Student Evaluation Instruments: The Interactive Impact Of Course Requirement, Student Level, Department And Anticipated Grade

Jennifer Driscoll, Quinnipiac University, USA
David Cadden, Quinnipiac University, USA

ABSTRACT

The examination of Student Evaluation Instruments (SEI) has generated a considerable literature. Interestingly, this extensive literature provides no clear guidance on how to interpret SEI results in order to make comparative evaluations of instructors' performances. The research presented in this paper draws upon six semesters worth of SEI responses for all courses in our school of business – a database of nearly 30,000 responses. The paper examines how core measures of teaching effectiveness – student evaluation of instructor's teaching ability and willingness to recommend the instructor – are affected by several factors. These factors include: the department from which the course was offered; whether the course was required by the core, the department or was an elective; the status of the student and the anticipated grade. Statistical analyses are conducted to examine and determine the impact of these factors and their interactions. The goal is to develop a system that can more accurately gauge instructors' performances as measured by the student evaluation instrument.

INTRODUCTION

Increasingly, colleges and universities are under the expectation to prove excellence in teaching. The ability to demonstrate such excellence in teaching and learning is being driven by public demand and accrediting agencies. Most institutions of higher learning have developed systems for measuring teaching effectiveness. These systems include a variety of approaches that include evaluation of instructional design, monitoring course management, and instructional delivery. This last factor can be evaluated by means of peer review and student evaluations. Student evaluation of instruction is generally acquired through a standardized instrument. Taken together, these mechanisms play a critical role in the academic life since they are crucial in the promotion and tenure processes. Seldin (1993) argued that student evaluation instruments (SEI) are the dominant factor used by administrators when they evaluate teaching effectiveness. Becker and Watts (1999) have argued that the measurement derived from SEIs contributed 50% to 60% of the overall evaluation of teaching effectiveness. Hobson and Talbot (2001) and Richardson (2005) have stated that universities use SEIs as their primary method for evaluating teaching effectiveness. Comm and Matthasiel (1998) found that 94% of business schools responding to a survey use SEIs as one means of evaluation instruction. This high proportion may be due to an assessment requirement of AACSB (1994).

LITERATURE REVIEW

Importance

Given their importance, it is not terribly surprising that the study of Student Evaluation Instruments has engendered a huge literature. Cashin (1995) stated that there were over 1,500 books and articles on SEIs. Wilson (1998) reported that since their first use, there have been over 2, 000 articles on this subject. Al-Issa and Sulieman

(2007) found 2,988 articles on SEIs published between 1990 and 2005. Therefore, it is not surprising that this method of evaluating teaching performance has gained widespread use in most universities and colleges (Hobson & Talbot, 2001; Richardson, 2005) and is often the primary method used to evaluate classroom teaching performance (Yunker & Sterner, 1988). Comm and Mathaisel (1998) indicate that almost all AACSB accredited business schools responding to a survey use Student Evaluation Instruments as an element in determining teaching effectiveness.

Validity

Much of the SEI literature examines the validity of the SEI as a tool to assess teaching effectiveness (Clayson and Sheffet 2006; Glynn et al. 2006; Green et al. 1998; Soper 1973; Rodin and Rodin 1973; Sopher 1973; Morgan et al. 2003). Several studies tend to support the validity of SEIs (Aleamoni, 1999; Wachtel, 1998). However, there still exist serious questions as to whether SEIs should be used as a primary measure of teaching effectiveness. Also, there is the question of whether students are in a position to accurately evaluate the teaching capabilities of their professors. Some argue that students cannot evaluate [Caskin (1983); Selden (1984), Newton (1988); Bures, DeRidder and Tong (1990); and Richer (1996)].

That argument was predicated on students' inability to distinguish between attitudes toward the instructor and the instructor's actual effectiveness as a teacher. Clayson and Sheffet (2006) presented evidence of a strong relationship between students' perception of the instructor's personality and their evaluation of instructional effectiveness in marketing and business core courses. It was found [Aigner and Thum (1986)] that instructor's enthusiasm, along with other factors, exhibited significantly positive influences on an instructor's rating. Williams and Ceci (1997) found that SEI ratings are significantly influenced by instructors' personality factors. Clayson (1999) presented evidence that the majority of variance in SEI results were attributable to personality. Not all authors [Centra (1993) and Braskamp et. al. (1944)] agree with the notion that personality is a major determinant of SEI results.

