Volume 8, Number 1 **ISSN 1095-6328**

ACADEMY OF EDUCATIONAL LEADERSHIP JOURNAL

An official Journal of the

Allied Academies, Inc.

Michael Shurden and Royce Caines
Editors
Lander University

The Allied Academies, Inc., is a non-profit association of scholars, whose purpose is to support and encourage research and the sharing and exchange of ideas and insights throughout the world. Academy information is published on the Allied Academies web page at www.alliedacademies.org.

Whitney Press, Inc.

Printed by Whitney Press, Inc.
PO Box 1064, Cullowhee, NC 28723
www.whitneypress.com

The *Academy of Educational Leadership Journal* is owned and published by the Allied Academies, Inc., PO Box 2689, 145 Travis Road, Cullowhee, NC 28723, (828) 293-9151, FAX (828) 293-9407. Those interested in subscribing to the *Journal,* advertising in the *Journal,* submitting manuscripts to the *Journal*, or otherwise communicating with the *Journal*, should contact the Executive Director at info@alliedacademies.org.

ACADEMY OF EDUCATIONAL LEADERSHIP JOURNAL

CONTENTS

LETTER FROM THE EDITORS v

THE RELATIONSHIP BETWEEN PART-TIME INSTRUCTORS AND FINAL GRADES IN THE PRINCIPLES OF BUSINESS STATISTICS COURSE 1
Rob H. Kamery, Christian Brothers University
Lynn P. Kugele, Christian Brothers University
Roy H. Williams, Christian Brothers University

INSIGHTS TO TEACHING GENERATIONS X AND Y BUSINESS STUDENTS 11
Carol L. Bruneau, The University of Montana
MaryEllen Campbell, The University of Montana

SURPRISING STUDENT CHOICES OF TRADITIONAL VS. NONTRADITIONAL LEARNING APPROACHES IN AN UNDERGRADUATE ORGANIZATIONAL BEHAVIOR COURSE 23
Mel E. Schnake,Valdosta State University
Michael P. Dumler, Illinois State University
Bill Fredenberger, Valdosta State University
Sherry Schnake, St. Mary of the Woods College

JOB SATISFACTION OF MALE AND FEMALE ACCOUNTING FACULTY: THE EFFECT OF SEX-ROLE ORIENTATION AND ACADEMIC RANK 35
Suzanne Pinac Ward, University of Louisiana at Lafayette
Ellen D. Cook, University of Louisiana at Lafayette
Dan R. Ward, University of Louisiana at Lafayette

MOTIVATIONAL ORIENTATION, SELF-REGULATED
LEARNING STRATEGIES AND
STUDENTS' CHOICE OF TEACHING MODEL 59
Louis F. Jourdan, Jr., Clayton College & State University
James J. Bagwell, Clayton College & State University
George W. Crawford, Clayton College & State University

PREPARING STUDENTS FOR COLLABORATIVE
WORK OR CASE STUDIES:
AN ANTICIPATORY CASE 73
Cheryl A. McConnell, Rockhurst University
Laura Fitzpatrick, Rockhurst University

THE BASIC UNDERGRADUATE POM COURSE:
FACULTY OPINIONS OF DESIRED COURSE CONTENT
AND THE ADEQUACY OF EXISTING TEXTBOOKS 93
Earl Z. Damewood, Marshall University
Joseph Abramson, Marshall University
W. Blaker Bolling, Marshall University

THE FACULTY PERSPECTIVE ON THE
IMPACT OF AACSB ACCREDITATION 111
Wayne A. Roberts, Jr., Southern Utah University
Roy Johnson, Southern Utah University
John Groesbeck, Southern Utah University

LETTER FROM THE EDITORS

Welcome to the *Academy of Educational Leadership Journal.* The *AELJ* is owned and published by the Allied Academies, Inc., a non profit association of scholars whose purpose is to encourage and support the advancement and exchange of knowledge, understanding and teaching throughout the world. The *AELJ* is a principal vehicle for achieving the objectives of the organization. The editorial mission of this journal is to publish empirical, theoretical and scholarly manuscripts which advance the discipline, and applied, educational and pedagogic papers of practical value to practitioners and educators. We look forward to a long and successful career in publishing articles which will be of value to many scholars around the world.

The articles contained in this volume have been double blind refereed. The acceptance rate for manuscripts in this issue, 25%, conforms to our editorial policies.

We intend to foster a supportive, mentoring effort on the part of the referees which will result in encouraging and supporting writers. We welcome different viewpoints because in differences we find learning; in differences we develop understanding; in differences we gain knowledge and in differences we develop the discipline into a more comprehensive, less esoteric, and dynamic metier.

Information about the organization, its journals, and conferences are published on our web site. In addition, we keep the web site updated with the latest activities of the organization. Please visit our site and know that we welcome hearing from you at any time.

Royce Caines and Michael Shurden
Editors
Lander University

Manuscripts

THE RELATIONSHIP BETWEEN PART-TIME INSTRUCTORS AND FINAL GRADES IN THE PRINCIPLES OF BUSINESS STATISTICS COURSE

Rob H. Kamery, Christian Brothers University
Lynn P. Kugele, Christian Brothers University
Roy H. Williams, Christian Brothers University

ABSTRACT

This paper analyzes the relationship between part-time instructors and final course grades received by students in the principles of business statistics course in a comprehensive IIA university. The only type of part-time instruction employed at the university was adjunct faculty. It was found that part-time instructors, on average, assign higher grades than do full-time instructors. With the use of a multiple linear regression equation in which the response variable is the grade assigned to the students, the explanatory variable, instructor status--i.e., full-time or part-time--is statistically significant at a 0.05 level (p-value = 0.011). However, the explanatory variable, GPA, is most closely related to the students' grade with a p-value of 0.0000001. In addition, the students' age is statistically significant at an alpha level of 0.01. The overall model yielded an adjusted R-Square value of 0.6427, that is, approximately 64% of a student's grade is accounted for by the explanatory variables which included the student's age, cumulative grade point average, and whether the instructor is a full-time or part-time faculty.

INTRODUCTION

The increasing use of part-time instructors at both community colleges and at four-year institutions has been well chronicled in several educational publications (Bolge, 1995; Leslie, 1998 & Sonner, 2000). The Chronicle of Higher Education reported from a survey of the National Center for Education Statistics, "The proportion of adjuncts has doubled over the past 25 years, to more than 40% of all faculty members. At community colleges, 64% of faculty hold part-time posts, compared with 29% of the faculty members at four-year institutions" (Leatherman, 1997).

Reasons offered for the increasing utilization of part-time instructors include: 1) The budgetary constraint facing numerous educational institutions. In the face of such constraint, colleges and universities save money by employing more part-time instructors. Part-time faculty

can usually be terminated with much less difficulty than full-time instructors, giving universities flexibilities when enrollments decline or the university is facing other financial exigencies. 2) The increasing number of academic program offerings. In an effort to recruit more students, many colleges and universities have increased their offerings to include more Saturday and evening program courses. Additionally, satellite campuses and convenient electronic offerings via the Internet and other distance learning methods have increased. 3) A shortage of full-time qualified faculty. University enrollments have increased and projections are that the next ten to fifteen years will see an even greater number of students applying to colleges and universities as the more recent baby boom population attains college age (DeBarros, 2003). Even with new modes of instruction, the demand for faculty should increase to meet the rising student enrollment. If full-time faculty is unavailable, part-time faculty will be needed to fill those needs.

Issues relating to the increasing use of part-time instructors largely center on the question of whether the use of part-time instructors is beneficial or detrimental to the educational process. Many, if not most, educational institutions have embarked on formal programs of self-study and continuous improvement. One of the requirements for continuous improvement is that the university strives for consistency in multi-section course content. Since measuring the quality of instruction is such a difficult undertaking, other surrogate measures or observations are offered in support of both sides of this question. It is suggested, for example, that part-time instructors who usually have other full-time jobs outside academe may bring beneficial unique "real world" insights into the classroom. Moreover, evidence suggests that part-time instructors are comparable in their teaching abilities (Freeland, 1998; Rifkin, 1998).

On the other hand, being a part-time employee of a college or university poses its own problems. Part-time instructors with successful careers outside academe may have little time for their instructional requirements such as class preparation and paper grading. Also, if part-time instructors are away from the academic setting for a substantial period of time, they may become deficient in terms of their academic qualifications. Part-time instructors typically are not required to participate in important committee activities where curriculum matters and course coverage are determined. Therefore, they may not fully understand the fundamentals required by the student in order to be proficient in upper division courses. Another problem arises when part-time faculty, fearful of their temporary status, tend to appease the students with good grades in hopes of receiving higher faculty evaluation scores.

LITERATURE REVIEW

Grade inflation may be worsening as colleges and universities increase their reliance on temporary or part-time instructors. As the use of part-time instructors increases, however, the question is whether it contributes to grade inflation. For part-time instructors, keeping students satisfied may mean assigning higher grades than do full-time instructors. Sonner (2000) compares

the average class grade given by part-time and full-time instructors over a two-year period at a small public university. The results suggest that part-time instructors assign higher grades than do full-time instructors. Part-time instructors, hired on an ad hoc basis, are easily replaced; thus, most face serious pressure to earn good student evaluations.

Several studies indicate that student grades are related to instructor rank (Ford, Puckett & Tucker, 1987; Jackson, 1986; Sonner & Sharland, 1993; Williamson & Pier, 1985). Research on this topic has consistently illustrated that lower ranking instructors give much higher grades than do senior instructors. Bolge (1995) analyzes student learning as a function of instructor status (full-time vs. part-time). Clark (1990) studies the comparison of the achievement of students taught by full-time vs. part-time instructors.

Grenzke (1998) reports that part-time instructors are more likely to be evaluated than are full-time instructors. Jackson (1986) reports that, in general, students do not rate part-time instructors as highly as full-time instructors. It would seem reasonable to assume that the grades given would be comparable. Sonner's (2000) study tests the hypothesis that there is no difference in the average grade awarded by part-time and full-time instructors. If, however, evidence is found suggesting that part-time instructors give students higher grades than full-time instructors do, it would suggest that the part-time instructors are inflating grades. Landrum (1999) reports, in that case, higher grades in courses taught by part-time instructors would lead students to develop unrealistic expectations about the grades they should receive and lead to pressure on full-time instructors to follow, or risk student reprisals and poor evaluations.

Many four-year institutions price discriminate by employing part-time instructors in an effort to contain escalating operating costs. Leslie (1998) states that hiring patterns have shifted to the point where more than 40% of college or university instructors are part-time. Clery (1998) notes that between 1976 and 1995, the number of part-time instructors increased by 91% compared with an increase of only 27% in the number of full-time instructors. According to The New Professoriate, a report released in October 2002 by the American Council on Education (ACE), non-traditional faculty "now make up the majority in academe" (Marklein, 2002).

Several studies examine other factors that affect student performance. Schmidt (1983) analyzes the relationship between the amount of time a student devotes to his/her studies and subsequent performance. Additionally, many studies examine the relationship between attendance and performance. Park and Kerr (1990) and Romer (1993) find a positive relationship between attendance and performance. Durden and Ellis (1995) provide a more detailed study of the attendance/student performance relationship by incorporating absenteeism in their analysis.

Chan, Shum, and Wright (1997) examine the effect of attendance, as well as mandatory attendance, on student performance. Controlling for survival biases, Chan, Shum, and Wright (1997) find that student performance improves with attendance, but that student performance is not enhanced by mandatory attendance. Chan, Shum, and Lai (1996) find evidence that a cooperative learning strategy enhances student performance. Ely and Hittle (1990) find that a stronger

mathematical background improves student performance in managerial economics and basic finance courses.

Sen, Joyce, Farrell, and Toutant (1997) examine the performance of students with different areas of specialization in principles of finance. Specifically, they segregate their sample into business majors and non business majors. They find that non business majors outperform business majors. They attribute the superior performance of non-business majors to better quantitative preparation and higher overall GPAs.

The primary focus of the aforementioned literature is the impact of student characteristics on class performance. Conversely, we analyze the effect of instructor rank as it pertains to full time or part time employment status on student grades in the principles of business statistics course. Can a student taking a principles of business statistics course improve his or her grade by enrolling in a course taught by a part-time instructor?

METHODOLOGY AND RESULTS

Data were collected from all sections of principles of business statistics taught at a comprehensive IIA university in the south. Two full-time and four part-time instructors were employed to teach the principles of business statistics course. For each of a sample of 255 students, the following data, which we believe to include explanatory factors for student grades, were obtained:

1.	The dependent variable, grade (A, B, C, D, F)
2.	The independent variable, status of the instructor (full-time or part-time)
3.	The independent variable, status of the student (full-time or part-time)
4.	The independent variable, students' major
5.	The independent variable, students' gender
6.	The independent variable, evening or day time class
7.	The independent variable, students' age
8.	The independent variable, students' GPA

The dependent variable grade, which is recorded on the students' record as an alpha character, was numerically represented in the model as: A=4.0, B=3.0, C=2.0, D=1.0, and F=0.0. Students who withdrew from the course were deleted from the sample data. Since student

withdrawal data was omitted, the results of the study are subjected to survival bias. The lack of control for such bias is recognized as a limitation of the study.

Exhibit 1 examines the relationship between the status of the instructor, i.e., part-time or full-time, and the grade received in the principles of business statistics course. The hypothesis tested was that there was no difference in the average grades awarded by part-time versus full-time instructors. Based on the p-value of 0.100541129, the hypothesis would not be rejected even at a fairly liberal t-critical value of 0.10. However, since the computed p-value was reasonably close to the 10 percent level of significance, we believe further examination of the data is warranted.

Research has shown that grade performance is correlated to various student characteristics, e.g., age, gender, classification, whether attending on a full-time or part-time basis, and their academic major (Chan, Shum & Wright, 1997; Sen, Joyce, Farrell & Toutant, 1997). We decided to include these variables, along with our variable of main concern, i.e., whether the course was taught by a part-time or full-time instructor, and measure their relationships with a multiple linear regression model. In this way, we can analyze the relationship between student grades and the employment status of the instructor (part-time or full-time) while controlling for the various student demographic characteristics mentioned above.

Exhibit 1 Descriptive Statistics

t-Test: Two-Sample Assuming Equal Variances

	Part-time	Full-time
Mean	2.978947368	2.76
Variance	0.999552072	1.042684564
Observations	95	150
Pooled Variance	1.025999567	
Hypothesized Mean Difference	0	
df	243	
t Stat	1.648505995	
P(T<=t) one-tail	0.050270564	
t Critical one-tail	2.341794243	
P(T<=t) two-tail	0.100541129	
t Critical two-tail	2.596207196	

Although an ordered probit analysis (Kamery, Van Ness & Van Ness, 1999) or a multinomial logit model (Glasure, 2002) may be more appropriate for analyzing the dependent variable, coded grades, and its relationship with the various student characteristics, only the multiple regression approach will be utilized here. (Using the coding method of A=4 (or 95), B=3 (85), etc., would be

similar to estimating the mean or standard deviation of data which has been summarized into a frequency distribution, by using the midpoint of each class as the best representative of that class.) A comparative analysis of the three types of models, e.g., regression, probit, and logit, is under development in a subsequent paper. Exhibit 2 presents the results of a multiple regression analysis.

A graphical analysis of the residuals does not indicate serious violations of the model's assumptions. There are no extreme points (outliers); at each grade level, residual variance does not indicate the presence of homoscedasiticity; the residuals closely approximate a normal distribution. The adjusted coefficient of multiple determination shown in Exhibit 2 is equal to 0.64274, indicating that 64.274 percent of the change in the dependent variable, grade, is explained by the set of independent variables (which represent predominantly student characteristics, except for the instructor status variable). The F statistic's high value corroborates the existence of a significant relationship between student grades and the set of independent variables.

Independent variables which would be significant at a 0.05 level of confidence include:

1.	Instructor status (full or part-time)	t stat value = -2.55
2.	Grade point average (GPA)	t stat value = 4.649E-54
3.	Age	t stat value = -3.409

There is no significant relationship between a student's grade and whether that student is a part-time or full-time student. Additionally, there is no significant relationship between a student's major and the grade received in the course. Five categories for student major (accounting/finance, management, marketing, information technology, other) were included in the model as indicator variables. The t stat values for each of these indicator variables show little or no relationship. Moreover, gender of the student is not a significant predictor of course grade.

Exhibit 2 Multiple Regression Results

SUMMARY OUTPUT

Regression Statistics		
Multiple R	0.810792946	
R Square	0.657385201	
Adjusted R Square	0.642743543	
Standard Error	0.607556717	
Observations	245	

Exhibit 2 Multiple Regression Results

SUMMARY OUTPUT

ANOVA

	df	SS	MS	F	Significance F	
Regression	10	165.7308339	16.57308339	44.89827563	6.03234E-49	
Residual	234	86.37528856	0.369125165			
Total	244	252.1061224				
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	0.861922906	0.265602804	3.245157399	0.001345495	0.338645017	1.385200794
Instructor status (full or part)	-0.241028239	0.094343891	-2.554783752	0.011259831	-0.426900041	0.055156437
Student status (full or part)	-0.060684299	0.102516853	-0.591944612	0.554459163	-0.262658078	0.141289481
Indicator 1 for major	0.057921993	0.100103759	0.578619558	0.563402401	-0.139297626	0.255141612
Indicator 2 for major	0.068836184	0.101598692	0.677530215	0.498738931	-0.13132868	0.269001047
Indicator 3 for major	0.27264495	0.245096205	1.112399723	0.267107829	-0.21023182	0.755521721
Indicator 4 for major	-0.015015874	0.28950004	-0.051868297	0.958677885	-0.585374949	0.555343201
Gender	-0.114141815	0.080371248	-1.420182187	0.156885617	-0.272485389	.044201758
Class	-0.092243857	0.089462177	-1.031093365	0.303561572	-0.268497942	0.084010228
GPR	0.974520163	0.047609702	20.46894053	4.64903E-54	0.880721815	.068318512
Age	-0.022489128	0.006597503	-3.4087335	0.000768389	-0.035487211	0.009491045

During the analysis, several issues of interest were identified for possible future research. There was insufficient information derived from this study to include those issues here. Those issues include:

1.	Do part-time and full-time instructors employ similar methods of teaching?
2.	Do part-time and full-time instructors use similar methods of testing and grading?
3.	Is there a consistent coverage of material as prescribed in the course of study?
4.	Is the performance of students in upper division courses which have a statistical component different for those students taught by part-time vs. full-time instructors?

CONCLUSION

The primary objective of this paper was to examine the relationship between student grades in the principles of business statistics course, and the employment status of the instructor, i.e., whether full-time or part-time. Although a simple test of mean grades did not uncover a significant relationship, a multiple regression model which allowed for the inclusion of many student characteristics did report a significant relationship between the two factors. We found that a student's cumulative grade point average was the strongest predictor of success in the principles of business statistics course. Next in importance was the age of the student and of major concern to this research, the employment status of the instructor, part-time or full-time. It is recognized that our sample may include selection bias since part-time faculty may teach predominantly at times and places where non-traditional students are enrolled. Our data was collected at a single university, and thus our results may lack universal application.

REFERENCES

Bolge, R. (1995). Examination of student learning as a function of instructor status (full-time versus part-time). *ERIC Document Reproduction Service*. ED 383, 241.

Chan, K., C. Shum & P. Lai (1996). An empirical study of cooperative instructional environment on student achievement in principles of finance. *Journal of Financial Education* (Fall), 21- 28.

Chan, K., C. Shum & D. Wright (1997). Class attendance and student performance in principles of finance. *Financial Practice and Education* (Fall/Winter), 58-65.

Clark B. (1990). Comparison of the achievement of students taught by full-time versus adjunct faculty: Governance and management. *ERIC Document Reproduction Service*. ED 330, 261.

Clery, S. (1998). Faculty in academe. *ERIC Document Reproduction Service.* ED 423, 740.

DeBarros, A. (2003, January 3). New baby boom swamp colleges, *USA Today*, 1A.

Ely, D. & L. Hittle (1990). The impact of math background on performance in managerial economics and basic finance courses. *Journal of Financial Education, 19,* 59-61.

Ford, H., J. Puckett & L. Tucker (1987). Predictors of grades assigned by graduate teaching assistants in physical education. *Psychological Reports, 60*, 735-739.

Glasure, Y. (2002). Does absenteeism matter in course performance? *Journal of the Academy of Business Education,* Fall*, 3*, 32-42.

Grenzke, J. (1998). Part-time faculty: Quality issues. *ERIC Document Reproduction Service*. ED 417, 686.

Jackson, E. (1986). A comparative study to determine the effectiveness of adjunct faculty in the business division at Fayetteville Technical Institute. *ERIC Document Reproduction Service.* ED 294, 622.

Kamery, R., B. Van Ness & R. Van Ness (1999). The effect of part-time instruction on grades in principles of finance. *Financial Practice and Education,* Fall/Winter*, 9*(2), 105-110.

Landrum, R. (1999). Student expectations of grade inflation. *Journal of Research and Development in Education, 32*(2), 124-128.

Leatherman, C. (1997, December 5). Leader of scholarly groups outline response to growth in use of part time faculty, *The Chronicle of Higher Education,* A18.

Leslie, B. (1998). Part-time, adjunct, and temporary faculty: The new majority? Report of the Sloan conference on part-time and adjunct faculty. *ERIC Document Reproduction Service.* ED 422, 771.

Marklein, M. (2002, December 5). Non-tenured instructors feel relegated to second class, *USA Today*, 1A.

Park, K. & P. Kerr (1990). Determinants of academic performance: A multinomial logit approach. *Journal of Economic Education, 21*(2), 101-111.

Romer, D. (1993). Do students go to class? Should they? *Journal of Economic Perspectives, 7*(3), 167-174.

Schmidt, R. (1983). Who maximizes what? A study in student time allocation. *American Economic Review, 73*(1), 23-28.

Sen, S., P. Joyce, K. Farrell & J. Toutant (1997). Performance in principles of finance courses by students with different specializations. *Financial Practice and Education,* (Fall/Winter)*,* 66- 73.

Sonner, B. & A. Sharland (1993). Grading differences between graduate teaching assistants and faculty members in the introductory marketing class. *Journal of Marketing Education, 15*(2), 44-49.

Sonner, B. (2000). A is for 'adjunct': Examining grade inflation in higher education. *Journal of Education for Business, 76*(1), 4-5.

Williamson, L. & J. Pier (1985). Relationship between instructor degree status and student grades: A research report. *ERIC Document Reproduction Service*. ED 264, 632.

INSIGHTS TO TEACHING GENERATIONS X AND Y BUSINESS STUDENTS

Carol L. Bruneau, The University of Montana
MaryEllen Campbell, The University of Montana

ABSTRACT

Through the years, teaching has often been noted as being a "noble profession." With the challenges of teaching generations X and Y many business professors are beginning to appreciate why others consider teaching such a noble profession. Generations X and Y have become a challenge for those working in educational institutions. Many who teach often attest to the fact that these students are different from the ones they taught a decade ago. Today's business students often do not comprehend or retain material covered in class. They are focused on practicality to such an extent that they often become fixated on memorizing only what will be covered on the test to the exclusion learning.

For business professors who have been in the field for a number of years, it is easier to blame Generations X and Y students for their lack of understanding than it is to accept responsibility for ineffective pedagogical technique. Could it be that these Generations are so different in their ability to access and acquire information that they need to have pedagogy tailored especially to them? The authors think this might be a strong possibility. In fact, it is the authors' belief that the continued use of traditional teaching methods is the reason so many professors find Generations X and Y such a challenge.

This research attempts to deal with why the old ways of teaching just do not produce the same results with students as they once did. In this paper, the authors examined values of Generations X and Y through a survey of undergraduate marketing students' attitudes toward various teaching methods. Based on the results of their survey, the authors propose that there are specific methodologies which are more effective than others in motivating business students to learn and to retain information. Specifically, the study found that students were more motivated to learn when marketing classes were personal, interactive, stimulating and practical (Bruneau & Campbell, 2002). Using this framework, the authors identify students' preferences for specific teaching techniques and suggest how to incorporate the results of these data into the classroom.

INTRODUCTION

A great deal has been written about communications within the workplace. Articles on how to communicate with employees and customers are popular in both academic and practitioner publications (for practitioner examples see Lloyd, 2001; Lovern, 2001; Morgan, 2001; and Radice, 2002). Many business professors are also finding that communicating with the current Generation X and Generation Y students has become an unexpected challenge. Teaching classes which combine Generation X students (born between 1965 and 1977) and Generation Y students (born between 1978 and 1984) has presented more of a challenge than many business professors anticipated when they decided to pursue an academic career. At the very least, these students are a different group from what many faculty remember when they first began teaching.

Exchanging stories about students has become a popular release for many professors as they discuss the latest situation they have run into with their students. Whether its assessing student behavior with other colleagues in the faculty lounge or trying to create policy dealing with student issues at departmental meetings, faculty decry the fact that the "young sluggards" do not read, cannot write and will not speak up. They show little ambition and almost no concern for business protocol or etiquette. This profile follows how Hilton (2000) and McNamara (1995) and others have depicted these generations in their research.

Faculty are often frustrated when they work diligently to create interesting classes only to realize from students' test scores that the lectures obviously imparted little knowledge. In fact, students' response to a traditional lecture format is dismal. They let their disdain be known to faculty who follow the "sage on the stage" model by reading the school newspaper or by skipping class. Faculty are always recounting tales about how their students try to slide by with doing the minimum for the grade they seek rather than focusing on learning.

In spite of their academic malaise, Generations X and Y students over and over again are described as being "nice" people. The fact they do not know much does not outwardly disturb them. They are often friendly and talkative when they meet professors in the hall or visit them in their offices. These students tell faculty that they don't worry too much about their grades. In fact, when they strike up a conversation with a professor they appear to be more concerned about what the faculty member did for fun on the weekend than they do about trying to clear up a misunderstanding about a marketing concept.

Based on these observations and others from the literature discussing Generations X and Y, the authors of this paper decided to explore the possibility that the old methods of teaching needed to be evaluated. Since the concept of marketing begins with understanding the target market, the authors thought that the teaching of marketing should begin the same way. They decided to research student opinion about teaching methodology to learn, firsthand, how students like to learn. Details of the methodology are discussed in this paper. The overall results, however, suggest that students

desire marketing courses designed to provide information that is personal, interactive, stimulating and practical.

These findings were not unusual; in fact they were fairly predictable based on anecdotal research conducted by Popcorn & Marigold (1998). What was unusual was how Generations X and Y students defined qualitative terms such as personal, interactive, stimulating and practical. Understanding what these concepts mean to today's students provides a starting place for professors who teach courses to this age group.

This study also reinforced the research that has shown providing information is no longer the primary role of the professor. At one time college students could be depended on to write down almost every word a professor uttered. That is no longer the case. Many professors admit they have to tell students to write something down in their notes. Students today do not particularly relate to nor enjoy the pedagogy based on listen, write and regurgitate.

Generations X and Y also appear to be significantly impacted by how information is presented. Instead of looking to an expert for insight, they evaluate whether or not they like the person before they consider him or her to be an authority figure. For today's students to comprehend and retain information, then, there first needs to be a personal connection between the professor and the students. This tailoring of information reflects the research of Peppers and Rogers (1996). To acquire this connection and to encourage students to engage with the material, professors may find that they need to significantly restructure the classroom experience beginning with how they deliver information. Based on this research, professors might be well advised to approach course topics as strategically as they would a business consulting case.

The research suggested in this survey is that being an effective teacher does not mean that a person has to undergo a personality change, nor does it require that a professor become a comedian. It does, however, suggest that today's business professor consider designing a presentation strategy based on the four values discussed in this paper. The authors hope that this information will enable professors to have a more successful teaching experience with Generations X and Y than many are currently experiencing.

METHODOLOGY

Questionnaires with qualitative and quantitative questions were administered to four junior-level consumer behavior classes during the Fall semester of 2002 and the Spring semester of 2003. A total of 198 surveys were completed with 166 of those usable. There were 86 male respondents and 79 female respondents (one respondent seemed unsure of his/her gender). A total of 151 of the students were classified as Generation Y and only 15 as Generation X.

The qualitative portion of the questionnaire asked students to describe what characteristics they liked in their favorite class; and conversely, what characteristics they disliked in their least favorite class.

The quantitative portion of the questionnaire listed various teaching techniques and had students rate them on four six-point Likert scales. The anchors for the scales were: like very much/dislike very much, learn a lot/learn very little, keeps my attention/is very boring, and helps me study/hinders my studying.

RESULTS

The results of the qualitative portion of the questionnaire were reported in Bruneau and Campbell (2002.) In summary, students were more likely to appreciate teaching styles that were personal, interactive, stimulating and practical. These four themes are supported by the quantitative data.

For the results of the quantitative portion of the questionnaires, nine teaching methods commonly used by business professor will be examined, including: the professor lecturing, videos, guest speakers, use of PowerPoint slides, case analyses, in-class group discussion, individual semester projects, semester group projects, and working with organizations outside of the classroom. Each teaching method will be discussed separately and if possible, qualitative comments from the students will be used to support the quantitative data.

In the means presented below, the numbers are from a 6-point Likert scale where 1 reflects very positive thoughts about the technique (like very much, learned a lot, keeps my attention and helps me study) and 6 reflects very negative thoughts about the technique (dislike very much, learn very little, is very boring and hinders my studying). The results also divide students into those who had positive thoughts (marked 1, 2, or 3 on the question) and those who had negative thoughts (marked 4, 5, or 6 on the question). Also, where applicable, qualitative statements are included to provide insight to students' ratings.

Table 1: Professor Lecturing

	Positive	Negative	Mean	Standard Deviation
Like	87.95%	12.05%	2.37	1.08
Learn	88.55%	11.42%	2.29	1.08
Attention	77.44%	22.56%	2.65	1.27
Study	75.61%	24.39%	2.70	1.34

Qualitative comments about professors lecturing were both positive and negative. Students reacted positively to professors who were animated, used a lot of real world examples, and seemed

to care about their students. They disliked professors who were boring or who came across as thinking they were better or smarter than their students. While there were a few qualitative comments about uncaring, boring or dictatorial professors, the high percentage of students that like the technique of professors lecturing indicates that the authors' colleagues must be doing something right. These results reflect the preference of Generation X and Y students to prefer teaching that is personal. They want to be treated with respect and caring. Relationships are very important to these students. They are more important than work, than assignment, than school (O'Reilly, 2000; Fitzpatrick, 1996). One student stated, "friendly professors are a plus for a course. I look forward to going to courses where the professor will talk to me in a more personal manner. And it actually makes me want to do better in their classes to show I care."

