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ACADEMY OF EDUCATIONAL LEADERSHIP JOURNAL

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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

DIMENSIONS OF STUDENT PERCEPTIONS OF FACULTY ETHICAL BEHAVIOR: REFINING A MEASURE AND RELATIONSHIPS WITH SELECTED OUTCOME VARIABLES

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ABSTRACT

Scale items used in previous studies of student perceptions of faculty ethical behavior were administered to a sample of undergraduate business students in order to assess the dimensionality of these perceptions. Results suggest five distinct dimensions of student perceptions of faculty ethical behavior. These empirically derived dimensions were then related to three outcome variables, satisfaction with the university, intent to remain in the current degree program, and intent to transfer to another university. Results of this analysis suggest that one dimension of faculty ethical behavior is related to student satisfaction with the university, and that satisfaction, in turn, was related to student intent to transfer to a different university.

INTRODUCTION

Recent developments in business (e.g., Enron, Adelphia, Tyco, WorldCom, and Andersen Consulting) and politics (e.g., the expulsion of James Traficant from the House of Representatives, and the recent Letter of Admonition from the U.S. Senate Ethics Committee to Senator Robert G. Torricelli) has brought ethics to the forefront of public debate and media attention. However, while several scholars have suggested that teaching is rife with ethical dilemmas (Svinicki, 1994), relatively little empirical research has been conducted on ethics in academia (Tabachnick, Keith-Spiegel & Pope, 1991; Keith-Spiegel, Tabachnick, and Allen, 1993). The little research on faculty ethical behavior which has been conducted has typically focused on such topics as sexual harassment and has largely ignored the many daily ethical dilemmas which occur in faculty-student interactions (Tabachnick, Keith-Spiegel & Pope, 1991). Surprisingly, there is very little research on student perceptions of faculty ethical behavior, and the outcomes of those perceptions (Morgan & Korschgen, 2001). The few studies which have addressed student perceptions of faculty ethical

behavior have ignored significant methodological issues, such as the dimensionality of the rating instrument used to assess student perceptions, and the validity and reliability of the measurement. The primary purpose of this study is to improve the measurement of student perceptions of faculty ethical behavior. Items from previous questionnaires related to a narrow range of faculty behaviors dealing with the professor-student interaction as well as additional items to more fully capture this domain will be examined for content validity, dimensionality, and reliability. Identifying dimensions of student perceived faculty ethical behavior will enable researchers to create a valid and reliable scale which can then be used to examine outcomes of student perceptions, such as student retention. Relationships between these empirically-derived dimensions of student perceived faculty ethical behavior and selected outcome variables (student course satisfaction and intent to remain in their current degree program or retention) will then be examined.

ETHICAL BEHAVIOR

Ethical behavior is rather difficult to define precisely given its origin in personal, organizational and societal values (Ball, 2001). Not that long ago, ethics was defined largely in terms of complying with the law. While, expectations have risen in recent years, it is difficult to draw a precise line between what is generally considered ethical behavior, and what is not. In a general sense, what is considered ethical behavior is what "most people" would consider right and wrong. Clearly, different groups may define ethical behavior differently. Therefore, one determinant of ethical behavior is the context within which it occurs. Ethical behavior in one industry or occupation may be quite different from another. Ultimately, an individual's ethics are his or her beliefs about what is right or wrong, good or bad (Garrett & Klonoski, 1992). Thus, an individual's actual ethical behavior is influenced by his or her personal beliefs and values, the climate of the organization, as well as society's values.

FACULTY ETHICAL BEHAVIOR

Some authors have expressed skepticism about the general ethical integrity of university and college professors (Anderson, 1992; Callahan, 1982; Sykes, 1989). Others point out how difficult it is to develop standardized expectations for behavior in university settings given the diversity, professional training, and independence of faculty (Whicker & Kronenfeld, 1994). A recent survey found that 74% of college seniors in a Zogby International poll reported that their professors, when teaching ethics, tell students that there is no clear right or wrong; rather, what is "ethical" depends on one's individual values and culture (Leo, 2002).

Yet other authors argue that ethical behavior has a key role in higher education (Smith, 1996; Little, 1989; Markie, 1994; Strike & Soltis, 1992). Evidence of the growing concern of ethics in academia is the number of professional organizations which have developed codes of ethics (e.g.,

the Academy of Management, American Association of University Professors, American Psychological Association). In addition, many colleges and universities have developed codes of conduct, although it has been suggested that many of these take a legalistic or minimalist approach, defining codes of conduct largely in terms of legal compliance (Kibler, 1994; Zabihollah, Elmore & Szendi, 2001).

There is some evidence that student perceptions of ethical climate may be related to important outcome variables such as student retention (Lipshutz, 1993; Parker, 1997). The 103-item Ethical Climate Index was administered to a sample of graduate students and faculty in the college of education in a Midwestern state university (Schulte, 2001). Schulte (2001) concluded that the data indicated that both faculty and students believed that a positive ethical climate is important in student retention in the degree program. Day-to-day faculty behavior and interactions with students would clearly influence student perceptions of the ethical climate, and thereby their likelihood of continuing in their current program of study.

MEASURES OF STUDENT PERCEPTIONS

Given the paucity of research addressing student perceptions of faculty ethical behavior, there are few research instruments available. Tabachnick, Keith-Spiegel, and Pope (1991) developed a 63-item measure which they used to compare the perceptions of teaching psychologists with clinical psychologists. The items were based on a previous study of teaching psychologists, and represent what the psychologists, not necessarily the students, consider to be examples of unethical behavior. The psychologists indicated the extent to which they engaged in these behaviors as well as rating how ethical they viewed each behavior. They also administered this instrument to college students and professors, asking them to rate the acceptability of behaviors in which professors might engage. They found great similarity between student and professor perceptions, male and female student perceptions, freshmen and upper-class student perceptions, and between Midwest and West Coast student perceptions.

In a follow-up study, Keith-Spiegel, Tabachnick and Allen (1993) developed a 107-item scale, taking 59 items from their earlier questionnaire (Tabachnick, Keith-Spiegel & Allen, 1991), and an additional 48 items from incidents contributed by students responding to a request to describe ethical problems with professors. Thus, approximately half of these items were identified by students as examples of faculty unethical behavior. Students rated these items in terms of how ethical they considered the behavior. They found few differences between freshmen and advanced students, between Midwest and West Coast students, and significant differences on only 6 of the 107 behaviors between male and female students. The types of faculty behaviors perceived as most unethical by students are those which impact fairness, and acts which violate a perceived class contract (e.g., "using a grading procedure that does not adequately measure what a student has

learned," "giving every student an A regardless of the quality of their work," and "changing the criteria for successful completion of the class in the middle of the semester").

Birch, Elliott and Trankel (1999) developed a 64-item measure which asked respondents to rate the ethical appropriateness of 64 behaviors. Twenty-seven items in this scale were adapted from the Tabachnick et al. (1991) and Keith-Spiegel (1993) scale, and thirty-two items were developed from a review of other ethics surveys, from discussions with faculty and students, and from participant (faculty) discussions during a workshop on ethics. This instrument was administered to the faculty at a Western state university. They found that there was strong agreement among the respondents about fairness in grading, relationships between faculty and students, and university responsibilities. However, there were "gray areas" about which there was much less agreement concerning other aspects of student/faculty relationships. Similar to previous research, they found no differences between male and female respondents.

Morgan and Korschgen (2001) asked a sample of faculty and undergraduate students to rate the ethicalness of 16 faculty behaviors on a five-point scale with endpoints of "unquestionably not ethical" to "unquestionably ethical." They selected items from the Tabachnick, et al. (1991) scale which dealt primarily with student-faculty relationships. They found significant differences between faculty and student perceptions on four of the sixteen items. Faculty saw increasing popularity by giving easy tests, accepting a textbook rebate, sexual involvement with a student, and using profanity in lectures as more unethical than did students. Students saw using old lecture notes, and the breaking of students' confidences as more unethical than did faculty.

These instruments all measured a relatively broad array of faculty behaviors which were judged to have ethical implications. In addition to the day-to-day professor-student interactions (e.g., behavior in the classroom, assignments, grading), these questionnaires measured such faculty behaviors as dealings with colleagues, inappropriate use of the institution's resources, and avoiding college/university or departmental responsibilities.

One common methodological feature, and significant limitation, of these studies is the use of multiple item measures of perceived faculty ethical behavior, yet analyzing each item individually. All of these researchers conducted statistical tests of each individual item included in their scale. There was no assessment of discriminant or convergent validity or even reliability estimation. Nor was there any attempt to validate dimensions of perceived faculty ethical behavior across different groups of respondents (e.g., students and faculty). The problem with this, of course, is that some of these items may be highly correlated and therefore redundant. If many subjects interpret two items in a scale to mean the same thing, then we no longer have two separate, independent measures. We are not measuring two separate constructs, and they should not be interpreted nor analyzed as such. They should be combined into a single measure. This is particularly likely to occur when several similar items are presented to subjects at the same time. Respondents may honestly interpret several items similarly, or they may respond to several items in a manner similar to phenomenon known as common method variance. Respondents may, for

example, attempt to be consistent with their responses, producing spurious, inflated correlations among the items. (Podsakoff & Organ, 1986). Regardless of the specific reason, the result is, in the respondents' minds, several items are the same. Analyzing or interpreting the results of these items individually is no longer appropriate.

A perhaps more significant problem with a single item measure is the difficulty in assessing its reliability and validity. In other words, it is difficult to establish precisely what is in fact being measured with single item measures.

Branstetter and Handelsman (2000) used a modified version of the Tabachnick et al. (1991) scale to measure graduate student perceptions of psychology faculty ethical behavior. In the first part of their study, they asked graduate students to evaluate how ethical they viewed 50 faculty behaviors. In the second part of the study, they asked respondents to report how frequently they engaged in the same 50 behaviors. They point out that the Tabachnick, et al. (1991) scale relates to six distinct areas of faculty behavior: (1) in-class issues, (2) lessons and evaluations, (3) outside-of-classroom issues, (4) relationships in academia, (5) responsibilities to students and colleagues, and (6) issues unique to teaching of psychology. This implies that the 63 items in the Tabachnick, et al. (1991) scale should collapse into these 6 dimensions. In fact, Branstetter and Handelsman (2000) did perform an exploratory factor analysis on the data from the first part of their study, which resulted in 5 factors (based on the eigenvalues = 1.00 rule of thumb and a scree test). Thus, the analysis did not support the a priori six dimensions of ethical faculty behavior. They interpreted these factors as follows: (1) systemic issues in academia; (2) dual relationship issues between graduate teaching assistants and students; (3) sexual relationships between faculty and students; (4) fidelity, justice and general competence in teaching; and (5) veracity, confidentiality and professional issues. A subsequent analysis examined graduate teaching assistant perceptions on these factors across age, gender, year in program, and specialty area. They found that older teaching assistants were less likely to rate dating and sexual relationships with students as ethical, and that, compared to women, men were more likely to rate the dual relationships factor as unethical but more likely to rate dating and sexual issues as ethical. Using data from the second part of their study, where they asked the same graduate teaching assistants to rate the frequency in which they themselves engaged in each of the 50 behaviors, the 50 items were compared individually across various subgroups (e.g., gender, age). One of their conclusions was that male graduate teaching assistants (GTAs) engaged in certain behaviors more frequently than did female GTAs. However, two of the three behaviors (scale items) loaded on the same factor (Factor 3: Sexual Relationships; item 9: "Becoming sexually involved with a student", and item 18: "Engaging in sexual fantasies about a student"). Since these loaded on the same factor in the principal components analysis, it makes little sense to further analyze them individually. In the respondents minds, these items measure largely the same construct. The third item included in this analysis did not load significantly on any of the factors in the exploratory factor analysis. Therefore, it is difficult to interpret what exactly is being measured with this item, or assess its validity and reliability.

SINGLE ITEM MEASURES

It has long been accepted that multiple-item measures are preferable to single-item measures (Nunnally, 1978). This preference is based on the general notion that a measurement instrument consists of a random sample of items from the domain of all items which measure the construct of interest. There are several other, more specific reasons for the preference for multiple-item measures. First, it is not possible to test the internal consistency reliability of a single-item measure. In addition, reliability can often be improved by adding items to a scale. However, recently it has been suggested that there are circumstances where single-item measures may be desirable (Scarpello & Campbell, 1983; Wanous, Riechers, & Hudy, 1997; Gardner, Cummings, Dunham & Pierce, 1998; Nagy, 2002). The relative advantages and disadvantages of single-item versus multiple-item measures is not the focus of this research. Rather, this research examines the possible misuse of previous multiple item measures of student perceptions of faculty ethical behavior as single-item measures, and creating a valid and reliable scale which taps a limited part of the domain of faculty ethical behavior, specifically, those dealing with professor-student interactions. More completely specifying this domain by developing additional scale items and assessing the dimensionality, content validity and reliability of this instrument will enable researchers to more fully test the notion that student perceptions of faculty ethical behavior are related to important outcomes such as student retention.

RESEARCH GOAL

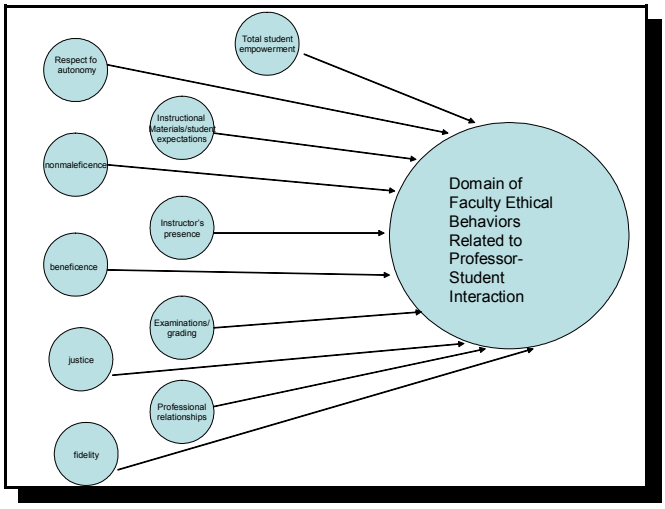
The purpose of this research is to examine a multiple-item measure of student perceived faculty ethical behavior to assess the dimensionality, or content validity, of this measure. The ultimate goal of this research is to develop a valid, yet more parsimonious, measure of this construct. This measure is based on items taken from the Tabachnick, Keith-Spiegel, and Pope (1991); Keith-Spiegel, Tabachnick and Allen (1993), and Morgan and Korschgen (2001) instruments. Items were selected which focused on the faculty-student relationship both within and outside of the classroom. There are clearly other important types of faculty behaviors which have ethical implications, however, students are not qualified judges of these behaviors (e.g., assisting junior colleagues). We focused on the limited domain of ethical faculty behaviors which students could readily observe and thus could accurately judge.