Demographic factors have been included in many of the studies. Race and gender of instructors have also been investigated as possible factors. Smith and Anderson's (2005) study of female Hispanic faculty found that they received much lower scores on their SEIs than their Anglo counterparts.

Many researchers [Leslie, Kellams & Gunne (1982); Gappa (1984); and Bruno (2003)] examined the employment status of the instructor and found that full-time faculty members generally received higher scores than part-time faculty.

Other researchers have looked at the impact of course workload on SEIs. Not surprisingly, several studies (Stapelton et al., 2001, and Paswan and Young, 2002) clearly indicated a negative relationship between increased course demands (materials, workload, and homework) and the results of student evaluations of their instructors. Course demands (as measured by hours per week required outside of class) were found by Aigner and Thum (1986) to have a significant negative impact.

Course Type

For the purpose of this research, it is important to review research on the role that the course type plays on evaluations. Current research has shown a relationship between the student's reason for taking the course (requirement for the school core, requirement for the major, or an elective) and the student's perception of the professor. Elective courses are rated higher than non-elective courses (Marsh, 1987; Feldman, 1978). Required courses outside the student's major receive the lowest ratings (Marsh, 1987; Feldman, 1978). Boex (2000) identified that student-instructor interaction had a significantly positive impact on effectiveness ratings in core-level courses, but not for non-core level courses.

Methodology Criticisms

The significant portion of the SEI literature has also been criticized for being methodologically flawed. Among several methodological problems identified by Marsh (1987) in this type of research were implying

causation from correlation, use of an inappropriate unit of analysis, and not properly accounting for the multivariate nature of SEIs and potential biases.

All of these varied factors support the issue that SEIs should not be the sole basis for evaluation. Green et al. (1998) recommend that accounting departments should reevaluate their SEIs to remove items that students cannot assess. Further, they note that SEIs should be designed to capture data on course materials and curriculum design/course development, as well as other relevant dimensions of effective teaching.

METHOD

Student Evaluation Instrument

As part of the Quinnipiac School of Business' quest for AACSB 15 years ago, we initiated an assessment program. Part of that program involved the development and use of a student evaluation instrument. The instrument has 21 close ended and two open-ended questions (provided in Appendix 1). In order to assure anonymity, no demographic questions, other than the student's status (*freshman, sophomore, junior, senior or graduate student*), are collected. Data are also collected on the categorization of the course: *a business core, a major's core, or an elective.* We also inquire the extent to which the student is keeping up with materials for the course and the expectation of their grade. The remaining 17 close ended questions focus on the student's perception of particular aspects of the course and their instructor's teaching ability. These questions are scored on a 5-point Likert-scale. Two items - students' evaluation of the instructor's *Teaching Ability* and whether the student would *Recommend* this instructor to a friend - are of particular importance during the evaluation process. This paper will singularly focus on the *Teaching Ability* score. This question is coded such that the more favorable the evaluation of the instructor's teaching ability, the *higher* the score (1-Poor~5-Excellent).

Sample

We examined data collected from our Student Evaluation Instrument for six semesters (three years) for the entire School of Business. The results yielded nearly 30,000 useable responses across all business majors.

Our examination centered on two questions from our University's School of Business SEI - the students' evaluation of the instructor's *Teaching Ability* and whether the student would R*ecommend* this instructor to a friend. At our institution, when evaluating a faculty member for continued employment, promotion and tenure, these two items take precedence in terms of importance.

RESULTS

Total Sample

Table 1 provides the number of observations, mean score, and standard deviation for the total sample by semester for the two Likert-scale questions of highest importance in our promotion and tenure process, *Teaching Ability* and *Recommendation.*

It should be noted that our evaluation instrument codes the courses by department; however, there are three sets of courses – Health Management, Business Law and Quantitative Methods – that are coded separately. We did not include these courses in our study since the instructors were not evaluated within the normal context of a departmental review. These three represent approximately 4% of the total sample. Table 3 provides percent of total observations for the six semesters analyzed.