The qualitative comments also indicate that students prefer a professor to use practical, real world examples during the lectures. Students are not interested in merely learning new information and new skills; they have to understand the value of what they are being taught (Caudron, 1997). This desire for practical education stems from students' fear of not finding employment after graduation (Hilton, 2000; Dwyer, 1996). Real world examples can come from either current news stories or the professor's professional experiences. However, some students commented on not liking professors who talk about their personal lives when it had no relevance to the course material. One student stated that his/her favorite instructor provided "interesting real life examples that applied directly to current class topics. A variety of these examples from current events, historical information and personal experience." This same student disliked a professor who "rambled about their life experience-all of this did not apply to class."

Table 2: PowerPoint Slides

	Positive	Negative	Mean	Standard Deviation
Like	46.34%	53.66%	3.63	1.32
Learn	44.51%	55.49%	3.62	1.16
Attention	34.76%	65.24%	4.10	1.43
Study	61.59%	34.76%	3.18	1.49

Many business professors use PowerPoint slides provided by textbook publishers to illustrate their lectures. Compared with the blackboards that many professors remember from college, PowerPoint seems to be a wonderful technology to get ideas across to students. However, approximately one third of the respondents to the qualitative sections of the survey mentioned that they disliked PowerPoint presentations. This was particularly a problem when the students

perceived that the professor was using "canned" slides provided by the textbook publishers. Another issue was how the professor interacted with the slides. Students did not like having a professor read directly from the slides without adding examples. The students indicated that this teaching style was very impersonal and dull.

Today's college students are not a passive recipient of information, they must be engaged in order to comprehend and retain information (Wolburg & Pokrywczynski, 2001). Students in this study appreciated interaction with classmates and with the professor. Some comments from students about their least favorite classes included, "it was a lecture class, where the instructor just stood at the front of the class and read from slides," and "a lot of PowerPoint-we all just sit around and copy what's on the slide and don't even listen or have a damn clue what is being lectured." Canned PowerPoint and lecturing straight from slides also conflicts with students' desire to have education be challenging.

Not all students in the study disliked PowerPoint. One student commented, "I really enjoy PowerPoint presentations because I'm a visual learner. However, most instructors go through them too fast, so they're not effective." Thus, PowerPoint presentations may be effective if combined with other teaching techniques because they can add to class interaction.

Table 3: Use of Videos

	Positive	Negative	Mean	Standard Deviation
Like	89.76%	10.24%	2.15	1.16
Learn	78.18%	21.82%	2.60	1.31
Attention	85.45%	14.55%	2.30	1.26
Study	51.52%	48.48%	3.40	1.29

Students indicated a very strong partiality toward videos shown in class. However, in the qualitative section of the survey, several students qualified this preference by stating the video had to be current and practical. For example, one student liked "Videos that were interesting and modern, not old and boring."

The use of relevant videos in class appeals to students' desire for practicality in education. They want information that will be useful to them in their future careers. Some student comments included, "I liked all the videos we watched b/c it kept me interested in the class and also helped me relate the material to the real world," and "videos that helped to get the point across, especially in marketing classes. I enjoy watching advertisements (or campaigns) that target specific audiences and

that are successful. I like to see how the real professionals do it." Another student stated, "Video cases-show the application of theory in practice."

However, videos must be put in the context of the course. The professor should not count on students to make connections between the theories taught in class and the content of the video. One student stated that he/she disliked "videos with no introduction or follow up.

Note that although students liked videos, paid attention to them and learned from them, only 51.52% claim that videos helped them study. The authors believe that the students interpreted "helps me study" as "helps me study for exam." Thus, videos may detract from a student studying for exams if questions about the videos are not included in exams.

Table 4: In-Class Group Projects

	Positive	Negative	Mean	Standard Deviation
Like	74.70%	25.30%	2.84	1.33
Learn	72.29%	27.71%	2.86	1.38
Attention	83.73%	16.27%	2.42	1.23
Study	50.00%	50.00%	3.55	1.43

Students rated in-class group projects fairly high. Some positive comments about this teaching technique include, "The prof. used real life experiences and situations or problems and had the class figure out how to solve them," and "I just really like group work where the professor is walking around answering any questions that might arise."

There are two explanations for the popularity of this teaching style. It appeals to the students' desire for practicality as real world examples are used. It also conforms to the students' need for interaction with their classmates and professors. Again, however, this teaching technique seems to distract students from studying for their exams.

Table 5: Guest Speakers

	Positive	Negative	Mean	Standard Deviation
Like	95.12%	4.88%	1.81	0.87
Learn	89.63%	10.37%	2.11	1.12
Attention	93.90%	6.10%	1.84	0.96
Study	51.83%	48.17%	3.41	1.30

The use of guest speakers in the classroom was the highest rated teaching technique. One student commented that, "Guest speakers who work in the field and can bring new light and excitement are excellent." Another student expressed a preference for "relevant guest speakers with some quality history and knowledge." Again, this technique conforms to students' desire for practical education. Students did comment that there should only be four or five guest speakers in a semester's class. If there were more speakers, they felt the professor was not doing his/her job.

Table 6: Case Analyses

	Positive	Negative	Mean	Standard Deviation
Like	66.46%	33.54%	3.09	1.34
Learn	80.12%	19.88%	2.65	1.22
Attention	62.44%	37.56%	3.17	1.39
Study	60.25%	39.75%	3.18	1.34

Case analyses again match students need for practicality. Positive comments included preference for "case studies to learn from" and "case analyses that help us understand better." Students appreciated the use of real world examples and applications that case analyses provide. Often case discussions involved extensive interaction among professor and students. Case analyses were also found to be stimulating and challenging by demonstrating the complexities of the real world to students.

Table 7: Semester Group Projects

	Positive	Negative	Mean	Standard Deviation
Like	41.21%	58.79%	3.98	1.61
Learn	58.79%	41.21%	3.23	1.43
Attention	53.94%	46.06%	3.39	1.45
Study	43.03%	56.97%	3.92	1.44

Table 8: Semester Individual Projects				
	Positive	Negative	Mean	Standard Deviation
Like	61.21%	38.79%	3.23	1.52
Learn	82.42%	17.58%	2.52	1.35
Attention	72.12%	27.88%	2.82	1.38
Study	61.82%	38.18%	3.13	1.46

Students indicated they preferred to work on semester projects individually rather than in groups. This is similar to a result found by Baglione, et. al (2003) who found that students evaluated simulations more positively if they were allowed to work individually. The reasons students gave were the flexibility to work at one's own pace and convenience, as well as not having to rely on someone else for one's grade. One student stated that "students are very busy and trying to find a time for 4 or 5 people to meet is very, very difficult." In another student's favorite class, "There weren't any group projects where I felt I ended up doing all of the work." This preference for students to work individually does contradict studies of a previous generation of students that found students were happier and learned more in larger groups (Gentry, 1980; and Wolfe & Chacko, 1983). One student summed up the consensus on group projects by stating, "Group projects suck! Trying to work with people who have families, full time jobs, or are lazy is hard. In a job, a group will all be at work together."

Conversely, several students recognized the value of semester projects that allowed the students to address real world issues.

Table 9: Working with Organizations Outside of the Classroom				
	Positive	Negative	Mean	Standard Deviation
Like	63.75%	34.25%	2.99	1.50
Learn	76.88%	23.12%	2.52	1.45
Attention	76.88%	23.12%	2.54	1.45
Study	51.88%	48.12%	3.43	1.55

When asked what things they liked about their most favorite business class, some responses involved working with an organization. For example: "Picking a real life company and doing an in-depth, all-semester-long study on it for final presentation," and "Field trips and/or outside the classroom experiences-need more interaction with the real world." Again, working with an

organization allowed the students to interact with professionals in their chosen field. It also appealed to the students' need for stimulation.

IMPLICATIONS

No one teaching technique is either good or bad unto itself. Instead, it is the extent that each technique is personal, stimulating, interactive, and practical that will determine if it effective with today's business students.

Many students in the study expressed a desire for their professors to use a variety of teaching techniques. Students comments about their favorite classes included, "The teacher did not rely on PowerPoint, but rather used a combo of teaching methods," "I prefer a mix of methods. Too much of any one thing can get boring. Have a few PowerPoint slides to help emphasize your lecture. Maybe show some video clips. Changing it up keeps our attention. Getting us to talk also keeps our attention." Students easily became bored with the sage on the stage model as is demonstrated by the following comment about one student's least favorite class, "it was the same ol' same ol' every class period."

The sage on the stage model is still being used in many business classrooms. One student called using a variety of teaching technique "unconventional" because he/she viewed it as the exception rather than the norm, "Unconventional teaching: It is not the same thing everyday. It could be learning from personal experiences of the professor, from the book, from hands on assignments, or we could just talk about a concept." One student even suggested that he/she liked not knowing what to expect from the professor day to day.

The only area where students desired formal predictability was testing. In this aspect of their courses, students wanted structure. A majority of the students complained about professors who were not structured, especially when discussing exams. Students want have an idea about what to expect on an exam. Many said that they preferred to get detailed study guides before the exam. Several even suggested that the professor take a day of class time to review for an exam.

A major finding of this study is that professors who create links between marketing theory and marketing practice by appealing to the psychographic profiles of their students are more likely to be effective teachers with Generations X and Y than those whose focus is on course material. By packaging technical information using examples students can relate to and by structuring the transfer of information so that students are forced to engage, professors are more likely to have a positive, fulfilling experience in the classroom.

FUTURE RESEARCH

The authors are planning on continuing this research stream, taking it in different directions. First, long interviews (McCracken, 1988) will be conducted with business to student to provide more explanation and insight into students' preferred teaching style.

Also, the authors would like to expand this research to encompass students from the other function areas of business, students from other academic areas, students from other regions of the United States, and students from other countries. The authors will gladly share co-authorship and their research instrument with any colleagues who might be interested in collaboration.

REFERENCES

Baglione, S.L., L.A. Tucci, J.A. Talaga & T.E.Burson. (2003). Faculty involvement improves students' overall evaluation of a marketing stimulation. Proceedings of the 2003 Annual Meeting of the Association of Marketing Theory and Practice, Section 1.1, 1-4.

Bruneau, C.L. & M. Campbell. (2002). Breaking with tradition: Motivating generations X and Y business students. *Academy of Educational Leadership Journal, 6*(3), 11-20.

Caudron, S. (1997). Can generation Xers be trained? *Training and Development, 51*(3), 20-25.

Dwyer, V. (1996, November 25). A crash course in Reality 101: Generation Y asks universities to deliver for their futures. *Maclean's, 109*(48), 50-55.

Fitzpatrick, K. (1996, November 11). The X files. *National Review, 48*(21), 46.

Gentry, J.W. (1980), Group size and attitudes toward simulation experience. *Simulation and Gamings, 17*(1), 7-24.

Hilton, L. (2000). Understand generations to manage effectively. *South Florida Business Journal, 2*(1), 53-57.

Lloyd, J. (2001). Get to know the latest work-force entrant: Generation Y. *Minneapolis-St. Paul City Business, 19*(1), 11.

Lovern, E. (2001). New kids on the block: Here comes the next generation of workers: They have Gen Xers' energy and skills, with a new attitude. *Modern Healthcare, 31*(28), 28-34.

McCracken, G. (1988). The long interview. In *Qualitative Research Methods* series, No. 13. Newbury, CA: Sage Publications.

McNamara, P.H. (1995). All is not lost: Teaching generation X. *Commonweal, 133*(8), 12-16.

Morgan, A.B. (2001). Young and restless are preparing to take control of Boomers' firms. *Houston Business Journal, 32*(16), 30-33.

O'Reilly, B. (2000, July 24). Meet the future: It's your kids. The Millennial generation has grown up with prosperity, the Internet, divorce and Columbine. They already know they do not want to live or work the way we do. *Fortune, 142*(3), 144-145.

Peppers, D. & M. Rogers (1996). *The one to one future: Building relationships one customer at a time.* New York, NY: Currency Doubleday.

Popcorn, F. & L. Marigold. (1998). *Clicking: 17 Trends that Drive Your Business-and Your Life.* New York, NY: Harper Business.

Radice, C. (2002). Gen Y workforce: Adapting management skills for the New millennium; Open mindedness, training, and communication are among central needs of today's new generation of workers. *Grocery Headquarters, 68*(3), 22-26.

Wolburg, J.M. & J. Pokrywczynski. (2001). A psychographic analysis of generation Y college students. *Journal of Advertising Research, 41*(5), 33-53.

Wolfe, J. & T.I. Chacko. (1983). Team-size effects on business game performance and decision making behavior. *Decision Sciences, 14,* 121-133.

SURPRISING STUDENT CHOICES OF TRADITIONAL VS. NONTRADITIONAL LEARNING APPROACHES IN AN UNDERGRADUATE ORGANIZATIONAL BEHAVIOR COURSE

Mel E. Schnake,Valdosta State University
Michael P. Dumler, Illinois State University
Bill Fredenberger, Valdosta State University
Sherry Schnake, St. Mary of the Woods College

ABSTRACT

Students in two sections of an undergraduate organizational behavior course were presented with the opportunity to choose a learning and evaluation method for the course which best suited their individual learning styles. Surprisingly, very few students took advantage of this opportunity. A learning style preferences questionnaire determined that there were differences in the learning styles of male and female students. An exit questionnaire captured student ratings of course effectiveness, satisfaction with the course, and reasons for their choices of learning and evaluation methods. No significant relationships were observed between male and female students on course effectiveness, course satisfaction, or in the reasons for their learning method choices. Student reasons for their choices and discussed and alternative explanations suggested.

INTRODUCTION

Business schools are increasingly employing nontraditional learning methods to reach an increasingly diverse student population (French & Grey, 1996). Students differ in their motivation, personality, maturity, employment, time available, family responsibilities, and preferred learning styles. All of these factors may impact the effectiveness of various teaching methodologies (Klenke-Hamel & Sanders, 1997).

Another reason business schools have begun exploring alternative instructional methods is the belief that the lecture is an outmoded method of course delivery (Birk, 1997). In fact, some have called for the abolishment of the traditional lecture on college campuses (Sperber, 2000). There is a widespread belief that students will learn more effectively if they use other methods such as

experiential activities, case analyses, and other "hands-on" or "active learning" experiences (DeBerry, 1998). Hoeksema (1995) proposed two types of learning strategies: deep and surface. Deep learning, considered the highest form of learning, is directed at understanding the meaning of a task and to satisfy curiosity. Surface learning involves memorizing facts and disorganized pieces of information. Students engaged in surface learning will memorize information with a focus on getting good grades on exams, but may not fully master the material. In contrast, students engaged in deep learning will put forth greater effort and do extra work and will not only learn the material, but also more fully understand it and be able to apply it. Lectures and exams are linked with surface learning, while active-learning instructional methods with corresponding alternative evaluations methods are linked to deep learning.

Lengnick-Hall and Sanders (1997, p. 1335) have defined quality management education as: "a course or integrated program of study that consistently yields (1) high levels of learning (e.g., increased knowledge, skill, and understanding), (2) high levels of change or intention to change behavior (application of new knowledge and skills), and (3) highly positive reactions (e.g., satisfaction with the course, the method of instruction, and the value of what was learned and intentions to recommend the course to others). They designed management courses to provide students with the opportunity to co-design the course with the instructor and assume more responsibility for their own learning. Students were presented with various methods of learning and evaluation methods as well as with deadlines and performance standards. Measures of student learning styles indicated a wide variety of learning preferences. Results of an analysis of outcome measures indicated that students reported satisfaction with the course, high levels of learning, and an intent to recommend the course to others (Lengnick-Hall & Sanders, 1997).

Research on the relationship between learning styles and instructional methods has been conducted most frequently in samples of K-12 students. One well-known model has been developed by Dunn and Dunn (Dunn and Dunn, 1992, 1993; Dunn, Dunn & Perrin, 1994) which describes learning style in terms of individual reactions to (1) their immediate environment (e.g., sound, temperature, seating arrangements), (2) their own emotionality (e.g., motivation, persistence, responsibility), (3) sociological preferences (e.g., learning alone or with others), (4) physiological characteristics (e.g., perceptual strengths and weaknesses, time of day energy levels), and (5) processing indications (e.g., global/analytic, impulsive/reflective). Studies in both elementary and high schools provide evidence that when instruction methods are matched with individual student learning styles, student performance is improved (Andrews, 1990; Orsak, 1990; Dunn, Griggs, Olson, Gorman & Beasley, 1995).

Another relatively well-known theory which argues for matching instructional methods with learning styles is Gardner's Theory of Multiple Intelligences. Gardner (Gardner & Hatch, 1989) identified seven types of intelligences, all of which are necessary to function in society. The seven intelligences are: (1) logical/mathematical intelligence, (2) verbal/linguistic intelligence, (3) visual/spatial intelligence, (4) bodily/kinesthetic intelligence, (5) musical/rythmic intelligence, (6)

interpersonal intelligence, and (7) intrapersonal intelligence. However, since intelligence has both biological and cultural bases, individuals differ in terms of which types of intelligence are most developed. These differences in intellectual strengths and weaknesses then determine how individuals most effectively learn (Gardner, 1991).

Similar evidence exists at the college level. Fredenberger, Schnake, Oliver and Fadil (2002) recently identified three clusters of learning preferences in a sample of undergraduate business students. Traditional Learners preferred a clearly and logically organized course, with specific information about assignments, requirements and rules. They also preferred to learn by reading and listening to lectures. Hands-On Learners preferred setting their own objectives, working independently, and working with things (e.g., building or operating). They also preferred learning by direct experience and by viewing slides, pictures or graphs. Group Learners preferred working in teams and with other people, working with words and language and learning through talking or writing. Traditional Learners may be best suited for the traditional lecture instructional method, while Hands-On Learners and Group Learners may learn more effectively through more nontraditional methods such as Lengnick-Hall and Sanders' (1997) alternative learning methods.

The purpose of this research is to examine undergraduate business students' learning style preferences and their choices of learning methods in organizational behavior courses in which they were given the autonomy to choose between traditional lecture and tests, nontraditional individual learning methods, or nontraditional group learning methods.

METHOD

Students in two sections of an undergraduate organizational behavior course were given the autonomy to choose their own learning methods as well as methods of evaluation of their mastery of the course material. The first day of class, students were presented with a syllabus entitled OB, Inc. The introductory portion of this syllabus appears at Exhibit 1. The instructor explained that there is research evidence that students have different preferred styles of learning, and when instructional methods match these learning styles, more effective learning takes place.

Table 1: Introduction Section of Course Syllabus
OB, Inc.
MGNT3250, ORGANIZATIONAL BEHAVIOR AND MANAGEMENT
Spring Semester, 2001

Organizations are increasingly moving toward group- or team-based designs, where teams of employees assume more responsibility for their own performance. Companies such as Volvo, Quad-Graphics, Delco, Northern Telecom, Saturn, and Honeywell have reported tremendous success and turnarounds which they attribute in large part to employee teams. Organizations who have not adopted team-based work designs have increasingly employed other forms of individual employee participation and involvement.

Table 1: Introduction Section of Course Syllabus
OB, Inc.
MGNT3250, ORGANIZATIONAL BEHAVIOR AND MANAGEMENT
Spring Semester, 2001

There is also a growing body of empirical evidence that learning is enhanced by student involvement in the design of the learning experience. Individuals learn in different ways, which makes a single course delivery system (e.g., lecture) ineffective for at least some students. This course is designed around and based on this empirical evidence, and the following assumptions:

1. Employee/student participation in decision making generally results in more accurate decisions.
2. Employee/student participation in decision making generally results in more commitment to making those decisions work.
3. Employee/student responsibility for their own performance and results generally leads to higher motivation and performance.
4. Individuals differ in how they learn most effectively and therefore require different instructional/learning methods.
5. Different instructional/learning methods require different methods of assessment and evaluation.

MGNT 3250, hereafter referred to as OB, Inc., is a non-traditional course in Organizational Behavior and Management. It is based on the idea that the traditional lecture is an effective course delivery method for some students, but ineffective for others. In addition, since organizations are increasingly employing team-based work designs rather than more traditional individual job assignments, this course will provide students with an opportunity to gain skills in working in teams. Primarily, this course will enable you to select and design the learning and instructional methods most effective for you. The Instructor's role in this course is similar to the role of a manager or supervisor in a self-managing team; that is, as a resource. Individuals and/or teams may call on the Instructor to provide lectures, explanations, descriptions of assigned material and to design evaluation methods.

GRADING

You must reach an agreement on how your performance will be evaluated for each work period with the instructor. Once this agreement is made it may not be changed during that work period. It may, however, be changed for the next work period. You may choose to work as an individual or in a self-managing team. Regardless of the method you choose, you must reach agreement with your instructor as to how your performance will be evaluated by the second day of that work period.

Evaluation Methods

You may choose any reasonable method by which to have your performance evaluated. For example, if you prefer to work as an individuals and prefer traditional methods, you may ask the instructor to lecture to you on the assigned material and administer a variety of forms of examinations. If you decide to work in a self-managing team, you may still ask the instructor to administer an examination to you, or you may make presentations to the instructor, write papers, ask the instructor to verbally ask you questions about the material, or any other reasonable method by which the instructor can assess your understanding of the assigned material. THE ONLY REQUIREMENT IS THAT YOU MUST DECIDE ON A METHOD BY WHICH THE INSTRUCTOR CAN ACCURATELY ASSESS THE LEVEL OF UNDERSTANDING OF THE MATERIAL OF EACH

Table 1: Introduction Section of Course Syllabus
OB, Inc.
MGNT3250, ORGANIZATIONAL BEHAVIOR AND MANAGEMENT
Spring Semester, 2001

MEMBER OF YOUR GROUP. That is to say, one group member may not carry other group members... everyone's performance must be assessed. The assessment method chosen must permit determination of differentiation in levels of student performance. You must reach agreement with the instructor about how your performance will be evaluated by the second day of each work period.

All students must take a 50 question multiple choice midterm and a 50 question multiple choice final examination on the day scheduled by the university for this course.

Work Rules

OB, Inc. has some common work rules.

1. You have 5 personal days that you may use at your discretion. These must cover all illnesses as well as any other types of absences. The 6th absence costs you one letter grade. The 7th absence results in an F for the course.
2. Self-managing teams who find they have a non-performer, must manage this problem during the current work session. Teams may change their membership at the end of each work period. If you are fired from a team, you are responsible to perform the work during the next work period individually, or gain membership in another team.
3. YOU MUST NOT BE ABSENT DURING AN ASSIGNED EVALUATION OF PERFORMANCE....IT IS NOT POSSIBLE TO "MAKE UP" EVALUATIONS.

The course was divided into four quarters or "work periods", with each quarter covering approximately three chapters. Students were free to change their learning and evaluation method at the beginning of each quarter, but once chosen they had to continue with this learning and evaluation method for the entire quarter. Several possible learning and evaluation methods were discussed, including group case analysis, individual presentations to the class, manager interviews, etc. But it was stressed that the instructor was open to new and creative ideas. Any reasonable approach to learning the assigned material for the quarter and evaluation method would be considered. It was explained that students choosing the traditional lecture learning method and test evaluation method would complete a 20 point quiz at the completion of each chapter. Students choosing nontraditional learning methods would have to develop and reach an agreement with the instructor on learning/evaluation methods equivalent to three 20 point quizzes for each quarter. All students, regardless of learning/evaluation methods chosen had to complete both a midterm and final examination (multiple choice). Students then completed the Canfield Learning Styles Inventory (Canfield, 1976; Canfield & Canfield, 1978) during this first class session. During the last class session of the semester, students completed an "Exit Questionnaire" which included outcome measures from Lengnick-Hall and Sanders (1997) as well as an open-ended question which asked

students to identify the specific reasons for their choice of learning/evaluation methods. One hundred three students began the semester; eighty-three completed the course. Due to absences on days questionnaires were administered complete, matched questionnaires were obtained from 53 students for a response rate of 64%.

The Canfield Learning Styles Inventory (LSI) assesses student preferences for different learning methods. The LSI measures three domains of learning styles: conditions of learning (Gagne, 1967, 1970; Kolb, 1974; Stern, 1962), content (Beswick and Tallmadge, 1970; Dorsel, 1975), and preferred ways of obtaining new information (Cooper & Garth, 1966; Jensen, 1970; Snow, Tiffin, & Seibert, 1964). Conditions of learning are defined as preferences for the dynamics of the situation in which learning occurs. Its subscales address preferences for working alone or in teams, a clearly organized course, having detailed and specific information about assignments and requirements, setting one's own learning objectives, and working independently. Content is the type of information in which the student is interested. The subscales assess preferences for numeric or qualitative information, working with inanimate objects or working with people. Learning mode has to do with the preferred media used in learning. The subscales of this domain assess preferences for learning through listening, reading, iconics (viewing illustrations, slides, graphs, etc.), or through direct experience (i.e., handling or performing, field trips, practice exercises). The lower the score on the LSI indicates a stronger preference.

The exit questionnaire included an open-ended question which asked students to describe the reasons why they chose the learning methods they employed during the semester, fourteen items from the scale developed by Lengnick-Hall and Sanders (1997) which measures student perceptions of course effectiveness and 15 items which tap student satisfaction with the course. The course effectiveness scale asked students to rate the extent to which the course increased their ability to, for example, manage their time, work well with others/collaborate, take charge of what I learn, apply theory to real life situations, understand organizations, and manage behavior in organizations. A seven-point Likert scale with anchors of "not at all," "to some extent," and "to a great extent." was employed. A factor-analysis of this scale suggested one factor. Coefficient alpha for the 14 item scale was .94. The satisfaction with the course scale asked students to rate the extent to which the course was a productive learning experience, relevant to their future, were satisfied with the content of the course, and whether they have or expect to apply what they learned in the course on the job or in their personal life. A five-point Likert scale with anchors of Strongly Disagree to Strongly Agree was used. A factor analysis of these 14 items suggested a single factor, and coefficient alpha reliability estimate was .93.

Student reasons for selecting the traditional lecture and exam method were coded as "1" if they mentioned each specific reason, and "0" if they did not mention it, creating "dummy variables" for each of the seven specific reasons.

RESULTS

Surprisingly, few students opted for nontraditional learning methods. During the first quarter, no students chose nontraditional learning methods, although several approached the instructor to discuss options for successive "work periods." During the second quarter, four students opted for individualized nontraditional learning methods. One student agreed to summarize each chapter and meet with the instructor weekly to discuss it and answer questions posed by the instructor. Two students agreed to summarize each chapter and post their comments on a web page for all other students to view. A third agreed to analyze real world practices of companies concerning the topics in the assigned reading and write a paper. By the end of the semester, only two students continued using nontraditional learning and evaluation methods. No students opted for any group-based learning methods during the semester. There were a total of 103 students at the beginning of the semester. Eighty three remained at the end of the semester. Thus, approximately 4% of students attempted nontraditional learning methods during the second "work period," but only 2% continued with them through the end of the semester.

To determine whether there were any differences in the preferred learning styles of students, responses on the seventeen Canfield LSI subscales were examined by gender. First, a MANOVA of the sixteen LSI subscales by gender revealed that students did differ significantly by gender on the LSI subscales. Next, univariate analyses of variance (ANOVA) were conducted on each of the seventeen LSI subscales to identify exactly how male and female students differed in their preferences of learning styles.

The ANOVA revealed that male and female students differed significantly on six of the seventeen LSI subscales. Specifically, male students indicated a preference for peer (means = 10.00, 14.19; $F = 5.58$; $p < .05$), goal (means = 9.77, 13.33; $F = 4.33$; $p < .05$), independence (means = 10.17, 15.33; 7.94; $p < .01$), inanimate (means = 8.23, 14.51; 13.00; $p < .01$), iconics (means = 8.27, 11.91; $F = 5.22$; $p < .05$, and direct (means = 8.20, 13.12; $F = 8.48$; $p < .01$). Compared to female students, male students preferred working in student teams; setting their own objectives; working independently; working with things (e.g., building, operating); learning by viewing illustrations, slides, pictures or graphs; and learning by handling or performing. Thus, at least some significantly different learning style preferences were identified in this sample between men and women. It might be reasonably expected that given the opportunity, students would select learning and evaluation methods best suited to their preferred learning style. Yet, few students took advantage of this opportunity.

The exit questionnaire included an open ended question which asked students for the reasons for their choice of learning method. Of particular interest here are the majority of students who chose the traditional learning method. These open-ended responses were independently coded into seven categories by three raters. These categories included (1) unable to work independently/lazy, (2) familiarity with the traditional lecture method, (3) belief that the traditional method would be

easier, (4) time pressure (belief that nontraditional methods would require more time), (5) uncertainty/risk aversion (unsure of what nontraditional methods would require), (6) importance of instructor's input in learning, and (7) belief that traditional lecture method would provide an advantage on exams.

Initially, the three raters agreed on 59% of the coding on 54 responses. However, this is a substantially understated inter-rater agreement percentage. This 59% represents complete agreement on how the 32 out of 54 responses should be coded. Some responses involved as many as four codes. The three raters agreed initially on 64 specific codes with 27 disagreements (70% agreement). After discussing the responses on which the raters disagreed, 100% agreement was reached. These infrequent disagreements involved a response which mentioned several reasons. Typically, all three coders agreed on two of three, or three of four reasons initially, and after brief discussion, reached consensus on the final reason.