Empirically-derived dimensions of faculty ethical behavior will then be regressed on important outcome variables including student course satisfaction and student retention (intent to remain in their current degree program and intent to transfer to a different university).

MEASURES

A 95-item questionnaire was developed, taking items from previous measures (Tabachnick, Keith-Spiegel & Pope, 1991; Keith-Spiegel, Tabachnick & Allen, 1993; Morgan & Korschgen, 2001; Branstetter & Handelsman, 2000). Items were selected which dealt specifically with faculty behaviors relating to student-faculty interaction both within and outside of the classroom. Additional items were added to the scale to more completely measure the ethical principles related to student affairs suggested by Kitchener (1985), and the five areas of teaching behavior with distinct ethical implications suggested by Smith (1996). Kitchener (1985) suggested five ethical principles in dealing with students: (1) respect for autonomy, respect for the individual's right to make his/her own decisions; (2) nonmaleficence or doing no harm to others; (3) beneficence or benefiting others; (4) justice and treating others fairly; and (5) fidelity, being loyal and trustworthy. Smith (1996) suggested that certain faculty behaviors are directly related to ethical issues: (1) total student empowerment (e.g., turning over responsibility for the course to students, structuring the course to achieve high student ratings); (2) instructional materials and student expectations (e.g., choosing a textbook without reading it); (3) instructor's presence (e.g., frequently missing class, not being available to students); (4) examinations and grading (e.g., giving test questions not related to course material); (5) professional relationships (e.g., giving a high recommendation for a student whose performance does not warrant it). At this early stage in the research process, it was important to be inclusive in order to fully measure the domain of faculty ethical behaviors relating to student-faculty interaction and identify dimensions of this domain. This domain is illustrated in Figure 1.

Figure 1
Domain of Faculty Ethical Behaviors Related to Professor-Student Interaction



Items included were developed based on both faculty and student inputs. The original Tabachnick et al. (1991) scale was generated based on input from teaching psychologists. However, the follow-up study (Keith-Spiegel, Tabachnick and Allen, 1993) included approximately the same number of items based on input from students. The Birch, Elliott, and Trankel (1999) scale was based in part on the Tabachnick et al. (1991) scale, but additional items (32 items) were generated based on discussions with both faculty and students. Thus, the scale employed in the present study is based approximately equally on input from faculty and students. In addition, there is recent evidence that students and faculty have relatively similar views regarding faculty ethical behavior (Morgan & Korschgen (2001).

Instructions on this scale defined ethical behavior in terms of right and wrong, and distinguished it from desirable and undesirable behavior (Appleby, 1990; Murray, 2000), as recommended by Morgan and Korschgen (2001). Respondents were instructed to focus on whether a behavior was right or wrong, and not whether they liked or disliked it. A seven-point Likert-type scale was employed with scale anchors of Definitely Ethical (1) and Definitely Unethical (7), with a midpoint of Neutral (4).

METHOD

The 95 item Faculty Behavior questionnaire was administered to several undergraduate business classes during the third week of class in the Fall Semester 2002 at a medium-sized state university in the south, and in a large lecture-hall management class at a large state university in the Midwest. A total of 132 students responded at the Midwestern university. The average age of these students is 21.03, 50.4% are male (.8% did not report their gender), and the average grade point average is 2.97. At the southern university,

The Faculty Behavior scale was submitted to a principal components analysis resulting in nineteen factors with eigenvalues greater than 1.0, explaining 65.85% of the variance in the scale. However, not all of these factors were interpretable, and a scree test suggested four to five factors. A varimax rotation was performed and items which did not load cleanly (factor loading >= .50) on a single factor were omitted. A second factor analysis was performed on the reduced-item scale (10 items were omitted), again producing nineteen factors with eigenvalues >= 1.0. A scree test again suggested between four and five factors. Once again, several factors were not interpretable, and several items did not load cleanly on a single factor. The data were submitted to a varimax rotation, and each scale item was examined to determine those items which exhibited very high (>= .50) loadings on a single factor. Thirty such items were identified.

These thirty items were submitted to a principal components analysis, resulting in five factors with eigenvalues >= 1.0, explaining 60.53 % of the variance. A scree test also suggested five factors. The results of this analysis appear in Table 1.

Table 1: Results of the Principal Components Analysis of Faculty Ethical Behavior					
	Factor 1 Classroom Ethical Behavior	Factor 2 Inappropriate Exchange	Factor 3 Relationships Outside the Classroom	Factor 4 Dating	Factor 5 Inappropriate Use of Time
Giving lower grades to students who disagree with him/her (the instructor).	.77	.00	.00	.00	.12
Teaching class under the influence of alcohol or recreational drugs.	.75	.00	.00	.18	.18
Not providing alternative teaching and testing procedures for students who have learning disabilities.	.65	.00	.00	.21	.23
Giving exams which do not reflect the material covered/discussed	.73	.00	.00	.00	.23
Allowing how much he/she likes or dislikes a student to influence the student's grade.	.72	.23	.00	.00	.00
Including false or misleading information that may hurt the student's chances when writing a letter of recommendation for the student.	.79	.00	.00	.00	.13
Including material on a test that was not covered in the lectures or assigned reading.	.75	.00	.00	.00	.18
Requiring students to disclose highly personal information in a group discussion or exercise (e.g., students who remain silent and don't discuss the information are graded down).	.74	.23	.00	.00	.19
Asking small favors (such as a ride home) from students.	.00	.57	.38	.29	.00
Accepting expensive gifts from students.	.28	.70	.00	.21	.14
Borrowing money from students.	.19	.82	.24	.11	.00
Lending money to a student.	.00	.78	.33	.14	.00

Table 1: Results of the Principal Components Analysis of Faculty Ethical Behavior					
	Factor 1 Classroom Ethical Behavior	Factor 2 Inappropriate Exchange	Factor 3 Relationships Outside the Classroom	Factor 4 Dating	Factor 5 Inappropriate Use of Time
Accepting inexpensive gifts from students.	.00	.70	.23	.21	.11
Teaching a class without being adequately prepared that day.	.17	.00	.21	.00	.64
Failure to maintain regularly scheduled office hours.	.36	.17	.00	.00	.56
Frequently arriving several minutes late for class.	.15	.00	.00	.00	.77
Frequently missing class without advance notice.	.43	.00	.00	.13	.62
Not getting exams graded and returned until 4 weeks after the exam was given.	.32	.00	.00	.14	.61
Never learning any of the student's names in a relatively small class (e.g., 20 to 30).	.00	.20	.00	.00	.73
Being sexually attracted to a student.	.00	.16	.21	.68	.12
Dating a student majoring in a field outside the professor's teaching assignment and unlikely to ever enroll in the professor's class.	.00	.27	.16	.83	.00
Dating a student not currently enrolled in the professor's class.	.00	.31	.20	.82	.00
Becoming sexually involved with a student after the course is completed and grades are filed.	.00	.00	.26	.79	.00
Hugging a student.	.00	.00	.57	.33	.11
Accepting a student's invitation to a party.	.13	.28	.61	.16	.00
Selling goods (e.g., books, a car) to a student.	.00	.13	.74	.00	.17
Hiring a student to work for him/her (painting a house, baby-sit, etc.).	-.12	.20	.73	.16	.00

Table 1: Results of the Principal Components Analysis of Faculty Ethical Behavior					
	Factor 1 Classroom Ethical Behavior	Factor 2 Inappropriate Exchange	Factor 3 Relationships Outside the Classroom	Factor 4 Dating	Factor 5 Inappropriate Use of Time
Beginning an on-going friendship with a student who is enrolled in the professor's class.	.00	.20	.66	.16	.13
Going to a bar with students after class.	.33	.36	.49	.26	.00
Eigenvalue	7.96	4.85	1.90	1.59	1.23
% of Variance Explained	27.43	16.74	6.56	5.46	4.25

Nine items loaded cleanly on Factor 1. These items deal with a professor's behavior within the classroom, including grading, examinations, and fairness in dealing with students. This factor was interpreted as Classroom Ethical Behavior. Five items loaded on Factor 2. These items pertain to loaning money to students, borrowing money from students, accepting gifts from students, and asking favors of students. This factor was interpreted as Inappropriate Exchange. Six items loaded on Factor 3. These items deal with friendships and non-romantic relationships with students. This factor was interpreted as Relationships Outside the Classroom. Four items loaded on Factor 4. These items focus on dating and having sexual relationships with students. This factor was interpreted as Dating and Relationships. Six items loaded on Factor 5. These items have to do with effort and the use of time. More specifically, these items addressed the professor not being adequately prepared for class, not maintaining scheduled office hours, frequently arriving late for class, frequently missing class without notice, and taking a long time to grade and return exams. This factor was interpreted as Inappropriate Use of Time. Coefficient alpha reliability estimates ranged from .79 to .89 for these five factors. Reliabilities and correlations among the five empirically derived dimensions of faculty ethical behavior appear in Figure 4. Reliability estimates appear on the diagonal. As Table 2 shows, there is a moderate degree of correlation among the five factors. Factors 2 and 3 (favors and loans, platonic relationships outside of the classroom), factors 2 and 4 (favors and loans, dating), factors 3 and 4 (platonic relationships outside the classroom, dating), and factors 1 are 5 (classroom behaviors, inappropriate use of time) are most strongly related.

Table 2: Correlations Among Faculty Ethical Behavior Dimensions					
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1	.90	.40**	.12*	.12*	.54**
Factor 2		.86	.60**	.49**	.31**
Factor 3			.79	.53**	.21**
Factor 4				.87	.19**
Factor 5					.80

OUTCOME VARIABLES

Questionnaires containing outcome measures were administered to students in these introductory management and information systems classes. The outcome measures were administered approximately two months after the administration of the ethical behavior scale. Student ID numbers were used to match respondent questionnaires. A thirteen-item scale measured retention (intent to finish the current degree program at the current university) (9 items, e.g., "I plan to finish my current degree program at this university."), and satisfaction with the current university (4 items, e.g., "I really do not like this college/university"). Principal components analysis of these 13 items revealed three factors. Three retention items ("There is a very good chance that I will transfer to another college/university to finish my degree," "I plan to start looking at other colleges/universities to transfer to," and "I plan to change colleges/universities as soon as possible.") loaded on a single factor. This factor was interpreted as "intent to transfer." Three additional retention items ("I plan to finish my current degree program at this college/university," "I made the right choice when I enrolled in this college/university," "I'm very unhappy with my educational experience at this college/university.") loaded on a second factor. This factor was interpreted as "intent to remain." The four satisfaction items (e.g., "I am very satisfied with my educational experience at this college/university," "I really do not like this college/university.") loaded together along with the remaining three retention items.

Coefficient alpha reliability analysis was performed on the items making up these three factors. Reliability estimate of the intent to remain scale is .87. A coefficient alpha reliability estimate of .91 for the intent to transfer scale was achieved by dropping the "I plan to change colleges/universities as soon as possible" item. Finally, a coefficient alpha reliability coefficient of .81 was achieved by dropping the "I really do not like this college/university" item.

RELATIONSHIPS AMONG PERCEIVED FACULTY ETHICAL BEHAVIOR AND OUTCOME VARIABLES

Variables for the five faculty ethical behavior subscales and the three outcome variables were created by averaging respondents' scores on these items. The three outcome variables were regressed on the five faculty ethical behavior scales. The results indicate that only one of the faculty ethical behavior scales was significantly related to any of the outcome variables. Inappropriate Exchange was significantly and negatively related to satisfaction with the university ($R2 = .06$, $p < .05$; $b = -.20$, $p < .01$).

Two-way and three-way interactions among the outcome variables were tested and found to be non-significant. However, bivariate correlations of -.20 ($p < .01$) and .17 ($p < .05$) was observed between satisfaction and intent to transfer, and satisfaction and intent to remain, respectively. This raises the issue of whether student perceptions of faculty ethical behavior might have an indirect effect on retention through satisfaction with the university. To examine this question. additional regressions were performed. First, Inappropriate Exchange has already displayed a relationship with satisfaction with the university. Next, satisfaction was regression on intent to remain and intent to transfer. Satisfaction with the university was significantly related to intent to transfer ($R2 = .05$, $p < .01$; $b = -.24$, $p < .01$). Thus, while not providing a complete test of direct and indirect relationships, the results are suggestive that student perceptions of faculty ethical behavior may impact satisfaction with the university, which in turn affects students' intent to transfer.

DISCUSSION

Previous versions of measures of faculty ethical behavior have generally been rather lengthy (e.g., 63 items). However, this research provides evidence that several dimensions of student perceived faculty ethical behavior can be measured with a much shorter scale.

The only previous factor analysis of student perceptions of faculty ethical behavior (Branstetter & Handelsman, 2000) also identified 5 dimensions. However, this previous research employed a 50-item measure of specific teaching and teaching-related behaviors in a sample of graduate teaching assistants. There are some similarities between this previous research and the present study. Both studies identified a factor involving lending money to students, asking favors of students, selling goods to students, and accepting gifts from students. Both studies also identified a factor dealing with dating and romantic relationships between professors and students. In addition, both studies identified a factor related to fairness and general competence in teaching (e.g., using alcohol or drugs while teaching, not maintaining scheduled office hours, missing class).