Comparison Measure

In Tables 2 and 3, we provide the mean score for *Teaching Ability* and *Recommendation*, respectively, for each semester by department. The last row in each table, School of Business, represents the number of courses given this designation. It includes our cornerstone and capstone courses along with several one credit courses. Faculty members from different departments teach these courses. Scores from these courses are included in their

evaluations; therefore, we have included them in our analysis. Data were not collected for these courses during the Fall 2002 semester.

Table 1: Teaching Ability and Recommendation Scores by Semester

	Teaching Ability			Recommend Teacher		
	Count	Mean	Std. Dev.	Count	Mean	Std. Dev.
Fall 2002	4,312	3.91	1.07	4,199	1.88	1.14
Spring 2003	4,605	3.84	1.10	4,499	1.94	1.16
Fall 2003	5,348	3.88	1.08	5,224	1.93	1.16
Spring 2004	5,395	3.91	1.04	5,287	1.90	1.11
Fall 2004	5,212	3.78	1.16	4,848	1.95	1.15
Spring 2005	4,724	3.96	1.05	4,612	1.88	1.13
Overall	29,596	3.88	1.09	28,660	1.91	1.14

Table 2: Mean Scores for Teaching Ability by Semester and by Department

	F2002	S2003	F2003	S2004	F2004	S2005
Accounting	4.00	3.94	3.74	3.89	3.90	4.11
CIS	4.11	3.87	4.11	4.18	4.14	4.14
Economics	4.04	3.93	4.09	4.10	4.02	3.92
Finance	3.43	3.66	3.67	3.97	3.60	3.86
IB	3.69	3.79	3.95	3.73	3.84	3.50
Management	3.83	3.66	3.63	3.96	3.86	4.02
Marketing	3.99	3.88	4.22	4.14	4.06	4.13
School of Business		3.58	3.55	3.39	2.82	3.86

Table 3: Mean Scores for Recommendation by Semester and by Department

	F2002	S2003	F2003	S2004	F2004	S2005
Accounting	1.76	1.73	1.96	1.89	2.00	1.74
CIS	1.60	1.85	1.63	1.65	1.69	1.74
Economics	1.79	1.93	1.77	1.69	1.82	1.92
Finance	2.30	2.21	2.17	1.82	2.20	1.95
IB	2.16	2.03	1.92	2.10	1.99	2.32
Management	1.86	2.02	2.08	1.78	1.90	1.84
Marketing	1.94	2.01	1.59	1.73	1.85	1.68
School of Business		2.21	2.37	2.48	2.42	2.10

Obviously, use of a global standard would be preferable and easier, given the uniformity it would provide. However, the statistical differences between departments on both measures would bring into question the validity and, more importantly, fairness of using a single global measure. The same would be true if we found differences amongst the rank of the students (*freshmen, sophomores, juniors, seniors and graduate students)* or the nature of the course requirement (*core requirement, requirement for major* or *elective*). It would also be critical to identify if the students' anticipated grade might influence the outcomes on both measures. To address the question of whether there were significant variations, we conducted a Generalized Linear ANOVA test using SPSS. The results for the *Teaching Ability* measure are presented in Table 4, while the results for *Recommendation* measure are presented in Table 5.