The percentages of students who mentioned each of the seven reasons for their decision to remain with the traditional lecture/exam method appear in Table 1. As Table 1 shows, the most frequently mentioned reason (31.5% of respondents) was the perception that the instructor's input was important in the learning process. Typical comments included "I feel that I learn better by coming to class and having the instructor discuss and explain the materials," "I tend to learn better when I have a professor explaining things to me. It also makes me feel more confident about the material I am studying because sometimes when I am doing things on my own without the help of the professor I wonder if I am comprehending the material right or wrong," and "I learn more and absorb more through lectures and examples given by the teacher." The second most frequently mentioned reason for staying with the traditional lecture/exam approach (by 27.4% of respondents) was familiarity with the traditional learning methods. Typical comments included "I chose the traditional method mainly because that's what I am used to," "I chose the traditional classroom method because I know it," "I chose the traditional method because this is the way I have always learned and I believe this is my best way of learning," and "I feel I am more accustomed to this learning method, and learn more this way."

A chi-square analysis of reason by gender showed that male and female students did not differ significantly in the reasons for their decisions regarding learning/evaluation methods.

An analysis of variance with the satisfaction scale and the effectiveness scale as dependent variables and gender as the independent variable revealed no significant differences. The seven "dummy variables" created for the student reasons for selecting the traditional lecture and exam method were included in regression analyses on both the satisfaction scale and the effectiveness scale.

Table 1: Results of Qualitative Data Analysis of Decision Reasons	
Reason for Choosing Traditional Learning Methods	% of Respondents Mentioning Reason
Unable to work independently/lazy	6/49 (8.2%)
Familiarity with traditional learning methods	20/53 (27.4%)
Belief that traditional method would be easier	9/53 (12.3%
Not enough time for nontraditional methods	14/53 (19.2%)
Uncertainty/Risk Aversion	5/53 (6.8%)
Importance of Instructor's input in learning	23/53 (31.5%)
Perceived advantage of traditional method on exams	6/53 (8.2%)

DISCUSSION

A great deal of attention is being given to student diversity, different learning style preferences and matching learning, instructional and evaluation methods to this diversity. Instructors on many campuses are being encouraged, if not pressured, to employ nontraditional methods in their classrooms, and those who cling to traditional lecture and evaluation methods are sometimes viewed as outdated or inflexible. However, the results of this research suggests that when given the opportunity to learn and be evaluated in virtually any reasonable method they prefer, most students opted for traditional lectures and exams. Further, when asked about the reasons for their decisions, the importance of the instructor and familiarity with traditional learning and evaluation methods were the two most frequently cited reasons.

One explanation for these results is that students are simply risk averse and are familiar and comfortable with the traditional lecture method. Perhaps, if exposed to other learning methodologies, they would come to prefer other approaches. However, another possibility is that many believe the traditional lecture is, in fact, most effective for them. One recent student compare the traditional lecture with cooperative learning methods (Morgan, Whorton & Gunsalus, 2000). Results suggest that the two methods were equivalent in terms of long term retention; however, the lecture method was superior in terms of short term retention. Several students in the current research stated that they believed the lecture method was most effective for them.

An alternative explanation is that students who state they are familiar and/or comfortable with the lecture method may actually be driven by assessment. That is, they are reluctant to attempt an alternative learning method because they are afraid they may miss something in class which will be on the exams, or they simply believe that they will perform better on exams by attending the lectures of the exam-preparer, which of course may be something entirely different than effective

learning. In fact, the Morgan, et. al (2000) study provides evidence that lectures enhance short-term retention which may produce better results on exams. This explanation suggests that alternative assessment methods may encourage different learning methods.

While in the present study, students had the opportunity to propose alternative evaluation methods, such as case analysis and presentations, to match alternative learning methods, few students took advantage of these opportunities. However, researchers should be aware that individual assessments may bias students against teamwork or other alternative learning methods. Methods of assessment must be designed to match the method of learning. Of course, one interesting study examine learning/assessment matches as well as learning/assessment mismatches.

Universities are not likely to abolish the lecture method in the near future. It remains a very low-cost method of reaching large numbers of students. However, the results of the current study suggest that there may be other reasons to retain lectures. The most frequently cited reason for choosing traditional lecture by students in the current study was the importance of the instructor to their learning, followed closely by familiarity with the lecture method.

Future research is needed to determine whether students really believe that the lecture method is most effective for them or whether their decision is really "assessment driven." That is, they choose the lecture because they believe it will help them perform better on exams. This could be accomplish relatively easily in courses which employ the lecture method of instruction, but alternative methods of evaluation, such as case analyses, group projects, and presentations.

REFERENCES

Andrews, R. (1990). The development of a learning styles program in a low socioeconomic, underachieving North Carolina elementary school. *Journal of Reading, Writing, and Learning Disabilities International, 6*(3), 307-313.

Birk, L. (1997). What's so bad about the lecture? *Education Digest, 62*, 58-61.

Beswick, D. & G. Tallmadge. (1970). Reexamination of two learning style studies in light of the cognitive process theory of curiosity. *Journal of Educational Psychology, 62*, 514-520.

Canfield, A.A. (1976). *Canfield Learning Styles Inventory*. Detroit, MI: Humanics Media.

Canfield, A.A. & J.S. Canfield. (1978). *Canfield Instructional Styles Inventory.* Detroit, MI: Humanics Media.

Cooper, J. & J. Garth. (1966). Interactions of modality with age and with meaningfulness in verbal learning. *Journal of Educational Psychology, 58*, 41-44.

DeBerry, T.W. (1998). Teaching "the dismal science" by the lecture method: Maligned by not abandoned. *International Social Science Review, 73*, 67-74.

Dorsel, T. (1975). Preference-success assumptions in education. *Journal of Educational Psychology, 67*, 514-520.

Dunn, R. & K. Dunn. (1992). *Teaching elementary students through their individual learning styles.* Boston: Allyn and Bacon.

Dunn, R. & K. Dunn. (1993). *Teaching secondary students through their individual learning styles.* Boston: Allyn and Bacon.

Dunn, R., K. Dunn & J. Perrin. (1994). *Teaching young children through their individual learning styles.* Boston: Allyn and Bacon.

Dunn, R., A. Griggs, J. Olson, B. Gorman & M. Beasley. (1995). A meta-analytic validation of the Dunn and Dunn learning styles model. *Journal of Educational Research, 88*(6), 353-361.

Fredenberger, B., M. Schnake, J. Oliver & P. Fadil. (2002). A cluster analysis of preferred learning styles of undergraduate business students: Evidence of a need for diverse teaching methods. Proceedings, Southwest Academy of Management, St. Louis, MO.

French, R. & C. Grey. (1996). *Rethinking management education.* Newbury Park, CA: Sage.

Gagne, R. (1967). Instruction and the conditions of learning. In L. Siegal (Ed.), *Instruction, some contemporary viewpoints.* San Francisco, CA: Chandler.

Gagne, R. (1970). *The conditions of learning.* (2nd Edition). New York: Holt, Rinehart and Winston.

Gardner, H. (1991). *The unschooled mind: How children think and how schools should teach.* New York: Basic Books, Inc.

Gardner, H. & Hatch, T. (1989). Multiple intelligences go to school. Educational implications of the theory of multiple intelligences. *Educational Researcher, 18*(8), 4-9.

Jensen, A. (1970). Individual differences in visual and auditory memory. *Journal of Educational Psychology, 62*, 123-131.

Kolb, D. (1974). On management and the learning process. In D. Kolb (Ed.) *Organization psychology: A book of readings.* Englewood Cliffs, NJ: Prentice-Hall.

Lengnick-Hall, C.A. & M.M. Sanders. (1997). Designing effective learning systems for management education: Student roles, requisite variety, and practicing what we teach. *Academy of Management Journal, 40*, 1334-1368.

Morgan, R.L., J.E Whorton & C. Gunsalus. (2000). A comparison of short term and long term retention: Lecture combined with discussion versus cooperative learning. *Journal of Instructional Psychology, 27*, 53-58.

Orsak, L. (1990). Learning styles and bye: A winning combination. *Journal of Reading, Writing, and Learning Disabilities. 6*(3), 335-346.

Snow, R., J. Tiffin, & W. Seibert. (1965). Individual differences and instructional film effects. *Journal of Educational Psychology, 56*, 315-326.

Sperber, M. (2000). End the mediocrity of our public universities. *Chronicle of Higher Education, 47*, 24.

Stern, G. (1962). Environments for learning. In N. Sanford (Ed.) *The American college.* New York: Wiley.

Keywords: lecture, nontraditional learning methods, learning style preferences

JOB SATISFACTION OF MALE AND FEMALE ACCOUNTING FACULTY: THE EFFECT OF SEX-ROLE ORIENTATION AND ACADEMIC RANK

Suzanne Pinac Ward, University of Louisiana at Lafayette
Ellen D. Cook, University of Louisiana at Lafayette
Dan R. Ward, University of Louisiana at Lafayette

ABSTRACT

The glass ceiling which frequently stops women from gaining access to and advancing in the accounting profession has long been recognized. The accounting profession, like all organizations, has tended to foster self-replication; that is, individuals in the power structure tend to hire, mentor, and advance those individuals who are perceived to be most like themselves. Research has found that these persons tend to be "masculine" men. The academic arm of the profession, while subject to much less scrutiny and study, appears to have subscribed to the same stereotypical masculine orientation as the key to advancement and tenure.

This study examines the relationships among gender, sex-role orientation, academic rank, and job satisfaction among 101 university accounting professors. The Bem Sex-Role Inventory was utilized to measure the masculine and feminine personality characteristics of the respondents and the Job Descriptive Index (JDI) to measure the level of respondent satisfaction. Results indicated that female accounting faculty tend to suppress their feminine characteristics and emphasize their masculines ones while in line for promotion to a higher rank. Furthermore, all accounting faculty, regardless of gender or sex-role orientation were generally satisfied with the nature of work, supervision, and co-workers, but less satisfied with promotion and pay.

INTRODUCTION

Women, in their attempt to gain admission and advance in the so-called "male-dominated professions," have far too frequently encountered gender inequities and barriers–obstacles frequently referred to as the "glass ceiling." Gender discrimination and inequity can take numerous forms. Maupin (1986) suggests that much of the discrimination against women has focused on sex-role

stereotyping; i.e., a preconception of their feminine sex characteristics. Included in these preconceptions are that women are reluctant to accept responsibility or assume positions of leadership and that women are frequently absent from the workplace due to marriage and child rearing responsibilities. In contrast, society tends to stereotype males as competitive, non-giving, and judging success by their external accomplishments. Bay et al. (2001, p. 4) reports that the literature suggests that in academia, some of the feminine role characteristics such as lack of competitiveness, lack of assertiveness, patience, receptivity and modesty are traits that may prevent success. Such stereotyping may result in female professors being assigned to more gender-appropriate tasks such as teaching, advising, and student-centered service leaving the more assertive males to conduct the research, which contributes to the successful pursuit of tenure, and to carry on the leadership types of service.

While the academic arm of the accounting profession has been traditionally dominated by male faculty, there has been a marked increase in the number of female entrants into the academic environment. Norgaard (1989) found that there was a significant increase in the number of women accounting faculty members between 1981 and 1988 (14 percent to 22 percent) while only a slight change in the number of male faculty members occurred. In 1994, the American Institute of Certified Public Accountants (AICPA) reported that approximately 26 percent of all accounting faculty members were female. The American Accounting Association (AAA) in its study The Report on Supply and Demand for Accounting Professors (AAA, 1994) noted that women comprised 44 percent of the 144 doctoral candidates who expected to enter accounting academia in 1994. Carolfi, et al. (1996) reported that while women are still under represented in the academic accounting profession, institutions have made significant strides in increasing the number of female accounting faculty on staff with 30 percent of the accounting doctorates awarded between 1988 and 1993 granted to women. Collins (2000) reported that between 1991 and 1997, 39.2 percent of faculty accepting employment were women.

In spite of these strides, several studies (Parker, 1995; Carolfi et al., 1996; Buckless, et al., 1998; Collins et al., 1998; and Collins et al., 2000) have noted that gender differences exist in the types of positions filled by new accounting doctorate, with newly minted female doctorates less likely than new male doctorates to attain appointments at certain doctoral and research oriented schools. Prior research also indicates that many of the new female accounting academicians report that they encountered discrimination in their work environment perceiving barriers to promotion to higher ranks and to administrative positions (Norgaard, 1989). Lehman (1992) suggested that this situation may be the result of gender discrimination. Saftner (1988), in a study of the promotion of terminally qualified accounting faculty, found that, while both men and women attained the rank of associate professor in comparable time periods, women were significantly slower in their advancement to the rank of full professor with men being promoted to that rank sixteen times more often than females. Carolfi, et al (1996) and Dwyer (1994) support the extended time period for

women prior to their promotion to upper academic ranks with Carolfi, et al (1996) reporting a significant under representation at the rank of full professor.

As the number of highly qualified women entering academic accounting increases, promotion of women to senior ranks, movement into administrative positions, achievement of a semblance of earnings equality, and achievement of job satisfaction in an often indifferent and nonresponsive climate are frequently cited as areas of gender concern in academics. Both analytical and anecdotal evidence suggest that women in the accounting professorate have traditionally experienced the stereotypical environment described earlier. This, in conjunction with the theory of self-replication, suggests that the stereotypical masculine orientation is often the key to academic advancement and tenure. According to Kanter (1977),

> (o)rganizations clearly reproduce themselves. People in power (who are mostly masculine men) mentor, encourage, and advance people who are most like themselves. Not surprisingly, then, the handful of women who actually do achieve senior rank in organizations usually resemble the men in power. They have had to identify with and emulate the masculine model in order to progress in the organization. Thus, numerous recent studies in organizational behavior have shown that there are apparently very few, if any, personality or behavioral differences between male and female managers (p. 72).

The purpose of this study is twofold: first, to investigate whether the stereotypical masculine orientation exists to a significant extent in academic accounting via an inquiry into the masculine/feminine sex-role characteristics of accounting faculty with respect to new hires (assistant professors) and advancement (associate and full professors), and, second, to examine the level of job satisfaction of male and female accounting faculty relative to their sex-role orientation and academic rank.

SELECTED LITERATURE REVIEW

The current study utilized two widely accepted instruments--the Bem Sex-Role Inventory (BSRI) and the Job Descriptive Index (JDI)--to first measure the masculine and feminine characteristics of university accounting professors and then to determine whether or not the masculinity and femininity scores of the BSRI correlate positively with levels of job satisfaction. In the sections that follow, the development and structure of the two instruments are briefly explained. Then, selected studies are reviewed beginning with those which, like the current study, employed both instruments. Finally, literature on sex-role characteristics and job satisfaction is discussed.

Sex-role identity has been defined as the relative degree to which one endorses the socially desirable traits or stereotypes associated with one's own and one's opposite gender (Jolson, 1997). Charging that sex-typing traditionally treated masculinity and femininity as mutually exclusive, Bem (1974) developed a sex-role inventory that characterizes a person as masculine, feminine, androgynous, or undifferentiated as a function of the difference between his or her endorsement of masculine and feminine personality characteristics. Recognized as "the most widely accepted and used of the measures of masculinity and femininity" (Powell and Butterfield, 1989), the BSRI is distinguished from other commonly used masculinity-femininity scales in two ways: (1) masculinity and femininity are treated as two independent dimensions rather than as ends of a single continuum thus allowing respondents to indicate that they are high on both dimensions, low on both, or high on one and low on the other; and (2) the BSRI is predicated on the concept of the "traditionally sex-typed person as someone who is highly attuned to cultural definitions of sex-appropriate behavior and who uses such definitions as the ideal standard against which his own behavior is to be evaluated" (Bem, 1981, 5).

The BSRI requires a respondent to indicate on a seven-point scale ranging from 1--"never or almost never true" to 7--"always or almost always true" how well each of the sixty personality characteristics--twenty stereotypically feminine, twenty stereotypically masculine, and twenty filler items--describe him/herself. These characteristics do not necessarily represent desired characteristics, but rather those perceived to be held by that gender. In assembling the lists, a personality characteristic qualified as masculine if it was independently judged by both males and females to be significantly more desirable for a man than for a woman and feminine if it was independently judged by both males and females to be significantly more desirable for a woman than for a man. A personality characteristic qualified as neutral with respect to gender if it was independently judged by both males and females to be no more desirable for one gender than for the other and if male and female judges did not differ significantly in their overall desirability judgments of that trait. No significant changes (the classification of undifferentiated was an addition) in the classifications of these characteristics has occurred since the development of the BSRI (Street, Kimmel, and Kromrey, 1995; Holt and Ellis, 1998).

A masculinity score and a femininity score, representing the extent to which a person endorses masculine and feminine personality characteristics, are computed for each respondent. A masculine sex role represents both the endorsement of masculine attributes and the simultaneous rejection of feminine attributes while a feminine sex role represents the endorsement of feminine attributes and the simultaneous rejection of masculine attributes. An androgynous sex-role results from endorsement of both feminine and masculine traits while rejection of both sets of characteristics produces an undifferentiated sex-role. Currently, no particular sex role is viewed as better than any other, but rather is dependent on the appropriateness for the individual (Street, Kimmel, and Kromrey, 1995).

The BSRI has been used in a number of studies by researchers in other disciplines (Beere, 1990, reported that 795 articles and 167 ERIC documents have used the BSRI) as well as business-related disciplines. Powell and Butterfield (1979), in a survey of undergraduate and graduate business students to investigate whether there was a shift away from sex-typing of the management profession as masculine, found no such shift. In a subsequent study, Powell and Butterfield (1981) hypothesized that individuals' sex-role identities rather than sex would predict their managerial aspirations; Comer and Jolson (1985) investigated whether a student's gender or self-perceived sex role was a significant predictor of the student's career choice; and Quackenbush (1987) investigated whether masculinity and femininity are actually social competencies that contribute to an individual's personal and social effectiveness. Recent studies have attempted to determine that sex-role identity, specifically one classified as androgynous, is a more promising mechanism than gender to identify those who are likely to display characteristics and behavior that correlate with effectiveness as a sales leader (Jolson et al, 1997); investigated management response styles as determined by the BSRI (Bows-Sperry et al, 1997); reported that public (state government) executives must first prove their masculinity, irrespective of biological sex, in order to succeed (Kosseck, 1998); and determined that compared with other gender roles, with regard to conflict management styles, masculine individuals were highest on the dominating conflict style, feminine individuals were highest on the avoiding style, and androgynous individuals were highest on the integrating style (Brewer et al., 2002).

A significant body of research on sex-role stereotyping, and more specifically, androgyny, exists in the literature. Maupin (1990, 1991 and 1993) surveyed Big Six CPAs over a period of years to assess their beliefs regarding the reasons for the scarcity of women partners in accounting firms. She reported that male CPAs put a disproportionate emphasis on the characteristics of females as causal factors for women's general lack of success, thereby implying that, in order to succeed, women should adopt a model of organization behavior that is essentially male. On the other hand, female CPAs put more emphasis on situation-centered reasons and believed that both personal growth by women and changes in practices and social composition of public accounting firms would be necessary before significant numbers of women would advance to partnership levels. Several studies have shown that the handful of women who actually do achieve senior rank in organizations usually resemble males in power (Baril et al., 1988; Powell, 1988; Powell and Butterfield, 1989; Brenner et al., 1989; and Fagenson, 1990) and that women who have been successful in formerly male professions are much more likely to display masculine characteristics than other women (Lemkau, 1983; Doerfler & Kammer, 1986; Maupin & Hehman, 1994). Most recently, studies report that women in high levels of position or power are perceived as masculine relative to men and women in low levels of position or power (Ledet and Henley, 2000) and that a traditional feminine gender role still seems to negatively influence a managerial career for women in spite of the fact that many organizations have indicated that they are actually looking for leadership qualities which are associated with the female gender role (Ivarsson and Ekehammar,

2001). In a study of academia, Street et al. (1995) reported that university professors, in general, believe that the ideal woman is androgynous, that is, possessing traits which are both stereotypically male and those which are stereotypically female.

Job satisfaction is one of the most widely studied variables in the field of organizational behavior with more than 6,300 articles or dissertations on job satisfaction in the PSYCINFO computer database by the mid-1990s. The roots of empirical research may be traced back to Robert Hoppock's 1935 book, Job Satisfaction in which he reported that job satisfaction varies systematically by job level. The primary research into the measurement of job satisfaction was conducted by Smith, Kendall, and Hulin (1969) (and revised by Smith et al. in 1987) who developed the Job Descriptive Index (JDI). The JDI is designed to elicit and measure employee satisfaction concerning their work environment within five key areas: (1) general nature of work, (2) supervision (3) co-workers, (4) promotion, and (5) pay. The format of the JDI is that of short descriptive adjective statements designed to garner responses for specific areas of satisfaction with work-oriented rather than self-oriented responses sought (Ward et.al., 1986).

Viewed by many investigators as one of the most thoroughly researched and developed measures of its kind, the validity and reliability of the instrument have been widely tested in 277 journal articles between 1974 and 1997 (Reiner, 1999) among different occupational, racial, and gender groups (Igbaria and Guimaraes, 1999). Most recently, Kinicki et al. (2002) offered further support for the JDI's consturct validity. Only a select group of studies, those that relate to either accounting professionals or faculty, in general, will be discussed here.

Ward et al (1986) used the JDI to measure the level of job satisfaction of 643 female accountants and reported that, overall, female CPAs appeared to be satisfied with their job and work environments. However, women accountants are most satisfied with supervision and co-workers and least satisfied with their promotional opportunities and pay.

With regard to using the JDI to measure levels of job satisfaction in academic settings, Ormsby and Ormsby (1988) studied faculty in a metropolitan state-supported southeastern university to determine the effects of unionization and other personal characteristics (e.g., sex, age, tenure status, academic college, academic rank, pay level and union voting behavior) on levels of job satisfaction. Results indicated that unionization had not noticeably changed job satisfaction and that there was a significant increase in only the pay dimension of the JDI.

Using data from a representative sample of male and female faculty collected both before and after a successful unionization attempt, Ormsby and Watts (1991) reported that unionization has no significant effect on faculty satisfaction. Further, they reported that the level of job satisfaction for male faculty was significantly higher than for female faculty. Tang (1999) examined the gender differences in job satisfaction of staff and faculty in a southeastern university and found no significant differences. However, consistent with other studies of gender differences in job satisfaction, there were significant differences between males and females with males tending to have higher satisfaction with pay than females and females tending to have higher satisfaction with

co-workers than males. In particular, pay satisfaction was significantly associated with gender, higher status, and satisfaction with work and promotions. While not using the JDI, Ward and Sloane (2000) considered job satisfaction in the academic labor market by drawing upon a particularly detailed data set of 900 academics from five traditional Scottish universities. Results indicated that reports of overall job satisfaction do not vary widely by gender. While comparison salary is found to be an important influence on academics' overall job satisfaction, evidence suggests that academics place a lower emphasis on pecuniary relative to non-pecuniary (promotion prospects, job security) aspects of work than other sectors of the workforce.

Several studies have employed both the BSRI and the JDI to evaluate accounting professionals as well as management personnel. Maupin (1986) sought to evaluate the validity of the proposition that, to be successful in a male-dominated environment, women have to assume more of the characteristics identified as being masculine. She further hypothesized that a woman CPA's sex-role characteristics can be used to predict her JDI score. Surveying 500 women CPAs to investigate both job satisfaction and career advancement, she reported that sex role characteristics can be used to predict a woman's job satisfaction level with higher masculinity and femininity scores positively correlated with greater levels of job satisfaction. Further, she reported that women CPAs classified as androgynous achieved the greatest job satisfaction and that women who have advanced to upper levels of the public accounting profession (partners, managers, seniors) possess significantly different masculine and feminine characteristics than recently hired CPAs (juniors). Specifically, she found that 76 percent of women partners were androgynous and the remaining 24 percent were sex-reversed; i.e., scoring significantly higher on masculine characteristics than on feminine characteristics. At the entry level, 52 percent were feminine; 24 percent, androgynous; 20 percent, undifferentiated; and 4 percent, masculine. She then concluded that androgyny seems to be acceptable alternative to the exclusively male behavior that, heretofore, was perceived as making successful CPAs in general.

Maupin and Lehman (1994) examined the relationship between sex-role orientation and both occupational status and job satisfaction levels of 461 then "Big Six" auditors (221 male and 240 female). Studying their subjects over a five-year period to determine if both male and female employees would inevitably reject "feminine" stereotypes and adopt "masculine" stereotypes as a condition of moving up the corporate hierarchy, they found that a high stereotypical masculine sex-role orientations was significantly (positively) related to higher occupational status as well as to job satisfaction and lower turnover. Further, they found significant differences between auditors at the junior, senior, manager and partner levels with respect to masculine and feminine characteristics. Significant differences between both masculinity and femininity scores were found for all male auditors, while females had significantly different masculinity scores but not significantly different femininity scores. Male partners were 59 percent androgynous and 41 percent masculine with the percentage of males with high masculinity scores (either androgynous or masculine) increasing directly with career ranking (e.g., 55 percent, juniors; 79 percent, seniors; 87

percent, managers; 100 percent, partners.) In addition, the percentage of males with high femininity scores (androgynous or feminine) also increased with career ranking. Of the female respondents, 54 percent of the partners level were androgynous with the remaining 46 percent were masculine. Thus, 100 percent of the female partners had high masculinity scores and 54 percent had high femininity scores. Similar to the males, the percent of females with high masculinity scores increased with career ranking (juniors, 39 percent; seniors, 53 percent; managers, 85 percent; partners, 100 percent.) However, unlike the males, the percentage of females with high femininity scores decreased as career ranking increased, declining from 72 percent for juniors to 54 percent for partners. Finally, with regard to the level of job satisfaction, they reported that, for the male auditors, both the masculinity and femininity scores of the BSRI correlated positively with the JDI score. For female auditors, however, the masculinity score correlated positively with the JDI score, but the correlation between the femininity score and the JDI score was not significant. The researchers reported that evidence indicates that male and female auditors who successfully reach the partnership level are more similar than different and that a high stereotypical masculine orientation is indeed a key ingredient to advancement, job satisfaction, and long tenure in contemporary "Big Six" accounting organizations. They summarized their findings concluding that "(f)or many accountants, then, it appears that being successful in an accounting organization means suppressing or eliminating attitudes and behaviors that would identify them as "typically female", and therefore as ill-suited for partnership roles as those roles are currently defined" (p. 435).

Using both the BSRI and the Supervision Component of the JDI, Maupin (1989) examined whether managers in California and Hawaii who are perceived by their subordinates to be effective supervisors possess sex-role characteristics that differentiate them from managers who are perceived to be unsatisfactory supervisors. Findings indicated that a supervisor's sex-role characteristics can be used to predict a subordinate's level of satisfaction with the supervisor and that the level of satisfaction increases as the supervisor becomes more androgynous.

Most recently Bay et al. (2001) examined the relationship between gender orientation as measured by the BSRI and success and between gender orientation and job satisfaction among accounting professors. They reported significant differences in the gender orientations across the ranks of female accounting professors with female accounting faculty at higher ranks more likely to possess masculine characteristics than those at lower ranks. Further, women were more likely to display cross gender characteristics that men (56% of women were either androgynous or masculine while only 43% of men were either feminine or androgynous). Female assistants were more likely to possess feminine characteristics (feminine or androgynous) than associates who were more likely to possess feminine characteristics than full professors. On the other hand, males presented different patterns of gender orientations with an increase across the ranks of feminine characteristics. Male full professors and associates were more likely than assistants to possess feminine characteristics. Job satisfaction was found to be related to gender orientation, but not to gender. Specifically, strongly masculine or strongly feminine individuals were less likely to feel

satisfied with their jobs than other personality types while androgynous and undifferentiated accounting professors reported the higher levels of job satisfaction. As appropriate, specific results of the Bay et al. study will be compared with the results of the current study in the sections that follow.

METHODOLOGY

To examine whether the stereotypical masculine orientation exists to a significant extent in academic accounting as well as the job satisfaction of accounting educators, a systematic random sample of 250 female and 250 male accounting academicians was selected from universities and colleges across the United States. Responses were received 101 faculty members resulting in a 20.2 percent response rate. Of the respondents, 51 were female and 50 were male academicians. Testing for non-response bias via Oppenheim's technique (1966) of comparing the early and the late responses indicated no significant differences between early and late responses and, thus, no evidence of material non-response bias.

The Bem Sex-Role Inventory (BSRI) was the instrument utilized to measure the sex-role characteristics of the respondents via classification of the subjects into four distinct sex-role groups: feminine, masculine, androgynous, and undifferentiated. The items contained on the masculinity, femininity, and neutral scales of the BSRI are presented in Table 1. For each item, a respondent indicates how well that characteristic applies to himself/herself by using a 7 point scale where 1 represents "never or almost never true" and 7, "always or almost always true."

A femininity score (the mean of the respondent's feminine items) and a masculinity score (the mean of his/her masculine items) were determined for each respondent. Using the relations between each respondent's individual femininity and masculinity scores and the overall feminine mean score of 4.550 and the overall masculine median score of 5.200, respondents were classified into one of the four sex-role groups: androgynous (individual scores exceeded both the femininity and masculinity median scores), feminine (individual scores exceeded the feminine median score but not the masculine median score), masculine (individual scores exceeded the masculinity median score but not the femininity median score), or undifferentiated (individual scores did not exceed either the femininity or the masculinity median scores).

The Job Descriptive Index (JDI) was the instrument utilized to measure the job satisfaction of accounting academicians within five key areas: the general nature of work, supervision, co-workers, promotion, and pay. The JDIs were scored which resulted in a satisfaction index for each respondent in each of the five key dimensions of job satisfaction. No JDI score is considered "passing" or "failing", but is useful in comparison with the score or scores of other individuals or groups. However, the higher the individual score, the greater the level of job satisfaction. A score of 18 represents indifference and a score of 27, a balanced attitude toward job satisfaction.