This study has identified five distinct dimensions of student perceptions of faculty ethical behavior, and conducted initial work toward developing a more parsimonious measure of these

dimensions. Further psychometric work on scale development is warranted to further validate this measure. Once the scale is finalized, it can easily be re-written to assess the "ethical climate" of the institution by asking respondents to rate the frequency of each behavior in general among the faculty. However, a reliable and valid measure of this construct should provide the impetus for examining how student perceptions of faculty ethical behavior, or the "ethical climate" of the institution, affect important outcome variables such as student retention, class attendance, perceived stress, and even student performance.

This study also provides some preliminary evidence that student perceptions of faculty ethical behavior may be related directly and/or indirectly to some important outcome variables, including satisfaction with the university, intent to remain, and intent to transfer. While faculty ethical behavior in the present study was significantly related to only satisfaction with the university, satisfaction with the university and intent to transfer were significantly and inversely related. It may be that perceptions with faculty behavior are directly related to satisfaction with the university and indirectly related to intent to remain and intent to transfer through satisfaction.

One limitation of the study is that the same sample was used for scale validation and testing relationships with outcome variables. However, tempering this limitation is that predictor and outcome variables were measured at different times, thus minimizing to some extent common method variance problems.

REFERENCES

Anderson, M. (1992). *Imposters in the temple.* New York: Simon & Schuster.

Appleby, D.C. (1990). Faculty and student perceptions of irritating behavior in the college classroom. *The Journal of Staff, Program & Organization Development. 8*, 41-46.

Ball, R. (2001). Practical difficulties with ethics. *Public Management, 83*(3), 2-5.

Branstetter, S.A. & M.M Handelsman. (2000). Graduate teaching assistants: Ethical training, beliefs, and practices. *Ethics & Behavior, 10*(1), 27-53.

Callahan, D. (1982). Should there be an academic code of ethics? *Journal of Higher Education, 53,* 335-344.

Gardner, D.G., L..L. Cummings, R.B. Dunham & J.L. Pierce. (1998). Single-Item versus multiple-item measurement scales: An empirical comparison. *Educational & Psychological Measurement, 58*(6), 898-915.

Garrett, T.M. & R.J. Klonoski. (1992). *Business Ethics*, 3rd Edition, Englewood Cliffs, NJ: Prentice-Hall.

Keith-Spiegel, P., G. Tabachnick & M. Allen. (1993). Ethics in academia: Students' views of professors' actions. *Ethics & Behavior, 3,* 149-162.

Kitchener, K.S. (1985). Ethical principles and ethical decisions in student affairs. In H.J. Canon & R.D. Brown (Eds.) *New directions for student services: Applied ethics in student services*. San Francisco, CA: Josey-Bass, 17-29.

Leo, J. (2002). Professors who see no evil. *U. S. News & World Report, 133*(3), 14.

Lipschutz, S.S. (1993). Enhancing success in doctoral education: From policy to practice. *New Directions for Institutional Research, 80*: 69-80.

Little, D. (1989). Are academicians by their very nature ethical, or should they be? Paper presented at the Annual Convention of the Virginia Community Colleges Association, Roanoke, VA.

Markie, P.J. (1994). *A professor's duties: Ethical issues for college teaching.* Lanhan, MD: Rowman & Littlefield.

Morgan, B.L. & A.J. Korschgen. (2001). The ethics of faculty behavior: Students' and professors' views. *College Student Journal, 35*(3), 418-432.

Murray, B. (2000). Professors' most grating behaviors. *Monitor on Psychology,* January, 56-67.

Nagy, M.S. (2002). Using a single-item approach to measure facet job satisfaction. *Journal of Occupational & Organizational Psychology, 75*(1), 77-87.

Nunnally, J. C. (1978). *Psychometric theory.* New York: McGraw-Hill.

Parker, C.E. (1997). Making retention work. *Black Issues in Higher Education, 13*(26), 120-128.

Podsakoff, P.M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management, 12*, 531-544.

Scarpello, V. & Campbell, J. P. (1983). Job satisfaction: Are all the parts there? *Personnel Psychology, 36*, 577-600.

Smith, R. (1996). Essential ethical considerations in education. *Education, 117*(1), 17-21.

Strike, K.A. & J.F. Soltis. (1992). *The ethics of college teaching.* New York: Teachers College Press.

Svinicki, M. (1994). Ethics in college teaching. In W.G. McKeachie (Ed.), *Teaching tips: Strategies, research, and theory for college and university teachers.* 9th Edition, Lexington, MA: D.C. Heath, 269-277.

Sykes, C. (1989). *ProfScam: Professors and the demise of higher education.* Washington, DC: Regnery Gateway, Inc.

Tabachnick, B.G., P.C. Keith-Spiegel & K.S. Pope. (1991). Ethics of teaching: Beliefs and behaviors of psychologies as educators. *American Psychologist, 46*, 506-515.

Wanous, J. P., Reichers, A. E. & Hudy, M. J. (1997). Overall job satisfaction: How good are single-item measures? *Journal of Applied Psychology, 82*, 247-252.

Whicker, M. & Kronenfeld, J. (1994). *Dealing with ethical dilemmas on campus.* Thousand Oaks, CA: Sage.

Zabihollah, R., R.C. Elmore & J.Z Szendi. (2001). Ethical behavior in higher educational institutions: The role of the code of conduct. *Journal of Business Ethics, 30*(2), 171-183.

QUALITY IN HIGHER EDUCATION: THE STUDENT'S ROLE

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ABSTRACT

One continuing area of interest in higher education is the continuing improvements in the quality of education. As a result, some universities have made an effort to implement total quality management (TQM) from industry with varying degrees of success. Two questions frequently arising in these efforts are the degree of emphases on the internal and external processes and the role of the student, often acknowledged as "the customer". The purposes of this paper are as follows: (a) illuminate the notable differences which exist between the applications of TQM in industrial and service firms and its relevance to understanding the role(s) of the student in relationship to the processes/systems of higher education; (b) establish an analytical framework for better understanding and appreciation of the system of higher education and to create a more relevant definition of the student's position in the process of higher education; and to (c) identify the real customers of the educational system so quality efforts can be directed toward optimization of the system.

INTRODUCTION

In the 1980s the concepts of prominent quality management advocates such as Dr. W. Edwards Deming, Dr. Joseph Juran, Armand V. Feigenbaum, and Philip Crosby were scrutinized and applied to change industrial systems and the focus of management. Manufacturing applied total quality management (TQM) concepts to its operations, the quality of U. S. goods improved, and American business began reversing the erosion in its domestic market share. In 1987, the U. S. government encouraged and recognized the TQM movement by establishing the Malcolm Baldrige National Quality Award (MBNQA) (The Malcolm Baldrige, September 25, 2001).

Acknowledging that TQM concepts led to vast improvements in service quality and competitiveness, some universities, with the financial assistance and support of major corporations, attempted to directly translate TQM principles from manufacturing and service applications to those of higher education. Institutions attempting to use the TQM principles included the Georgia

Institute of Technology, University of Wisconsin, Boston College, Babson College, Samford University, and the University of Massachusetts. Although the applications were the same, to differentiate education TQM from the TQM of industry, applications in education were renamed as total quality education (TQE) and continuous quality improvement (CQI). In 2001, the University of Wisconsin-Stout won the Malcolm Baldrige National Quality Award in the Education Category (Baldrige Award Recipients, August 15, 2003), making this university the first Baldrige Award recipient in higher education.

The TQM or facets of TQM continue to be broadly embraced and applied in higher education. However, in the opinion of the authors, too many of these present applications of TQM are faddish, representing bureaucratic biases rather than the established principles and concepts of the prominent TQM creators. They fail to appropriately focus on the process system. There has been an unquestioning and slavish allegiance to the original principle of customer-driven quality, and, simultaneously, a more liberal approach to the importance of the identification of critical processes to quality. Specifically, the misapplication of the customer focus that has resulted in the misidentification of the student as the "customer" has been a consistently identified obstacle in implementing total quality across numerous institutions. The authors challenge the views that students are primarily products of the educational process and that students are the primary customers, whose satisfaction is foremost in the development of a quality product. The purposes of this article are to: (a) illuminate the notable differences which exist between the applications of TQM in industrial and service firms and its relevance to understanding the role(s) of the student in relationship to the processes/systems of higher education; (b) establish an analytical framework for better understanding and appreciation of the system of higher education and to create a more relevant definition of the student's position in the process of higher education; and to (c) identify the real customers of the educational system so quality efforts can be directed toward optimization of the system.

STUDENTS' UNIQUE POSITION IN THE VALUE-ADDED PROCESS

Academicians sometimes tend to hold their profession above comparison to other human endeavors. The mistake in doing so is to miss the elemental understanding and insights that come from application of alternative perspectives that expose and allow them to question those ingrained and subliminal assumptions, biases, and stigmas from our analysis and understanding. In applying the value-added perspective to academe, it is important to incorporate the unique perspective of our academic endeavors: that students are simultaneously persons in, and a product of, a value-added process. This two-fold factor is precisely what makes the educational continuum unique in the application of TQM concepts.

In educational efforts towards improving quality in colleges and universities, students have been identified as input or raw materials to be transformed by the educational process into products.

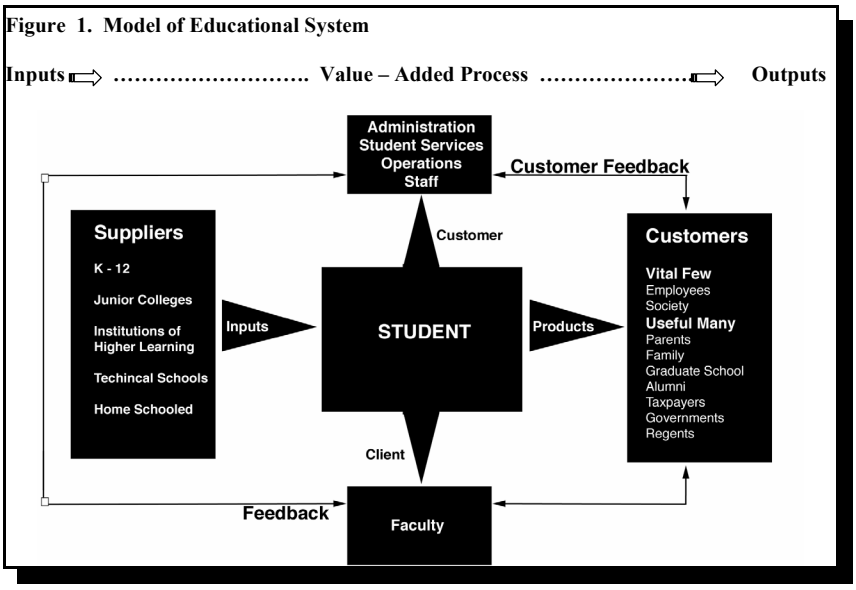
TQM terminology from manufacturing and service industries has been readily adopted. In doing so, students have been metaphorically identified as (1) input or raw materials to be transformed into a useful product by the educational processes of the institution, (2) customers whose needs or desires are to be met and who are to be delighted by the process, and (3) clients who seek a professional service. Each of these perspectives has had varying degrees of acceptance in academia, and each has certain strengths, limitations, and assumptions which accompany them.

Successful application of TQM to the educational process requires an analysis and understanding of the complex interrelationships that occur in the total system and evolve over a longer timeframe than is normally experienced in manufacturing or services. Evans and Lindsay (2002) stated that "When interactions occur among the parts of a system, managers cannot manage the system well by simply managing the parts; they must understand the horizontal, cross-functional processes and optimize the system." Gunn (1993) concluded that administrators have not realized that education is a system and that the output will remain unchanged until the system is changed. Some (Barnard, 1999) believe that a major obstacle to adapting the quality approach to higher education institutions (HEIs) is the perception of the instructor-student relationship. In examining each case, the basic input, process, and output model shown in Figure 1 will be used and expanded.

STUDENT AS A PRODUCT

Although generally overlooked, the continuum of academic instruction leading to a diploma in higher education is analogous to a manufacturing or value-added process. While it may not be popular in educational discussions to compare the academic processes (system) to that of manufacturing, it is both accurate and appropriate within the concepts of TQM.

Figure 1. Model of Educational System



The educational system receives a person to be educated (the input), and, through a continuum of interdisciplinary requirements, value is added to that input resulting in a person who is educated in the basics of a discipline or liberal arts (the product). The objective of the educational process is to imbue in the product or person the elemental knowledge and ability to initiate performance in a chosen profession, enabled and empowered by the process to participate in his or her own lifelong development through a continued, self-guided learning process. An important factor is that every process must add value to the raw material. If it does not, then it only adds cost to the final product.

In TQM, if a supplier sends inferior raw materials, materials that do not meet established standards, then the material must either be discarded or re-worked, both of which add cost and no value to the final product. In universities, reworking raw materials requires that under-prepared students (i.e., students who do not meet accepted standards of the HEI), take remedial courses and/or participate in some other intervention which will bring the student (input) up to acceptable standards. This rework may take the form of increasing a student's knowledge and skills in certain areas such as statistics, or it may take the form of assisting the student in acquiring acceptable learning skills and strategies such as self-regulated learning and self-management. If a student is not reworked, then the student is discarded; attrition occurs either through voluntary withdrawal or academic failure. Seymour (1993) provides examples of both approaches by one university. In this university, the attrition rate in the freshman class was 20%, with more attrition occurring later in the students' course of study. This, in effect, was rejecting under-prepared students. To remedy the problem of attrition among minority students, a program was developed which was described as an "academic preseason." Results were impressive. In the first year, average first quarter GPA for participants increased from 2.2 to 2.6. In the second year, following some process redesign, the average participant GPA was 3.3 (Seymour, 1993).

CONSEQUENCES OF THE STUDENT AS A PRODUCT

Labeling the student as input to be converted into a final product places the student as a passive input which has been converted into a useful end product. It assumes that the process of learning is something that is done to the student, without his or her participation. The student has no input into the process that changes them. Therefore, the metaphor of student as input or product is not accurate because it assumes that the student is not a participant in the learning process, but rather passively sits in classes while he or she is "filled" or "packaged" with knowledge, as a box is packaged in a manufacturing environment. Seeing the student as an input to which value will be enhanced by the educational system composed of multiple processes and seeing the student as an end-product is appealing, but it is an incomplete view. The role of the student in the educational process includes much more.