Table 4: Results for GLM on Teaching Ability

Effect	Sum of Squares	Df	Mean Square	F	Significance
Corrected Model	5780.79	722	8.01	7.96	>.001
Intercept	4313.87	1	4313.87	4290.13	>.001
Department	30.12	11	2.78	2.72	.002
Ranking	6.94	4	1.74	1.73	.141
Requirement	31.95	4	7.99	7.94	>.001
Grade	52.28	4	13.07	13.00	>.001
Department * Ranking	97.94	39	2.51	2.50	>.001
Department * Requirement	62.45	39	1.60	1.59	.011
Department * Grade	76.46	43	1.78	1.77	.001
Ranking * Requirement	38.59	16	2.41	2.40	.001
Ranking * Grade	14.10	16	.88	.88	.597
Requirement * Grade	19.06	16	1.19	1.19	.271
Department * Ranking * Requirement	148.52	107	1.38	1.38	.006
Department * Ranking * Grade	129.81	120	1.08	1.08	.270
Department * Requirement * Grade	114.00	92	1.24	1.23	.065
Ranking * Requirement * Grade	68.52	46	1.49	1.48	.019
Department * Ranking * Requirement * Grade	150.78	147	1.03	.02	.417
Error	28788.48	28630	1.01		
Total	476138.00	29353			
Corrected Total	34569.26	29352			

Table 5: Results for GLM on Recommendation

Effect	Sum of Squares	df	Mean Square	F	Significance
Corrected Model	5777.39	683	8.46	7.53	>.001
Intercept	1281.82	1	1281.82	1140.75	>.001
Department	37.10	11	3.37	3.00	.001
Ranking	6.06	4	1.52	1.35	.249
Requirement	5.54	4	1.38	1.23	.295
Grade	92.06	4	23.01	20.48	>.001
Department * Ranking	80.53	39	2.07	1.84	.001
Department * Requirement	73.25	39	1.88	1.67	.005
Department * Grade	100.63	42	2.40	2.13	>.001
Ranking * Requirement	22.16	16	1.39	1.23	.233
Ranking * Grade	15.89	16	.99	.88	.589
Requirement * Grade	24.68	16	1.54	1.37	.145

Table 5: Results for GLM on Recommendation (continued)

Effect	Sum of Squares	df	Mean Square	F	Significance
Department * Ranking * Requirement	165.95	104	1.60	1.42	.003
Department * Ranking * Grade	156.79	131	1.39	1.24	.046
Department * Requirement * Grade	131.57	82	1.61	1.43	.007
Ranking * Requirement * Grade	62.40	43	1.45	1.29	.095
Department * Ranking * Requirement * Grade	149.62	136	1.10	.98	.553
Error	31147.94	27720	1.24		
Total	141079.00	28404			
Corrected Total	36925.33	28403			

The results indicate that the *Teaching Ability* measure is significantly influenced by the department that offers the course, course's requirement, and by the students' anticipated grades. Taken individually, it would appear that the student ranking is not significant. The results further indicate that the *Recommendation* measure is significantly influenced by the department that offers the course and by the students' anticipated grades. It would appear that neither the student ranking nor the nature of the course's requirement are statistically significant.

The interaction effects also appear to be influenced heavily by what department the course was offered. These results provide strong evidence that a school-wide measure would be inappropriate.

CONCLUSIONS

Particular attention should be given to the standard by which to measure performance. Our research findings indicate that there are significant differences across departments. As a result, for promotion and tenure decisions, consideration should be given to the use of department measures in evaluations rather than a universal measure, such as the overall school mean. Prior studies primarily focused on the SEIs instrument without analysis of the appropriate measurement standard.

This research provides empirical data to support the use of a more appropriate standard to adequately assess teaching effectiveness. The measurement standard (*overall school versus department)* must be considered in the evaluation process. In this way, the SEI evaluation process can more accurately appraise teaching ability. It is safe to say that student evaluation instruments will remain in use; however, how the standard by which they are measured may change as a result of considerations presented in this research.

FUTURE RESEARCH

Although this research did not explore beyond the measurement standard, the data we collected allows us to investigate a variety of factors in future research. The existing literature appears to indicate that the requirement status of the course, and where it falls in the curriculum, impacts a student's perception and resulting evaluation of the instructor. Since course requirement status appears to impact ratings, consideration must be given to this mitigating factor when evaluating a faculty member.

With respect to the students' anticipated grades and their evaluations of the instructor's teaching, our future research could confirm prior research (Nelson and Lynch 1984; Mehdizadeh 1990; Stratton et al 1994; Isley and

Singh 2005; McPherson 2006) where lower evaluations resulted from lower anticipated grades and higher anticipated grades resulted in higher teaching evaluations.