Table 1: Items on the Masculinity, Femininity, and Neutral Scales of the BSRI		
Masculine Items	Feminine Items	Neutral Items
49. Acts as leader *	11. Affectionate	51. Adaptable
46. Aggressive	5. Cheerful	36. Conceited
58. Ambitious	50. Childlike	9. Conscientious
22. Analytical	52. Compassionate	60. Conventional
13. Assertive	53. Does not use harsh language	45. Friendly
10. Athletic	35. Eager to soothe hurt feelings	15. Happy
55. Competitive	20. Feminine	3. Helpful
37. Dominant	59. Gentle	24. Jealous
19. Forceful	47. Gullible	39. Likeable
25. Has leadership abilities	56. Loves children	6. Moody
7. Independent	26. Sensitive to needs of others	21. Reliable
52. Individualistic	8. Shy	30. Secretive
31. Makes decisions easily	38. Soft spoken	33. Sincere
40. Masculine	23. Sympathetic	42. Solemn
1. Self-reliant	44. Tender	57. Tactful
34. Self-sufficient	29. Understanding	12. Theatrical
16. Strong personality	42. Warm	27. Truthful
43. Willing to take a stand	2. Yielding	18. Unpredictable
28. Willing to take risks		54. Unsympathetic
* Numbers preceding scale items indicate the position of each item on the BSRI.		

Responses to the BSRI were stratified by gender and academic rank in order to examine the relation between the sex-role orientation of accounting faculty and their academic rank as full, associate, or assistant professors. According to Bem (1976), a person's individual behavior as determined by the BSRI changes very little over time and thus age is not a mitigating factor. In addition to being stratified by gender and academic rank, the responses to the JDI were also stratified by sex-role orientation.

ANALYSIS AND DISCUSSION OF RESULTS

The results of the analysis are presented in the following sections. First, the sex-role orientations of the respondents are discussed with the effect of rank and gender examined. Then, the levels of job satisfaction relative to sex-role orientation and academic rank, stratified by gender, are addressed.

Table 2 presents the sex-role classifications of the respondents stratified by rank and gender. As can be seen, overall 39.2 percent of the female respondents were classified as masculine (high masculine, low feminine; i.e., sex reversed) with another 11.8 percent androgynous (high masculine, high feminine). Thus over half (51%) of all female respondents in this study had high masculinity scores. Comparably, while over half (56%) of the female respondents in the Bay et al. study also had high masculinity scores, the composition differed from the current study in that only 15.7 percent were classified as masculine with the other 40.5 percent as androgynous. The heavier concentration of androgynous orientation as compared to the masculine was consistent at all levels. When looking at the sex-role groupings of females in this study by rank, higher percentages of women at the lower academic ranks had high masculinity scores with approximately 41 percent of female assistant professors (35.3% masculine, i.e., sex reversed, and 5.9% androgynous) and approximately 63 percent of female associate professors (54.2% masculine, i.e., sex reversed, and 8.3% androgynous) reporting such scores. Similarly, Bay et al. reported high masculinity scores for 54 percent of female assistants (13.5 % masculine and 40.5 % androgynous) and approximately 59 percent for female associates (10.8% masculine and 48.7% androgynous). Thus, it appears that female academicians tend to recognize that, consistent with prior research, masculine behavioral patterns are advantageous, if not necessary, for advancement in academia. Interestingly, in the current study a lower percentage (40%; 10% masculine, i.e., sex reversed, and 30% androgynous) of female full professors had high masculinity scores which differs from prior research in that females at the top ranked position generally all report high masculinity scores. The results reported by Bay et al. were similar to those in the current study in that not all female full professors had high masculinity scores (53.3%) with 33.3 percent classified as masculine and 20 percent as androgynous.

Approximately one in three females in the current study reported high femininity scores (23.5% feminine (high feminine, low masculine) and 11.8% androgynous (high feminine, high masculine)) as compared to 60 percent in the Bay et al. study with the difference caused by the high concentration of females (40.5%) classified as androgynous in that study. Consistent with prior research, a higher percentage of females at the top academic rank of full professor indicated high femininity scores (which was not the case in the Bay et.al study (46.7%). However, unlike prior studies, similar percentages of these female full professors were classified as feminine (30%) and androgynous (30%). Much lower percentages of female accounting faculty at the associate (16.7% feminine, 8.3% androgynous) and the assistant (29.4% feminine, 5.9% androgynous) indicated high femininity scores. These results were similar to those reported by Bay et al. In that this percentage

fell as rank increased (64.8% assistant, 59.5% associate, 46.7% full). One possible interpretation of this result is that women in accounting academia repress their feminine behavioral patterns and attitudes in favor of their masculine ones as a means of gaining promotion to higher ranks.

Table 2: Percentage of Respondents By Sex-Role Group Stratified by Academic Rank and Gender

	Masculine	Feminine	Androgynous	Undifferentiated	Total
Overall: (n = 101)					
Female (n = 51)	39.2%	23.5%	11.8%	25.5%	100%
Male (n = 50))	24.0	34.0	20.0	22.0	100
Full Professors:					
Female (n = 10)	10.0	30.0	30.0	30.0	100
Male (n = 18)	16.6	27.8	27.8	27.8	100
Associate Professors:					
Female (n = 24)	54.2	16.7	08.3	20.8	100
Male (n = 21)	28.6	38.1	14.3	19.0	100
Assistant Professors:					
Female (n = 17)	35.3	29.4	05.9	29.4	100
Male (n = 11)	27.3	36.4	18.2	18.2	100

With regard to the sex-role groupings of male respondents, 44 percent reported high masculinity scores with 24 percent classed as masculine and 20 percent as androgynous, very similar to the results in the Bay et al. study where 45.8 percent reported high masculinity scores–28 percent classed as masculine and 17.8 percent as androgynous. The percentage of male accounting academicians indicating high masculinity scores is fairly consistent across all three ranks (44.4 percent (16.6% masculine, 27.8% androgynous) of full professors, 42.9 percent (28.6% masculine, 14.3% androgynous) of associates, and 45.5 percent (27.3% masculine, 18.2% androgynous) of assistants). In contrast to the results discussed previously for the female respondents, a majority of male accounting academicians (54%; 34% feminine, i.e., sex reversed, 20% androgynous) reported high femininity scores. Approximately one out of two male full professors had high femininity scores (27.8% feminine, i.e., sex reversed, 27.8% androgynous) which is somewhat consistent with findings in prior studies as well as with the Bay et. al. study (50.4% of full professors having high femininity scores; 27.7% feminine, 22.7% androgynous).

When looking at progression from assistant to associate to full professor for the male and female accounting academicians in this study, several interesting observations can be made. At the assistant and associate ranks, a higher percentage of females (35.3% assistant, 54.2% associate) were identified as masculine than of males (27.3% assistant, 28.6% associate) with this trend reversed at the full professor level. (Bay et al. reported just the opposite; lower percentages of masculine females at the two lower ranks (assistants: 13.5% female vs. 22.8% male; associates: 10.8% female vs. 31.1% male) with a higher percentage (33.3% female vs. 28.6% male) at the full level.) The opposite is true in this study for those classed as feminine with lower percentages of females at the lower ranks (29.4% assistant, 16.7% associate) in the feminine category and higher percentages of males (36.4% assistant, 38.1% associate) in that category. Bay et al. reported similar percentages of feminine females at the assistant level (22.8% male, 24.3% female) with a higher percentage of male associate professors (23.6% male vs. 10.8% female) in that category. Again, this trend is reversed at the full professor level. In both this study and the Bay et al. study, similar percentages of both female and male full professors reported high femininity scores (60% female, 55.6% male in the current study; 46.7% female, 50.4% male in the Bay et. al. study.) Thus, consistent with prior research, both males and females at the highest ranked position reported high femininity scores.

Table 3 shows the ANOVA results for the female and male accounting academicians in this study. As can be seen, there are no significant differences in either femininity or masculinity characteristics of the full, associate, and assistant professors in this study with one exception. For male accounting faculty, the femininity scores were significantly different ($p < .10$) between the different ranks. In particular, the femininity scores of male assistant professors were significantly lower than those of associate and full professors.

Table 3: ANOVA Results

	Academic Rank	
	F - Ratio	p
Females:		
Femininity	0.778	.465
Masculinity	0.258	.773
Males:		
Femininity	3.170	.051*
Masculinity	1.274	.289

* significant at p = .10 level

Table 4 presents the femininity and masculinity score means for the female and male accounting faculty in this study stratified by academic rank. As can be seen, for female faculty, only the femininity mean score for full professors (4.7350) is above the overall femininity mean (4.550). Furthermore, only the mean masculinity score for female associate professors (5.3229) is above the overall masculinity mean (5.200). Interestingly, the mean femininity score for male full professors (4.6583) and male associate professors (4.5595) are both above the overall mean femininity score of 4.5500. In addition, for male accounting academicians, the masculinity mean scores for full professors (5.3250) and assistant professors (5.2364) are both above the overall masculinity mean score of 5.2000.

Table 4: Sex Score Means Stratified by Academic Rank and Gender

	Full Professors	Assoc. Professors	Ass't. Professors	Total
	(n = 28)	(n = 45)	(n = 28)	(n = 101)
Overall Mean:				
Femininity	4.6875	4.3100	4.2500	4.5500
Masculinity	5.2143	5.2322	5.1179	5.2000
Females:	(n = 10)	(n = 24)	(n = 17)	(n = 51)
Femininity	4.7350	4.0917	4.2971	4.2863
Masculinity	5.0150	5.3229	5.0412	5.1686
Males:	(n = 18)	(n = 21)	(n = 11)	(n = 50)
Femininity	4.6583	4.5595	4.1773	4.5110
Masculinity	5.3250	5.1286	5.2364	5.223

Tables 5 - 9 present the respondents' mean JDI scores in each of the five satisfactions dimensions (work, supervision, co-workers, promotion, pay) stratified by gender, sex-role orientation, and academic rank. The reader should keep in mind that a score of 18 represents indifference toward a dimension with a score of 27 representing a balanced attitude. Each of the five dimensions is discussed in the following sections.

Nature of Work

Overall, the males and female accounting academicians in this study are satisfied with the nature of their work as indicated by the mean JDI scores presented in Table 5 (female mean 41.24, male mean 38.52; both over the balanced score of 27). Masculine females indicated a much higher level of satisfaction with the nature of their work (46.05) than any other gender-sex-role combination with masculine males reporting the lowest level of satisfaction (35.50). Furthermore, undifferentiated academic accountants as a whole had the lowest satisfaction with work (37.88) than the other sex-role groups (masculine 42.09, feminine 39.83, androgynous 38.63).

Table 5: Mean JDI Scores - Work
Stratified By Sex-Role Group, Academic Rank, and Gender

	Masculine	Feminine	Androgynous	Undifferentiated	Combined
Overall: (n = 101)					
Female (n = 51)	46.05	38.75	40.00	36.69	41.24
Male (n = 50)	35.50	40.59	37.80	39.27	38.52
Full Professors:					
Female (n = 10)	42.00	39.00	42.00	36.00	39.30
Male (n = 18)	31.00	39.00	35.40	43.20	37.83
Associate Professors:					
Female (n = 24)	45.69	37.50	34.50	36.60	41.50
Male (n = 21)	36.50	40.50	41.00	36.00	38.57
Assistant Professors:					
Female (n = 17)	47.50	39.60	45.00	37.20	42.00
Male (n = 11)	38.00	42.75	39.00	36.00	39.55
Combined (n = 101)	42.09	39.83	38.63	37.88	39.89

For the female academicians, assistant professors regardless of sex-role characteristics generally reported higher satisfaction with the nature of their work (masculine 47.5; feminine 39.6; androgynous 45.0; undifferentiated 37.2.) In fact, masculine female assistant professors had the highest level of satisfaction with the nature of their work than another other sex-role-gender-rank

combination (47.5). For masculine and undifferentiated females, the mean JDI score decreased as academic rank increased (masculine: 47.5, 45.69, 42.0; undifferentiated: 37.2, 36.6, 36.0). However, for the feminine and androgynous female accounting educators, lower satisfaction with work was reported by the associate professors (feminine 37.5, androgynous 34.5) with an increase in satisfaction at the professor level (39.0 for feminine, 42.0 for the androgynous) (although not as high as at the assistant level).

For males, satisfaction with work was lowest at the full professor level for three sex-role classifications (masculine 31.0, feminine 39.0, androgynous 35.4). Interestingly, however, undifferentiated male full professors reported the highest level of work satisfaction (43.2) among all of the male rank-sex-role groups with masculine male full professors indicating the lowest satisfaction with work among all groups (including females) (31.0). Males with masculine and feminine sex-roles reported decreased levels of work satisfaction as rank increased (masculine: 38.0, 36.5, 31.0; feminine: 42.75, 40.5, 39.0).

Supervision. As Table 6 indicates, both male and female academic accountants are generally well satisfied with their level of supervision and/or their supervisor (male mean 40.86; female mean 37.06). Feminine males reported much higher levels of satisfaction with supervision than any other gender-sex-role category (46.06) with masculine females reporting the lowest (34.20). In general, those academic accountants classified as feminine (42.10) or undifferentiated (40.00) exhibited higher levels of supervision satisfaction than did those in the masculine (36.38) or androgynous (36.75) groupings.

Table 6: Mean JDI Scores - Supervision
Stratified By Sex-Role Group, Academic Rank, and Gender

	Masculine	Feminine	Androgynous	Undifferentiated	Combined
Female (n = 51)	34.20	36.50	39.50	40.85	37.06
Male (n = 50)	40.00	46.06	35.10	39.00	40.86
Full Professors:					
Female (n = 10)	51.00	41.00	51.00	36.00	43.50
Male (n = 18)	44.00	47.40	34.80	37.80	40.67
Associate Professors:					
Female (n = 24)	36.00	30.00	16.50	39.60	34.13
Male (n = 21)	39.50	46.88	41.00	43.50	43.29
Assistant Professors:					
Female (n = 17)	27.50	39.00	51.00	45.00	37.41
Male (n = 11)	37.00	42.75	27.00	33.00	36.55
Combined (n = 101)	36.38	42.10	36.75	40.00	38.94

For the female accounting academicians, masculine and androgynous full professors together with androgynous assistant professors reported an extremely high level of satisfaction with their supervision (all had a mean JDI index of 51.0). In contrast, the female androgynous associate professors were very dissatisfied with their supervisor and/or supervision as reflected in the mean JDI of 16.5, which is below the indifference score of 18. Denial of promotion to the rank of full professor or a long time in rank are two possible explanations for this dissatisfaction with supervision. Satisfaction with the level of supervision increased as masculine females rose in academic rank while the opposite was true for undifferentiated females.

Male academic accountants did not report the extremes found for the females regarding satisfaction with their supervision. For both masculine and feminine males, satisfaction levels increased as rank increased (masculine 37.0, 39.5, 44.0; feminine 42.75, 46.88, 47.4). Androgynous assistant professors had the lowest level of supervisory satisfaction among the male groups and reported a balanced attitude of 27.0.

Co-Workers. As can be seen in Table 7, accounting academicians appear to be generally satisfied with their peers in the workplace (females 31.59, males 33.84), although not as satisfied as they are with the nature of their work or their level of supervision. Masculine males reported essentially a balanced attitude toward their co-workers (27.75), the lowest among the gender-sex-role groups, while feminine males reported the highest level of co-worker satisfaction (37.94).

For the females in the study, masculine full professors had the highest level of peer satisfaction (42.0) while feminine assistant professors actually reported a slight dissatisfaction with co-workers, reporting the lowest JDI mean of 25.2. Interestingly, the feminine female's satisfaction with co-workers goes from slightly dissatisfied (25.2) at the assistant level to basically neutral at the associate level (27.75) to somewhat satisfied at the full level (34.0). For the other three sex-role groups, associate professors were less satisfied with co-workers than assistant professors were with a slight increase in satisfaction at the full level. This may be the result of promotions being denied to the respondent females in the study while at the same time co-workers received such promotions.

Undifferentiated male accounting academicians were initially fairly satisfied with co-workers (37.2) with satisfaction levels decreasing as rank increased (associate 34.8; full 30.0). The opposite is true of the feminine male educators whose satisfaction with co-workers rose as academic rank increased (assistant 35.25, associate 38.25, full 39.6). Masculine male educators, originally satisfied with their peers (31.0), were dissatisfied with them at the associate level (25.5) with satisfaction somewhat recovered at the full level (29.0). As with the females, this disenchantment with co-workers may be the result of promotions going to others rather than to the respondents in the study. Although the androgynous male associate professors were actually fairly satisfied with their co-workers (40.0), this satisfaction decreased at the full professor level (30.0).

Promotion. A review of Table 8 indicates, that, generally speaking, all accounting academicians reported dissatisfaction with promotional possibilities with males in general having

lower JDI scores (females 21.76, males 19.68). Masculine males, in particular, indicated much promotion dissatisfaction (16.5) although androgynous females exhibited a fairly similar JDI index (17.0). Feminine females (25.5) and feminine males (22.59) appeared to be the most satisfied of all sex-role categories (while still expressing somewhat of a dissatisfaction).

Table 7: Mean JDI Scores - Co-Workers Stratified By Sex-Role Group, Academic Rank, and Gender

	Masculine	Feminine	Androgynous	Undifferentiated	Combined
Overall: (n = 101)					
Female (n = 51)	31.65	28.25	31.50	34.62	31.59
Male (n = 50)	27.75	37.94	34.80	33.27	33.84
Full Professors:					
Female (n = 10)	42.00	34.00	32.00	30.00	33.00
Male (n = 18)	29.00	39.60	30.00	30.60	32.67
Associate Professors:					
Female (n = 24)	30.69	27.75	27.00	34.80	30.75
Male (n = 21)	25.50	38.25	40.00	34.50	34.14
Assistant Professors:					
Female (n = 17)	32.00	25.20	39.00	37.20	31.94
Male (n = 11)	31.00	35.25	39.00	37.50	35.18
Combined (n = 101)	30.19	33.93	33.56	34.00	32.70

Female feminine associate professors reported a slight level of satisfaction (28.5) with promotion, the highest mean JDI of all of the gender-rank-sex-role groups. Androgynous female assistant professors displayed much dissatisfaction with promotions (12.0) which decreased to extreme dissatisfaction at the associate rank (9.0), but which, interestingly, increased substantially at the full professor level (24.0) which may result from the decrease in such extreme competition. For females in the other three sex-roles, satisfaction with promotion generally fell from the associate to the full level. This may, perhaps, reflect the fact that full professors have reached the pinnacle of academic rank and can advance no further except into administrative positions.

The only male sex-role-rank combination which even reported a slight satisfaction with their promotions were the feminine full professors (28.0). All remaining groupings reported slight to extreme dissatisfaction (below the balanced score of 27 as well as, in some cases, below the indifference score of 18 which generally indicates a high level of dissatisfaction). Masculine males, while expressing mild dissatisfaction with promotion at the assistant level (24.0), became extremely disenchanted with their peers at the associate level (13.0) with a slight recovery at the full level

(18.0). Undifferentiated male accounting academicians became increasingly disillusioned with promotions as they progressed up the ranks (assistant 24.0, associate 21.0, full 13.2).

Table 8: Mean JDI Scores - Promotion
Stratified By Sex-Role Group, Academic Rank, and Gender

	Masculine	Feminine	Androgynous	Undifferentiated	Combined
Female (n = 51)	21.30	25.50	17.00	21.23	21.76
Male (n = 50)	16.50	22.59	20.40	18.00	19.68
Full Professors:					
Female (n = 10)	18.00	22.00	24.00	18.00	21.00
Male (n = 18)	16.00	28.00	19.20	13.20	19.67
Associate Professors:					
Female (n = 24)	21.69	28.50	09.00	20.40	21.50
Male (n = 21)	13.00	18.75	24.00	21.00	18.29
Assistant Professors:					
Female (n = 17)	21.00	25.20	12.00	24.00	22.59
Male (n = 11)	24.00	22.50	18.00	24.00	22.36
Combined (n = 101)	19.50	23.79	19.13	19.75	20.73

Pay. Surprisingly, accounting academicians reported being somewhat satisfied with their pay as evidenced by mean JDI scores of 30.12 for males and 31.53 for females as presented in Table 9. Feminine females (25.0) and androgynous males (24.6) were the only two gender-sex-role groups which reported dissatisfaction with their pay.

Females at the assistant professor rank, regardless of sex-role classification, were fairly satisfied with their pay. The satisfaction of undifferentiated females increased at the associate level (37.2), but fell over 10 points at the full professor level (26.0). The satisfaction level of the masculine (33.69) and the androgynous (27.0) females fell at the associate level with an increase at the full level. However, the largest decrease occurred in the satisfaction index of feminine females which fell from 39.6 to 19.5, from fairly satisfied to fairly dissatisfied; a trend which continued at the full professor level with feminine females reporting a mean JDI of 8.00, extreme dissatisfaction.

For the males, only feminine (33.0) and androgynous (36.0) assistant professors reported being satisfied with pay as both masculine (24.0) and undifferentiated (27.0) assistants indicated dissatisfaction with their enumeration. Androgynous males became increasingly disenchanted with their pay as their satisfaction levels decreased as rank increased (assistant 36.0, associate 24.0, full 20.4), moving from fairly satisfied to fairly dissatisfied. However, the opposite is true of masculine males whose satisfaction increased from 24.0 at the assistant level (mild dissatisfaction) to 27.0

(balanced) at the associate level to 36.0 (fairly satisfied) at the full level. Undifferentiated male full professors reported a similar satisfaction with pay (38.4) having increased from a balanced attitude at the assistant level (27.0) and dissatisfaction at the associate level (21.0). Feminine males, however, indicated higher levels of satisfaction at the lower ranks (assistant 33.0, associate 39.75) with only a balanced attitude of satisfaction toward pay reported at the full professor level (27.6).

Table 9: Mean JDI Scores - Pay
Stratified By Sex-Role Group, Academic Rank, and Gender

	Masculine	Feminine	Androgynous	Undifferentiated	Combined
Female (n = 51)	34.20	25.00	32.00	33.23	31.53
Male (n = 50)	28.50	34.59	24.60	30.00	30.12
Full Professors:					
Female (n = 10)	36.00	08.00	36.00	26.00	24.60
Male (n = 18)	36.00	27.60	20.40	38.40	30.00
Associate Professors:					
Female (n = 24)	33.69	19.50	27.00	37.20	31.50
Male (n = 21)	27.00	39.75	24.00	21.00	30.29
Assistant Professors:					
Female (n = 17)	35.00	39.60	30.00	33.60	35.65
Male (n = 11)	24.00	33.00	36.00	27.00	30.00
Combined (n = 101)	32.06	30.62	27.38	31.75	30.83

Analysis was conducted to determine whether the JDI scores of the respondents were correlated significantly with either masculinity or femininity BSRI scores. There was no significant correlation between the femininity BSRI scores and any of the dimensions of job satisfaction. However, the masculinity BSRI scores were significantly correlated negatively to three of the JDI dimensions: work (Pearson's r = -.432, p=.01), co-workers (Pearson's r = -.554, p=.01) and supervision (Pearson's r = -.333, p=.05). To determine the effect of gender, sex-role orientation, and academic rank on satisfaction with work, supervision, co-workers, promotion, and pay, a multi variate analysis of variance (MANOVA) was conducted. No significant main effects or interaction effects were found.

SUMMARY AND IMPLICATIONS

Many professions, including accounting academia, are frequently perceived as fostering self-replication of "masculine" behavior throughout the power hierarchy; that is, a person has to

exhibit masculine traits and attitudes, not feminine ones. This study provides insight into the masculine/feminine characteristics of female and male accounting educators by examining their sex-role orientations using the Bem Sex-Role Inventory and into their degree of job satisfaction by utilizing the Job Descriptive Index. Prior research indicates that a stereotypical masculine orientation is often the key to advancement into the upper echelons of power in any profession or organization. The results of this study are consistent with prior research (including Bay et al , 2001) in that half of the females in this study had high masculinity scores. This is particularly true at the lower ranks of associate and assistant professor. In addition, the majority of males at the full and associate professor levels reported high femininity scores which is consistent with findings in Bay et al. as well as other prior studies.

However, this study had several results which diverge from the findings of previous studies including Bay et al. For example, lower percentages of females at the highest academic rank of full professor had high masculinity scores, i.e., sex reversed. Additionally, while the majority of female full professors reported high femininity scores which is consistent with prior studies, in the current study, a higher percentage of the female full professors were classified as feminine rather than androgynous which is contrary to previous findings. Furthermore, masculinity scores for both female and male accounting educators did not increase as rank or position increased which was the case in prior studies. Masculinity scores for female accounting faculty increased from assistant to associate, but then fell at the full professor level.

Regarding job satisfaction in accounting academia, all accounting faculty, regardless of gender or sex-role orientation, generally reported satisfaction with the nature of their work, their supervisors, and their co-workers. Not surprising, less satisfaction and, in some cases, even dissatisfaction were indicated for promotion and pay.

The results of the current study appear to indicate that female accounting academicians tend to suppress their femininity characteristics and emphasize their masculines ones while they are in line for promotion to a higher rank. However, the results seem to imply that female accounting professors revert to their feminine characteristics while still retaining some of the masculine traits once the top rank of full professor is attained where they are somewhat satisfied with promotions and really dissatisfied with pay. Perhaps, these female full professors feel that they no longer have to play the "masculine" game once they have attained tenure and the top rung of the academic ladder.

Consistent with Bay et al., the males in this study appear to be able to exhibit not only masculine traits, but feminine ones as well. Thus the results of this study may indicate that accounting academia allows male accounting faculty at all ranks to exhibit the softer emotions related to human needs while not allowing female faculty at the lower ranks to manifest these same emotions. Only when females have no further upward steps to take does the academic environment allow the expression of these feminine characteristics by female accounting faculty. Thus the accounting academic arena appears to continue to conform to the "stereotypic male masculine

model" as the road to success and supports the premise that organizations, business or academic, tend to reproduce themselves.

REFERENCES

American Accounting Association. (1994). Report on supply & demand of accounting professors. Sarasota, FL, AAA.

American Institute of Certified Public Accountants. (1994). The AICPA report on the gender and ethical/racial breakdown of accounting department heads & faculty. New York: AICPA.

Baril, G., N. Elbert, S. Maher-Potter & G. Reavy. (1989). Are androgynous managers really more effective? *Group & Organization Studies*, (Winter), 234-249.

Bay, D., M. Allen & J. Njoroge. (2001). Gender orientation, success and job satisfaction in accounting academia. *Advances in Public Interest Accounting, 8*, 1-20.

Beere, C. (1990). *Gender roles: A handbook of tests and measures*. New York: Greenwood.

Bem, S. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology, 43*(2), 155-162.

Bem, S. (1981). *Bem sex-role inventory, Manual*. Palo Alto, CA: Mind Garden.

Bows-Sperry, L., J. Veiga & J. Yanouzas. (1997). An analysis of managerial helping responses based on social role theory. *Groups and Organization Management,* (December), 445-459.

Brenner, O., J. Tomkiewicz & V. Schein. (1989). The relationship between sex-role stereotypes and requisite management characters revisited. *Academy of Management Journal, 32*, 662-669.

Brewer, N., P. Mitchell & N. Weber. (2002). Gender role, organizational status, and conflict management styles. *International Journal of Conflict Management, 13*(1), 78-94.

Buckless, F., S. Ravenscroft & A. Baldwin. (1998). Educational qualifications and gender: Accounting for women as adjuncts. *Journal of Education for Business*, (Jan-Feb), 151-156.

Carolfi, I. A., C. M. Pillsbury & J. R. Hasselback. (1996). The hiring of women in accounting academia. *Journal of Education for Business*, (January/February), 151-156.

Collins, A., B. Parrish & D. Collins. (1998). Gender and the tenure track: Some survey evidence. *Issues in Accounting Education, 9*(Fall), 231-246.

Collins, D., A. Reitenga, A. Collins & S. Lane. (2000). "Glass walls" in academic accounting? The role of gender in initial employment position. *Issues in Accounting Education, 15* (Aug), 372-393.

Comer, L., & M. Jolson. (1985). Sex-labeling of selling jobs and their applicants. *The Journal of Personal Selling and Sales Management, 5* (1), 15-23.

Doerfler, M. & P. Kammer. (1986). Workaholism, sex, and sex role stereotyping among female professionals. *Sex Roles, A Journal of Research, 14*, 551-560.

Dwyer, P. D. (1994). Gender differences in the scholarly activities of accounting academics: An empirical investigation. *Issues in Accounting Education,* (Fall), 231-246.

Fagenson, E. (1990). Perceived masculine and feminine attributes examined as a function of individuals' sex and level in the organizational power hierarchy, A test of four theoretical perspectives. *Journal of Applied Psychology, 75*, 204-211.

Holt, C. & J. Ellis. (1998). Assessing the current validity of the Bem Sex Role Inventory. *Sex Roles, A Journal of Research, 39*, 929-938.

Ivarsson, S. & B. Ekehammar. (2001). Women's entry into management: Comparing women managers and non-managers. *Journal of Managerial Psychology, 16*(4), 301.

Jolson, M., A. Dubinsky, L. Comer & F. Yammarino. (1997). Sex-role identity. *Marketing Management,* (Winter), 49.

Kanter, R. M. (1977). *Men and Women of the Corporation*. New York: Basic Books

Kinicki, A.J., F. McKee-Ryan, C. Schriesheim & K. Carson. (2002). Assessing the construct validity of the Job Descriptive Index: A review and meta-analysis. *Journal of Applied Psychology,* (Feb), 14-32.

Kossek, E. (1998). Gender, power, leadership, and governance. *Administrative Science Quarterly,* (Dec), 946-950.

Ledet, L. & T. Henley. (2000). Perceptions of women's power as a function of position within an organization. *Journal of Psychology, 134* (Sept), 515-527.

Lehman, C. (1992). Herstory in accounting, The first eighty years. *Accounting, Organizations, and Society,* (April/May), 261-285.

Lemkau, J. (1983). Women in male-dominated professions, Distinguishing personality and background characteristics. *Psychology of Women Quarterly, 8*(2), 144-165.

Maupin, R. & C. Lehman. (1994). Talking heads, stereotypes, status, sex-roles and satisfaction of female and male auditors. *Accounting Organizations and Society, 19* (4/5), 427-437.

Maupin, R. & C. Lehman. (1986). The impact of sex-role characteristics on the job satisfaction and success of women CPAs. *The Woman CPA,* (July), 35-37.

Maupin, R. & C. Lehman. (1990). Sex role identity and career success of certified public accountants. *Advances in Public Interest Accounting, 3*, 97-106.

