalize these results to universities across the country. However, we do show that the current survey instrument is representative of the typical SET instrument used around the country. Moreover, we show that

Exhibit 3. Significant t-Statistics and Goodness-of-Fit Measures for the Final LISREL Model

|  |  | Course Workload | Superfluous Professor Character | Course Character |
| :---: | :---: | :---: | :---: | :---: |
| Full-Time -4.7 |  | --- | -8.08 | --- |
| Tenured |  | --- | --- | -2.28 |
| Research-Oriented |  | -5.36 | 7.72 | --- |
| MBA Class - |  | 2.20 | --- | 3.22 |
| Finance Major |  | --- | -2.48 | --- |
| GPA |  | -2.68 | 5.72 | 4.51 |
| Day Class |  | --- | -6.32 | 2.81 |
| Required Course |  | --- | --- | -4.15 |
|  | Professor Character | Course Workload | Superfluous Professor Character | Course Character |
| Professor Character | --- | --- | --- | --- |
| Course Workload | 3.70 | --- | 2.57 | --- |
| Superfluous Professor Character | -8.66 | --- | --- | --- |
| Course Character | 13.56 | --- | --- | --- |
| Overall Model of Goodness-of-Fit Measures |  |  | Value |  |
| Chi-Square Value |  |  | 8.87 |  |
| Degrees of Freedon |  |  | 15 |  |
| p-Value |  |  | 0.884 |  |
| Chi-Square Value/DF |  |  | 0.591 |  |
| Goodness-of-Fit Index |  |  | 0.995 |  |
| Adjusted Goodness-of-Fit |  |  | 0.976 |  |
| Root Mean Square Residual |  |  | 0.031 |  |

previously used methods of examining the above discussed issues have been inadequate. Future research
efforts should be directed at testing the generalizability of these findings using the framework we have provided.

## References

Accounting Education Change Commission,1990, "AECC Urges Priority for Teaching in Higher Education," Issues in Accounting Education, 5 (No.2, Summer), 330-331.

Bell, Timothy B., Thomas J. Frecka, and Ira Solomon, 1993, "The Relation Between Research Productivity and teaching Effectiveness: Empirical Evidence for Accounting Educators," Accounting Horizons 7 (No. 4, December), 3349.

Brandenburg, D.C., J.A. Slinde, and E.E. Batista, 1977, "Student Ratings of Instruction: Validity and Normative Interpretations," Journal of Research in Higher Education, 7, 67-98.

Bures, Allen and Hsin-Min Tong, 1993, "Assessing Finance Faculty Evaluation Systems: A National Survey," Financial Practice and Education 3 (No. 2, Fall/Winter), 141-144.

Burnett, J., R. Amason, and P. Cunningham, 1989, "What Makes Marketing Academicians Successful? An Assessment of Teaching, Publishing, and Service," Journal of Marketing Education 11 (No. 1), 7-11

Deberg, C.L. and J.R. Wilson, 1990, "An Empirical Investigation of the Potential Confounding Variables in Student Evaluation of Teaching," Journal of Accounting Education 8, 37-62.

Dyckman, Thomas R., 1989, "Practice to Research—What Have You Done for Me Lately?" Accounting Horizons 3 (No. 1), 1-8.

Gage, N.L., 1961, "The Appraisal of College Teaching: An Analysis of Ends and Means," Journal of Higher Education, 17-22.

Higher Education Research Institute, 1992. "Freshman Interest in Business in Steep Decline," University of California at Los Angeles, 1.

Howell, William C. and L. Todd Johnson, 1982, "An Evaluation of Compressed-Course Format for Instruction in Accounting," The Accounting Review 57 (No. 2, April), 403-414.

Kaplan, Robert S., 1989, "Connecting the Research-TeachingPractice Triangle," Accounting Horizons 3 (No. 1, March), 129-132.

Kinney, William R., 1989, "The Relation of Accounting Research to Teaching and Practice: A 'Positive' View," Accounting Horizons 3 (No. 1, March), 119-124.