AUTHOR INFORMATION

Prof. Jennifer M. Driscoll is Assistant Dean of the School of Business at Quinnipiac University. She has been involved in AACSB Accreditation and review and works closely with department Chairs on assessment and evaluation measures. In addition, she teaches courses in business communications on the graduate and undergraduate level. She received her doctorate from the University of Wisconsin-Milwaukee and her undergraduate degree from Vassar College.

Prof. David Cadden has taught at Quinnipiac University for twenty-six years. A member of the Management Department he holds a doctorate degree from Baruch College at the City University of New York. He received his undergraduate degree and a Masters from the Polytechnic Institute of New York. During his tenure at Quinnipiac he has held the following positions: Chair of the Management Department, Director of AACSB Accreditation, Coordinator of the Strategic Integrated Management Seminar, and Chair of the Continuous Quality Improvement Team.

REFERENCES

1. Aigner, Dennis J., and Frederick D. Thum. 1986. On student evaluation of teaching ability. *Journal of Economic Education* 17 (4): 243-265.
2. Aleamoni, L.M. 1999. Student rating myths versus research facts from 1924 to 1998. *Journal of Personnel Evaluation in Education*, 13 (2), 153-166.
3. Al-Issa, A. & Sulieman, H.2007 Student evaluations of teaching: perceptions and biasing factors. *Quality Assurance in Education*, 15 (3), 302-317.
4. Badri, Masood A., Mohammed Abdulla, Mohammed A. Kamali and Hamzeh Dodeen. 2006. Identifying potential biasing variables in student evaluation of teaching in a newly accredited business program in the UAE. *The International Journal of Educational Management* 20 (1): 43-60.
5. Blackwell, Lloyd J. 1983. A statistical interpretation of student evaluation feedback: A comment. *Journal of Economic Education* 14 (3): 28-31.
6. Boex, L.F. Jameson. 2000. Attributes of effective economics instructors: An analysis of student evaluations. *Journal of Economic Education* 31 (3): 211-227.
7. Brightman, Harvey J., Merwy L. Elliot, and Yezdi Bhada. 1993. Increasing the effectiveness of student evaluation of instructor data through a factor score comparative report. *Decision Sciences* 24 (1): 192-199.
8. Campbell, Heather E., Gredes, Karen; Steiner, Sue. 2005. What's looks got to do with it? Instructor appearance and student evaluations of teaching. *Journal of Policy Analysis and Management*, 24(3): 611-620. Retrieved February 10, 2008, from ABI/INFORM Global database. (Document ID: 857258371).
9. Clayson, Dennis E., and Mary Jane Sheffet. 2006. Personality and the student evaluation of teaching. *Journal of Marketing Education* 28 (2): 149-160.
10. Comm, C.L., and Mathaisel, D. 1998. Evaluating teaching effectiveness in America's business schools: implications for service marketers. *Journal of Professional Services Marketing* 16 (2): 163-170.
11. Dee, Kay C., 2007. Student Perceptions of High Course Workloads are Not Associated with Poor Student Evaluations of Instructor Performance. *Journal of Engineering Education*, 96(1): 69-78.
12. Drago, William and Jimmy Peltier. 2004. The effects of class size on effectiveness of online courses. *Management Research News* 27 (10): 27-36.
13. Feldman, K.A. 1984. Class size and college students' evaluations of teachers and courses: a closer look. *Research in Higher Education* 21 (1): 45-116.
14. Feldman, K.A. 1978. Course characteristics and variability among college students in rating their teachers and courses: A review and analysis. *Research in Higher Education* 9: 199-242.
15. Feldman, K.A. 1978. Course characteristics and college students' ratings of their teachers and courses. *Research in Higher Education* 9: 199-242.
16. Glynn, Joseph G., Paul L. Sauer, and Gregory R. Wood. 2006. Dimensionality of a student evaluation of teaching scale: A ten year review. *Academy of Educational Leadership Journal* 10 (2): 45-53.