Maupin, R. & C. Lehman. (1991). Why are there so few women CPA partners? *Ohio CPA Journal,* (Nov/Dec), 17-22.

Maupin, R. & C. Lehman. (1993). Why are there so few women accounting partners? *Managerial Auditing Journal, 8*, 10-10.

Norgaard, C. (1989). A status report on academic women accountants. *Issues in Accounting Education,* (Spring), 11-28.

Quackenbush, R. (1987). Sex roles & social perception. *Human Relations, 40*(10), 659-670.

Parker, D. (1995). An examination of the distribution of female accounting academicians: Evidence of regional and institutional bias. Unpublished working paper, Stephen F. Austin State University.

Powell, G. (1988). *Women and men in management.* Newbury Park: Sage.

Powell, G. & D. Butterfield. (1979). The good manager, masculine or androgynous? *Academy of Management Journal*, (June), 395-403.

Powell, G. & D. Butterfield. (1981). A note on sex-role identity effects on managerial aspirations. *Journal of Occupational Psychology, 54* (4), 299-301.

Powell, G. & D. Butterfield. (1989). The 'good manager,' Did androgyny fare better in the 1980s? *Group and Organization Studies*, 216-233.

Saftner, D. (1988). The promotion of academic accountants. *Journal of Accounting Education, 6* (1), 55-66.

Street, S., Kimmel, E. & J. Kromrey. (1995). Revisiting university student gender role perceptions. *Sex Roles, A Journal of Research, 33*, 183-201.

Street, S., Kromrey, J. & E. Kimmel. (1995). University faculty gender role perceptions. *Sex Roles, A Journal of Research, 32*, 407-422.

NOTE

The authors wish to acknowledge the assistance of Dr. Thomas E. Wilson, Jr. and Ms. Tracy Bundy.

MOTIVATIONAL ORIENTATION, SELF-REGULATED LEARNING STRATEGIES AND STUDENTS' CHOICE OF TEACHING MODEL

Louis F. Jourdan, Jr., Clayton College & State University
James J. Bagwell, Clayton College & State University
George W. Crawford, Clayton College & State University

ABSTRACT

The purpose of this study is to determine the relationship between students' use of self-regulating learning behaviors and preferences for one of three (3) teaching models, including traditional classroom, hybrid (partially online), and fully online courses. The study was based on the results of motivational strategy survey responses of 261 junior and senior level business students. The research methodology measured four variables including self-efficacy, intrinsic motivation, cognitive strategy, and self-regulation. Students preferring online courses have higher scores in self-efficacy, intrinsic motivation, high cognitive strategy use, and self-regulation, than those preferring hybrid courses and traditional classroom courses, with self-efficacy being the most significant determinant. Significant differences were found between online and classroom courses, and between online and hybrid courses. The differences between hybrid courses and classroom courses were not statistically significant. These implications can assist in advising students in choosing the course with the instructional delivery method that will enable the student to maximize learning outcomes and course performance.

INTRODUCTION

The use of online courses in both education and business has been dramatically increasing. The percentage of colleges offering distance education programs increased from 48% in 1998 to 72% in 1999 (Henry, 2000). Furthermore, online (OL) college courses have become an integral part of higher education for the foreseeable future (Nakos, Deis, & Jourdan, 2002). With the advent of online learning, students' choices of teaching models has expanded beyond the traditional classroom model. These choices each have different requirements and characteristics for the different teaching models, specifically OL and distance learning (DL) types of delivery.

Furthermore, some believe individual differences of students may influence the student and course outcomes depending on the teaching model chosen. Some have speculated that a student

must be more motivated for an online course than for a traditional one (Carnevale, 2001). Others believe students in online and classroom courses drop out for the same reasons. David Bailey, director of institutional research at Tyler College, believes colleges are moving toward a point where students may be matched with a particular delivery medium based on their learning styles and on their lives (Carnevale, 2000). Buchanan at the University of Wisconsin at Milwaukee believes potential distance education students should be asked before a course begins whether they can work independently and how computer literate they are. "Not everyone is going to be able to succeed in this new learning environment, and why should they? You really need to weed people out, and I don't see universities doing that" (Carr, 2000). Gibson believes that "to send students out into the world unprepared to teach and learn through online learning is a mistake" (Carr, 2000). Some colleges and universities are moving to require students to take at least one OL course. In these cases, OL courses should not be used as a tool of convenience for students, but should be used from a belief that the Internet is effective at helping students learn (Carnevale, 2001).

CHOICE OF TEACHING MODEL

Research has suggested that OL may not for everyone. Even with the increasing number of delivery options, one study found that 80% of OL students still choose classroom courses (Guernsey, 1998). Studies have examined predictors of student performance in classrooms, predictors of performance in online courses, and student perceptions of online courses. There are differences in the characteristics of effective and ineffective distance learners (Roblyer, 1999), previous experience with technology (Richards & Ridley, 1997), learning styles (Gibson and Graf, 1992; Saunders, 1998), and satisfaction (Thomerson & Smith, 1996). However, there is still a need to investigate differences between students who choose different teaching models (Robyler, 1999). The dropout rate is a concern (Carnevale, 2000; Carnevale, 2001). OL course completion rates vary from less than 50% to greater than 80% across some institutions. Several administrators concur that course completion rates are often 10-20% higher in traditional courses than in distance offerings. Others have found that drop out rates are as high as 35-50% compared to 14% for traditional classes (Lynch, 2001).

Given the varied opinions regarding who should enroll in OL courses and the differences among students, only a small number of studies have examined why students choose DL over traditional delivery systems and what factors affect receptivity to DL. Many of those have focused on demographic differences (Roblyer, 1999). One study found that some reasons for not taking OL courses were "the advantage of having the professor available", the need for personal instruction, and acknowledgement that they learned better in a traditional classroom environment (Nakos, Deis, & Jourdan, 2002).

Evidence suggests that students prefer a choice, rather than being forced to take OL courses. Results of some studies have determined that learner choice influences a variety of variables.

Thomerson and Smith (1996) found that assignment to DL courses affected student satisfaction even though performance among the groups was comparable. Smith (1996) found that choice of teaching model was important to students; 30% of those surveyed indicated that they would never choose DL. In a work environment, trainees given choices resulted in greater satisfaction, higher motivation to learn, more positive reactions, and better performance on an achievement test compared to those who were not given choices regarding training program attendance (Baldwin, Magjuka, & Loher, 1991; Hicks & Klimoski, 1987; Mathieu, Tannenbaum, & Salas, 1992; Ryman & Biersner, 1975).

SELF-REGULATING BEHAVIOR

Self-regulating behavior has consistently been related to performance, motivation, and choices in both academic and work environments. Self-regulation (SR) is used interchangeably with self-management; some also refer to it as self-directed or active learning in an academic context. It is an area that is receiving increasing attention by practitioners and management researchers (Vancouver & Morrison, 1995). While the terms are becoming interchangeable, the term SR is typically used in educational research, and self-management (SM) is more often used in management and industrial/organizational research. SR is a cognitive process that determines the transformation of motivational force into behavior and performance (Kanfer, 1990). SR of cognition and behavior has been demonstrated to be important to classroom learning and performance (Corno & Mandinach, 1983; Corno & Rohrkemper, 1985). Active learners who control are able to manage their learning using numerous strategies and techniques (Schunk & Zimmerman, 1994). Similar findings have been identified in applied settings (Brief & Hollenbeck, 1985; Erez & Kanfer, 1983; Frayne, 1991; Latham, & Frayne, 1989; Frayne & Latham, 1987; Frayne & Geringer, 2000). In summary, self-regulated learners are motivated, independent, and metacognitively active in their learning (Zimmerman, 1990). Self-regulated learners actively manage their learning activities as they engage with a task, flexibly adjusting approaches as required. In short, self-regulating individuals, whether students or employees perform at higher levels, have higher self-efficacy, and typically have a learning goal or mastery orientation versus a performance goal orientation.

GOAL ORIENTATION

Related to SR are two orientations that are used to acquire competence in achievement situations. There is a learning goal, or task orientation, which is also called mastery, and there is a performance goal orientation, also referred to as competitiveness or ego goals (Ames, 1992; Dweck & Legget, 1988; Nicholls, 1989; Ames & Archer, 1988; Dweck, 1986; Nicholls, 1984). These orientations have different aspects of cognition, affect behavior (Harackiezicz, Barron, Tauer, & Carter, 2000), and are distinct both conceptually and empirically. What orientation an individual

uses influences the degree of effort that they choose to expend toward a particular outcome (Ames, 1992).

A learning goal orientation (LGO), or mastery, is self-oriented, or self-referential and focuses on learning and developing skills (Harackiewicz et al., 2000). The LGO focuses on adaptive learning behaviors such as task involvement, challenge seeking, and deep processing of material (Ames & Archer, 1988). Individuals with LGO develop competence by acquiring and mastering new skills and situations (Dweck, 1986; Dweck & Leggett, 1988; Elliott & Dweck, 1988).

A performance goal orientation (PGO), on the other hand, is normative; individuals compare their performance to others and focus on demonstrating competence (Harackiewicz et al., 2000; Ames & Archer, 1988; Dweck, 1986; Nicholls, 1984). Individuals with a PGO use maladaptive learning strategies, such as avoiding challenge and risk of failure, because failure would indicate poor ability. They also use surface level processing (Elliott & Dweck, 1988; Nolen, 1988) and validate their competence by seeking favorable judgments, and avoiding negative judgments (Dweck, 1986; Dweck et al. 1988; Elliott & Dweck, 1988). Those with PGO perceive ability as fixed and view high effort as an indicator of low ability and report decreased interest in a task (VandeWalle, Brown, Cron, Slocum, 1999).

The general findings of the relationship between goal orientation and performance are that LGO leads to improved performance and PGO does not. LGO has been related to academic performance, while PGO has been unrelated (Button, Mathieu, & Zajac, 1996; Phillips & Gully, 1997). LGO training led to planned use of more effort in future; PGO training did not. (Stevens & Gist, 1997). LGO has also been related to sales performance (VandeWalle et al., 1999).

This study examines the differences in the motivational orientation and learning strategies, including self-regulating learning behaviors of those students who choose and prefer one of three teaching models.

HYPOTHESES

It is anticipated that those students who are highest in self-regulation will choose OL courses more because they are independent, have high self-efficacy, and have the optimal skills to adjust their study strategies to meet the situational demands. The specific research hypotheses are as follows:

H1:	Students preferring online courses will have higher scores in self-efficacy, intrinsic motivation, high cognitive strategy use, and self-regulation than those preferring hybrid courses and classroom courses
H2:	Students preferring hybrid courses will have higher scores in self-efficacy, Intrinsic motivation, cognitive strategy use, and self-regulation than those preferring classroom courses.

H3: Students preferring classroom courses will have a higher performance goal orientation than those preferring online and hybrid courses.

METHODOLOGY

Participants

The participants were 261 junior and senior level business students enrolled in undergraduate courses at a state university in the southeastern part of the United States. The sample was composed of 63% female, 37% male, with an average age of 27. The students in the sample also worked an average of 34 hours per week.

Measures

The dependent variables were four (4) scales, which measured motivational and self-regulated learning components, and two (2) scales which measured goal orientation in an academic setting. The participants responded to a self-report questionnaire, composed of four (4) scales from the Motivational Strategies for Learning Questionnaire (MSLQ) developed by Pintrich and DeGroot (1990). Two scales developed by Harackiewicz, Barron, Taurer, Carter, and Elliott (2000) measured learning goal and performance goal orientation.

Students were asked to use a seven (7) point rating scale to assess how true each statement was about them for all items. The self-efficacy scale (coefficient alpha=.94) included nine (9) items regarding students' perceived competence regarding their performance in the course; it included such statements as "I expect to do well in this class", and "I can do an excellent job on the problems and tasks assigned to this class."

The Intrinsic Value scale (coefficient alpha= .79) consisted of such statements as "I think what we're learning in this class is interesting" and "It's important for me to learn what is being taught in this course." The cognitive strategy use scale (coefficient alpha=.85) was related to the use of rehearsal strategies such as repeating terms over and over for memorization, and elaboration strategies which included summarizing, paraphrasing, and organizational strategies. This scale was composed of items such as "It's hard for me to decide what the main ideas are in what I read", "When I study, I put important ideas into my own words", and "When I study for a test, I practice saying the important facts over and over to myself."

The self-regulation scale (coefficient alpha = .75) included statements on metacognitive strategies such as monitoring progress through planning, skimming, and comprehension checks. It also included items regarding effort management strategies that measured students' persistence at difficult, boring tasks and diligence. Samples of items in this scale are "I work on practice exercises

and answer end of chapter questions even when I don't have to" and "When the work is hard, I either give up or study only the easy parts."

Two goal orientation scales developed by Harackiewicz et al. (2000) measured learning goal orientation, or mastery, and performance goal orientation, or competitiveness. A sample of items in the mastery scale (coefficient alpha = .79) were "I want to learn as much as possible in this class", and "I prefer course material that really challenges me so I can learn new things." The competitiveness scale (coefficient alpha = .80) included such statements as "It is important for me to do well compared to other students", and "My goal in this class is to get a better grade than most of the other students."

The independent variable was students' reported preference for one of three teaching models: traditional classroom (n=130), online (n=60), and hybrid courses (n=86), with the hybrid course being 50% classroom and 50% online activity. This question was included as part of the questionnaire.

RESULTS

The data were analyzed using MANOVA and found that there was statistically significant difference ($p<.001$) among one or more of the six (6) scales by preference for teaching model (Pillai Trace = .114, F=2.50, df =12, 494, p=.003). Further analyses with one-way ANOVA found that those differences existed in one (1) dependent variable, self-efficacy ($p<.05$). Pairwise comparisons of the three groups using the Bonferroni adjustment detected significant differences (p=.001) between online (average = 50.8) and traditional classroom preferences (average = 45.6) and between online and hybrid course preferences (p=.023). While the average self-efficacy score was higher for the hybrid course (average = 46.6) than for the traditional classroom course (average = 45.6), the differences were not statistically significant ($p>.05$).

Table 1. One-way ANOVA of dependent variables.

Source	SS	df	MS	F	P
Mastery	10.868	2	5.434	0.388	0.679
Error	3516.223	251	14.009		
Self-eff	572.863	2	286.432	3.277	0.039
Error	21942.101	251	87.419		
Intrinsic	48.759	2	24.380	2.487	0.085
Error	2460.705	251	9.804		

Table 1. One-way ANOVA of dependent variables.

Source	SS	df	MS	F	P
Cognitive	328.008	2	164.004	1.056	0.349
Error	38974.669	251	155.278		
Self-reg	66.976	2	33.488	0.543	0.581
Error	15466.457	251	61.619		
Perform	271.821	2	135.911	2.379	0.095
Error	14336.620	251	57.118		

Note: Mastery goal orientation; Self-eff = self-efficacy; Intrinsic= intrinsic value; Cognitive = cognitive strategy; Self-reg = self-regulating strategy; Perform = performance goal orientation.

DISCUSSION

These findings are relevant to teaching in higher education for several reasons. This is one of the first studies to examine the relationship of self-regulated learning and goal orientation to student choice or preference for teaching models. Further, self-regulated learning has been demonstrated to be related to academic performance in the classroom (Kovach, 2000; Macan, Shahani, Dipboye & Phillips, 1990; McKeachie, Pintrich & Lin, 1985). Interventions can be designed to increase self-regulating behaviors in students.

Second, it can be used to advise students who are considering online or distance education courses. Studies of student opinions and perceptions have indicated that some students are aware that they require, or at least prefer, a learning situation which offers more support from the instructor, that they learn better through interaction with both the professor and other students in the classroom setting, and that they learn better through listening and hearing. Third, courses, particularly freshman and sophomore courses can be designed to foster and reinforce self-regulating learning behaviors. Fourth, self-regulation is related to on-the-job performance (Erez & Kanfer, 1983; Godat & Brigham, 1999; Frayne, 1991; Latham, & Frayne, 1989; Frayne & Latham, 1987; Frayne & Geringer, 2000; Brief & Hollenbeck, 1985). Therefore, students' development of self-regulating skills and self-efficacy will prepare them for on-the-job success after graduation.

One of the reasons that there were significant differences on only one of the dependent variables, self-efficacy, is that all of these factors are interrelated and influence one another. Specifically, a mastery performance orientation leads to the use of self-regulating behaviors.

One's goals and goal orientation will determine what behaviors are utilized. Self-regulating behaviors lead to successful task achievement. This achievement, in turn, influences one's

self-efficacy, the confidence that one has in his ability to perform a specific task. Further research is needed to explain the complex interaction of goal orientation, self-regulation, and self-efficacy. Research has demonstrated that all three of these constructs can be influenced by training and situational cues. Each of the goal orientations have both situational and dispositional components (Ames, 1992; Butler, 1993; Button et al., 1996; Elliott & Dweck, 1988; VandeWalle et al, 1999; Stevens & Gist, 1997). Future research should explore individual differences in capabilities for self-management. One suggestion in this regard is to examine self-regulatory skills that may influence how effectively learners can control their own behavior and cognition in the face of competing demands (Schunk & Zimmerman, 1997). This is particularly important in light of the fact that some have identified many online students are also working full time, with many demands from both inside and outside of the university placed on them. Individual differences are likely to influence self-regulation and work performance in situations where there is free choice about behavior (Locke & Latham, 1990; Weiss & Adler, 1984; Weiss, 1990). Self-efficacy, which leads to the use of self-regulating behaviors, (Kanfer, 1990) has been associated with choice of task, motivation level, effort, and perseverance with task (Hill, Smith, & Mann, 1987). VandeWalle et al., 1999 concluded that achieving job performance success takes more than just wanting to appear to others to have high ability. Rather, one needs to have the desire to develop skills required for such success. LGO led to higher sales performance and this relationship was completely mediated by three (3) self-regulation tactics.

Changing attributions that individuals can make about their ability and performance can enhance a learning goal orientation. Individuals with a LGO perceive ability as a malleable attribute (Dweck & Leggett, 1988) and perceive effort as a key cause of their performance success (Duda & Nicholls, 1992). Task performance may be enhanced for some individuals by training them to understand that many forms of ability can be developed and that effort is an important determinant of performance success (Ames, 1992). Dweck (1975) decreased the rate of participants quitting after receiving negative feedback by training participants to make effort attributions for failure (Vandewalle et al., 1999).

Given the findings of this study, it is recommended that colleges and universities provide courses and training to develop students' self-efficacy and SR behavior. Furthermore, it is recommended that instructors become knowledgeable in the components of SR in order to encourage and foster its use. This will improve students' academic performance as well as have them develop skills that are related to on-the-job performance. It is also recommended that additional research be performed to identify those variables that are related to students' choices and preferences for the different types of teaching models and their relationship to variations in student performance by model.

In summary, this study is one of the first to examine teaching model preference in terms of self-regulating behavior, specifically self-regulated learning behaviors. The results concluded that choice of model is related to self-efficacy, that is, one's confidence that he or she can perform a

specific task. Since training can enhance self-regulating behavior and self-efficacy, it would be worthwhile to provide students with such training to prepare them for both traditional classroom and online courses.

REFERENCES

Ames C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*, 261-271.

Ames, C. & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivational processes. *Journal of Educational Psychology, 76,* 478-487.

Baldwin, T., Magjuka, R. & Loher, B. (1991). The perils of participation: Effects of choice of training on trainee motivation and learning. *Personnel Psychology, 44*, 51-66.

Bergin, D. A. (1995). Effects of a mastery versus competitive motivation situation on learning. *Journal of Experimental Education, 63* (4), 303-315.

Brief, A. & Hollenbeck, J. (1985). An exploratory study of self-regulating activities and their effects on job performance. *Journal of Occupational Behavior, 6,* 197-208.

Brown, K. G. (2001). Using computers to deliver training: Which employees learn and why? *Personnel Psychology, 54*(2), 271-297.

Butler, D. & Winne, P. (1995). Feedback and self-regulated learning: A theoretical analysis. *Review of Educational Research, 65*, 245-281.

Butler, R. (1993). Effects of task- and ego-achievement goals on information seeking during task engagement. *Journal of Personality and Social Psychology, 65,* 18-31.

Button SB, Mathieu JE, Zajac DM. (1996). The development and psychometric evaluation of measures of learning goal and performance goal orientation. *Organizational Behavior and Human Decision Processes, 67*, 26-48.

Carnevale, D. (2000). Online instructor takes steps to reduce dropout rate. *The Chronicle of Higher Education, Information Technology*, January 28, 2000. http://chronicle.com/infotech

Carnevale, D. (2001, April 13). As distance education evolves, choices reflect the cultures of institutions. *The Chronicle of Higher Education*, [Online serial] Available: http://chronicle.com/distance.

Carr, S. As distance education comes of age, the challenge is keeping students. *The Chronicle of Higher Education, Information Technology* section, February 11, 2000. http://chronicle.com/infotech

Colquitt JA, Simmering MJ. (1998). Conscientiousness, goal orientation, and motivation to learn during the learning process: A longitudinal study. *Journal of Applied Psychology, 83*, 654-665.

Corno, L. (1993). The best-laid plans: Modern conceptions of volition and educational research. *Educational Researcher, 22,* 14-22.

Corno, L. & Mandinach, E. (1983). The role of cognitive engagement in classroom learning and motivation. *Educational Psychologist, 18*, 88-108.

Corno, L. & Rohrkemper, M. (1985). The intrinsic motivation to learn in classrooms. In C. Ames & R Ames (Eds.), *Research on motivation: Vol 2. The classroom milieu* (pp.53-90). New York: Academic Press.

Duda J.L. & Nicholls, J.G. (1992). Dimensions of achievement motivation in schoolwork and sport. *Journal of Educational Psychology, 84*, 290-299.

Dweck, C. (1975). The role of expectations and attributions in the alleviation of learned helplessness. *Journal of Personality and Social Psychology, 31*, 674-685.

Dweck C. (1986). Motivational processes affecting learning. *American Psychologist, 41,* 1040-1048.

Dweck, C. & Leggett, E. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95,* 256-273.

Elliott, E. & Dweck, C. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology, 54*, 5-12.

Erez, M. & Kanfer, F. (1983). The role of goal acceptance in goal setting and task performance. *Academy of Management Review, 8,* 454-463.

Frayne, C. (1991). *Reducing employee absenteeism through self-management training: A research-based analysis and guide.* Westport, CT: Quorum Books.

Frayne, C. & Geringer, J. (2000). Self-management training for improving job performance: A field experiment involving salespeople. *Journal of Applied Psychology, 85,* 361-372l.

Frayne, C. & Latham, G. (1987). The application of social learning theory to employee self-management of attendance. *Journal of Applied Psychology, 72*, 387-392.

Gibson, C. & and Graf, A. (1992). Impact of adults' preferred learning styles and perception of barriers to completion of external baccalaureate degree programs. *Journal of Distance Education, 7,* 39-51.

Guernsey, L. (1998, March 27). Colleges debate the wisdom of having campus students enroll in online classes. *The Chronicle of Higher Education* [Online serial]. Available: http://chronicle.com

Harackiewisz, J.M., Barron, K.E., Tauer, J.M., and Carter, S.M. (2000). Short-term and long- term consequences of achievement goals: Predicting interest and performance over time. *Journal of Educational Psychology, 92,* 316-330.

Hardy, D. W. & Boaz, M. H. (1997). Learner development: Beyond the technology. In T. E. Cyrs (Ed.), *Teaching and learning at a distance: What it takes to effectively design, deliver, and evaluate programs* (pp. 41-48). San Francisco: Jossey-Bass.

Henry, T. (2000). Professors seek online standards . Courses need academic rigor. *USA Today,* . 7D, July 20.

Heyman, G.D. & Dweck, C.S. (1992). Achievement goals and intrinsic motivation: Their relation and their role in adaptive motivation. *Motivation and Emotion, 16*, 231-247.

Hicks, W. & Klimoski, R. (1987). Entry into training programs and its effects on training outcomes: A field experiment. *Academy of Management Journal, 30*, 542-552.

Hill, T., Smith, N. & Mann, M. (1987). Role of efficacy expectations in predicting the decision to use advanced technologies: The case of computers, *Journal of Applied Psychology, 72*, 307-313.

Hoeksema, L.H. (1995). *Learning strategy as a guide to career success in organizations.* Leiden University. The Netherlands: DSWO Press.

Hofmann DA. (1993). The influence of goal orientation on task performance: A substantively meaningful suppressor variable. *Journal of Applied Social Psychology, 23*, 1827-1846.

Kanfer, R. (1990). Motivational and individual differences in learning: An integration of developmental, differential, and cognitive perspectives. *Learning and Individual Differences, 2*, 221-239.

Latham, G. & Frayne, C. (1989). Self-management training for increasing job attendance: A follow-up and replication. *Journal of Applied Psychology, 72,* 411-416.

Locke, E. & Latham, G. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.

Lynch, M. M. (2001). Effective student preparation for online learning. *The Technology Source,* November/December 2001. Available online at http://ts.mivu.org/default.asp?show=article&id=901

Macan, T., Shahani, C., Dipboye, R. & Phillips, A. (1990). College students' time management: Correlations with academic performance and stress. *Journal of Educational Psychology, 82*, 760-768.

Mathieu, J., Tannenbaum, S. & Salas, E. (1992). Influences of individual and situational characteristics on measures of training effectiveness. *Academy of Management Journal, 35*, 828-847.

McKeachie, W., Pintrich, P. & Lin, Y. (1985). Teaching learning strategies. *Educational Psychologist, 20*, 153-160.

Moore, M. G. & Kearsley, G. (1996). *Distance education: A systems view.* Belmont, CA: Wadsworth Publishing Co.

Nakos, G. E., Deis, M. H. & Jourdan, L. (2002). Students' perceptions of on-line courses: An exploratory study. *Turkisk Online Journal of Distance Education, 3*, 1-15

Nicholls, J. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review, 91*, 328-346.

Nicholls, J. (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard.

Nolen, S. (1988). Reasons for studying: Motivational orientations and study strategies. *Cognition and Instruction, 5*, 269-287.

Petracchi, H. E. (2000). *Research on Social Work Practice. 10* , May, 362-376.

Pintrich, P.R. & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology, 82*(1), 33-40.

Pintrich, P.R. & Schrauben, B. (1992). Students' motivational beliefs and their cognitive engagement in classroom tasks. In D. H. Schunk & J. Meece (Eds.), *Student perceptions in the classroom: Causes and consequences* (pp. 149-183). Hillsdale, NJ : Erlbaum.

Richards, C. & Ridley, D. (1997). Factors affecting college students' persistence in online computer-managed instruction. *College Student Journal, 31*, 490-495.

Roblyer, M. (1999). Is choice important in distance learning?: A study of student motives for taking internet-based courses at the high school and community college levels. *Journal of Research on Computing in Education, 32*, 157-171.

Ryman, D. & Biersner, R. (1975). Attitudes predictive of diving success. *Personnel Psychology, 28*, 181-188.

Sankaran, S.R. and Bui, Tung. (2001). Impact of learning strategies and motivation on performance: A study in web-based instruction. *Journal of Instructional Psychology, 28*(3), 191-198.

Saunders, N., Malm, L., Malone, B., Nay, F. Oliver, B. & Thompson, J. (1998). Student perspectives: Responses to internet opportunities in a distance learning environment. *Midwestern Educational Researcher, 11*(4), 8-18.

Schunk D. & Zimmerman B. (1997). Social origins of self-regulatory competence. *Educational Psychologist, 32*, 195-208.

Smith, C. (1996, May). Convenience vs. connection: Commuter students' views on distance learning. Paper presented at the annual forum for the Association for Institutional Research, Albuquerque, NM (ERIC No. ED 397 725)

Stevens, C. & Gist, M. (1997). Effects of self-efficacy and goal orientation training on negotiation skill maintenance: What are the mechanisms? *Personnel Psychology, 50*, 955-978.

Thomerson, D. & Smith, C. (1996). Student perceptions of affective experiences encountered in distance learning courses. *American Journal of Distance Education, 10*(3), 37-48.

Vancouver, J. & Morrison, E. (1995). Feedback inquiry: The effect of source attributes and individual differences. *Organizational Behavior and Human Decision Processes. 62,* 276-285.

VandeWalle, D., Brown, S.P., Cron, W.L. & Slocum, J.W. (1999). The influence of goal orientation and self-regulation tactics on sales performance: A longitudinal field test. *Journal of Applied Psychology, 84*(2), 249-259.

Vermunt, J.D. (1998). The regulation of constructive learning processes. *British Journal of Educational Psychology, 68*, 149-171.

Wallace, L. (1996). Changes in demographics and motivations of distance education students. *Journal of Distance Education, 11*, 1-31.

Weiss, H. (1990). Learning theory and industrial and organizational psychology. In Dunnette,M. & Hough, L. (Eds.) *Handbook of Industrial Organizational Psychology,* 2nd ed. (vol. 1,171-222). Palo Alto, CA: Consulting Psychologists Press.

Weiss, H. & Adler, S. (1984). Personality and organizational behavior. In B. Staw & L.Cummings (Eds.), *Research in organizational behavior* (Vol 6., 1-50). Greenwich, CT: JAI Press.

Young, J. R. (2001). Logging in with… Sara Dulaney Gilbert: Time management skills are one key to success for online students. *The Chronicle of Higher Education, Information Technology* section. May 11, 2001. http://chronicle.com/weekly/v47/i35/35a04001.htm.

Zimmerman, B. (1990). Self-regulating academic learning and achievement: The emergence of a social cognitive perspective. *Educational Psychology Review, 2*, 173-201.