Kreuze, Jerry G. and Gale E. Newell, 1987, "Student Ratings of Accounting Instructors: A Search for important determinants," Journal of Accounting Education (Spring), 87-98.

Marsh, H.W., 1987, "Students’ Evaluations of University Teaching: Research Findings, Methodological Issues, and Directions for Future Research," Journal of Educational Research 11, 253-388.

McKeachie, W.J., 1979, "Student Ratings of Faculty: A Reprise," Academe (October), 384-397.

Mulford, C.W. and A. Schneider, 1988, "An Empirical Study of Structural and Controllable Factors Affecting Faculty Evaluations," Advances in Accounting 6, 205-215.

Nichols, A. and J.C. Soper, 1972, "Economic Man in the Classroom," Journal of Political Economy VOL? (No. ?, MONTH?), 1069-1073.

Parasuraman, A., Leonard L. Berry, and Valarie A. Ziethaml, 1988, "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality," Journal of Retailing 64 (No. 1, Spring), 12-40.

Porcano, T.M., 1984, "An Empirical Analysis of Some Factors Affecting Student Performance," Journal of Accounting Education (Fall), 111-125.

Rayder, N.F., 1968, "College Student Ratings of Instruction," Journal of Experimental Education (Winter), 76-81.

Schultz, J., J. Meade, and I. Khurana, 1989, "The Changing Roles of Teaching, Research, and Service in the Promotion and Tenure Decisions for Accounting Faculty," Issues in Accounting Education 4 (No. 1), 109-119.

Sperry, J.B. and P.R. Olds, 1986, "An Examination of Some Systematic Factors Which May Affect Teaching Evaluations," Collected Papers of the American Accounting Association's Southeastern Regional Meeting, 97-100.

Stout, D.E., E.H. Bonfield, and M.S. Battista, 1987, "Additional Experimental Evidence on the Relationship Between Class Meeting Time and Compression and Accounting Student Performance and Evaluations," Journal of Accounting Education 5 (No. 1), 339-348.

Teas, Kenneth R., 1993, "Expectations, Performance Evaluation and Customers' Perceptions of Quality," Journal of Marketing 57 (No. 4, October), 18-34.

Tennant, K. and C. Lawrence, 1975, "Teaching Strategies: Effects on Student Evaluations of Teachers," The Accounting Review (October), 899-904.

Tompkins, James G., Heather Hermanson, and Dana Hermanson, 1996, "Expectations and Resources Associated with New Finance Faculty Positions," Financial Practice and Education 6 (No. 1, Spring/Summer), 54-64.

Wright, P., R. Whittington, and G.E. Whittenburg, 1984, "Student Ratings of Teaching Effectiveness: What the Research Reveals," Journal of Accounting Education (Fall), 5-30.

Yunker, P. and J. Sterner, 1988, "A Survey of Faculty Performance Evaluation in Accounting," The Accounting Educators' Journal 26 (No. 1), 63-71.


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[^1]:    ${ }^{1}$ The university under study is a research institution that operates on a quarter system. We define full-time as tenuretrack or already tenured faculty members. A full-time course load is two classes per quarter for those who are deemed research-oriented and three courses per quarter for those who are not. A sliding scale is in place for faculty who fall somewhere between the ends of the spectrum. Like most institutions, research orientation is not a completely objective classification. It is based on a combination of both publication frequency and quality of the outlet journal. However, these classifications are clearly known to all professors because of the directly observable course load requirement of each faculty member. In this study, a very clear separation exists between research-oriented and non-research-oriented professors.
    ${ }^{2}$ Although doctoral students do teach exclusively on a parttime basis, a distinction is made between them and adjunct professors from the outside because it is reasonable that differences may exist between the two groups.

[^2]:    ${ }^{5}$ For the sake of brevity, we omit the lengthy discussion of and rules for assessing overall model fit.