STUDENT AS CUSTOMER

A major component of TQM is customer focus. Originally, businesses decided what was quality and what was acceptable quality. Today, the battle cry of quality is that quality is what the customer says it is. The organizational goal is to provide a product or service that meets or exceeds customer requirements, to delight the customer. Focusing on the customer forces an organization to be specific about those it serves, and consequently, what its needs are (Marchese, 1993). With rare exception, HEIs quickly embraced some aspects of quality frameworks from advocates as Deming and Juran. One which higher education accepted very quickly with little dissent is that the student is THE institution's customer. While some advocated that a student is A customer, some of our colleagues indicated either explicitly or implicitly through their efforts and rhetoric, that students are THE customer.

Prior to discussing the student as customer, it is worthwhile to examine what a customer is. According to Bailey (2000), a customer is one who purchases a product or service and has the expectation that his or her preferences will be met regarding that product or service. Scrabec (2000) stated that the student is like a customer in that he or she pays for a service, and but that the similarity ends there. Customer identification was achieved by framing the question of "who are customers?" in terms of customer-supplier relationships (Evans & Lindsay, 1996). Juran (1974) discussed the distinction between internal and external customers. The point is that the customer should be identified for each transaction. (Johnson & Golomskiis, 1999). If that concept is accepted, instead of "Is the student a customer?", the question to be asked is "When is the student a customer?"

WHEN IS THE STUDENT A CUSTOMER?

Interactions with the president or provost, deans or department heads, or with managers in all forms of student services are service situations where it is possibly appropriate to define students as customers. Services such as those performed by admissions, financial aid, public safety, food services, campus stores, career counseling, disability services, etc., can be easily measured by benchmarking against the "best in class," and TQM methods can be applied to these services. The student can also be considered as a customer, as defined by original quality efforts, in administrative and student support services such as housing, parking, admission, food services, and library facilities. In those areas, the student is a customer in the conventional sense and meets Bailey's definition of customer as one "who buys goods or services and expects his expressed preferences to be met with regard to the product or service being purchased"(Bailey, 2000, p 354). In the above cases the student (i.e., customer) pays for the service and is primarily a passive participant in the development of the product or service. He or she specify his or her preferences, satisfaction or dissatisfaction, but is not involved in the process of changing the product or service.

While much of the evidence supporting TQM in HEIs has been anecdotal and sparse, some measure of success using TQM techniques in HEIs has been associated with the above-mentioned areas and in the area of administrative tasks (Koch & Fisher, 1998). One continuing area of resistance to TQM in HEIs has been the "student as customer" approach. As soon as TQM was introduced into higher education, it became a problem. According to Ewell (1993), "at few points in "TQ conversations does discussion become so heated as around the word "customer"'.

Marchese (1993) discussed six (6) important ideas for applying TQM in education, and the first was customer focus. In his article, he differentiated between internal and external customers, where internal customers are students as learners, employees of the college, and "people down the hall who receive my work." His emphasis was that you do not do everything the customer wants. Marchese defined external customers as funders, donors, employers, and graduate schools.

There are some assumptions that are made when the student is treated as customer in the learning situation. One, a satisfied student is a higher quality product than an unsatisfied student. Research findings regarding job satisfaction and performance are inconsistent, at best. Thus, few studies have examined the hypothesis that job satisfaction causes higher job performance, and the findings of those few are inconclusive. More studies have examined the effect of job performance on job satisfaction. (Judge, Thoresen, Bono, & Patton, 2001). Further, there is little evidence that there is a causal relationship between student satisfaction and academic performance. Therefore, the premise that satisfied students are "better" students, for the most part, has little merit. A second assumption is that students have the knowledge to know what they want and what help them to accomplish their career goals. This may be the case to a certain degree for adult learners who already have experience in business, but it would be difficult to justify for many inexperienced undergraduates.

CONSEQUENCES OF STUDENT AS CUSTOMER

Viewing the student as customer has been contested for a variety of reasons. Meeting student desires becomes the motivating force behind educational programs, and resource allocation is sometimes directly related to the number of customers who register and attend particular classes. Some studies have suggested that those students' not accepting responsibility for their learning are not very successful (Armstrong, 1983). Classes become popularity contests; this is particularly true when student ratings of faculty are used as measures of quality of learning. In addition, because flexibility and customization are emphasized to meet customer desires, self-designed majors, re-scheduling exams and making exceptions to the rule, are all done to keep the customer happy (Franz, 1998). Another consequence is entitlement, where the student believes that he or she deserves a certain grade because they paid for it. Grade inflation and concomitant post-educational performance deflation are by-products. (Scrabec, 2000).

In TQM, the importance of delighting the customer is emphasized. While the objective of business is customer satisfaction, meeting the customers' needs, and delighting the customer (Evans & Lindsay, 1996), it is not higher education's job to delight the customer (Franz, 1998) even though some have supported that approach. According to Seymour (1995), the student as customer-as-a-driver for quality in education is one "that has low fit and high impact on a college campus." Based on the reported obstacles to implementation of quality in high education, the resistance of faculty to student as customer occurs frequently.

WHY STUDENTS ARE ERRONEOUSLY CLASSIFIED AS CUSTOMERS

There are some explanations why the erroneous classification of students as customers may have occurred. Administrators, correctly viewing students as customers of institutionally provided administrative services, may assume that the same classification applies to the student in all phases and aspects of the educational process. In addition, adoption of TQM concepts by higher education has possibly lacked the focus, intensity, resource documentation, and the required preparation necessary to perceive the academic process as a system. Deming makes it clear that only a statistician should teach Statistical Process Control to TQM practitioners (Deming, 1993). This principle would also indicate that the best teacher of TQM concepts is a well-trained, experienced TQM practitioner-a factor often missing when institutions of higher learning attempt to implement TQM practices without the assistance of bona fide TQM consultants.

WHEN IS THE STUDENT THE CUSTOMER?

Rather than unquestioningly accepting the student as a customer, an appropriate question to ask might be "When is the student the customer?". Most of the documented success in TQM applications in HEIs has involved the administrative and student service aspects of university life, not the application of TQM in the classroom or in the application of learning (Owlia & Aspinwall, 1996). Such areas as administration and student services, library services, food service, counseling, application and admissions, financial aid, mail service, maintenance, and billing have improved through the use of TQM.

TQM's first application in higher education, at Fox Valley Technical College, resulted in improvements and increased satisfaction in such areas as placement of graduates, employer satisfaction with contracted training programs, and acceptance of college credits at receiving institutions (Narasimhan, 1997). Students who successfully complete a sophomore level business course become the input for the professor teaching a junior level business courses. In such cases, a student is the customer for certain services which are similar to those in industry, which can be

easily measured and benchmarked. In addition to being a purchaser in industry, a customer defines requirements for the quality of the product or service. Unfortunately, allowing the student to set specifications for his or her education would degrade the educational service being sold (Scrabec, 2000). TQM, or any quality effort, should not allow students to dictate teaching methods, but to solicit suggestions for improving class processes. (Gilbert, Keck, & Simpson, 1993)

STUDENTS AS A CLIENT

If students can be viewed as products of the academic process and are not simply customers in that process, what cogent relationship exists between them and faculty? As academicians, we see ourselves as providing knowledge and guidance by employing our professionalism gained over years of scholarship, research, and attainments in our own educational and life-long learning processes. In recent years, as long as students were being taught in the classroom, faculty have tended to perceive themselves in this limited role of statically imparting knowledge to the students as our customers. Now, the advent of distance-learning outside the classroom setting using computers and the Internet has brought (or should bring) an amazing revelation and refocus to higher education. Higher education is becoming what it has always surreptitiously been through the ages: the internal metamorphism by the learners themselves, brought about by their own agency through a number of educational resources, including interaction with faculty, content of the educational process, and the institutional environment.

Since the synergism of intellect, emotions, coping skills, spirit, and values can occur only within the individual student, it is becoming more apparent that students are in a sense the producers of their own education and are ultimately responsible for their own development and outcomes. Further, as students act and react within the educational process, their interaction causes changes within the very processes with which they interrelate. In response to their interaction, faculty must become facilitators, coaches, mentors, and advisors within the process, as well as disseminators of knowledge. Faculty members thus provide professional guidance. Adding value to students as clients enables faculty to synthesize their own personal and intellectual development. This facilitative relationship can more aptly be described in the TQM context as that of professional-to-client than as service provider-to-customer.

There are significant differences between customer and client. Differences include the duration and frequency of interaction and the degree of active participation in the processes leading to quality, the degree that the customer and client are changed by the interaction, the degree of impact of the interaction, and the duration of the change on the person and others. For the client-professional relationship, the process is interactive and on-going, and both the client and professional are changed by the interaction. Consequences of the exchange are frequently far-reaching and long-term, with immediate and intermediate results. The duration and frequency

of interaction is generally greater for a client with a professional than is the interaction between customer and salesperson. The customer exchange is typically short-term and sporadic with short-term results where the customer and salesperson are unchanged as a result.

The primary characteristic of a client-professional relationship is that the client influences the method of interaction and the outcome because of the client's active involvement in the process throughout. The professional has some specialized knowledge that does not typically exist in the customer metaphor. In such cases, the client plays an active role in creating the transformation by adding value; it is not given to the client as the student-as-product approach infers. Additionally, the client should not be able to have undue influence on the professional because the client does not like the results.

While the client-professional comparison is not a perfect fit, we believe that it is a more appropriate fit than "student-as-a-product" and "student-as-a- customer". It is felt that the student actively participates and is changed by the process in which he or she is involved. Furthermore, the focus is on the quality of the outcome and the critical processes, not on pleasing the customer. In addition, the client-professional comparison does not support the invalid assumption that a satisfied student will result in a higher quality product. The intended result will instead be a higher quality, informed, skilled person who can contribute to society. It should also result in a person who has self-managing and self-regulating skills.

At an International Association for Management Education for AACSB (1999), business leaders encouraged colleges and universities to collaborate with business leaders in their community in order to make the college curricula more relevant. The Baldrige educational award winner, the University of Wisconsin-Stout, surveys its business partners regularly to provide advice on content and requirements of degree programs. Other customers include the "useful many" such as parents, family, graduate school, alumni, taxpayers, governments, and regents. This is particularly relevant, in light of the fact that 75% of educational revenues that American colleges receive are from donors and taxpayers (Winston, 2001).

CONCLUSION

The educational process is unlike processes of manufacturing and service industries. Many of the outcomes of the educational system are intangible, unlike manufactured products, and they are also unlike services provided in that the interaction is prolonged and influences the change agent and the person being changed. Both the student as a product and the student as a customer are perceptions that create a more passive learning role than should actually occur. Instead of treating the student as a customer, we believe that comparing the student to a client of a professional service most accurately reflects the full embodiment of the student's role in the learning process.

Our paper acknowledges that the success of such programs as TQM, CQI, and TQE in the educational setting has been limited. We believe that the limited success of such programs is due to (a) the incorrect focus and misidentification of students as THE customer, (b) the incorrect assumption that a satisfied student will result in a more skilled, knowledgeable student, and (c) the value-added principle that each process should add value to the product or service, and (d) the failure to see the organization and quality efforts as part of a total system.

REFERENCES

AACSB. The International Association of Management Education. (1999). Continuous improvement symposium continues to draw a crowd. *Newsline, 30*(1), 10-13.

Armstrong, J. S. (1983). Learner responsibility in management education, or ventures into forbidden research. *Interfaces, 13*, 26-38.

Bailey, J. (2000). Students as clients in a professional/client relationship. *Journal of Management Education, 24*(3), 353-365.

Baldrige Award Recipients 1988-2002 (August 15, 2003). Retrieved September 4, 2003 from http://Baldrige.nist.gov.Contacts_Profiles.htm

Barnard, J. (1999). Using total quality principles in business courses: The effect on student evaluations. *Business Communication Quarterly, 62*(2), 61-73.

Blackbourn, J., Payne, J. & Hamson, N. (1997). When the student is the customer. *The Record in Educational Leadership. 17*(1), 37-39.

Brigham, S. (1993). Lessons we can learn from industry. *Change, 25*(3), 29-36.

Deming, W. E. (1993). *The New Economies for Industry, Government, Education.* Cambridge, MA: MIT Center for Advanced Engineering Study.

Entin, D. H. (1993). Case Study Number One Boston: Less than meets the eye. *Change, 25*(3), 19-21. retrieved from www. aahe.org/archives/TQM.pdf

Evans, J. & Lindsay, W. (1996). *The Management and Control of Quality*. (3rd edition). New York: West Publishing Co.

Evans, J. & Lindsay, W. (2002). *The Management and Control of Quality*. (5rd edition). Cincinnati: West Publishing Co.

Feigenbaum, A. (1991). *Total Quality Control*, New York: McGraw-Hill, 5.

Ewell, P. (1993). Total quality and academic practice: The idea we've been waiting for? *Change, 25*(3), 37-43.

Franz, R. (1998). Whatever you do, don't treat your students as customers. *Journal of Management Education, 22*, 63-69.

Gilbert, J., Keck, K. & Simpson, R. (1993). Improving the process of education: Total Quality Management for the college classroom. *Innovative Higher Education, 18*(1), 65-85.

Greene, R. (1993) *Global Quality.* Milwaukee: ASQC Quality Press, Milwaukee, Wisconsin,

Gunn, B. (1993). Replacing political systems with management systems. *National Forum of Educational Administration and Supervision, 10*(1), 55-69.

Harvey, C. (1998). Putting self-management into the classroom: One person's journey. *Journal of Management Education, 22*, 63-69.

Ishikawa, K..(1985). *What is Total Quality Control? The Japanese Way.*, Englewood Cliffs: Prentice Hall

Judge, T.A., Thoresen, C. J., Bono, J.E. & Patton, G.K. (2001). The job satisfaction-job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127*(3), 376-407.

Juran, J. (1974). *Quality Control Handbook.* New York: McGraw-Hill

Juran, J. (1988). *Juran on Planning for Quality*, New York: The Free Press, 24.

Juran, J. (1989). *Juran on Leadership for Quality - An Executive Handbook.* New York: The Free Press.