PREPARING STUDENTS FOR COLLABORATIVE WORK OR CASE STUDIES: AN ANTICIPATORY CASE

Cheryl A. McConnell, Rockhurst University
Laura Fitzpatrick, Rockhurst University

ABSTRACT

Faculty can address problems associated with team development and collaborative work activities by using appropriate in-class exercises before the activities or assignments begin. This paper provides a three-part case and teaching notes designed for in-class discussion before teams begin work on projects or case studies. Part A of the case introduces the students in a fictional auditing course who have been asked to prepare a collaborative case study analysis that will require research, written analysis, and a final oral presentation. Part B summarizes team interactions during the project and describes the condition of the project 2 days before the final presentation is due. Part C is a reflective section that encourages students to look inward at how their own group performed in the discussions of Parts A and B, and then asks students to participate in developing a collaborative work rubric that develops a shared understanding of expected team behaviors and interactions. The Teaching Note section provides recommendations for class facilitation, a review of collaborative work research, and examples of assignment outcomes.

INTRODUCTION

As faculty respond to the growing body of educational research that supports the positive connection between cooperative learning and achievement of learning outcomes, team activities and projects are becoming more common in business and economics programs. However, students often enter such activities with negative attitudes toward teamwork because of their predisposition to working alone, or because of previous negative experiences with teams. Common frustrations with teamwork include dealing with procrastinators, dealing with "hitchhikers", dealing with ineffective team leadership, and mediating conflict between team members. Therefore, it is necessary for faculty who use team experiences in their courses to help students understand team dynamics and to include illustrative team development activities.

This paper will present a class-tested team development case and teaching notes designed to foster team development. The three-part case engages students in a discussion of the potential problems of managing teams and team projects by presenting a case that anticipates the actual work students will perform. It facilitates team development by (1) identifying typical project management or team process problems, (2) alerting students to appropriate and inappropriate team behaviors, and (3) allowing student teams to participate in generating the behavioral descriptions that identify very high, moderate, or very low achievement of collaborative work skills.

USING TEAMS EFFECTIVELY

Using teams to encourage cooperative or active learning have been recognized as positively affecting achievement at the K-12 and college levels (Johnson & Johnson, 1989; Qin, Johnson & Johnson, 1995; Cooper, 1996; Riordan, Street, and Roof, 1997). Moreover, cooperative methods have been recognized as an effective way to motivate students to become actively involved in learning (Michaelsen, 1992; Ravenscroft, 1997). Not surprisingly, cooperative and active learning methods have been embraced by both college educators and external stakeholders as a way to engage students and to foster cooperation often required in the workplace (AECC, 1990 & 1992; Ravenscroft, 1997).

Despite the research support for active and cooperative learning methods, getting teams to work well - often an important objective of the method - is not easy. Experience tells both instructors and students that group work often ends up uncomfortable and frustrating. Feichtner & Davis (1992, p. 59) assert that "Entirely too many students are leaving the classroom experiencing only the frustrations of group work and not the numerous benefits possible through team effort" (emphasis in the original). Lack of individual accountability is one reason given for bad group experiences (Feichtner & Davis, 1992; Ravenscroft, Buckless, McCombs, and Zuckerman, 1995; Cooper, 1996). Another reason for poor group functioning is that group projects are assigned without allocating class time for groups to develop cooperative skills or to become cohesive (Michaelsen, 1992). Additionally, group work often leads to unequal contributions of members, resulting in "hitchhikers" and "workhorses" (Cottell & Millis, 1993). In short, active and cooperative learning will be counterproductive unless it is thoughtfully implemented and well supported (Anderson, Reder & Simon, 1996; Felder, 2001).

ANTICIPATORY CASE INTRODUCTION

Anticipatory case studies represent one way to help students understand how to successfully work in teams. The following case study, and the class discussion it generates, reveals some of the most common problems student teams will encounter. Part A of the case introduces the students in a fictitious auditing course who have been asked to prepare a collaborative case study analysis that

will require research, written analysis, and a final oral presentation. Part B summarizes team interactions during the project and describes the condition of the project 2 days before the final presentation is due. Part C is a reflective section that encourages students to look inward at how their own group performed in the discussions of Parts A and B, and then asks students to participate in developing a collaborative work rubric that develops a shared understanding of expected team behaviors and interactions. The fully implemented anticipatory case exercise, discussed in the "Teaching Notes" section, is most useful in setting appropriate expectations and preventing group problems when instructors use teams for out-of-class assignments, presentations, projects, or case study analysis.

The case described below has three parts with each part distributed and completed separately. The process has been class-tested by six different faculty members in five business and economics courses with a combined enrollment of over 300 students. The authors have found that spending an entire class session on this exercise has been worthwhile for minimizing student and faculty frustrations related to team activities and projects.

THE ANTICIPATORY CASE - PART A

Professor Sarah Carnes sat in her office preparing the syllabus for her senior-level auditing class. She sighed as she thought about writing the Case Study Analysis team project section. In her fifteen years of teaching, rarely had there been a semester where all of her student teams worked together smoothly. As she let her mind wander through some of the worst memories, she shuddered as if there were a chill in the room. "Why do I put myself and my students through this every semester?" she commented aloud in frustration. But even as she shook her head, she forced herself to sit up straighter as she began to write the Case Study Analysis project section of her syllabus.

Each student team would be given a separate internal control case study to research and analyze, and the project would result in a final written report and oral presentation. Although Carnes planned to provide some class time for team communication, most of the work would have to be done outside of class. Carnes clearly wrote the syllabus expectations to indicate that the teams were responsible for taking the information provided in the case, searching appropriate information sources for additional or updated information about the company's industry, preparing a written group response to the analysis questions in the case, and preparing an oral presentation that would summarize the case information and the team's findings.

A month after the class began, Carnes was sitting in her office once again thinking about the Case Study Analysis project. In her auditing class that morning, Carnes told students that she was in the process of assigning students to teams and that she would have the assignments ready to be distributed in the next class session. Michael Wong, a confident student, raised his hand and asked whether students could choose their own groups since the project would require significant work outside of class, and that they could therefore choose team members who had similar schedules.

Carnes, expecting the request, explained her reasons for not allowing students to choose their own groups.

Now, Carnes had to finish the team assignments. Using student information she gathered during the first class session and her observations over the last month, she placed students into 5-member teams. Carnes placed the following students in Team 2:

Erin Dilthy - Erin is a 21-year-old accounting major who is currently working part-time for a small, local CPA firm. She is energetic, personable, and is perceived by others to be a top student. Erin prefers to learn information from lectures rather than by reading or studying outside class, and she is teased by other students about how well she performs on exams without much effort. Erin freely participates in class discussions and she isn't hesitant to share her opinions.

Michael Wong - Michael is a 26-year-old student returning to school to get an Accounting degree. After working full-time at a bank for the past three years, he seems motivated to succeed and quickly obtain his degree. Although he appears quiet, he also appears confident about his ability and is quite willing to do work. He is a full-time student and works part-time at the university library.

Janet Byers - Janet is a 20-year-old finance major. She seems articulate, but is not that excited about auditing. Her advisor recommends the auditing class for all finance majors and Janet is enrolled in the class based on her advisor's recommendation. Janet does seem to be a serious student. She is a full-time student, a single mother of a young child, and she works eight hours a week in the university's business office.

Brandon McKuin - Brandon is a 21-year-old accounting major. He appears to have excellent quantitative skills, and he noted an interest in statistics. Although not overly shy, he is reserved in his discussions with others. He is enrolled in 18 hours this semester and does not have a job. He is a common visitor to the library, either reading or working at the computer.

Shelly Carlson - Shelly is a 23-year-old accounting major. She is on the volleyball team and has a wide network of friends. Her volleyball schedule causes her to miss classes and makes it difficult for her to meet outside of class. When called on during class discussions, Shelly does not have a lot of confidence in her answers and is sometimes unprepared.

	Discussion Questions:
(1)	Why did Professor Carnes include the Case Study Analysis project even though she had experienced difficulties with it before?
2.	Why do you think Carnes doesn't allow students to choose their own team members?
3.	What are the potential problems Team 2 may encounter in getting organized and working together?
4.	What strengths does each student bring to the team?
5.	What do the team members need to know about each other to increase the team's ability to successfully complete the assigned project?

THE ANTICIPATORY CASE- PART B

During an in-class case discussion activity, Professor Carnes looked around the classroom, noting with satisfaction that the student teams were on task and discussing the assigned questions. She began walking around the room, briefly listening to the discussion in various groups and responding to questions. If the group had provided quick, superficial answers, she challenged the students to be more complete in their responses.

As she walked around the class, she began to quietly observe Team 2's interactions. Erin and Michael appeared to be doing all of the talking, Janet and Brandon seemed uncomfortable, and Shelly had a glazed look on her face. Carnes moved toward the group and Janet, Brandon and Shelly looked toward her with expectant eyes.

"What's up?" Professor Carnes asked.

Erin and Michael exchanged a surprised look and responded that everything was fine. Carnes looked at their case question responses and noted that the group had almost completed the questions, and the responses were of high quality. She asked Shelly what she thought about the issues in one of the questions, and Shelly surprised her by directly addressing the point and summarizing the group's response well. Carnes then moved back to the front of the room and began to engage the entire class in the case discussion.

Fifteen minutes before the end of class, Carnes finished the case discussion and reminded the students that their Case Analysis Project was due in two days. She encouraged the teams to use the remaining class time to put the finishing touches on their projects. Out of the corner of her eye, Carnes noted that Michael seemed to take charge of Team 2's discussion. She was relieved that the other team members were alert, appeared engaged, and the uncomfortable tone she witnessed earlier appeared to be gone. As the students finished their discussions, she heard them agree to meet in an hour in the cafeteria.

Carnes met with a group of colleagues for lunch in the cafeteria, and as she was returning her tray, she noticed Team 2 working and eating at a table near the far door. All team members were present except for Shelly. Carnes stopped by the table, smiled, and asked how things were going. She looked at the material and papers on the table and began to realize that the team was nowhere near having a quality project completed. Shelly joined the group, apologized for being late, and put her work contribution on the table.

Carnes observed that the team had divided the case and research questions, and everyone brought their work to share. Erin brought a ½ page outline on her topic. She said that she wanted group feedback on her direction before she spent any more time researching. Michael brought a four page single spaced essay on his topic. As Carnes scanned the work, she noted that his 'research and analysis' included some information, but it was mostly his opinions on the topic. Janet brought two pages of research and analysis on her topic, and most of it appeared to be relevant and well organized. It was clear that Brandon didn't understand the team assignment. He brought two pages

of research, but it wasn't relevant to the case or analysis questions. Shelly brought a brief summary of a newspaper article as her contribution.

Carnes knew that the odds of Team 2 pulling together a quality case analysis were extremely low. The written analysis and oral presentation were due in two days, and the group was nowhere near finished. Carnes pasted a polite smile on her face, commented that it looked like there was still a lot of work left to do, encouraged them to work hard, and turned to leave. As she exited the cafeteria, she shuddered again thinking about the train wreck that was likely to happen in her classroom in two days.

	Discussion Questions:
1.	What tensions or emotions might be appearing between team members? Could they have been prevented or mitigated? How?
2.	What organizational problems have the team experienced? Could they have been prevented or mitigated? How?
3.	What should the team do now?

THE ANTICIPATORY CASE - PART C

	Reflect on your own team's discussion of this case.
1.	How could your team have been more effective in its discussion of this case?
2.	What do you need to know about each other to make your team experience successful?
3.	Share the necessary information you indicated in question 3 above.
4.	After your instructor facilitates the case discussion, participate in developing behavioral descriptors of positive and negative teamwork elements.

ANTICIPATORY CASE TEACHING NOTES

The following section presents the steps used to facilitate the case and the related class discussion. It describes methodologies as well as insights gained from class testing the case. The following facilitation suggestions are appropriate for a 75-minute class session. Instructors can, however, assign step 6 as an out-of-class exercise to accommodate a 50-minute class session. The steps are summarized as follows:

Step 1 (15 - 20 min.) - Student teams discuss case parts A and B
Step 2 (20 - 25 min.) - Instructor facilitates class discussion of parts A and B
Step 3 (5 min.) - Instructor clarifies his or her role in managing teams
Step 4 (5 - 10 min.) - Student teams discuss part C
Step 5 (5 - 10 min.) - Instructor facilitates class discussion of part C
Step 6 (20 - 25 min.) - Instructor facilitates the development of a collaborative work rubric

Step 1 - Students Discuss Case Parts A and B

Distribute Part A of the case study, asking one member of each team to serve as a recorder. As students discuss the questions assigned, move from group to group, listening to the discussions. Do not participate in the discussion unless you need to clarify a fact given in the case. By actively listening to their discussion, you let students know that their serious consideration of the questions is meaningful. If one team is done substantially before the other teams, often they have not fully discussed the case questions. To clarify your expectations in terms of a complete discussion of the case, you should review their notes and encourage them to more fully discuss any areas you find weak. By doing this you are not participating in the discussion; you are clarifying expectations and keeping students on task.

When a team has satisfactorily completed the discussion questions for Part A, distribute Part B. As discussion progresses, be particularly attentive to groups that appear to be off task. Remind them of the discussion requirements and review their notes. This active intervention during off-task behaviors again communicates to students that this is a learning exercise.

Step 2 - Instructor facilitates class discussion of parts A and B

Students, still sitting in their groups, prepare for a full-class discussion. Ask them "What happened after Part B?". As students respond, write key phrases and ideas on the board. Typical responses might include the following:

- Michael takes control and writes the report. During the presentation, other team members simply read their assigned sections.
- Erin and Michael argue over control. One of them wins and sets more clear expectations for the presentation. The team meets again to rehearse and the presentation goes smoothly.
- No one coordinates the team member contributions or tries to establish clear priorities for the presentation. The paper and presentation are disjointed. They lack cohesion and are mediocre at best.

- Janet reluctantly agrees to write a draft of the report and presentation. She gets little sleep, does almost all of the work, and receives little feedback from other team members. The final product is good, the team is relieved, and everyone but Janet is happy with the group grade.

At this point, the instructor can facilitate a discussion of some of the key issues related to teams and team development (e.g., Is this a team? What makes a group of people a team? Where did the team process go wrong?). Through the facilitated discussion, it should become clear to the students that successful team experiences can be managed, that we know quite a bit about what makes effective teams, and that it is better to address problems or conflicts sooner rather than later.

Class testing of this case has shown that it is better not to go back and discuss every question in Parts A and B. This can be redundant; students are also anxious to learn how they can successfully manage the team project process. Have students reflect upon their best and worst team experiences at school or at work and discuss what made them so. Each student should write down two of each; then call on someone to describe his or her best or worst team experience. As they share their stories, capture the key elements on the board in the format of table 1, which depicts typical responses.

Call on enough students or volunteers until you have several examples of positive and negative experiences. After several students share their experiences, you can simplify the exercise so that students are focusing on completing the table instead of fully describing their experiences.

Table 1: Behaviors Attributed to High- and Low-Performing Teams

Key Behaviors / Elements Needed for a High -Performing Team	Key Behaviors / Elements Often Associated with a Low-Performing Team
Clear understanding of project or purpose	Low motivation to work together
Full team participation	One or more "hitchhikers"
Understanding of team members' strengths & weaknesses	Poor project management; everything thrown together at the last minute
Clear communication	Complete conflict avoidance
Constructive conflict	Poor attendance
Trust	Vague understanding or project or purpose
Complementary skill sets among team members	
Team members' ability to listen compromise, seek consensus, complete tasks on time, focus on task and confront conflict	

Initiate a discussion about how to foster the positive behaviors needed for a high-performing team and how to eliminate the negative behaviors associated with low-performing teams. Try to let students generate ideas to overcome negative behaviors. It is much more powerful to hear students tell about how they successfully gave feedback to a nonperforming team member than for students to hear from you that they should give each other feedback. Faculty might ask, "What can you do when a team member dominates everything?" Or, "How do you organize a project so that you don't get overwhelmed the week it is due?"

Depending on the level of your class, several key behaviors or elements may need to be explained including:

1.	*Agendas*: What are they and why are they important? Who prepares them and how can they be communicated?
2.	*Project Management:* How can teams break the assigned project down into manageable parts? For example, students can share how the team in the case could have divided responsibilities and set target dates for sharing research and drafts (part B questions).
3.	*Clear Expectations*: How can the team make expectations of individuals more clear? For example, the students can be asked to reflect back to part B of the case with questions such as "Why did the team have so much trouble bringing quality work to the team meeting?" or, "What could they have done to clarify expectations?" or, "What could they have done to assure personal commitment?"
4.	*Feedback to group members on performance:* How can teammates give developmental feedback on peer performance? During class testing of this case, we discovered that modeling this skill was essential for students to understand how to give developmental feedback. One possibility is to use the example in the case where Shelly came to the meeting late with little prepared. The instructor can play Shelly's role and students can practice giving constructive feedback to her. In the role of Shelly, the instructor can indicate to students how the feedback feels and whether it would change her behavior.

Faculty uncomfortable with role-playing can, instead, show the class the difference between judgmental, unfocused feedback and nonjudgmental but focused feedback. An example of judgmental, unfocused feedback: "Shelly, You're never here and you don't do your work. You're not a good team member and it has to stop." The counter example for nonjudgmental but focused feedback: "Shelly, we are really frustrated. We have held two team meetings before class and you didn't attend either one. We had one team meeting after class and you came, but you didn't have your assignment completed. When any of us don't attend meetings or aren't prepared, we limit our contribution and the rest of the team has to work harder. We need to be a better team. What can we do?" If class time is particularly scarce, faculty may either obtain copyright permission to distribute research articles on handling difficult team members (Oakley, 2002), or they may require students to research the questions themselves.

In class testing, the authors noted that students may need assistance in understanding the need for assignments that require interpersonal and team skills (Case A discussion questions 1 and 2). When addressing teamwork with students, faculty can report important business trends such as cost control and downsizing, or reorganization by businesses for pursuing growth opportunities. Teams and teamwork have served important work and communication functions in both downsizing and expanding for growth opportunities. Most importantly, upon entering the work force it is highly likely that students will need to interact with colleagues and collaborate on team initiatives. Felder and Brent (2001, p. 71) emphasize that "On their first day on the job, two things will not happen. First, they will not be asked whether they prefer to work alone or with others, but will immediately be placed in one or more work groups. Second, they will not be presented with a list of all the company employees and asked whom they would like to work with; rather, they will be told who else is in their group, and their job will probably depend on how well they work with those people. Since that's what they'll be doing out their, our job is to help them learn how to do it here."

Step 3 - Instructor clarifies his or her role in managing teams

There is much debate about how involved the instructor should be in settling team conflicts. Most of the disagreements deal with how to handle "hitchhikers" who don't perform or come prepared. Options range from not allowing students to involve the instructor in team problems at all and allowing team members to "fire" each other from the team for lack of performance, to allowing team members to take all of their complaints to the instructor for mediation, or anywhere in between.

In the authors' experience, the optimal answer to the debate is "it depends." It depends on the age and experience of the students as well as the learning objectives. Sophomores need more direction and intervention by the instructor than do seniors or graduate students. Giving effective feedback and managing projects are learned skills. Therefore, it is important to support that learning process when appropriate - more support in the sophomore year, less in the senior or graduate years.

Although learning to work in teams is an important learning objective, it is not the only learning objective for the project. Instructors should use their judgment on when to intervene in dysfunctional teams. One general rule the authors have found useful is to never meet with only part of a team. If the team is not functioning well, it is important to have all members present when discussing roles, responsibilities, and conflicts because issues are rarely one-sided. Have the team focus on how to improve and become a high-performing team. Each member should indicate how he or she can help the team move to a higher performance level. Additionally, even when meeting with the team, the instructor should let the students facilitate the discussion as much as possible to encourage skill development.

The instructor should be clear about whether peer evaluations will be part of the project grade. This process encourages individual accountability and may increase participation and interaction. It also allows for grade adjustments when one team member does not pull his or her

weight. The authors often use a simple point allocation process on each major team project (See Appendix A).

Step 4 - Student teams discuss part C

Distribute Part C. Students often are surprised by Part C and enjoy reflecting on their own team discussion performance. Common information shared includes phone numbers, email addresses, work schedules, class schedules, academic strengths and weaknesses, and personal strengths and weaknesses.

Step 5 - Instructor facilitates class discussion of part C

Have teams share how they thought they performed. Often, students think they performed quite well. Challenge their perceptions. Did everyone participate in the discussions? How did you get a quiet student to participate? Were you on task all the time? If not, who took responsibility to get you back on task? Was it the same person each time?

Ask one of the teams what information they shared with each other. If other teams had additional elements shared, add those to a list on the board. Teams often realize that they need further information about each other and suggest that they share that information via email.

Step 6 - Instructor facilitates the development of a collaborative work rubric

Rubrics are commonly used educational tools that assist in scoring assignments or activities that may be perceived as subjective in nature. The rubric clarifies the dimensions that will be assessed, and it provides descriptors of the range of student performance within each dimension. When used properly, rubrics help students understand faculty expectations, and they help faculty provide better formative and summative grading information by clarifying the characteristics for various levels of student performance. Remember that students will be participating in developing a shared understanding of expected collaborative or team work behaviors; they will not be participating in developing the grading criteria for the assignment or project outcome.

Step 6a - Instructor develops and distributes a partially completed collaborative work rubric

All rubric development begins by determining the appropriate categories of evaluation. Faculty members provide this step to add clarity to the process and to guide student discussions. For a team project that includes both in-class and out-of-class work, a faculty member would typically expect that each team member contribute to group discussions, prepare quality work that is timely, have a positive attitude, work well with others, and help the group be effective. These categories

become rows in the rubric, and students will participate in completing the columns that will contain behavioral descriptions of various levels of student performance. Distinguishing performance at either three or four levels is common, and the column headings describe the level of student performance. For example, for the expectation that team members contribute to group discussions, the completed row in the rubric might look as follows:

Category	Very High	Moderate	Very Low
Group Discussion	Actively participates in all discussions Contributions are substantive and informed Contributions are on-topic	Moderately or occasionally participates in group discussions Contributions are somewhat substantive and informed Contributions are on-topic	Does not participate or only minimally participates in group discussions Contributions are not substantive and informed Contributions are off-topic
5 ---------- 4 ----------3 ---------- 2 ----------1			

Having students participate in writing the behavioral descriptors to each category not only saves faculty time, it significantly increases student understanding of effective team interactions, the expectations of the instructor, and the expectations of other team members. Develop a partially completed rubric template that includes faculty-specified categories and full examples of behavioral expectations within a specific category. An example of a partially developed collaborative work rubric is included as Appendix B. Distribute the partially completed rubric to student groups, and have them develop behaviorally anchored descriptors for each category. In this step, it is essential to move from group to group, making sure they understand that the descriptors should describe but not judge student behavior in each category. For example, students may be tempted to describe the Attitude category with descriptors of "positive", "fair", and "negative". The faculty member should ask students to clarify the descriptors by asking, "How is a 'positive' attitude exhibited?", or "What would a 'fair' attitude look like?" If students struggle with this step, encourage them to describe excellent and unacceptable work in each category. This will assist in clarifying the potential description of the middle level(s).

The partially developed rubric includes a scale that translates the broad column descriptors to numeric representation. If desired, faculty can provide a natural weighting of categories by increasing or decreasing the corresponding numeric scale.

Step 6b - Instructor collects and summarizes the student-developed rubrics

Collect the rubrics and explain to the students that you will combine their responses and your expectations into a completed rubric that will illustrate levels of collaborative work. After collecting the student-developed rubrics, include all of their responses in a master table. Group responses may overlap each other, but having all responses together will allow the faculty member to comprehensively view each category and its student-generated descriptors. The faculty member uses his or her own expectations and the student work to develop a comprehensive collaborative work rubric that will be used for the project or course. During the editing process, the faculty member eliminates duplicate responses, edits for consistent style and syntax, and shapes the rubric by emphasizing important areas or deleting responses that are off target. Although it is important to heavily edit student responses for consistency, it is also important to use actual student phrases whenever possible so that students can see the connection between their work and the completed rubric to be used in class. An example of a completed collaborative work rubric is included as Appendix C.

Step 6c - In a following class period, the instructor distributes the completed rubric to the students and describes its use

When completed, the rubric represents the shared collaborative work behavioral expectations of the students and the faculty member. Since much of the collaborative work is performed outside of the classroom, students are the appropriate initial assessors of each team member's contributions. If the faculty member intends to include peer perspectives as part of the project grade, the faculty member should fully describe how the rubric would be used to assist in that process. For example, a faculty member could ask students to complete a rubric about each of their team members. The completed rubric assessments could then be used to determine whether adjustments needed to be made to a low-performing team member's grade. Or, a faculty member could assign a specific portion of the assignment's points to a student's collaborative work performance and translate the peer-generated rubric results into a numeric value. Or, faculty could encourage students to use the collaborative work rubric as their decision basis to allocate team points as described in Appendix A. No matter how the faculty member uses the rubric, it is essential to communicate the details of its use to the students.

CONCLUSION

Using an anticipatory case can substantially reduce the problems encountered when requiring out-of-class team projects. Students discuss positive and negative group behaviors and experiences, and they become aware of their responsibility for managing team discussions and projects. The

authors frequently see student groups refer back to their rubric when discussing team problems. In addition, student teams are more focused about project planning, and they spend more time organizing themselves, clarifying the group goals, and identifying complementary team member skills. Having teams discuss behavioral examples of each important performance category also develops a shared understanding of quality work, and fosters a sense of ownership in the evaluation process.

APPENDIX A - Team Point Allocation Exercise

Each team member distributes a fixed number of points (100 points times the number of team members) to all team members, including him or herself. To discourage unsubstantiated differences, we require students to cite specific behaviors for team members earning less than 80 or more than 120 points. Additionally, we encourage honest reflection by requiring students to cite specific behaviors when they allocate 100 points to all team members. To discourage meaningless differentiations, we only allow allocations in increments of 5 points. A student's final grade for the project is the points earned on the project multiplied by the average of his or her team allocation points. If a team earns a B on a project, a student ranked high by their team may earn an A, while a nonperforming student may earn a C or less. We have used this point allocation process for five years with over 600 students. Conflicts are rare, but if students question their allocation points, we share the specific behaviors sited by the team members, being careful to preserve anonymity.

Team Point Allocation Form Instructions:

- Multiply the number of team members by 100.
- For example, if you have 6 members, multiply 6 by 100.
- 6 * 100 = 600 points to distribute - you must distribute all points
- Include yourself in the point allocation.
- Only increase or decrease individual allocations by increments of 5 points.

Example

	Name	Number of Points
1.	Joe	90
2.	Sue	105
3.	Mary	115
4.	Harry	105
5.	Tom	100
6.	LaVerne	85

Your Team # _____

Names	Number of Points
1.	
2.	
3.	
4.	
5.	
6.	

Note:

- If you gave anyone above 120 points or below 80 points, describe the specific behaviors that led to that assessment:
2. If you gave every member 100 points, describe the specific behaviors that lead to that assessment.

APPENDIX B - Example of Partially Completed Collaborative Work Skills Rubric			
Categories	Very High	Moderate	Very Low
Contributions to Group Discussion	Actively participates in all discussions Contributions are substantive and informed Contributions are on-topic	Moderately or occasionally participates in group discussions Contributions are somewhat substantive and informed Contributions are usually on-topic	Does not participate or only minimally participates in group discussions Contributions are not substantive and informed Contributions are off-topic
5 ---------- 4 ---------- 3 ---------- 2 ----------1			
Quality of Written Contributions			
5 ---------- 4 ---------- 3 ---------- 2 ----------1			
Timeliness / Preparedness			
5 ---------- 4 ---------- 3 ---------- 2 ----------1			
Attitude			
5 ---------- 4 ---------- 3 ---------- 2 ----------1			
Contribution to Group Effectiveness			
5 ---------- 4 ---------- 3 ---------- 2 ----------1			
Working with Others			
5 ---------- 4 ---------- 3 ---------- 2 ----------1			

APPENDIX C - Example of Completed Collaborative Work Skills Rubric			
Categories	Very High	Moderate	Very Low
Contributions to Group Discussion	Actively participates in all discussions Contributions are substantive and informed Contributions are on-topic	Moderately or occasionally participates in group discussions Contributions are somewhat substantive and informed Contributions are usually on-topic	Does not participate or only minimally participates in group discussions Contributions are not substantive and informed Contributions are off-topic
5 ---------- 4 ---------- 3 ---------- 2 ----------1			
Quality of Written Contributions	Fully completes tasks and assignments Provides work that is accurate, well-informed, and substantive Provides work that does not need to be checked or modified by other group members to ensure quality or discussion	Tasks and assignments are mostly complete Provides work that is fairly or somewhat accurate or well-informed Provides work that occasionally needs to be checked or modified by other group members to ensure quality	Tasks and assignments are usually incomplete Provides work that is usually not accurate or well-informed Provides work that usually needs to be checked or modified by other group members to ensure quality
5 ---------- 4 ---------- 3 ---------- 2 ----------1			
Timeliness / Preparedness	Group does not have to adjust deadlines or work assignments to reflect student's participation	Some, but not all of the contributions are completed on time Usually timely, but occasionally late for group meetings Group does not have to adjust deadlines or work assignments to reflect student's participation	Contributions are occasionally completed on time Occasionally timely, but usually late or absent for group meetings Group has to adjust a deadline or work assignment to reflect student's participation
5 ---------- 4 ---------- 3 ---------- 2 ----------1			

APPENDIX C - Example of Completed Collaborative Work Skills Rubric			
Categories	Very High	Moderate	Very Low
Attitude	Always displays a positive attitude about the task(s) Never is publicly critical about the project or the work of others Motivated Cooperative Receptive Maintains professionalism at all times	Usually displays a positive attitude about the task(s) Occasionally is publicly critical about the project or the work of others Somewhat motivated Occasionally indifferent Occasionally does not	Often has a negative attitude about the task(s) Often is publicly critical about the project or the work of others Unmotivated Indifferent Often displays lack of professionalism
5 ---------- 4 ---------- 3 ---------- 2 ----------1			
Contribution to Group Effectiveness	Helps keep group organized Helps keep group focused Is attentive to group process Identifies and try to solve group problems	Occasionally contributes to task organization Sometimes pursues off-topic tangents Is occasionally attentive to group process Participates in group problem identification and/or group process resolution	Does not contribute to task organization Frequently pursues off-topic tangents Inattentive to group process Does not participate in problem identification or group process resolution
5 ---------- 4 ---------- 3 ---------- 2 ----------1			
Working with Others	Practices active listening Respectful for others and their ideas Encourages group involvement Flexible when appropriate	Usually practices active listening Occasionally shows questionable respect for others and their ideas Not particularly attentive to encouraging group involvement Either too flexible, or somewhat rigid in pursuit of own ideas	Usually does not practice active listening Controlling Ignores or disrespects the ideas of others Individualistic Rigid in pursuit of own ideas
5 ---------- 4 ---------- 3 ---------- 2 ----------1			

REFERENCES

Accounting Education Change Commission (AECC). (1990). Objectives of education for accountants: Position statement number one. *Issues in Accounting Education*, (Fall), 307-312.