17. Gramlich, Edward M., and Glen A. Greenlee. 1993. Measuring teaching performance. *Journal of Economic Education* 24 (1): 3-13.
18. Green, Brian P., Thomas G. Calderon, and Barbara P. Reider. 1998. A content analysis of teaching evaluation instruments used in accounting departments. *Issues in Accounting Education* 13 (1): 15-30.
19. Hammermesh, D.S., & Parker, A.M. 2003, July. Beauty in the classroom: Professors' pulchritude and putative pedagogical productivity. Unpublished paper, University of Texas at Austin. Forthcoming, *Economics of Educational Review*.
20. Hill, Mary C. 1998. Class size and student performance in introductory accounting courses: Further evidence. *Issues in Accounting Education* 13 (1): 47-64.
21. Isely, Paul and Harin Singh. 2005. Do higher grades lead to favorable student evaluations? *Journal of Economic Education* 36 (1): 29-42.
22. Hobson, S. M., & Talbot, D. M. 2001. "Understanding student evaluations." *College Teaching*, 49(1): 26-31.
23. Holmes, Linda E., and Lois J. Smith. 2003. Student evaluations of faculty grading methods. *Journal of Education for Business* 78 (6): 318-323.
24. Isely, Paul., & Singh, Harinder. (2005). Do Higher Grades Lead to Favorable Student Evaluations? *Journal of Economic Education*, 36(1): 29-42.
25. Kanagaretnam, Kiridaran, Robert Mathieu and Alex Thevaranjan. 2003. An economic analysis of the use of student evaluations: Implications for universities. *Managerial and Decision Economics* 24 (1): 1-13.
26. Kau, J. and Rubin, P. 1976 Measurement Techniques, Grades and rating Instructors. *Journal of Economic Education*: 59-62.
27. Kulik, A. 2001, Spring. Student ratings: Validity, utility, and controversy. *New Directions for Institutional Research* 109: 9-25.
28. Lawson, Luther D. 2005. The correlation between teaching attributes and the instructor's rating. *Journal of Economics and Economic Education Research* 6 (3): 93-103.
29. Liaw, Shu-Hui and Kim-Leng Goh. 2003. Evidence and control of biases in student evaluations of teaching. *The International Journal of Educational Management* 17 (1): 37-43.
30. Marsh, H.W. 1987. Students' evaluations of university teaching: Research findings, methodological issues, and directions for future research. *International Journal of Educational Research* 11(Whole Issue No. 3).
31. March, H.W. 1984. Students' evaluations of university teaching: Dimensionality, reliability, and validity, potential biases, and utility. *Journal of Educational Psychology* 76: 255-379.
32. McPherson, Michael A. 2006. Determinants of how students evaluate teachers. *Journal of Economic Education* 37(1): 3-21.
33. Mehdizadeh, Mostafa, 1990. Loglinear models and student course evaluations. *Journal of Economic Education* 21 (1): 7-21.
34. Morgan, Donald A., John Sneed and Laurie Swinney. 2003. Are student evaluations a valid measure of teaching effectiveness: Perceptions of accounting faculty members and administrators. *Management Research News* 26 (7): 17-32.
35. Mulford, C., and Schneider, A. 1988. An Empirical Study of Structural and Controllable Factors Affecting Faculty Evaluations. *Advances in Accounting*, 205-215.
36. Nelson, Jon P., and Kathleen A. Lynch. 1984. Grade inflation, real income, simultaneity, and teaching evaluations. *Journal of Economic Education* 14 (1): 21-37.
37. Paswan, Audhesh, K., Young, Joyce A . 2002. Student evaluation of instructor: A nomological investigation using structural equation modeling. *Journal of Marketing Education* 24(3): 193-202.
38. Richardson, J. T. E. 2005. Instruments for obtaining student feedback: A review of the literature. *Assessment & Evaluation in Higher Education* 30(4): 387-415.
39. Seiler, Vicky L., and Michael J. Seiler. 2002. Professors who make the grade. *Review of Business* 23 (2): 39-44.
40. Seldin, P. 1993. The use and abuse of student ratings of professors. *Chronicle of Higher Education* 39: A40.
41. Shmanske, Stephen, 1988. On the measurement of teacher effectiveness. *Journal of Economic Education* 19 (4): 307-314.