Kanji, G. & Bin A Tambi, Abdul Malek (1999). Total quality management in UK higher education institutions. *Total Quality Management, 10*(1), 129-153.

Koch, J & Fisher, J. (1998). Higher education and total quality management. *Total Quality Management, 9*(8), 659-668.

Marchese, T. (1993). TQM: A time for ideas. *Change, 25* (3), 4-7. Retrieved from www.aahe.org/archives/TQM.pdf

Nagy, J., Cotter, M., Erdman, P., Koch, B., Ramer, S., Roberts, N. & Wiley, J. Case Study Number Three Madison: How TQM helped change an admissions process. *Change, 25*(3), 26-28.

Narasimhan, K. (1997). Organizational climate at the University of Braunton in 1996. *Total Quality Management, 8*, 233-247.

Owlia, M. & Aspinwall, E. (1996). Quality in higher education: A survey. *Total Quality Management, 6*, 161-171.

Scrabec, Q. (2000). A quality education is not customer driven. *Journal of Education for Business, 3*, 298-300

Seymour, D. (1993). Quality on campus. *Change, 25* (3), 8-18. Retrieved from www.aahe.org/archives/TQM.pdf

The Malcolm Baldrige National Quality Improvement Act of 1987-Public Law 100-1007 (September 25, 2001.). Retrieved September 4, 2003 from http://Baldrige.nist.gov/Improvement_Act.htm

Webster's New Collegiate Dictionary. (1991). Springfield, MA: G.&C. Merriam Co., 206.

Winston, G. (2001). Is Princeton acting like a church or a car dealer? Point of View, *The Chronicle of Higher Education*, February 23, 2001.

USING THE DELPHI METHOD IN STUDENT EVALUATIONS OF FACULTY

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ABSTRACT

In recent years, the practice of students evaluating faculty has increased substantially. At many universities student evaluations are the most important factor (or the only factor) used in evaluating faculty teaching. Many faculty members question the practice of placing such weight on student evaluations arguing that they are not reliable. This article presents the results of a study that examined the effects of using the Delphi method for student evaluations of faculty. One of the primary advantages of the Delphi method is that opinions tend to converge on successive rounds of "input-feedback." Students in four sections of undergraduate College of Business courses used the Delphi method to evaluate their instructors. The results are encouraging. Of the students reporting that the use of the Delphi method made a difference, almost 82% reported that this method improved the faculty evaluation process while only 18% reported that this method made it worse. Faculty members also reported positive results. Evidence confirming student convergence was also found and is described.

INTRODUCTION

In recent years, the practice of student evaluation of faculty has increased at an exponential rate (Hepworth & Oviatt, 1985). Seldin (1993) studied 600 liberal arts colleges in 1973, 1983, and 1993 and found that the number of colleges using student evaluations increased from 28 percent to 68 percent to 86 percent in 1993. Muse (1979) surveyed 100 programs and reported that 84 percent used some teaching evaluation instrument and 67 percent made use of the instrument compulsory. Specifically, Calderon et al. (1994) found that over 80% of business schools "always use" student ratings as a component of faculty evaluation. A 1998 survey reported that 99.3% of business schools used some form of student evaluations as input for evaluating teaching (Comm & Mathaisel, 1998). On some university campuses, student evaluations of faculty " …are now the most important, and sometimes the sole, measure of an instructor's teaching ability" (Wilson, 1998, p. A12).

Because many faculty members question the accuracy of student evaluations, different forms of evaluation have been tried with the hope of finding ones that will be accurate, reliable, and trusted

by the faculty. A review of the literature on student evaluations of faculty can be found in a set of five articles published in the November 1997 issue of American Psychologist. Greenwald (1997) examined validity issues with student evaluations; d'Apollonia and Abrami (1997) conducted a meta-analysis of the multisection validity studies of student evaluations; Greenwald and Gillmore (1997) studied the relationship between student evaluations and expected course grades; Marsh and Roche (1997) reviewed research on student evaluations focusing on the multidimensionality of teaching and evaluations and examined evaluations validity, perceived bias, and usefulness; McKeachie (1997) discussed student evaluations in general and the other four articles in particular. Faculty members are concerned about the use of student evaluations for several reasons. Research has shown that professors believe factors unrelated to teaching effectiveness can bias student responses. The factors include course difficulty, grading leniency, instructor popularity, class size, etc. (Marsh & Overall, 1981). Whitworth et al (2002) examined over 12,000 student evaluations to determine the effect of faculty gender, course type, and course level on students' evaluations of faculty members. They found that "…students perceived that female faculty members were better teachers than their male counterparts." (2002, p. 288) They also reported that evaluations varied by course type and course level. Graduate student ratings were significantly higher than undergraduate student ratings (2002, p. 288). They concluded, " …course evaluations of faculty members should not be compared across disciplines and levels of courses. Instead, student evaluations should be examined within only like courses or within only one course level (graduate or undergraduate)." (2002, p. 288)

Faculty members are also concerned with the reliability of student evaluations. Reliability is defined as "…consistency or interrater agreement (i.e., within a given class do the students tend to give similar ratings on a given item)." (Cashin, 1995, p.2) Marsh (1987) found average students evaluations to be reliable and stable among students within a specific class. Obenchain et al (2001) examined the reliability of student evaluations of faculty and reported mixed results (2001, p. 105). Marks (2000) reported that student evaluations lack discriminant validity. He stated that student evaluations "…are no more than perceptions and impressions." (2000, p. 117) Low levels of reliability lead faculty members to view student evaluations as somewhat random, and therefore not a meaningful measure of teaching effectiveness. Low levels of reliability are an indication of a lack of consensus among the students in a particular class.

Much of the research on student evaluations of faculty has dealt with the use of the evaluations by administrators or by the faculty themselves. Ahmadi et al (2001) examined student evaluations from the perspective of students. They reported that students view themselves as objective and serious when completing the evaluation forms. They also reported that students believe evaluations should be used in promotion and merit pay decisions. Students also reported that they did not have a gender bias and they were not biased by expected grades or the difficulty of the course.

PURPOSE AND ANALYSIS

This article presents the results of a pilot study that examined the effects of using the Delphi method on student evaluations of faculty. The primary purpose was to determine if this procedure shows promise of lowering the variability of student assessments and therefore improving the evaluation process. When evaluating the teaching performance of two faculty members, an administrator may ask if there a significant difference between two professors if one has a mean score of 3.7 on a particular scale and the other professor has a mean score of 3.2? This is unknown in most cases. However, we know from basic statistics that reducing the variability in the data improves the ability to discriminate between the two. A technique that reduces the variability of student assessments should improve the student evaluation process. Administrators may tend to prefer it because it allows evaluations based on student ratings to be more accurate, meaningful, and understandable. Professors prefer it because many tend to trust a consistent evaluation more than one that has considerable built in variability. The principle is the same as scoring in certain Olympic events where the highest and lowest scores are discarded before the total scores are tabulated.

The research also sought to determine the strengths and weaknesses of the Delphi method and whether it might be appropriate to use in student-faculty evaluation systems. No process can be effective without the support of faculty and students. Therefore, another purpose of the research was to obtain student and faculty assessments of the Delphi technique as a possible aid in the evaluation process.

THE DELPHI TECHNIQUE

The Delphi method is a technique commonly used to build consensus. The Delphi method encourages opinions to converge and therefore a consensus is obtained. Loaf Helper, an engineer with the Rand Corporation, is credited with the development of the Delphi technique in the late 1950s and early 1960s for use in defense research (Lachmann, 1972). Advantages that are often cited include the use of group judgment (Rohrbaugh, 1979), convergence of group opinion (Lyons, 1982), acceptance of group decisions (Erffmeyer & Lane, 1984), better evaluations of multidimensional situations (Gibson & Miller, 1990), feedback of information on both positive and negative data (Cooper & McCoy, 1974), the elimination of specious data, and the incorporation of the opinions of those who should know (Ang et al., 1979). However, the most commonly cited benefit of the procedure is that it encourages opinions to converge and therefore a consensus is obtained.

The Delphi technique involves questioning a group of people, usually experts, on a particular problem. Each person submits an anonymous response (Wedley, 1977). The administrator of the project tabulates these responses. The summary data are returned to the group. The group members are asked to consider the data from the proceeding round and then respond a second time. This

procedure is repeated three or four times and the most recent results are assumed to be the best responses.

The Delphi technique has been used for many years, for many issues, and in many ways, including higher education (Pollard, 1995; Miller & Olsen, 1998), long-range planning (Tersine & Riggs, 1976), and in the evaluation of laboratory managers (Zinn, Zalokowski & Hunter, 2001) and facilities managers (Hicks & McNay, 1999; Green & Price, 2000). As discussed by Armstrong (1977), Gerstenfeld found that over 10% of the firms in his sample of Fortune's 500 had used the Delphi technique. Armstrong also reported that McHale's survey of organizations, institutional units, and individuals engaged in futures research that found that the Delphi technique was one of the most popular techniques used. More recently, the Delphi method has been adopted for use in nursing (Rudy, 1996), the selection of procurement systems (Chan et al, 2001), family therapy (Jenkins & Smith, 1994; Blow & Sprenkle, 2001), the selection of educational projects (Buss, 2001), and substance abuse (Holland, 1998).

It is generally assumed that the Delphi results are more valid when the group is comprised of "experts." An important question is "Do students have enough expertise to make the procedure work?" Murray and Hamilton (1995) state that "Expertise implies that the individual panelists have more knowledge about the subject matter than most people …" A very compelling argument can be made that students have more knowledge about the subject matter than do other people. This viewpoint in reinforced by those who argue that student evaluations are presently the major source, (directly or indirectly) of teaching evaluations. Thus, they are the experts. Our task is to find the best way to utilize their expertise.

THE PRESENT SYSTEM OF FACULTY EVALUATION

A short description of the present system of evaluation should help in understanding and evaluation this project. For many years, the university has used a "traditional" method of student-faculty evaluations, which are administered, in almost every section of every course in the College. Some exceptions are made for new, unusual, or experimental courses, however the total of these is less than 10%. Students complete a form that contains 23 statements concerning the instructor and course. Students respond on a 5-point scale with response categories ranging from "strongly agree" to "strongly disagree." Data such as GPA, gender, major, and student classification are obtained for analysis.

Summary data for each course were returned to each professor after the term had ended. This included the number of responses in each category as well as the class mean, median, and quartile data. Each faculty member received similar data for the department and the college.

Department chairpersons use the data in preparing the faculty member's mandatory annual teaching evaluation. All questions can be, and sometimes are, used in the teaching portion of the evaluation. However, in many cases, a professor's rating is determined by one statement concerning

the "overall effectiveness" of the instructor. A difficulty of the present system is that students must make decisions without information from their colleagues, or more importantly, why their colleagues had these opinions. Since the present system is a "one shot " process, opinions cannot converge.

PROCEDURES USED IN THIS STUDY

The Delphi procedure was used in four sections of courses taught in the College of Business Administration. The experiment was conducted during the final four weeks of the class term. Four different faculty members taught the courses selected. The class size ranged from 37 to 44, which is normal for the College. The four courses examined included one lower level accounting course and three upper level management courses. The faculty members were two Professors, one Associate Professor, and one Instructor. The four faculty members' historical teaching effectiveness, as measured by student evaluations and the annual required evaluations by the department chairs, was at or above the norm for the College. In general, they are viewed as above average classroom teachers.

Three iterations in the procedure were used. The authors administered all three questionnaires for the three iterations. The faculty member teaching the course was not present. Each iteration required approximately 15 minutes of classroom time with no iteration requiring more than 20 minutes. The first iteration required the most time because of the necessity of explaining the procedure to the students; the other iterations required less time. The procedure began with students in the sections completing a questionnaire asking them for their overall rating of their instructor and an overall rating of the course. A nine- point Likert scale was used. Since there were four sections and two evaluations per section, there were eight frequency distributions. An example of the first questionnaire (Questionnaire I) is shown in Figure 1.

The results from the first questionnaire were described by calculating a mean, median, range, upper quartile, and lower quartile. The students were sophomores, juniors and seniors who had successfully completed a basic statistics course. Therefore, they were knowledgeable of the statistical terms used. This data were returned to the students in Questionnaire II along with the same two questions. Questionnaire II consisted of two pages: one for the evaluation of the instructor and the second for the evaluation of the class. For easy viewing by the student, the lower quartile, mean, and upper quartile were marked on the Likert scale. Questionnaire II is shown in Figure 2.

Figure 1

QUESTIONNAIRE I

Confidential Identification Number: _____ (Please write this number down for future use.)

Directions. Please assess this course and your instructor's performance on the following two items by circling one response for each.

Overall rating of course

Excellent				Good				Poor
9	8	7	6	5	4	3	2	1

Overall rating of instructor

Excellent				Good				Poor
9	8	7	6	5	4	3	2	1

Each individual was asked to review his or her initial position after consideration of the new data. Those who wished to respond above the previously determined third quartile or below the first quartile were asked to give reasons to explain the strength of their responses. The results from the second round were calculated in the same manner as the first round.

The data were again returned to the student respondents with a third questionnaire (Questionnaire III). Questionnaire III, like Questionnaire II, consisted of two pages: one for the instructor and one for the course. This questionnaire also listed the reasons why individuals chose to take positions that placed them either above or below the respective quartile values for each question. Questionnaire III is shown in Figure 3.

Figure 2

This Figure shows the collection instrument for evaluations on the course. An almost exact questionnaire was used for evaluating the instructor.

QUESTIONNAIRE II

Confidential Identification Number:_____

The prior evaluations of this course were as follows:

1. Overall rating of course Mean = 6.55 On the scale below, this is shown as an @.

The 25th Quartile = 3 (25% of the students rated the course at or lower than this number). On the scale below, this is shown as an *.

The 75th Quartile = 8 (25% of the students rated the course at or higher than this number). On the scale below, this is shown as a #.

Range = 2 - 9

Directions: After carefully considering the data from the preceding round of evaluations, please assess this course by circling the most appropriate response.

Overall rating of course

Excellent	#		@		Good		*	Poor
9	8	7	6	5	4	3	2	1

Directions for Written Comments

If your evaluation is below the 25th percentile or above the 75th percentile, please write one or two sentences briefly explaining the reason(s) for your evaluation.