Accounting Education Change Commission (AECC). (1992). The first course in accounting : Position statement number two. *Issues in Accounting Education*, (Fall), 249-251.

Anderson, J. R., L. M. Reder & H. A. Simon. (1996). Situated learning and education. *Educational Researcher, 25*(4), 5-11.

Cooper, J. (1996). Research in cooperative learning in the mid-1990s: What the experts say. Cooperative Learning and College Teaching, 6 (2), 2-3.

Cottell, P. G. & B. Millis. (1993). Cooperative learning structures in the instruction of accounting. *Issues in Accounting Education, 8* (Spring), 40-59.

Feichtner, S. B. & E. A. Davis. (1992). Why some groups fail: A survey of students' experiences with learning groups. In G.M. Maher & V. Tinto (Eds.) *Collaborative Learning: A Sourcebook for Higher Education*, University Park, PA: National Center on Postsecondary Teaching, Learning, and Assessment, 59-67.

Felder, R.M. & R. Brent. (2001). Effective strategies for cooperative learning, *Cooperation & Collaboration in College Teaching, 10*(2), 69-75.

Johnson, D. W. & R. T. Johnson. (1989). *Cooperation and Competition: Theory and Research.* Edina, MN: Interaction Book Co.

Michaelsen, L. K. (1992). Team learning : A comprehensive approach for harnessing the power of small groups in higher education. *To Improve the Academy, 11*, 107-122.

Oakley, B. (2002). It takes two to tango: How 'good' students enable problematic behavior in teams. *Journal of Student Centered Learning, 1,*19-27.

Qin, Z., D. Johnson & R. Johnson. (1995). Cooperative versus competitive efforts and problem solving. *Review of Educational Research, 65*, 129-143.

Ravenscroft, S. P., F. A. Buckless, G. B. McCombs & G. J. Zuckerman. (1995). Incentives in student team learning: An experiment in cooperative group learning. *Issues in Accounting Education, 10*(1), 97-109.

Ravenscroft, S. P. (1997). In support of cooperative learning. *Issues in Accounting Education, 12*(1), 187-190.

Riordan, D. A., D. L. Street & B. M. Roof, (Eds). (1997). *Group Learning: Applications in Higher Education*. Harrisonbury, VA: James Madison University School of Accounting.

THE BASIC UNDERGRADUATE POM COURSE: FACULTY OPINIONS OF DESIRED COURSE CONTENT AND THE ADEQUACY OF EXISTING TEXTBOOKS

Earl Z. Damewood, Marshall University
Joseph Abramson, Marshall University
W. Blaker Bolling, Marshall University

ABSTRACT

Professors teaching the basic undergraduate POM course were surveyed to determine what topics they covered (and to what degree), what additional topics they felt should be covered, the adequacy of the textbooks being used, who was required to take the POM course, and other related issues. A great discrepancy was found regarding who was required to take the course. For example, 85.9% of the schools responding required it of their Management Majors but only 18.2% required it of MIS, CIS, or Information System Majors. Of twenty-one subjects/topics asked about, over 90% of those responding indicated Intensive or Moderate coverage of Inventory Control and Quality Concepts. Over half reported such coverage for QC/SPC Methods, Project Management, JIT Concepts, Forecasting, Capacity Planning, MRP, Layout Strategies, Location Strategies, Decision Making, Productivity Measures, and Order Scheduling/Loading. Less than 50% reported such coverage of Linear Programming, Queuing Models, Transportation Problems, Learning Curves, Simulation, Assignment Problems, Global Programming, or Integer Programming. Most professors were reasonably happy with their textbooks, with 75.7% describing their current textbooks as either "About Right," "Very Good," or "Excellent." But, there appeared to be two distinct market segments, one wanting more quantitative material and one wanting more qualitative material.

INTRODUCTION

Although the study of the activities involved in the transformation processes that are used in creating services or products is not new, Operations Management as a field is relatively young (Heizer and Render, 2001). As is typical of a new area, the field has undergone many changes and now includes a blend of topics from statistics, industrial engineering, management science, management, strategy, marketing, accounting and others. As these changes have taken place,

textbooks have evolved as well. Whether or not the current textbooks and academic thinking reflect cutting edge topics in operations management or lag behind actual practices in leading companies is, of course, of concern. The purpose of the survey conducted here was to assess the current status of and trends in the teaching of Operations Management (or Production/Operations Management, interchangeably referred to as OM, POM or P/OM) in schools and colleges of business in the U.S. at the undergraduate level.

LITERATURE REVIEW

A survey of the literature revealed a number of conflicting concerns with POM education. For example, during the 1960's, 1970's, and 1980s the areas covered by operations management in most organizations, where inputs are transformed into services or products as outputs, were all too often focused on finance and/or marketing efforts. This resulted in a slower increase in productivity within the manufacturing and service sectors of the U.S. economy, concerns about quality, and the loss of competitiveness in world markets. It was suggested that one reason might be that the educational preparation of students was inadequate and there was a gap between what was being taught and what practicing managers in POM should know to remain competitive internationally (Bandyopadhyay, 1994). Some (Nieto, et al, 1999 and others) maintained that current POM textbooks have lagged behind state-of-the-art practices in leading companies. On the other hand, Nieto, et al also contested that some current POM textbooks covered "cutting edge" topics. Some criticism has been leveled against leading MBA programs relating to graduates knowing quantitative tools but being inadequate in management abilities concerning people. This has led, in some schools, to curriculum revamping. In executive education many companies have demanded the achievement of specific, real-world goals with a combination of academics and applications (Bongiorno, 1993). Bandyopadhya (1994) noted that it would appear that the graduates from many AACSB accredited schools were not prepared to deal with the POM area in industry. He also found that the vast majority of U.S. colleges and universities were not offering any major study in the field. He noted significant deficiencies in both POM course coverage and teaching methods in traditional business management programs.

Some business management degree programs continued to offer the subject only as a single course within the core curriculum (Coleman and Smith, 1994). An unpublished study by one of the authors of this paper (Bolling, 1992) found that most schools offered a sequence of courses such as statistics, quantitative methods, operations management and then strategic management (business policy). A few offered only a single semester course to cover the quantitative methods and operations management topics rather than the typical and more common two courses. The statistics and quantitative methods courses were sometimes offered outside the business curriculum to satisfy AACSB requirements limiting the percentage of courses taken in business. Coleman and Smith (1994) maintained that students often failed to see the value of the course(s) and/or failed to

understand how the topics were positioned in terms of their management education. They also suggested a better orientation towards the management functions of planning, organizing, leading and controlling as well as a framework with a longer-term and broader strategic viewpoint versus a tactical framework, which generally has a short-term orientation and an emphasis on quantitative techniques. However, they also noted the limited class time available.

Doane (1994) reviewed textbooks in introductory statistics and production and operations management relating to the coverage of total quality management topics and found a growing emphasis on TQM topics in most POM textbooks but little in the statistics textbooks, although some improvement in the statistics books was noted. He reported that the best selling POM textbooks had strong quality coverage and all texts in his sample were much better in this area than the statistics textbooks. He did note, however, that instructors well trained in research methods might have little or no exposure to actual practice. In general, he maintained that instructor training could be improved if the accrediting bodies became convinced of the importance of quality topics in business education.

Ducharme and Lewis (1987) noted a frequent disparity between what was taught in business colleges and what practicing POM and inventory managers used in their daily activities. They sent questionnaires to professors of operations management at 500 business colleges across the country and found that almost half (45.3%) of the operations courses were devoted to areas practicing managers deemed important. However, they also noted that with only one POM course required in most schools, many topics were omitted.

Hammond and Hartman (1996) explored undergraduate production/operations management (POM) students' preparation and the expectations of firms in the field and whether or not students were being prepared to function in the high-tech industries of today and tomorrow. They noted the recent AACSB accreditation guidelines that broadened the curriculum with greater emphasis on more non-business courses. This was a response to the business community's desire for broadly trained graduates with the abilities to think and to communicate. They also noted that the competitive edge for students was related to applying their knowledge within a computer-oriented business environment. Their survey indicated computer based POM software was not as popular among professors as with practitioners. The practitioners were critical of courses that required students to work computationally simple problems and then to memorize the material and take closed-book examinations. They pointed out the need to link the teaching of POM material with the needs and practices of the business community.

Harrison and Hanebury (1992) also noted concern for the subject matter taught being somewhat out of date but at the same time were uncertain as to how new techniques might be integrated with more traditional methods. As a point of interest they asserted that the most concrete manner to expose students to current practices would be plant tours of several different world-class manufacturing and nonmanufacturing operations. However, they noted the difficulties of being able to expose students to these given time availability and scheduling problems.

Johnson and Pyke (2000) focused on top graduate schools in engineering and business in their study of the teaching supply chain management. This topic has had a huge impact on industry and academia. They noted that functional integration between disciplines might be the key to making the curriculum more closely correspond with business practices.

In a 1995 a survey, done for the Institute for Operations Research and the Management Sciences (INFORMS), sent to university teachers representing a wide range of schools (Jordan, et al, 1996) noted a decline in the role of OR/MS. Although this area is not POM, it is closely related and the decline in its educational role was partly attributed to the changes made in the AACSB accreditation standards for business school curricula in April 1991. After this date, schools were free to define their own individual missions with curricula organized around that mission. Specific requirements for OR/MS no longer had to be included in any way. Their survey documented both the decline in interest in this area as well as a perceived need for quantitative competence in MBA graduates; a competence that was often hampered by a poor math background (or a fear of mathematics) among the students. The case method of instruction was cited as a promising fix but they noted a dearth of POM cases in current teaching materials and a need for the development of good case materials. Another portion of their study involved telephone interviews with deans or MBA program administrators. They found the current role of OR/MS was relatively minor in the core curriculum with the exception of competence in statistics.

A very limited study by Karuppan and Karuppan (1999) suggested that making introductory POM course materials available on the Web could have a positive impact for both the students and the instructor. Anticipated cost reductions related to paper savings associated with using the Web did not occur.

A very interesting paper concerned the evolution of operations management textbook contents and an analysis of the most recent POM textbooks (Nieto, et al, 1999). In it the authors noted that operations management as a subject did not arise until the end of the 1950s and the most relevant topics changed dramatically over time. They believed that the discipline's evolution was reflected in the textbooks' contents as new techniques, theories and advances developed. Their study involved 84 textbooks published between 1980 and 1998 that were grouped by use of ANOVA on the basis of qualitative/quantitative and long-/short-term dimensions. They found that all the textbooks gave a similar weight to quantitative vs. qualitative contents regardless of the decade of publication. However, they noted a recent tendency towards the association of long-term issues with qualitative approaches while short-term approaches were associated with quantitative contents. They also noted that recent textbooks tended to include the quantitative contents as appendices that could indicate a shift from operational research content to strategic-oriented content. [Note: We have also noted a shift of this quantitative material from chapters to either appendices or to chapter supplements.]

Tillery, Rutledge and Inman (1993) selected ten textbooks from over 30 basic POM texts available for use at the time to ascertain if educational institutions were providing either

quality-related training for those who would be directly responsible for quality control or a proactive quality mind-set to those who would be in management. They felt that quality had to be viewed as more than an array of techniques often related to statistics and that students had to be provided with an integrated view of quality and its broad role within the organization. Their study noted that the traditional model was still dominant in POM textbooks but there was a more expansive coverage given recently to quality, providing a more balanced view of its importance in operational and strategic issues. They found both inconsistencies in the treatment of quality across the texts and a transition towards a more expansive and strategic paradigm. However, they also found that the texts needed to be updated in their coverage of operational tools and techniques and that the external focus towards quality seemed weak. They did note awareness on the part of the textbook authors that quality did not mean automatic cost increases but all the texts were lacking in the cost issue related to court action liability.

Vollmann, Cordon and Heikkila addressed the issue of teaching supply chain management to business executives. They noted the need for texts to emphasize the development of synergy along the whole demand chain starting with meeting the needs of specific target markets rather than focusing on internal optimization, as was traditionally done (Vollmann, Cordon, and Heikkila 2000).

PURPOSE

The primary objectives of the research being reported here was to determine the topics currently being covered in the basic undergraduate POM course and, in the view of those teaching the course, other topics that should be covered and the adequacy of the textbooks currently being used. Other issues addressed by the research include who is required to take the POM course, at what level the course is taught, what prerequisites are required for the course, and which linear programming subjects/techniques are being taught.

PROCEDURE

A questionnaire was developed (see Appendix) by reviewing the literature for previous surveys made in this subject area and by including additional questions to meet the purposes of this study. The questionnaires were mailed to 744 deans of colleges and schools of business in the United States during January 2001. (Some of the questionnaires were received by departments of business in smaller institutions.) The deans were asked to route the questionnaire for completion by the professor with primary responsibility for coordinating the teaching of undergraduate operations management in that school.

BASIC RESULTS/DEMOGRAPHICS

The following represent the demographics and results of the survy:

1. Of the 744 questionnaires mailed only 3 were returned due to improper addresses. 237 forms were completed and returned. Of those returned, 225 were complete enough to be used in the analysis. Thus the useable form response rate was 227/741 or 30.6%.
2. Of those responding, 81% were from colleges or schools of business while the balance were from smaller colleges having departments of business.
3. Almost seventy-seven percent (76.9%) of the responses were from schools having both an undergraduate and graduate program in business, 1.3% had only a graduate program in business, and 21.8% had only an undergraduate program in business.
4. Reported school accreditation was as follows:

	Number	Percent
AACSB	126	56.0
ACBSP	15	6.7
IACBE	4	1.8
AACSB & ACBSP	2	.9
AACSB (In Process)	26	11.6
CBSP (In Process)	1	.4
None/Other/Regional	51	22.7
Totals	225	100.1

5. Almost ninety percent (89.8%) of the respondents indicated they offered an undergraduate course in POM, 3.1% indicated that they planned to add a course in POM, and 7.1% indicated that they had no plans to add a course in POM.

FINDINGS

The respondents who did not currently offer an undergraduate course in POM were asked not to complete Questions 6 through 17. This reduced the number of respondents included in the following findings to 206.

1. The respondents were asked which majors in their colleges were required to take operations management (POM). The tabulation is shown below.

Major	Percent Indicating POM Required
Accounting	68.9
Economics	46.1
Finance	69.4
Management	85.9
Marketing	69.4
Other Majors	43.2

"Other Majors" included 18.2% indicating POM was required for MIS, CIS or Information Systems majors, 7.1% indicating "all business majors", and 5.7% indicating it was required for international business majors.

2. The respondents indicated the following course titles for their POM courses.

Operations Management	40.4%
Production/Operations Management	30.2%
Production Management	5.3%
Other Course Titles	18.7%
Not Indicated	5.3%

3. Of those responding, 5.3% indicated that POM was not required by any majors but was taught as an elective course.

4. The respondents indicated that POM was taught at the following levels.

Sophomore	2.9%
Junior	77.2%
Senior	34.0%

Since this totals more than 100%, some respondents indicated more than one level.

5. When asked about prerequisites for POM in their institutions, 35.9% reported statistics and calculus were prerequisites, 54.9% said only statistics was a prerequisite, 1.5% said only calculus was a prerequisite, and 30.1 % named other prerequisites in various combinations with the prerequisites named here, or instead of the prerequisites named here. Among those other prerequisites named were algebra, finite mathematics and principles of management.

6. Of those responding, 12.6% replied that their schools offered a major in POM, 2.4% reported that they offered a minor in POM, while 16% offered a concentration in POM. Collectively, then, about 31% of the schools offered either a major, minor or concentration in POM.

7. Question No. 12 (See questionnaire in the Appendix) asked the POM professors how much coverage would be desirable for each topic typically taught in an operations management course. A summary of the responses is shown in Tables 1 and 2 below.

Table 1: Summary of Coverage Opinions

	Percent of Respondents			
Subject/Topic	Intensive Coverage	Moderate Coverage	Light Coverage	Do Not Cover
Quality Concepts	60.2	30.6	5.8	0.0
Inventory Control	53.4	37.9	5.3	0.5
QC/SPC Methods	44.7	35.4	12.1	2.9
Forecasting	38.8	39.3	11.2	6.8
JIT Concepts	35.0	44.2	17.0	0.0
Project Management	35.0	45.1	11.7	4.9
MRP	32.0	38.8	19.9	3.9
Decision Making	21.8	38.3	22.8	10.7
Capacity Planning	19.4	56.3	18.4	1.5
Productivity Measures	18.0	39.8	35.4	1.5
Order Sched./Loading	15.0	37.9	34.0	6.3
Layout Strategies	14.6	51.5	25.7	3.4
Linear Programming	10.7	26.7	28.6	27.7
Location Strategies	10.7	53.9	26.7	3.9

Table 1: Summary of Coverage Opinions				
Percent of Respondents				
Subject/Topic	Intensive Coverage	Moderate Coverage	Light Coverage	Do Not Cover
Queuing Models	6.3	28.2	31.6	27.7
Transportation Problem	5.3	29.1	34.5	24.8
Simulation	4.4	19.9	35.9	31.1
Learning Curves	3.4	21.8	49.5	18.0
Assignment Problem	2.4	18.9	27.7	44.7
Goal Programming	1.9	4.9	19.4	64.6
Integer Programming	0.0	3.9	20.4	68.0

Table 2: Intensive or Moderate Coverage Indicated		
(Sum of Intensive % and Moderate % Responses Ranked High-to-Low)		
Rank	Subject/Topic	Sum Percent
1	Inventory Control	91.3
2	Quality Concepts	90.8
3	QC/SPC Methods	80.1
4	Project Management	80.1
5	JIT Concepts	79.2
6	Forecasting	78.1
7	Capacity Planning	75.7
8	MRP	70.8
9	Layout Strategies	66.1
10	Location Strategies	64.6
11	Decision Making	60.1
12	Productivity Measures	57.8
13	Order Sched./Loading	52.9
14	Linear Programming	37.4
15	Queuing Models	34.5
16	Transportation Problem	34.4
17	Learning Curves	25.2

Table 2: Intensive or Moderate Coverage Indicated		
(Sum of Intensive % and Moderate % Responses Ranked High-to-Low)		
Rank	Subject/Topic	Sum Percent
18	Simulation	24.3
19	Assignment Problem	21.3
20	Goal Programming	6.8
21	Integer Programming	3.9

8. Question No. 13 (see Appendix) asks respondents to list important topics not shown in the topical list in Question No. 12. The bulk of these hand-written inputs is summarized in Table 3 below.

Table 3: "Penned-In" Topical Responses		
Topic	Number of Respondents Mentioning	Percent of Respondents Mentioning
Supply Chain Management	48	21.3
Operations Strategy	23	10.2
Process Planning	20	8.9
Services: Operation, Management & Scheduling	18	8.0
Theory of Constraints	17	7.6
Aggregate Planning	14	6.2
Product Planning and Design	13	5.8
Enterprise Resource Planning	12	5.3
Global POM Issues	11	4.9
E-Commerce	8	3.6

9. Question 14 asked respondents to indicate which linear programming subjects/techniques they cover when teaching L.P. The responses are summarized below.

39.3% would teach Graphical Solutions
9.1% would teach the Simplex Method (Hand Solutions)
28.2% would teach the Simplex Method (Computer Solutions)
6.8% would teach Sensitivity Analysis (Hand Computations/Interpretations)
25.2% would teach Sensitivity Analysis (Computer Solutions/Interpretations)

10. When asked how their current textbook measured-up (Question 15), the following responses were obtained.

36.9%	Very Good or Excellent
8.8%	About Right
9.7%	Needs qualitative or conceptual improvement of some topics.
6.3%	Needs more in-depth coverage of quantitative methods for some topics

The respondents could also list comments of their own for this question. They are summarized below.

Comment	Number
Better balance of quantitative and qualitative.	13
Greater emphasis on services.	8
More on supply chain management.	6
Use more cases.	4
Current texts are fine "as is".	3
Texts are bloated with too much material.	3
Texts are too expensive.	2

11. The respondents were asked to list the text currently being used in their POM course, The responses are summarized in Table 4 below.

Table 4: Textbooks Currently Being Used

Nominal Title of Textbook	Publisher	Authors	Percent
Production and Operations Management	Irwin/McGraw-Hill	Stevenson	22.2
Operations Management	Prentice-Hall	Heizer & Render	16.0
Operations Management for Competitive Advantage	Irwin/McGraw-Hill	Chase, Aquilano & Jacobs	12.4
Operations Management	Prentice-Hal	Russell & Taylor	9.8

Table 4: Textbooks Currently Being Used			
Nominal Title of Textbook	Publisher	Authors	Percent
Operations Management: Strategy and Analysis	Prentice-Hall	Krajewski & Ritzman	6.7
Fundamentals of Operations Management	Irwin/McGraw-Hill	Davis, Aquilano &Chase	3.6
Operations Management	Southwestern	Gaither & Frazier	3.1
Other			20.0
Not Indicated			6.2

12. The respondents were asked the general direction they would like to see in future texts (Question 16). Results were as follows.

29.1% More conceptual or qualitative treatments of topics.
22.8% More in-depth quantitative treatments of topics.
37.4% All other comments.

13. The respondents were asked to respond to this statement in Question No. 17: " Some studies indicate that a shift from a quantitative emphasis to a qualitative/conceptual emphasis may have occurred in operations management textbooks over the last several years". The results are shown below.

80.6% Agree	15.0% Disagree
When asked "Is such a trend desirable?" the responses were:	
49.5% Yes	37.9% No

CONCLUSIONS

Our research would indicate two fairly distinct market segments for operations management textbooks: those who want more quantitative material and those desiring more qualitative material. These segments were fairly balanced as indicated in the responses dealing with current and future textbooks (Numbers 10, 12 and 13 under "Findings" above). In addition, most of the respondents were pleased with the current offerings. The trend towards more qualitative/conceptual emphasis

was noted by over 80 percent of the respondents but whether or not this was a desirable trend resulted in a split (49.5 percent versus 37.9 percent) which also indicated the two segments.

There was a very clear trend to titling the textbooks as "Operations Management" to better reflect the broader applicability of some of the material and so complete the transition from early use in the factory to produce "things" to many other situations including the service and/or not-for-profit industries.

The authors were a little surprised about the apparent decline in teaching linear programming. If it might be assumed that such instruction would start with graphical solutions before delving into the simplex and/or computer solutions, then only about 40 percent were teaching linear programming, a technique that may be second to basic statistics in terms of frequency of use in manufacturing and service applications.

An area that appears to be in need of coverage in future textbooks would be supply chain management. This also relates to the growing emphasis on a long-term view of quality starting with the final consumer and working back through the entire supply chain.

A very practical concern of the authors is the limited time available to teach the material. In a one or two semester course it would be difficult to cover more than a portion of the material in the current textbooks. As one of the authors put it, "All we can do is introduce some of the material and make the students 'slightly dangerous' and hope that they do not sell their textbooks!"

RECOMMENDATIONS

The review of the literature indicated some concern that material being taught in operations management may not be what the college graduate in the workplace needs. In addition, there were suggestions that textbooks may lag behind current practices in many companies. Related to this were some suggestions that the instructors and/or their classes visit state-of-the-art companies to witness current practices. Therefore, we believe that studies should be conducted by contacting such organizations concerning their practices, their needs, their satisfaction with their recent college graduates, and their willingness to host faculty and/or class visits. A particular emphasis should be put on determining which operations management methods are being used in practice today and identifying those POM methods and topics which should receive more emphasis/coverage in POM textbooks and the classroom.

Publishers may want to address the two market segments identified here: (1) those professors desiring more quantitative material in the texts, and (2) those desiring more qualitative or conceptual treatment of topics. Different textbooks, designed for and targeted to one or the other of these segments, may be needed.

One current trend in POM textbooks noted by the authors is to put quantitative chapters or modules at the back of the textbook often treating them as supplements to the text. We believe that

this practice tends to de-emphasize the importance of these modules to students and professors alike. We recommend that these topics be treated as normal chapters in the textbooks allowing professors to emphasize or treat those chapters they believe to be of primary importance. This may be primarily appropriate for the quantitative market segment.

REFERENCES

Bongiorno, L. (October 25, 1993). Corporate America's New Lesson Plan. *Business Week.*

Brandyopadhyay, J. K. (First Quarter 1994). Redesigning the POM major to prepare manufacturing managers. *Production and Inventory Management Journal.*

Coleman, B. J. & S. J. Smith. (August 1994). A proposed typology for the production and operations management core course. *Journal of Management Education, 18*(3).

Doane, D. P. (May/June 1994). Assessing textbook coverage of quality topics in business education. *Journal of Education for Business, 69*(3).

Ducharme, R. E. & D. A. Lewis. (First Quarter, 1987). The academic/practitioner gap in production and inventory management. *Production and Inventory Management.*

Hammond, D. H. & S. J. Hartman. (May/June 1996). The match between undergraduate academic instruction and actual field practices. *Journal of Education for Business, 71*(5).

Harrison, B. & J. M. Hanebury. (Fourth Quarter, 1992). Integrating the new perspective on total quality control and production-operations management courses. *Production and Inventory Management Journal*.

Heizer, J.& B. Render. (Spring 2001). *Operations Management* (Sixth Edition). Englewood Cliffs, NJ: Prentice Hall.

Johnson, M. E. & D. F. Pyke. (Spring 2000). Introduction to the special issue on teaching supply chain management. *Production and Operations Management.*

Jordan, E., L. Lasdon, M. Lenard, J. Moore, S. Powell & T. Willemain. (February 1996) Report of the Operating Subcommittee of the INFORMS Business School Education Task Force. Institute for Operations Research and the Management Sciences.

Karuppan, C. M. & M. Karuppan (September 1999). Empirically based guidelines for developing teaching materials on the web. *Business Communication Quarterly*.

Nieto, M., D. Arias, B. Minguela & A. Rodriguez. (August 1999). The evolution of operations management contents: An analysis of the most relevant textbooks. *Industrial Management & Data Systems.*

Tillery, K. R., A. L. Rutledge & R. A. Inman. (1993). Quality management and POM textbooks: A review and assessment. *International Journal of Quality & Reliability Management, . 10*(1).

Vollmann, T. E., C. Cordon & J. Heikkila. (Spring 2000). Teaching supply chain management to business executives. *Production and Operations Management.*

APPENDIX
UNDERGRADUATE
OPERATIONS MANAGEMENT COURSE SURVEY

The purpose of this survey is to assess the current status of and determine trends in the teaching of Operations Management (or Production/Operations Management) in schools and colleges of business. Your time in completing and returning this survey will be greatly appreciated. We will be happy to share the results with you if you desire.

Please check the appropriate response(s) to each question.

1. My college or university has a:
___College (or School) of Business ___Department of Business

2. My college or university has the following programs in Business:
___ Undergraduate Program Only ___ Graduate Program Only ____Both Undergraduate & Graduate

3. Our Business program(s) is:
___Not Accredited ___Accredited by AACSB ____Accredited by:_____
___In process of accreditation by_____ Other:_____
_____

4. Does your college/school/department offer an UNDERGRADUATE COURSE in Operations Management/POM?
___Yes ___ NO, But anticipate adding one ___NO, With no plans to implement one

5. If you answered "YES" to Question 4 above, please continue with Question 6, otherwise please stop and go to Question 18.

6. Course Title: _____

7. Operations Management is a REQUIRED COURSE for the following majors:
___Accounting ___Economics ___Finance ___Management ___Marketing
___Other(Please Identify)_____
___ Not required for any undergraduate major in business but it may be taken as an elective.

8. Please indicate the level at which your Operations Management Course is taught.
___ Sophomore ___ Junior ___ Senior

9. What, if any, are the prerequisites for the Operations Management course?
___ Calculus ___ Statistics ___ Quantitative Methods
Other (Please list) _____

10. Does your college/school/department offer a major, minor or concentration in Operations Management/POM?
___Yes ___ NO IF "YES", Please circle one: major minor concentration

11. The textbook used in your Undergraduate Operations Management/POM course is:
Title: _____
Author/s:_____
Publisher: _____

12. For each of the following subjects/topics, please indicate the level of coverage you think is desirable in an Operations Management course.
I ---- Intensive or In-Depth Coverage with Problem Solving (more than 2 class periods)
M -- Moderate Coverage with Some Problem Solving (1 - 2 class periods)
L --- Light Coverage. Conceptual Understanding Only. (less than 1 class period)
O --- Shouldn't Be Covered (For whatever reason.)

___Linear Programming	___Queuing Models	___Decision Making
___Integer Programming	___Simulation	___Learning Curves
___Transportation Problems	___Quality Concepts/TQM	___Inventory Control
___Assignment Problems	___QC/SPC Methods/Charts	___JIT Concepts
___Goal Programming	___Forecasting	___Project Management
___Capacity Planning	___MRP	___Order Scheduling/Loading
___Layout Strategies	___Location Strategies	___Productivity Measurement

13. Please list subjects/topics NOT LISTED IN QUESTION 12 that, in your opinion, are desirable topics that should be included in an Operations Management Course. Also list the degree of desirable coverage in front of each topic using the CODES USED IN QUESTION 12. (Attach an additional sheet if necessary.)
___TOPIC:_____ ___TOPIC:_____
___TOPIC:_____ ___TOPIC:_____

14. If you teach linear programming in your course, please check all the related subjects/techniques that you teach. (Skip this question if you do not teach LP in your course.)