42. Shu-Hui Liaw, Kim-Leng Goh. 2003. Evidence and control of biases in student evaluations of teaching. *The International Journal of Educational Management* 17(1): 37-43. Retrieved February 10, 2008, from ABI/INFORM Global database. (Document ID: 291990071).
43. Simpson, Penny M., and Judy A. Siguaw. 2000. Student evaluations of teaching: An exploratory study of faculty response. *Journal of Marketing Education* 22 (3): 199-213.
44. Smith, Bettye P. 2007. Student ratings of teaching effectiveness: an analysis of end-of-course faculty evaluations. *College Student Journal* 41(4): 788-800. Retrieved February 10, 2008, from ProQuest Psychology Journals database. (Document ID: 1408086101).
45. Smith, G. & Anderson, K.J. 2005. Students' ratings of professors: The teaching style contingency for Latino/a professors. *Journal of Latinos and Education* 4(2): 115-136.
46. Soper, John C., 1973. Soft research: Student evaluations reconsidered. *Journal of Economic Education* 5 (1): 22-26.
47. Stapelton, Richard J., and Gene Murison. 2001. Optimizing the fairness of student evaluations: A study of correlations between instructor excellence, study production, learning production, and expected grades. *Journal of Management Education* 25 (3): 269-291.
48. Stratton, Richard W., Steven C. Myers, and Randall H. King. 1994. Faculty Behavior, grades, and student evaluations. *Journal of Economic Education* 25 (1): 5-15.
49. Thomas, Jennifer D. E. 2003. A rubric for the evaluation of interactive multimedia and the impact of instruction on students' evaluations. *The Journal of Computer Information Systems* 43 (4): 32- 40.
50. Wright, P., Whittenton, R. and Whittenburg, G. 1984
51. Watchtel, H.K. 1998. Student evaluation of college teaching effectiveness: A brief review. *Assessment and Evaluation in Higher Education* 23(2): 191-211.
52. Wilson, R. 1998, January 16. New research casts doubt on value of student evaluations of professors. *The Chronicle of Higher Education*: A12.
53. Wilson, R. 1998. New research casts doubt on value of student evaluations of professors. *The Chronicle of Higher Education* 44 (19): 12-15.
54. Young, Phillip, Dane A. Delli and Leroy Johnson. 1999. Student evaluation of faculty: Effects of purpose on pattern. *Journal of Personnel Evaluation in Education* 13 (2): 179-190.
55. Yunker, Penelope J., and James A. Yunker. 2003. Are student evaluations of teaching valid? Evidence form an analytical business course. *Journal of Education for Business* 78(6): 313-317.

APPENDIX 1

You are a:	Freshman	Sophomore	Junior	Senior	Graduate Student
Is this course:	Required for Core	Required for Major	Elective		
Rate the instructor's teaching ability in this class	Poor	Fair	Good	Very Good	Excellent
How are you doing in keeping up with assignments and readings – Percent complete:	0-20%	21-40%	41-60%	61-80%	81-100%
Expected Grade:	A	B	C	D	F
I have become more competent in this area due to this course.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
I have increased my overall knowledge of the subject matter.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
I feel challenged intellectually by this course.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
The instructor presents the material too rapidly.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
The instructor gives assignments are too difficult.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
The instructor is available to provide extra help.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
The instructor provides clear answers to the student questions.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
The instructor encourages class discussion.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
The instructor brings current ideas to the classroom.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
The instructor has the course well organized.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
The instructor summarizes main points and provides emphasis on material.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
The instructor relates course concepts in systematic fashion.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
The instructor seems to enjoy teaching.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
The instructor is friendly and considerate to students.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
The instructor is enthusiastic about the course material.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5
I would recommend taking another course with this instructor to a friend.	Strongly Agree 1	Agree 2	Neither 3	Disagree 4	Strongly Disagree 5