Note: The numeric evaluations shown in the Figures are for illustrative purpose.

Figure 3

This Figure shows the collection instrument for evaluations on the course. An almost exact questionnaire was used for evaluating the instructor.

QUESTIONNAIRE III

Confidential Identification Number:_____

The prior evaluations of this course were as follows:

1. Overall rating of course: Mean = 6.25 On the scale below, this is shown as an @.

The 25th Quartile = 4 (25% of the students rated the course at or lower than this number). On the scale below, this is shown as an *.

The 75th Quartile = 7 (25% of the students rated the course at or higher than this number) On the scale below, this is shown as a #.

Range = 3-9

Some of the reasons students gave for their evaluations were:

Novel way of giving quizzes	Too much to cover in time frame
Valuable tools are introduced	Computer problems are often vague
I just like the course - I do not know why	Not relevant to real business problems
Great slide projections	Need more of present state of technology

Directions: After carefully considering the data from the preceding round of evaluations, please assess this course by circling the most appropriate response below.

Overall rating of the course:

Excellent # @ Good * Poor

9 8 7 6 5 4 3 2 1

Directions for an Assessment of the Delphi Method

Please give your best evaluation of the Delphi Method by answering the question below.

In comparison with the "standard" faculty evaluation forms, the quality of this procedure is (check one)

a. Better _____ b. About the same _____ c. Worse _____

Note: The numeric evaluations shown in the Figures are for illustrative purpose

FACULTY AND STUDENT ASSESSMENT OF THE DELPHI TECHNIQUE

As previously noted, no system will work efficiently unless it has support from both faculty and students. In order to obtain student assessments of the Delphi method, Questionnaire III contained a question that asked for a comparison of the Delphi technique to the more traditional method of evaluation previously described. Faculty assessments were obtained by discussion with the four professors that participated in the project. Results of the faculty and students assessments are discussed below in the "Questions and Answers" section of this manuscript.

QUESTIONS AND ANSWERS

For clarity of output, the data were used to answer a series of questions related to the use of the Delphi Technique in the student-faculty evaluation process. The questions and answers are given below.

1. Did the Delphi technique act "as advertised" in causing the assessment distributions to converge from the first, to the second, and to the third iteration?

Yes. This is probably the most important question investigated by the research. If convergence is not obtained, then the Delphi technique has little more to offer than traditional methods of evaluation. A number of statistics can be used to measure or estimate how much a distribution has "converged" or how well "consensus" has been obtained. This analysis used three: the range, the interquartile range (the distance between the first and third quartiles), and the variance. The summary of data for analysis is presented in Table 1. There are four classes being evaluated with the students evaluating the instructor and the course. The primary concern was the evaluation of the course. The convergence of these evaluations between the first and third iteration is shown in Table 1.

The data are very encouraging. As shown in Table 1, the range of the instructor evaluations decreased for all four sections. This is expected from the Delphi method, since it should move some of the extreme evaluations toward the middle of the distribution. The interquartile range also decreased for all four sections. The results with the interquartile range values are even more impressive because they had only a small distance to converge. Only one distribution had an interquartile value as high as four. The remaining ranges were three or less. The variance decreased for three of the four sections.

Table 1: Measurements of dispersion for the overall rating of instructor for four instructors									
Showing a Decrease, No Change, or Increase from the First to the Third Round									
Professor	Range			Interquartile Range			Variance		
	Decrease	Same	Increase	Decrease	Same	Increase	Decrease	Same	Increase
A	X			X			X		
B	X			X			X		
C	X			X					X
D	X			X			X		
TOTAL	4	0	0	4	0	0	3	0	1

2. *Do students believe that the "Delphi technique" for evaluating faculty is a superior procedure to the more traditional methods now being used?*

Yes. Questionnaire III, the last one administered, contained the following question: In comparison with the "standard" faculty evaluation forms, the quality of this procedure is (check one)

a. Better _____ b. About the same _____ c. Worse _____

The results were very encouraging. On average 57% of the students rated the Delphi technique as different in quality from the "standard" evaluation process. Of these 82% evaluated the quality of the Delphi technique as "Better" than the "standard" process. There was some variation by instructor. The "Better" percentage ranged from 67% to 100% for the four faculty members. These data indicate that students felt the introduction of the Delphi method was worthwhile. An informal discussion with the students disclosed that the preference was the result of the additional information and the additional time given to form their opinions. In the traditional student evaluation process, students are given five to fifteen minutes to complete the evaluation instrument. In the Delphi technique, they are given three settings of five to fifteen minutes. They are also given information regarding the views of their peers. Yes, there may be some "Hawthorne effect," however the results are encouraging.

3. *From a faculty viewpoint, does the Delphi technique make a positive contribution to the evaluation process?*

Yes. The four faculty members that participated in this study thought the process was useful and that it collected information that was not available in traditional evaluation procedures. Major positive items included better feedback and the encouragement of students to "think through" the evaluations before assigning a final rating. They believed that the final evaluations were more reliable since the students put more time and effort in the process. It is also helpful that students had their colleague's perceptions before making the last assessment. As expected, professors were initially concerned about the amount of classroom time the project might take. However, this concern diminished as the project was actually administered.

4. *Does the Delphi technique show that a student's evaluation for the course, and his or her evaluation of the instructor, are independent assessments? Or, are the two events highly correlated so that a high score (or low score) on the professor assessment implies a high score (or low score) on the other course assessment?*

Maybe. A simple correlation coefficient was computed between the course evaluation and the instructor evaluation. The coefficients were computed for each of the three iterations resulting in a total of twelve coefficients. All the coefficients were significant at the .01 level of significance and ranged from 40% to 90%. The expectation of the researchers was that the coefficients would be higher. This would allow researchers to work with only the course data or only the instructor data. These data show that this should not be done until more information about the correlations between the two variables is obtained.

SUMMARY AND THOUGHTS FOR FUTURE RESEARCH

This research is a pilot study to analyze the effects of introducing the Delphi method into the student-faculty evaluation process. The dominant and prevailing question was to determine if the Delphi technique showed enough promise in evaluating college faculty to warrant a larger study. The conclusion offered by this pilot is yes, such an investigation could be useful. In fact, the potential payoff is large enough to warrant the assignment of significant resources to the project. Listed below are several items that should be specifically monitored in a larger study.

1. Increase the sample size in terms of the number of courses tested and the average enrollment in each course. A minimum of ten classes should be used. The class sizes should be large enough to insure that at least 25 students, in each class, will be in all sessions.
2. Since this process should be done in a regular scheduled class, a method to reduce or eliminate "student absences" must be used. It can be argued that it is not necessary for each person to attend each session. However, students that are at all three sessions should be able

to do a better evaluation than a student who was absent when one or more of the questionnaires were administered.

3. Use a system of data collection that will allow the researcher, with a high degree of certainty, to match the respondents for all three iterations of the process. It is not necessary to know who submitted a particular evaluation. However, it is very important to know which of the responses in each round the same person completed.
4. The project should be large enough and significant enough to insure students know the importance of their contributions. As noted earlier, it is often stated that the Delphi technique works best when the evaluators are "experts" in the field. If student ratings are accepted as an important component of faculty evaluation, then they are the experts. If so, then it is important that students know this and that they approach the evaluation in a careful, thoughtful and professional manner.
5. At least initially, the Delphi technique should supplement rather than replace the traditional valuation system. Because of the effort involved, it should not be administered more than once per year. Results should be compared with data obtained from other means. This would be consistent with other evaluation procedures, for example, promotion and tenure and post-tenure review.
6. The largest and most important "boost" for the Delphi procedure should could from the increased use of technology. With the number of electronic classrooms increasing, a procedure for using them in connection with a Delphi evaluation is quite possible. This could greatly reduce the time requirement, provide for much quicker turn around times, eliminate or reduce any absentee problem, and better maintain the students' interest.

REFERENCES

Ahmadi, M., et al (2001). Business students' perceptions of faculty evaluations. *The International Journal of Educational Management, 15*(1), 12-22.

Ang, J., Chua, J. & Sellers, R. (1979). Generating cash flow estimates: An actual study of using the Delphi technique. *Financial Management, 8*(1), 64.

Armstrong, J. S. (1977). *Long Range Forecasting: From Crystal Ball to Computer*. New York: Wiley.

Blow, A. J. & Sprenkle, D.H. (2001) Common factors across theories of marriage and family therapy: A modified Delphi study. *Journal of Marital and Family Therapy*, 385-401.

Buss, A. R. (2001) A Delphi study of educational telecollaborative projects: Identifying critical elements and obstacles. *Journal of Educational Computing Research,* 235-248.

Calderon, J., Green & Reider. (1994). Extent of use of multiple information sources in assessing accounting faculty teaching performance, Proceedings of the Ohio Regional Meetings of the American Accounting Association.

Cashin, W.E. (1995). Student ratings of teaching: The research revisited. IDEA Paper No. 32. Manhattan, Kansas: Kansas State University, Center for Faculty Evaluation and Development.

Chan, A.P.C. et al (2001). Application of Delphi method in selection of procurement systems for construction projects. *Construction Management and Economics, 19*(7), 699-718.

Comm, C. & Mathaisel, D. (1998). Evaluating teaching effectiveness in America's business schools: Implications for service marketers. *Journal of Professional Services Marketing, 16*(2), 163-170.

Cooper, B. S. et al. (1974). Multi-discipline design teams and the delphi technique for transportation planning. *Land Economics,* 419.

D'Apollonia, S. & Abrami, P.C. (1997). Navigating student ratings of instruction. *American Psychologist, 52*(11), 1198-1208.

Erffmeyer, R. C. & Lane, I. M. (1984). Quality and acceptance of an evaluative task: The effects of four group decision-making formats. *Group & Organizational Studies, 9*(4), 509-540.

Gibson, L. J. & Miller, M. M. (1990). A Delphi method for planning 'preemptive' regional economic actions. *Economic Development Review*, 34-42.

Green, A. & Price, I. (2000) Whither FM? A Delphi study of the profession and the industry. *Facilities, 18*(7/8), 281-292.

Greenwald, A. G. (1997). Validity concerns and usefulness of student ratings of instruction. *American Psychologist, 52*(11), 1182-1186.

Greenwald, A. G. & Gillmore, G. M. (1997). Grading leniency is a removable contaminant of student ratings. *American Psychologist, 52*(11), 1209-1217.

Hepworth, J. & Ovfiatt, A. (1985). Using student course evaluations: Findings, issues, and recommendations. *Journal of Social Work Education, 21*, 105-112.

Hicks, J. & McNay, P. (1999). The creation of a management-by-variance tool for facilities management performance assessment. *Facilities, 17*(1/2), 31-43.

Holland, M. (1998). Substance use and mental health problems: Meeting the challenge. *British Journal of Nursing*. 896-900.

Jenkins, D. A. & Smith, T. E. (1994). Applying delphi methodology in family therapy research. *Contemporary Family Therapy*. 411-430.

Lachmann, O. (1972). Personnel-administration in 1980, a Delphi study. *Long Range Planning, 5*(2), 21.

Lyons, H. (1982). The Delphi technique for problem solving. *Personnel Management, 14*(1), 42-47.

Marks, R. M. (2000) Determinants of student evaluations of global measures of instructor and course value. *Journal of Marketing Education, 22*(2), 108-119.

Marsh, H.W. (1987). Students' evaluations of university teaching: Research findings, methodological issues, and directions for future research. *International Journal of Educational Research, 11*, 253-387.

Marsh, H.W. & Overall, J.U. (1981). The relative influence of course level, course type, and instructor on students' evaluations of college teaching. *American Educational Research Journal*, 103-112.

Marsh, H.W. & Roche, L. A. (1997). Making students' evaluations of teaching effectiveness effective: The critical issues of validity, bias, and utility. *American Psychologist, 52*(11), 1187-1197.

McKeachie W. J. (1997). Student ratings: The validity of use. *American Psychologist, 52*(11), 1218-1225.

Miller, D. & Olsen, M. (1998). Setting standards for faculty evaluations. *The Cornell Hotel and Restaurant Administration Quarterly, 29*(2), 46-47.

Murry, J. W. & Hammons, J. O. (1995). Delphi: A versatile methodology for conducting qualitative research. *The Review of Higher Education,* Summer, 422 - 434.

Muse, W. (1979). Faculty evaluation. *Improving College and University Teaching*. 44.

Obenchain, K. M. et al (2001). The reliability of students' ratings of faculty teaching effectiveness. *College Teaching*. 100-106.

Pollard, R. (1995). The use of expert teachers to improve education. *Education*. 3.

Rohrbaugh, J. J. (1979). Improving the quality of group judgment: social judgment analysis and the Delphi technique. *Organizational Behavior and Human Decisions Processes, 24*(1), 73.

Rudy, S. F. (1996). A review of delphi surveys conducted to establish research priorities by specialty nursing organisations from 1985 to 1995. *ORLHead and Neck Nursing.* 16-24.

Seldin, P. (1993). The use and abuse of student ratings of professors. *The Chronicle of Higher Education.* A40.

Tersine, R. J. & Riggs, W. E. (1976). The delphi technique - a long range planning tool. *Business Horizons, 19*(2), 51.

Wedley, W. C. (1977). New uses of delphi in strategy formulation. *Long Range Planning, 10*(6), 70.

Whitworth, J.E., et al. (2002). Factors that affect college of business student opinion of teaching and learning. *Journal of Education for Business*. 282-289.

Wilson, R. (1998). New research casts doubt on value of student evaluations of professors. *The Chronicle of Higher Education,.44*(19) A12-A14.

Zinn, J., et al. (2001). Identifying indicators of laboratory management performance: A multiple constituency approach. *Health Care Management Review, 26*(1), 40-53.