___ Graphical Solutions Other _____
___ The Simplex Method (Hand Solutions) Other _____
___ The Simplex Method (Computer Solutions)
___ Sensitivity Analysis (Hand Computations/ Interpretations)
___ Sensitivity Analysis (Computer Solutions/Interpretations)

15. In your opinion, how does the text you're using measure-up? Please check only one.
___ About Right
___ Very Good or Excellent Text
___ Needs qualitative or conceptual improvement of some topics
___ Needs more in-depth coverage of quantitative methods for some topics
___ Other _____

16. What is the general direction you would like to see in future texts? Please check only one.
___ More conceptual or qualitative treatments of topics
___ More in-depth quantitative treatments of topics
___ Other preferred direction: _____

17.	Some studies indicate that a shift from a quantitative emphasis to a qualitative/conceptual emphasis may have occurred in Operations Management textbooks over the last several years. Do you agree with this statement? ___ Yes ___ No Is such a trend desirable? ___ Yes ___ No
18.	If you would like a copy of the final paper or results from this research please complete the information below. Name:_____ Address:_____ _____

THE FACULTY PERSPECTIVE ON THE IMPACT OF AACSB ACCREDITATION

Wayne A. Roberts, Jr., Southern Utah University
Roy Johnson, Southern Utah University
John Groesbeck, Southern Utah University

ABSTRACT

Obtaining AACSB accreditation is a long, resource consuming exercise. In this study 221 faculty from 30 schools that received AACSB accreditation between 1997 and 2001 were surveyed to determine the impact of accreditation on various stakeholders. Overall, accreditation was perceived as being beneficial to the business school, students, and faculty hired since accreditation, and to the employers of students. Faculty, who were employed at the institution prior to receiving accreditation, did not perceive accreditation as helping them personally.

INTRODUCTION

Obtaining AACSB accreditation is a major undertaking. It takes time, diverts a lot of administrative and faculty time from other activities, is fraught with uncertainty, and takes money. A fundamental question is whether or not it is worth the effort and expense.

The purpose of this research was to assess faculty perceptions regarding the impact, or outcome, of AACSB accreditation. Faculty from recently accredited schools rated the impact of accreditation on the business school, faculty who were with the school before accreditation, faculty hired since accreditation, the programs, and students and employers of students.

ACCREDITATION COSTS

The direct costs of AACSB candidacy and ultimate accreditation are non-trivial. At present the candidacy fee is $2,500 per year, along with an initial application fee of $1,500. At the end of the process, when the site visit occurs, the additional fee for that visit can exceed $5,000. These costs are just the beginning.

The AACSB standards require that faculty are knowledgeable and involved with the process, and evidence of that involvement must be documented. In fact, accreditation should be a "faculty-driven process" (Mottilla & Hatfield, 1997). One of the typical ways to document that involvement is to send faculty members to AACSB accreditation workshops that range from $1,000 per person and up just for the attendance fee. All told, the direct costs, conference fees, air fares, meals, and the ever-present cost of hiring consultants (deans of schools already accredited), can drive the total cost of the candidacy process to well over $50,000 if only a modest level of effort is made. If the school is aggressive, these costs typically approach $100,000.

Even more taxing might be the indirect costs. Faculty must become involved in committees, developing missions and goals, and documenting standards and qualifications. While there is value in faculty involvement, there are also opportunity costs for faculty who could be doing research, teaching, or service. As Holmes (2001) notes, "This is a lot of work, and… the already overworked faculty will have to do most of it." According to Henninger (1998), "Generally, faculty saw accreditation as unrewarded service work." There are great costs in faculty resistance and in the perceived changes brought about by accreditation.

Inevitably, a school in candidacy will have to hire additional faculty who are able to meet, and maintain, "academically qualified" status, and those faculty are not cheap. For the sake of comparison, the average salary of an associate professor at a public AACSB accredited school was about $85,000 in 2002-03. The average salary of an associate professor at a non-AACSB accredited school was about $69,000 for that same year. Hiring a new associate professor with AACSB-appropriate credentials to anchor an academic program could easily cost more than $91,000 in that same year, depending on the discipline (see AACSB International 2002).

Thus, pursuing AACSB creates several problems with existing faculty, and with sometimes less than enthusiastic university administrators. Salary gaps between existing business faculty and newly hired "anchors" can be very large. Worse yet, faculty in other disciplines outside of business, who do not like the salary gap as it is, become even more upset when market salaries for new AACSB-appropriate faculty starts to take place.

In short, pursuing AACSB is not a pleasurable exercise for a business school from both an internal and external political view. The annual incremental cost increases for even a small school, including salary and benefits, can easily exceed $500,000 per year.

VALUE OF ACCREDITATION

While the costs of accreditation are high, these costs must be compared to the perceived benefits of accreditation. According to AACSB, accreditation benefits the school, students, employers, and the public (AACSB International, 2002b). While there is not a great deal of research examining these results, empirical studies have examined some of the consequences of accreditation.

Shipley and Johnson (1991) found that, while AACSB accreditation is not a criterion for admission to graduate schools, it is likely to make a difference in course requirements. They also found that graduation from an accredited program is significant in placement among employers who are familiar with AACSB, but that many employers were unaware of the AACSB. Alexander and Hatfield (1995) surveyed transfer students and found that "being fully accredited including AACSB accreditation and the academic reputation" of their school were the leading reasons students transferred. Levernier and Miles (1992) found both that there was a difference in faculty salaries between AACSB accredited schools and non-accredited schools and that the salary differential across disciplines was greater at the accredited schools.

Traditionally, one of the key consequences of AACSB accreditation has been an increased focus on research. In fact, Udell, et al. (1995) note that, "Discussions of the validity and desire for AACSB accreditation generally become discussions of the seeming dichotomies of teaching and research." They found that faculty of AACSB accredited schools had published significantly more journal articles than faculty of institutions denied accreditation, though there was no difference in broadly defined "scholarly activities." This focus on research by the AACSB has been downplayed by new "mission driven" standards implemented in 1994. Several studies have examined the impact of these new standards, especially as they concern research requirements. Ehie and Karanthanos (1994) found that, while overall emphasis on teaching had grown, "accredited institutions perceive instructional responsibilities as less important and intellectual contributions as more important than do nonaccredited institutions." Henninger (1998) found "only modest changes in faculty selection and work resulting from the new standards." Similarly, Jantzen (2000) found that, "The adoption of 'mission-related' standards, by itself, has not resulted in a change in either the number or character of schools being accredited." Arlinghaus (2002), in a study of AACSB accounting programs, found that "the expectation for the volume of publication has increased at the majority of respondent institutions for both tenured and untenured faculty." For good or bad, the emphasis on research appears to remain.

While it seems clear that AACSB accreditation has some impact on schools, it still is not clear how valuable this impact is. One group whose responses to accreditation have not been included in prior research is the faculty themselves. While deans have frequently been surveyed about the impact of accreditation on the curriculum, tenure, etc. (see e.g., McKenna et al. 1995; Cotton, et al. 1993; Mayes, et al. 1993), faculty response to the value of accreditation has not been examined. That is the intent of this study.

DATA AND SAMPLE COLLECTION METHOD

A list of business schools which obtained AACSB accreditation during the years 1997 through 2001 was obtained, and six United States business schools were randomly chosen for each

year, resulting in a total of 30 schools. Table 1 lists the chosen schools. Email addresses for business school employees were obtained via the Internet, except for one university, which graciously agreed to forward our email letter and questionnaire to their faculty.

Each email address was sent a cover letter with links to questionnaires on two different occasions. Ten schools were emailed April 12 and April 29, 2001, and the other 20 schools were surveyed November 21, 2001 and January 28, 2002. Faulty who were with the institution prior to receiving AACSB accreditation were requested to access the questionnaire, the results of which are discussed here. Non-faculty were asked to reply to our email and indicate such, and faculty hired since accreditation were given other instructions.

Eliminating those that indicated they were not faculty resulted in 1121 email addresses. Sixty-two respondents indicated they were faculty hired since accreditation, and 221 respondents were hired prior to accreditation. Hence, the minimum response rate was 25.25%. Depending on the number of non-faculty that remained on the list, the response rate might be considerably higher. It is not, of course, known how the response rate of those hired since accreditation compares to the response rate of those hired prior to accreditation.

Table 1. Recently AACSB Accredited Schools Selected for Study

St. Mary's University	The U. of Tampa
Marshall University	Illinois Institute of Tech.
SW Texas State	Chapman University
Fairfield University	Seattle Pacific U.
New Jersey Institute of Tech	U. of Mass. - Dartmouth
Pace University	Iona College
Jacksonville State U.	Niagara U.
Henderson State U.	Winston-Salem State U.
Rice University	No. Carolina St. U.
Longwood College	Indiana University Kokomo
Coastal Carolina U.	Fairleigh Dickinson U.
The College of NJ	U. of Mass. - Boston
Quinnipiac University	Michigan Tech. U.
Truman State	Long Island U.
St. Joseph's U.	No. Dakota State University

QUESTIONNAIRE

The questionnaire consisted of 40 Likert statements and 5 questions regarding the status and history of the respondent. It was developed using Microsoft Frontpage, and submitted questionnaires were automatically dumped into an Excel file, thus eliminating input error. For the purposes of analysis, Likert responses were coded as follows: -2 = strongly disagree, -1=disagree, 0=neither agree nor disagree, 1=agree, and 2=strongly agree. For some statements respondents were given a 'not applicable' choice, which was treated separately.

RESPONDENT CHARACTERISTICS

Table 2 summarizes data regarding the respondents. With regard to rank, 14% were assistant professors, 37.6% were associate professors, and 39.8% were full professors. With regard to tenure, 58% had tenure prior to accreditation, 18.6% received tenure after accreditation, and 22.6% were not tenured. With regard to discipline represented, 20% were from accounting, 10.4% taught economics, 12.2% finance, 10.9% information systems, 24.4% management, 10.4% marketing, and 6.3% quantitative methods. There was a reasonable spread with regard to administrative duties, with 43.3% reporting they had no administrative duties, to only 3 respondents who report they are currently 100% in administration. Finally, there was quite a spread regarding years of experience at the institution prior to accreditation: 7.7% had worked there 1 year or less, and, at the other end, 48.4% indicated they had worked at the school for more than 7 years prior to its receiving accreditation.

Based on these results there is little reason to suspect that the respondents do not constitute a representative sample of faculty employed at institutions prior to, and subsequent to, AACSB accreditation.

Table 2. Selected Respondent Characteristics

Number of Respondents by Year Accredited			Areas of Teaching Responsibility	
Year	Number		Discipline	Number
1997	82		Accounting	44
1998	31		Economics	23
1999	30		Finance	27
2000	36		Information systems	24
2001	42		Management	54
TOTAL	221		Marketing	23

		Quantitative methods	14
Respondent Tenure Status		Other response	11
Tenured prior to accreditation	128	TOTAL	221
Tenured after accreditation	41		
Not tenured	50		
Missing	2		
TOTAL	221		
Years working for School Prior to Accreditation		Faculty Rank	
1 year or less	17	Instructor	10
More than 1 to 3	38	Assistant Professor	31
More than 3 to 5	32	Associate Professor	83
More than 5 to 7	25	Full Professor	88
More than 7	107	Other	5
Missing	2	Missing	4
TOTAL	221	TOTAL	221

RESULTS

The results of the survey are reflected in tables 3 through 6. In each table, the exact wording of the Likert statements is provided. The statements have been rearranged for the sake of discussion, and do not reflect the order in which they appeared on the questionnaire. The main discrepancy is that the overall assessment questions were asked near the end of the questionnaire, just before demographic data was collected. The 2-tailed significance value provided reflects the probability that you would get the sample mean if the null hypothesis, that the mean value equals 0, is true. Zero represents the neutral point (neither agree nor disagree).

With regard to the impact of accreditation on the business school, respondents, in general, agree with the statement that it has been positive. As shown in table 3, the mean response for the overall statement, 1.06, was significantly above zero. Over 83% agreed or strongly agreed that it was good for the business school, and only 8.6% disagreed with the statement. The majority of respondents agree that AACSB accreditation helps the business school compete for financial resources, students, and faculty. Further, 70% agreed or strongly agreed that accreditation helps ensure that they have, and will continue to have, a quality program. Only 16.4% disagreed with that statement.

With regard to the impact of accreditation on the working climate and on interpersonal working relations, the results are not so positive. The mean responses to statements regarding

faculty-administration relations, faculty-faculty relations, and the working climate are all negative. Examining the percentages associated with these three statements is revealing. The modal response is neutral, suggesting neither a positive nor negative impact. The percent that strongly agreed or disagreed are relatively low, suggesting that the impact, in the eyes of most respondents, was not great.

Table 4 shows how respondents assessed the impact of AACSB accreditation on themselves. With regard to the overall impact, the mean response was not significantly different from 0. The percent that agreed that, overall, they benefited was 22.1%, while 30.1% neither agreed nor disagreed with the statement, and 27.7% disagreed. With regard to how accreditation has impacted the allocation of their efforts, the modal responses for most categories was neutral. The one exception concerns research, where the modal response indicates that more effort is devoted to this activity. As the means indicate, more non-neutral respondents are putting less effort into teaching, working with students, university and public service, participating in discipline-specific organizations, upgrading knowledge, and upgrading credentials.

More respondents indicated agreement with the statement regarding increasing job stress than disagreed. In fact, the modal response for this category was agreement. The modal responses to statements regarding how rewarding their jobs are and working relations are neutral. Again, as indicated by the sample means, non-neutral respondents indicate, on average, that their jobs are less rewarding, and that they do not have better working relations with other faculty and administrators as a result of AACSB accreditation.

Table 3. AACSB accreditation impact on the business school.

Likert Statement (n)	Mean (Standard deviation)[a]	Sig.[b] (2-tailed)	SA[a] (+2)	A (+1)	N (0)	D (-1)	SD (-2)
Overall, AACSB accreditation has been good for the business school. (221)	1.06 (.94)	.000	33.9%	49.3%	8.1%	6.3%	2.3%
AACSB accreditation has helped our business school compete for..							
....financial resources. (219)	.73 (1.04)	.000	23.3	42.5	21.9	8.2	4.1
...students. (218)	.83 (.92)	.000	19.7	56.0	13.8	8.3	2.3
...what I consider to be appropriate faculty. (217)	.77 (.99)	.000	22.6	46.5	19.4	8.8	2.8
Going through the AACSB accreditation process has helped ensure that we have, and will continue to have, a quality program. (220)	.72 (1.10)	.000	23.6	46.4	13.6	11.4	5.0

Table 3. AACSB accreditation impact on the business school.							
Likert Statement (n)	Mean (Standard deviation)[a]	Sig.[b] (2-tailed)	SA[a] (+2)	A (+1)	N (0)	D (-1)	SD (-2)
Because of AACSB accreditation...							
...faculty-administration relationships are better. (217)	-.23 (1.03)	.001	5.1	16.6	40.6	25.8	12.0
...faculty-faculty relationships within the business school are better. (216)	-.13 (1.00)	.050	5.1	20.8	37.5	28.7	7.9
...the overall working climate among faculty has improved. (216)	-.23 (1.03)	.001	2.3	25.5	31.0	29.6	11.6
[a] 5-point scale where +2=strongly agree (SA), +1=agree (A), 0= neither agree nor disagree (N), -1=disagree (D), and -2 =strongly disagree (SD).							
[b] 2-tailed significance associated with H: mean = 0							

Respondents were given a series of statements regarding the impact of accreditation on faculty employed prior to accreditation. The results are shown in Table 5. The mean response to the overall impact statement, -.01, is not significantly different from zero. The percent that agreed or strongly agreed with this statement is roughly the same as the percent that neither agreed nor disagreed, and those who disagreed. With regard to the extent of agreement with the statement that the productivity of this group has increased, the mean response is, again, not significantly different from zero. However, note that the modal response indicates agreement, and that 45.8% either agreed or strongly agreed while only 31.2% disagreed or strongly disagreed with that particular statement. The mean responses for all other statements in this table are significantly different from zero. The modal response regarding the statement that faculty have become more satisfied with their work is neutral, at 43.3%, but as the sample mean and percentages indicate, disagreement with this statement exceeds agreement. Interestingly, while 22.2% agreed that there has been salary increases for this group, 65.7% disagreed with this statement. The mean response, -.74, suggests that, on average, salary increases have not accompanied accreditation. The responses to the statement regarding faculty turnover indicates that not many faculty quit due to accreditation efforts. Finally, most respondents, 50.4%, indicate that tenure and promotion is more difficult now that their school is AACSB accredited.

Table 4: AACSB accreditation impact on respondents.

Likert Statement (n)	Mean (Standard deviation)[a]	Sig.[b] (2-tailed)	SA[a] (+2)	A (+1)	N (0)	D (-1)	SD (-2)
Overall, AACSB accreditation has benefitted me. (216)	.13 (1.17)	.116	10.2%	31.9%	30.1%	15.7%	12.0%
Because of AACSB accreditation, I'm putting more effort into...							
....the courses I teach. (209)	-.31 (1.06)	.000	4.8	16.3	36.4	28.2	14.4
...working with students. (207)	-.40 (.95)	.000	2.4	11.6	43.5	28.5	14.0
... research. (206)	.51 (1.16)	.000	21.4	35.0	24.8	11.7	7.3
... university service. (208)	-.35 (.95)	.000	3.8	10.6	43.3	31.3	11.1
... helping members of the public (such as businesses and civic groups). (209)	-.46 (.89)	.000	1.4	8.6	45.9	30.1	13.9
...becoming involved with discipline-specific academic organizations. (209)	-.20 (1.07)	.007	7.2	15.8	38.3	27.3	11.5
... upgrading my knowledge in my discipline. (209)	-.15 (1.14)	.060	7.2	22.0	34.0	22.5	14.4
...upgrading my credentials. (209)	-.22 (1.09)	.003	4.8	21.1	36.4	22.5	15.3
As a result of AACSB accreditation,...							
...my job is more stressful. (219)	.44 (1.13)	.000	18.3	25.6	23.7	16.9	5.5
...my work is more rewarding. (219)	-.29 (.98)	.000	1.4	21.9	35.2	29.7	11.9
...I have better working relations with other faculty. (219)	-.21 (.86)	.000	1.4	16.9	48.9	25.1	7.8
...I have better working relations with administrators. (219)	-.28 (.95)	.000	1.8	17.8	42.5	26.0	11.9

[a] 5-point scale where +2=strongly agree (SA), +1=agree (A), 0= neither agree nor disagree (N), -1=disagree (D), and -2 =strongly disagree (SD).

[b] 2-tailed significance associated with H: mean = 0

Table 5. AACSB accreditation impact on faculty.

Likert Statement (n)	Mean (Standard deviation)[a]	Sig. [b] (2-tailed)	SA [a] (+2)	A (+1)	N (0)	D (-1)	SD (-2)
Faculty hired prior to accreditation							
Overall, AACSB accreditation has benefited faculty who were here prior to accreditation. (220)	-.01 (1.04)	.845	4.5%	30.5%	32.7%	23.6%	8.6%
Faculty who were here prior to AACSB accreditation...							
...have become more productive. (218)	.10 (1.10)	.176	5.0	40.8	22.9	21.6	9.6
...have become more satisfied with their work. (217)	-.46 (.83)	.000	.9	9.2	43.3	36.4	10.1
...have seen salary increases due to AACSB accreditation. (216)	-.74 (1.21)	.000	3.7	18.5	12.0	31.9	33.8
Some faculty quit because of AACSB accreditation or accreditation efforts. (218)	-.53 (1.15)	.000	4.6	17.0	22.0	33.5	22.9
It is more difficult to receive tenure and promotions now that we are AACSB accredited. (218)	.35 (1.19)	.000	18.3	32.1	22.5	20.2	6.9
Faculty hired since accreditation Overall, AACSB							
accreditation has benefitted new faculty. (214)	.79 (.89)	.000	16.5	56.4	16.5	6.0	2.8
Compared to faculty who worked here prior to AACSB accreditation efforts, new faculty...							
...generally value research more. (217)	1.04 (.84)	.000	28.2	53.2	11.4	4.5	1.4
...generally value teaching more. (217)	-.32 (1.00)	.000	4.6	13.2	38.4	31.5	11.4
...generally value university/public service less. (215)	.09 (.96)	.158	5.9	27.1	39.4	19.9	5.0
...have better contracts . (211)	.48 (1.08)	.000	15.6	39.4	21.6	16.1	4.1

[a] 5-point scale where +2=strongly agree (SA), +1=agree (A), 0= neither agree nor disagree (N), -1=disagree (D), and -2 =strongly disagree (SD).

[b] 2-tailed significance associated with H:mean=0

Respondents, on average, feel that new faculty have fared better as a result of accreditation. As shown in table 5, 72.9% agreed or strongly agreed that accreditation has benefited new faculty, while only 8.8% disagreed. Only 16.5% neither agreed nor disagreed with the statement. Similarly, 55% agreed that new faculty have better contracts, while only 20.2% disagreed. With regard to the values of new faculty, over 81% agree that they value research more, which overwhelmed the 5.9% that disagreed. Results suggest that there is no difference, on average, between new and other faculty regarding how they value university and public service.

The responses with regard to students are somewhat perplexing. A large majority, 68.2%, agreed that AACSB accreditation benefited students. Yet the mean response to the statement that classroom instruction is generally better was negative and statistically significant, with 40.4% disagreeing with that statement. Further, the mean responses to the statements that coursework is more appropriate, and that students are getting a better education, are not significantly different from zero, implying that on average these have not changed significantly because of accreditation. Responses do indicate that, on average, students are better able to find appropriate employment, and while the mean is significantly different from zero, it is not large, and the modal response to this statement, with a sizable percentage, 41.0%, is the neither agree nor disagree category.

The responses to the overall statement and the specific statements are not consistent. It may be due to outcomes not explicitly measured in the questionnaire, such as better resources for students because of stronger finances, to the enhanced image associated with attending an AACSB accredited school, to an opening of opportunities for students (such as graduate school opportunities), or some other outcome.

Table 6. AACSB accreditation impact on students, employers, and overall assessment.

Likert Statement (n)	Mean (Standard deviation)[a]	Sig. [b] (2-tailed)	SA [a] (+2)	A (+1)	N (0)	D (-1)	SD (-2)
Students and employers							
Overall, AACSB accreditation has benefitted students. (220)	.60 (1.01)	.000	13.2%	55.0%	15.9%	10.9%	5.0%
Overall, AACSB accreditation has benefitted the employers of our students. (219)	.24 (.89)	.000	4.6	36.5	40.6	14.6	3.7
Because of AACSB accreditation,...							
...classroom instruction is generally better. (218)	-.25 (1.03)	.000	1.8	24.8	33.0	27.1	13.3
...coursework is more appropriate. (218)	-.05 (1.06)	.522	3.7	32.1	30.3	23.9	10.1

Table 6. AACSB accreditation impact on students, employers, and overall assessment.

Likert Statement (n)	Mean (Standard deviation)[a]	Sig. [b] (2-tailed)	SA [a] (+2)	A (+1)	N (0)	D (-1)	SD (-2)
...students are getting a better education. (217)	.02 (1.06)	.799	5.1	32.7	30.4	22.6	9.2
...students are better able to find appropriate employment. (217)	.18 (.99)	.010	8.3	28.6	41.0	16.6	5.5
Overall assessment and recommendation							
Overall, AACSB accreditation has been worth the effort to obtain it. (221)	.78 (1.08)	.000	24.0	29.8	12.7	7.7	5.9
Overall, AACSB accreditation is something I would recommend to other schools. (220)	.66 (1.08)	.000	21.4	43.6	20.5	9.1	5.5

[a] 5-point scale where +2=strongly agree (SA), +1=agree (A), 0= neither agree nor disagree (N), -1=disagree (D), and -2 =strongly disagree (SD).

[b] 2-tailed significance associated with H:mean=0

One statement was included regarding the impact of accreditation on employers of students. As shown in table 6, 41.1% agreed that accreditation benefited employers, 40.6% neither agreed nor disagreed, and 18.3% disagreed. The mean response was significant and positive. However, if students aren't getting better instruction, more appropriate coursework, and a better education, it is not clear how employers are benefiting. Again, it must be due to factors not measured in the study. Holmes (2001) for example, notes the high costs of accreditation, but highlights its value both as a learning experience and in establishing credibility, especially for historically black colleges and universities.

Table 6 also depicts the responses to two overall assessments. In both cases the mean values were positive and significant. A clear majority of respondents, 53.8%, agree that AACSB accreditation has been worth the effort. Only 13.6% disagree with that statement. A full 65% would recommend AACSB accreditation to other schools.

THE EMERGING PICTURE

If one assumes that disagreement with a statement, such as "I am putting more effort into public service," implies that the respondent is putting less effort into public service, then an interesting picture emerges.

First, respondents find that the AACSB accreditation helps the business school compete for finances, students, and faculty, and helps a school maintain a quality program.

With regard to students, results indicate accreditation helps students and their employers. However, results indicate that classroom instruction is worse, and that students are neither getting a better or worse education. Further, faculty hired prior to accreditation are putting less effort into teaching and working with students. It is, therefore, not clear how accreditation helps students. It could be the impact of image, or the ability to hire appropriate faculty (faculty, by the way, that value teaching less and research more), or obtain other useful resources.

Regarding the reallocation of faculty efforts, less effort is allocated to teaching, working with students, public and university efforts, and involvement with discipline-specific organizations, and more effort is allocated to research. This is consonant with the literature (e.g., Ehie & Karanthanos, 1994; Jantzen, 2000; Arlinghaus, 2002) and calls into question the real application of mission-driven standards.

It does not appear that AACSB accreditation has any beneficial impact, overall, with regard to the working climate or the desirability of the job. Results indicate faculty, on average, find their job is more stressful and less satisfying, and they certainly do not believe that faculty-faculty or faculty-administration relations have improved. Of course, working relations may have been very positive prior to seeking accreditation.

Despite this shift from teaching to research, and the increased job stress, and no positive impact on teaching, the respondents, on average, indicated strongly that accreditation was worth the effort.

CONCLUSIONS AND COMMENTS

Faculty who have been through the AACSB accreditation process are, in general, positive about the outcomes. It appears that faculty present prior to accreditation is the one group that does not, on average, significantly benefit. Regardless, they do believe that accreditation is worth the effort and recommend it to other schools.

While AACSB has moved to a mission-driven standard, it appears that the nature of a university still changes as a result of accreditation. Public and university service, involvement in discipline-specific organizations, and teaching efforts give way to increased research efforts. It is not known to what extent this is a positive, negative, or neutral outcome. Further, it is not clear whether this is a consequence of AACSB values or values held by faculty.

The discussion here has to a significant extent been guided by statement mean values, and for different institutions the expected outcomes might be significantly different. For example, in some institutions salaries of existing faculty might be significantly increased, or significant numbers of faculty might decide to pursue careers elsewhere. Therefore, in interpreting the results of the

study it is important to go beyond the mean and examine the distribution of responses, which reflect different situations for individual schools and faculty. For example, while on average it appears that salary increases do not accrue to faculty who must suffer through the accreditation process, 22.2% of the respondents imply that there were salary adjustments. As other examples, while on average it appears that faculty are suffering more stress and find their jobs less rewarding, 22.4% disagree that their jobs are more stressful, and 23.3% agree that their work is more rewarding. Consequently, any school contemplating seeking AACSB accreditation needs to evaluate the results in light of their idiosyncratic circumstances.

One additional caveat must be mentioned. All respondents were from schools that were successful in achieving accreditation. When weighing the possible consequences of pursuing accreditation it is necessary to consider the possibility of never achieving it.

REFERENCES

AACSB International (2002), *2001-2003 Salary Survey Report*, St. Louis: Knowledge Services.

AACSB International (2002). *Publications - Value of Accreditation brochure,* retrieved January 30, 2002, from http://www.aacsb.edu/brochure.html.

Alexander, R. P. & D. Hatfield (1995). Does AACSB accreditation impact enrollment? *The Coastal Business Journal, 1*(1), 47-52.

Arlinghaus, B. P. (2002). The environment for professional interaction and relevant practical experience in AACSB-accredited accounting programs. *Journal of Education for Business, 77*(4), 38-45.

Cotton, C.C., J. F. McKenna, S. Van Auken & R.A. Yeider (1993). Mission orientations and deans' perceptions: implications for the new AACSB accreditation standards. *Journal of Organizational Change, 6*(1), 17-27.

Ehie, I. C. & D. Karathanos (1994). Business faculty performance evaluation based on the new AACSB accreditation standards. *Journal of Education for Business, 69*(5), 257-263.

Jantzen, R. H. (2000). AACSB mission-linked standards: effects on the accreditation process. *Journal of Education for Business, 75*(6), 343-48.

Henninger, E. A. (1998). Dean's role in change: the case of professional accreditation reform of American collegiate business education. *Journal of Higher Education Policy & Management, 20*(2), 203-214.

Henninger, E. A. (1998). Perceptions of the impact of the new AACSB standards on faculty qualifications. *Journal of Organizational Change Management, 11*(5), 407-424.

Holmes, L. (2001). Seeking accreditation is well worth the work. *Black Issues in Higher Education, 18*(20), 152-153.

Levernier, W. & M. Miles. (1992). Effects of AACSB accreditation on academic salaries. *Journal of Education for Business, 68*(1), 55-61.

McKenna, J.F., C.C. Cotton & S. Van Auken. (1995). Business school emphasis on teaching, research and service to industry: does where you sit determine where you stand? *Journal of Organizational Change, 8*(2), 3-16.

Mayes, B.T., D. Heide & E. Smith. (1993). Anticipated changes in the business school curriculum: a survey of deans in AACSB accredited and non-accredited schools. *Journal of Organizational Change, 6*(1), 54-63.

Motilla, D.T. & L. Hatfield. (1997). The view from the trenches: a steering committee's retrospective on implementing the new AACSB accreditation standards. *Journal of Education for Business, 72*(5), 289-293.

Shipley, M. F. & M. Johnson. (1991). Employment and academic opportunities for graduates of AACSB-accredited schools. *Journal of Education for Business, 66*(4), 235-240.

Udell, G.G., S. Parker & C. Pettijohn. (1995). An examination of the research productivity of marketing faculty at newly minted AACSB schools. *Journal of Marketing Theory and Practice, 3*(2), 106-113.