ADVICE FOR THE NOT READY FOR VIRTUAL TIME PROFESSORS: LIGHTS, CAMERA, ACTION! TIPS ON CREATING A WORKABLE ONLINE COURSE

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ABSTRACT

Traditional classrooms accompanied by face-to-face interaction among students and faculty members, lectures, text and other readings, experiential learning through actual field trips and case studies are components of traditional course delivery systems. For most faculty, those were the structures used for the faculty member's studies prior to teaching. Increasingly, schools are delivering course materials using the distributed learning technologies. Those technologies include using synchronous learning tools, such as interactive live video feeds, asynchronous learning tools, such as taped lectures, and "quasi-synchronous" tools such as discussion boards (threaded discussions) and virtual classrooms. This paper discusses the different technologies, their relationship to different learning styles and one example of using such technologies to delivery a completely online, internet-based course. It concludes with recommendations to faculty members who may use components or all of the technologies currently available.

Potential Impact: Effective use of different course delivery systems requires familiarity with the strengths and weaknesses of each teaching tool. This paper ties the strengths and weaknesses to learning objectives and goals. This will help faculty link the course delivery system to the goal the faculty member seeks to accomplish.

SHEDDING LIGHT ON THE SUBJECT: WHAT IS THE RELATIONSHIP BETWEEN USING DISTRIBUTED LEARNING TECHNOLOGIES AND DEVELOPING CRITICAL THINKING?

"Technology enables man to gain control over everything except technology." (Esar, 1995) What is online education and what can it add to and how can it improve the learning process? Online education is an educational model for designing and delivering interactive, responsive substantive course information through media that create learning opportunities conveniently accessible to learners at a different time and place and in a different form. Online education focuses on delivering course content and creating a learning environment through providing access to the course material from a different time, place and location. Online education is another means of reaching learners using different media and a further extension of other, different distributed learning technologies.

The simplest form of these technologies is the correspondence course. These courses typically involved complete self-study where students perform the coursework at their leisure, then submit it for analysis and grading. In the correspondence courses, there is usually little or no interaction with other students and limited interaction between the student and the instructor. Distance learning courses are more complicated and can be more interactive than the traditional correspondence course. Distance learning courses have typically relied on delivering lectures through one- or two-way video feed. To complete coursework, students attend lecture, usually with limited discussion, then fulfill course requirements in a way that is similar to traditional course delivery. Online education delivered through computer based technology provides an opportunity to teach using a different teaching methodology and to reach individuals with different learning styles. In order to complete coursework, students spend significant periods of time using their computers to obtain course material and instructions, to communicate with their peers and their instructors and to fulfill required activities that are assessed. Of course, there are many models that mix these different course delivery systems together with the traditional "on ground" model. To discuss how those technologies can be used to encourage critical thinking there follows a brief overview of how people learn.

Critical thinking has been defined differently by different scholars. Critical thinking must be directed or purposeful, not aimless thinking. (Paul 1993, Zahorik (1997) Critical thinking involves developing students problem-solving skills or the ability to "figure things out", i.e. to look at a problem and determine how to solve it using directed thinking. This type of thinking requires the ability to draw conclusions that can be justified and explained. To engage in this problem solving, the instructor must develop and employ measures, models, or principles to determine whether the goal of resolving the problem has been reached.

How do students acquire these skills to solve problems? To answer that question, a brief overview of learning theory is required. There are two major theories on how people learn. These theories can be viewed as being on opposite ends of a continuum with many variations of those theories along the continuum. The two major theories on learning are objectivism and constructivism. Objectivism is based on the proposition that knowledge exists objectively and can be discovered; constructivism is based on the proposition that knowledge exists only as it is incorporated by the learner and does not exist independently.

Objectivism is an educational philosophy that takes the approach that knowledge exists independently of the individual. According to this theory, knowledge is outside the individual and it is the individual's role to acquire that knowledge in the outside reality. It is the learner's responsibility to find knowledge and receive and internalize it. Under this philosophy, the instructor's goal is to teach this knowledge to students. The instructor is the "sage on the stage" and the student's responsibility is to absorb the knowledge presented by the instructor.

Constructivist educational philosophy takes a different approach to analyzing how people learn. As one author stated, "Meaning is not given to us in our encounters, but it is given by us, each

in our own way, according to how our understanding is currently organized." (Iran-Nejad, 1995) Under the constructivist educational philosophy, knowledge does not exist independently of the learner. Instead, people bring their own knowledge, skills, and background to bear when they solve problems. New experiences add to and may cause learners to confirm, revise or discard previous knowledge. In order to successfully problem solve, then, one must deconstruct what has been learned (i.e. break it down into its various components) and then reconstruct it to incorporate the new knowledge. Under this educational philosophy, there are multiple realities and reality is a matter of interpretation. Students learn through actively creating knowledge through experimentation, exploration, manipulation and testing. This constructivist educational philosophy proposes that learning is learner-centered and contextual. The instructor's role under this theory is that of the "guide on the side."

Both theories on how people learn undoubtedly have validity. To use an analogy related to the subject taught by this author, just as the law is neither solely based on its social context, nor solely based on pure logic and objective reason, learning appears to occur in a number of different ways. To understand the law, learners must acquire a certain amount of basic knowledge. Students must become familiar enough with the terminology and processes of the law so that they can use higher order thinking skills to analyze, apply and evaluate the law. It would be impossible, for example, for students to intelligently discuss the property rights under the law if the students do not know how the law defines "property" and what rights are involved in property ownership. Thus, there is an objective "reality" in the definition of basic terms and processes. After students have mastered that reality and are comfortable in the use of a common language, they can begin to examine the social context of the law, for example, the influences, policies and political factors that affect the law. Students can then begin to use higher order thinking skills to evaluate, apply and challenge what they have learned.

Critical thinking requires that students learn to gather information and check whether it is clear, accurate and relevant. The role of the instructor in this collaborative activity is to help direct the thinking. This might be through guidelines on where to find material; how to approach the material; and/or guidelines on what the solution should look like. Collaborative activities can help encourage critical thinking by encouraging students to "own" the learning process. (Gokhale, 1995) Requiring students to express concepts in their own words and explain them to others can enhance that critical thinking. "Each step in the process of thinking critically is tied to a self-reflexive step of self-assessment. As a critical thinker, I do not simply state the problem; I state it and assess it for its clarity. I do not simply gather information; I gather it and check it for its relevance and significance. I do not simply form an interpretation; I check my interpretation to see what it is based on and whether that basis is adequate." (Paul, 1990)

To obtain maximum advantage from any teaching methodology, it helps to create an effective learning community. . Depending on the topic, the instructor's preference, knowledge and skills required for the profession and the student's preparation, instructors can create a learning

environment for the students. Success in this learning environment comes from the interaction of students working together to learn. Faculty can first lecture or require other exercises on foundational material. Students can then be required to use the foundational material to engage in critical evaluation. Although teaching basic terminology and philosophies may not be efficiently taught through group exercises, helping students learn and use higher order critical thinking skills can be effectively accomplished through collaborative activity. Faculty can create such a community through use of collaboration tools online.

To encourage higher order thinking skills, however, instructors may have to find out what assumptions students have made, identify those and then encourage students to incorporate new information to reformulate new knowledge about a subject. Establishing an environment within which students can practice self-evaluation and evaluating others, for example, through directed, purposeful group or collaborative activity is a way to do encourage development of analytical skills. This leads to the need to develop a learning community within which students can acquire the critical thinking skills.

Many instructors use small group discussions, either intuitively or consciously, to encourage further examination and exploration of issues and to evaluate and synthesize information. Learners in these groups frequently find value in testing ideas through discussing those ideas with their peers. The group process, which includes interaction and feedback among members of a group, can help students with this learning process. There are many pedagogical benefits of collaborative or group activity, including increased socialization (peer to peer interaction, peer to instructor interaction), peer assistance, helping learning through problem solving and interaction, encouraging individual students to explain their conclusions to others (and thereby increasing student-to content interaction and student to student interaction.). (McKeachie, 2001). Although critical thinking can be developed through the small group discussion process, in order for it to be effective, instructors must develop clear objectives and monitor the students' progress to determine whether the objectives have been achieved. To effectively use the discussion groups to develop skills, instructors to model those skills so that students can see how those skills are applied to problem solving. In addition, faculty must develop a method to encourage student preparation so that the small group discussion is effective. In other words, in order for group collaboration to be effective, the instructor must design it to encourage group ownership of the results and to encourage students to develop the group outcome. This can be very effectively done in the online environment.

SHINING MORE LIGHT: ADVANTAGES OF DISTRIBUTED LEARNING TECHNOLOGIES

Instructors can use distributed learning technologies to create collaborative learning environment where students can engage in critical thinking. There are other advantages to using distributed learning technologies, including increased accessibility between faculty and students,

increased faculty-student and peer-to-peer interaction, increased availability of course materials, ready access to information that is available on the Internet, and providing a dynamic course calendar in which changes can be immediately provided to students.

Using an on-line course management system can enhance student opportunities to interact with each other and the instructor. E-mail, discussion rooms, chat rooms are methods that allow additional interactions between instructors and students. Many students are familiar with chat rooms. Discussion boards and chat rooms permit students to review material and answer questions at their leisure, at their own time and are considered by students to be less intimidating that face-to-face or in-classroom interaction. Discussion boards permit students that are shy or that have limited English skills the opportunity to compose their replies prior to posting them to the group. This gives added confidence to students. Students also benefit from cross-communication about course requirements in a less-intimidating atmosphere.

Faculty can be more accessible through the use of e-mail and "virtual" office hours. Faculty can post when the faculty member will respond to e-mail, so faculty are not obligated to respond around the clock and students know when to expect responses. A faculty member may also hold "virtual" office hours and be available at times that may more closely match the students' schedules. Yet the faculty member does not have sit in office to be available.

Posting course materials and other course information on the Web provides students convenient and flexible access to the course materials. Changing demographics of the student population make this an attractive reason to use a course management tool. For example, students who could not attend class can find the relevant handout on the Web. Students can obtain lecture notes or overheads earlier and thus focus attention on the in-class portion of the class and minimizing note-taking. Students can also have the instructor's assistance in organizing the materials because the instructor can post lecture notes or outlines on the web.

Posting on the web can also permit instructors to tie relevant course materials to other supporting materials and resources on the Internet. This material can also be linked to the main textbook(s) in the course. Many textbook publishers have added an online component to the course materials available. These may include interactive self-study exercises on the course materials or updates of existing material. Multimedia applications can be presented to also link the materials together to encourage students to view concepts from a number of different perspectives. Presenting material in several different media may help those who have different learning styles. If material is presented in a visual, text and auditory format, then different learning styles can be accommodated. Further, this can assist students to see the information from a multi-dimensional perspective.

A well developed online course can help to develop student learning through promoting additional dialogue and may in other ways enrich and strengthen student learning opportunities. A common perception is that web-based courses are easier. All the evidence is not in, but there are studies that demonstrate that the on-line courses are as rigorous as or more rigorous than traditional

courses. The amount of rigor depends on the pedagogical rigor of the instructor in designing and implementing the technology for the course.

Prompt and systemic feedback can also be provided through on-line courses. Online quizzes, surveys and other materials can be developed to allow students to assess their own learning. Faculty can review and comment periodically to provide significant immediate feedback. Faculty can post answer to case problems and quizzes without immediately evaluating results and students can review in the privacy of their own homes and at their own time.

Using an online course management tool can help students and faculty organize course materials. Using an on-line calendar can help students keep track of course requirements. All course materials can be coordinated on the calendar and the calendar can be updated as the semester progresses.

LIGHT IS BEGINNING TO SHINE BUT IT CAN'T BE "ALL GAIN AND NO PAIN"!

One key disadvantages of using online courses is a familiar one for anyone who has adopted new technology. That issue is: will it work when it is needed. There are significant issues related to technology usage: accessibility, compatibility, and hardware and transmission limitations. Accessibility is an issue for instructors and students. Accessibility has many components, including the availability of equipment and software in offices, labs, classrooms and homes, training and follow-up and assistance to learn and effectively use new software and technology. Compatibility is an issue -- some software programs cannot communicate with each other. Thus instructors must be careful to present materials in more than one format. If software and equipment is not available in labs, offices, classrooms and homes then the material is ineffective for faculty and for students. For example, faculty may develop a course but cannot readily use it in out-dated classrooms. Or the faculty member may be able to use the materials in one classroom but not another. Inadequate or insufficient training and follow-up are other issues. One training course may not be sufficient to permit efficient use of software and students and faculty may face significant and steep learning curves.

Another disadvantage relates to the substantial time required to prepare a course for partial or total online delivery. Even partially online courses require hours of initial work to organize the course and the course materials to presented, the format, any multimedia and its conversion to web usage, obtaining appropriate permissions and other issues. Instructors in a traditional classroom format rely upon the textbook, lectures, and written materials to present information. If the instructor uses an online course format, the instructor must take care in how the textual materials are presented because there are no visual clues to allow students to determine the complete meaning of a communication. In addition, if the course is totally online, the instructor may choose to convert lecture notes into a typed document. Directions for assignments must be very clearly explained. If the material is subject to a copyright or has not been prepared directly by the faculty member, the

faculty member may spend a significant amount of time obtaining permission or finding an acceptable substitute for the material.

THE CAMERA IS ON: HOW DOES AN INSTRUCTOR BEGIN THE PROCESS OF USING DISTRIBUTED LEARNING TECHNOLOGIES?

Rethinking the course and its components is a critical first step to effectively teach a Web-enhanced or totally online course. Teaching online differs from face-to-face interaction and the instructor must consider those differences in developing the course. One expert suggested that there were three types of interaction in on-line courses: learner to content, learner to teacher and learner to learn. (Ko, 2001). Each component must be considered to successfully present a web-enhanced or totally online course. In addition, the technology must help accomplish the learning process-not the other way around. The technology must enhances the learning experience. If online classes are developed based on sound pedagogy, online teaching will permit faculty and students from a broader range of communities to participate in higher education. It will also permit a combination of Web-based and live interaction courses to further enhance the educational experience.

The following table outlines some of the objectives for the *HRM 157* course, *Legal Aspects of Human Resources Management*, and how the objectives were to be accomplished:

Table 1: Developing objectives for Online Courses-One example

Objective	How to Accomplish
Define legal terms relating to labor-management relations	online self study quizzes
Define legal terms relating to labor-management relations	Asking questions during virtual classroom sessions
Analyze situations to identify legal and ethical issues	Discussion board assignments that require students to explain legal and ethical theories and how students applied them
Analyze situations to identify legal and ethical issues	Individual written memos that discuss developing a management strategy to address the issues

Structuring this course involves encouraging students to study on their own and encouraging them to substantively participate in a way that demonstrates that they have read the assigned material, evaluated it and applied it to resolve issues. Online quizzes were designed to encourage

self-study. Reading assignments were designed to encourage application of the legal and ethical principals to resolve issues.

Just as building a learning community in the classroom can assist with developing critical thinking skills, building a learning community in cyberspace can also help students develop those skills. However, building a learning community using distributed learning technologies requires different skills than those used to build a community in the traditional classroom. As with all learning communities, success in the learning environment comes from the interaction of students working together to learn. Many of the distributed learning technologies can help faculty create an enfironment within which students can learn, question, challenge, analyze and synthesize information.

How are learning communities in cyberspace different? Gone are the verbal clues, body language, ethnic background, facial expressions, gestures and general appearance that individuals use to communicate. In cyberspace, individuals must learn a new language and use new tools of communication. Individuals must become acquainted through written comments (and perhaps pictures or graphics). Developing a learning community in a cyberspace classroom thus requires determining what creates a community and developing new tools for building that community. There are at least two steps that faculty must help students do in order to create an effective online learning community. One is to help encourage students create their online identities and the other is to encourage discussion and socialization for the members of the learning community.

First, faculty must make a conscious effort to encourage students to develop their "electronic" identities as they begin constructing the electronic learning community. This electronic identity requires that students consider and formulate responses to questions and issues, the ability to formulate a mental picture of those with whom the student is having the discussion, and the ability to be able to describe learning, emotional and social issues through written words (and perhaps graphics, to some extent). In a traditional classroom, the student's identity is created in class through the methods noted earlier; verbal clues, dress-style, ethnicity, and other visual and auditory clues. In the online community, faculty must encourage students to create their identities through exercises and questions that permit students to establish their identities through responses to the questions. The community must be a nurturing one that allows students to express themselves and at the same time maintain a sense of privacy for those things that the students do not want to disclose. The instructor must create opportunities for that community to develop; the instructor cannot wait for that community to develop naturally.

Next, in order to create this learning community, faculty must make a conscious deliberate effort to encourage development of a group of individuals who have a common purpose and shared goals. Faculty must again develop exercises and other methods of encouraging students to analyze the information that they receive. Part of this process involves encouraging individual preparation by the student, informing students of the criteria for evaluation and permitting students to practice using the criteria so that effective analysis occurs.

This instructor's online learning community was developed through the use of an electronic bulletin board. The electronic bulletin board can be found in many different forms, including threaded discussions (asynchronous) or virtual classrooms (synchronous) discussions more commonly called chat rooms. Because the "conversations" in threaded discussions and virtual classrooms are recorded, faculty can review and enhance the learning process through careful review and contribution as appropriate. All student participation was evaluated based on quantity and quality of comments.

In sum, in order to effectively structure online courses, the faculty member must develop specific assignments that accomplish the course objectives and must create an effective online learning environment. The following factors should be incorporated: (1) Introductory activities that allow students to begin establish their identities, (2) Identifying the objective(s) of each activity, (3) Determining how the activity will be assessed, (4) Finding and listing the resources that must be used (a combination of internet and non-internet resources is appropriate), (5) Developing the individual and/or group components of the exercise or activity, and (6) Comparing the exercise as developed with the objectives and assessments. It helps to develop the scoring rubric/criteria prior to using the exercise.

THE CAMERA IS ON BUT NOTHING ELSE WORKS: I'M EXPERIENCING TECHNICAL DIFFICULTIES . . .

Technical difficulties! How does one address the problems of equipment failing during a crucial moment? Expect that if anything can go wrong, it will, at the worst possible moment. Accept that while explaining a difficult point during a virtual classroom session, the server might crash. Accept that a web-site link will be broken (or will have changed, e.g. to a porn site for one of the author's links). The key is to be flexible and maintain a sense of humor. Also, plans B & C are appropriate to minimize the negative effect of technical difficulties. Be sure to develop a close relationship with the campus computer technician. Also, sometimes students are familiar with certain software and/or hardware. Take advantage of that knowledge.

ACTION: HOW DOES THIS WORK FOR A TOTALLY ONLINE COURSE-AN EXAMPLE

HRM 157, Legal Aspects of Human Resources Management, is a required course for all business majors who have selected human resources management as their option in the business program at California State University, Fresno. It is an elective for all business majors who have selected legal environment as their option. Most of the students are juniors and seniors. The author taught this course two semesters in two different formats: as a traditional course with web-based enhancements and as a totally online course. This discussion focuses on the totally online course,

how it was structured and the student's reaction to the course. In spring, 2003, this course was presented as a totally online course. There were no class meetings--the only in-person meeting with the students was the final exam.

COURSE STRUCTURE

The course was constructed to accomplish a number of pedagogical objectives: (1) encouraging self-study and preparation; (2) requiring application of legal principles to develop management strategies for resolving human relations issues; (3) fostering mastery of key legal and ethical concepts demonstrated by case analysis individually and in groups; (4) encouraging group collaboration to resolve legal and ethical issues; and (5) increasing written communication skills

To accomplish each objective, the course was structured to require that students use discussion forums and the virtual classrooms to answer questions posed in PowerPoint slides, the agendas for the virtual classroom sessions, and specific discussion forum assignments. To require application of legal principles and development of management strategies, students were required to read sample situations that human resources professionals might face, prepare a legal analysis of the issue(s) and to develop a management strategy to resolve the issue and to prevent the issue from occurring in the future. To develop mastery of key legal and ethical concepts, students were assigned outside readings to read, evaluate and apply ethical and legal principles through group discussion. Students were also tested in exams on their mastery of the concepts. Virtual classrooms were scheduled bi-weekly; an agenda detailing the questions and additional readings was provided before the session and all students attending were expected to have read and prepared answers the questions.

All exercises required writing. Sometimes there were serious issues because of a lack of clarity. If writing quality was an issue, the instructor privately communicated with the student (through e-mail) to make recommendations. Other students also made comments if the posted information was unclear. Exams were conducted online and were a combination of objective and essay questions. The final exam was the first meeting between most of the students and the faculty. The final exam was designed to require that students complete work in the instructor's presence with a "C" grade to verify that the student had completed the work for the course.

For faculty, the major concerns include organizing the course prior to the beginning of the semester and the increased workload to monitor and review the students' work. In order for the course to be successful, faculty must log on regularly to check e-mail, check students' performance in discussion forums and on on-line quizzes or homework, post reminders of work due and participate in virtual classroom sessions. In this online course, this author spent many more hours of individual student contact than when teaching this course in a traditional classroom.

STUDENT REACTION TO THE COURSE

How did student rank the importance of various components of the course? Students ranked the syllabus, textbook and the agenda for the virtual classroom sessions as equally important. Students ranked the other assignments, including the company memoranda, the PowerPoint outlines, the supplemental readings and the research assignment (covering a California agricultural statute) as less important.

The vast majority of the students (70%) concluded that the course was well organized and well presented. All students agreed that the course objectives were clearly stated and that they were covered in the course. This may reflect the fact that in addition to stating the objectives in the syllabus, each assignment and agenda for the virtual classroom session was prefaced with a statement of the objectives--taken directly from the syllabus. This required preparation of all nearly every item prior to the beginning of the semester to ensure consistency.

Much communication between this author and the students in the class occurred through posted announcements and e-mail. Each course delivery system is different, but in Blackboard, the campus-selected course delivery system, students see announcements first, when they log onto the course. E-mail was the other regular method used to communicate with individual students. In a survey conducted at the end of the course, half the students ranked the announcements as the most important means of communication in the course, interestingly enough, students ranked e-mail as the least important. This may reflect the instructor's choice to answer e-mail that related to course requirements through posting an announcement or comment in the discussion forum. The students ranked the virtual classroom as important as the announcements. Sixty-five percent of the students concluded that it was easy to contact the instructor in this course. Overall, seventy-five percent of the students agreed that they received adequate information about the course.

In the course of teaching this online course, this instructor was still able to communicate enthusiasm in the subject matter and this instructor's interest in good performance by the students. One of the survey questions was whether the instructor showed a genuine interest in encouraging high quality student work. Ninety-five percent of the students agreed or strongly agreed with that statement. Students also agreed that the environment permitted inquiry and discussion. Ninety-five percent of the students agreed that the instructor's questions elicited discussion and input from the students. All students agreed that the instructor encouraged students to ask questions. How did the instructor communicate that enthusiasm? Through selective responses to discussion forum posts, through e-mail that complimented students on particularly perceptive responses, through positive compliments during virtual classroom sessions and through announcements that complimented groups (by name) for their work.

How did students rank the substantive portion of the course? Students stated that the following items had the greatest impact on their learning: textbook (90%), the PowerPoint outlines (80%), virtual classroom (70%), and written assignments to write a memo that discussed

management strategies to resolve legal issues (80%). Sixty percent of the students stated that the class and group discussion forums increased their understanding of the material.

Students were asked open-ended questions about what they liked most and least about the course. There was no agreement on any one item that students liked least about the course. Many students (20%) disliked the discussion forums (although 60% felt that they learned through the forums). Approximately 8% of the students disliked that the course was online, and had complaints about the virtual classroom session (one that the sessions were too long, one that the virtual classroom sessions were disorganized (the issue raised by that student was resolved by the third session) and one student who felt that the sessions included too much "chit chat". One student's major gripe with the course was that some of the students were not prepared for the virtual classroom sessions. Some students would have preferred an initial class meeting.

When students were asked what they liked most, a quarter of the students recommended additional virtual classroom session. Twenty percent of the students liked the course organization and structure and the fact that it was an online course. Other comments included enjoying the subject matter, the professor's preparation and prompt responses to their queries and coursework and the supplemental readings. The major suggested improvement was to request more virtual classroom sessions. Twenty percent of the students requested more sessions. As one student stated: "I think the virtual classrooms increased my learning a lot. I think that the instructor should penalize students more when they weren't prepared for the virtual sessions. The questions were given to us ahead of time and people still took ages to answer them."

Students were also asked to make suggestions to convey to future students to improve their learning experience. Half the students made the same suggestions: "BE PREPARED. The laws that we learn are complex and there are so many exceptions. Be prepared for discussions on the virtual classroom so that you can reinforce or clarify what you have already read." Another student stated, ". . keep up with the readings. And make no mistake, this class will present more work than a class you physically have to go to. Don't think easy, when you think online course." Being organized and logging on regularly were suggestions by an additional twenty percent of the students.

Student performance in the online course was equivalent to that in the traditional course. The online class was smaller-21 students completed the course, whereas 28 students completed the traditional course during the fall, 2002 semester. Grade distribution was very similar in the two courses.

ACTION: A TOTALLY ONLINE COURSE? HOW DOES ONE PREPARE?

What preparation is required to use internet tools to teach a course? This online course was a success, at least for most students. The course organization and structure permitted accomplishment of the learning objectives outlined for this course. The key to success is preparation. Start small. Rome wasn't built in a day. Decide what course objectives could be facilitated through

the use of technologies. Develop a relatively short list of goals. Then, determine what tools may be used to accomplish those goals. As the semesters pass, more goals may be added. For example, one goal could be to make course materials more accessible to students. During the semester the instructor would post handouts, lecture notes, or any other relevant materials on-line and encourage students to access that material there.

A second step is to consider the capabilities of the students. In order for these courses to be successful, students must have access to the technology and have the skills to use that technology. Students must thus have sufficient expertise to log onto a computer and navigate within a specific program. Students must have computers that have access to the software necessary to run the program.

Another step is to look at the technologies and determine what's available at the instructor's institution. Determine what the institution's support structure is for using web-enhanced instruction. Is there a resource person available? Is the equipment available and in good working order? Is there assistance to help in instructional design and in the technology and its use? These questions should be answered before developing a web-enhanced course.

CSUF has purchased Blackboard, an on-line course management tool. Blackboard also has a free portal available for individual to create courses. That portal is found at www.Blackboard.com/. Experimenting with a course using that website can help instructors determine the benefits, costs and accessibility of the technology.

Remember that this technology is a tool to help accomplish instructor-established goals. The technology shouldn't control: the instructor chooses how to use the technology to accomplish the instructor's goals.

REFERENCES

Applefield, Huber & Moallem. (2000). Constructivism in theory and practice: Toward a better understanding. *High School Journal, 94*(2), 35.

Bhattacharya, M & Chatterjee, R. (2000). Collaborative innovation as a process for cognitive development, *Journal of Interactive Learning Research*, Fall, 295.

Carey, M. (1993). Teachers roles and technology integration: Moving from teacher as director to teacher as facilitator. *Computers in the Schools, 9*(2-3), 105-118.

Chester, A. & Gwynne, G. (1998). Online teaching: Encouraging collaboration through anonymity. *Journal of Computer Mediated Communication, 4*(2) http://www.ascusc.org/jcmc/vol4/issue2/chester.html.

Chickering, A. W. & Ehrmann, S. C. (1996). Implementing the seven principles: Technology as lever, *American Association for Higher Education Bulletin, 49*(2), 3-6. (http://www.tltgroup.org/programs/seven.html).

Dewey, J. (1938). *Experience and Education.* New York: Collier MacMillan.

Esar, E. (1995). *20,000 Quips and Quotes.* New York: Barnes and Noble Books.

Gokhale, A. (1995) Collaborative learning enhances critical thinking. *Journal of Technology Education, 7*(1) http://scholar.lib.vt.edu/ejournals/JTE/jte-v7n1/gokhale.jte-v7n1.htm.l

Harris, K. (1996) Memo to constructivists: Skills count, too. *Educational Leadership, 53*(5), 26-30.

Iran-Nejad, A. (1995). Constructivism as substitute for memorization in learning: Meaning is created by learner. *Education, 116*(1), 16-33.

Ko, S. & Rossen, S. (2001). *Teaching Online: A Practical Guide.* Boston: Houghton Mifflin.

Laferrière, T. (2000). Time saving strategies and tips for instructors using online discussion forums. retrieved August 16, 2003 from http://www.tact.fse.ulaval.ca/ang/html/timesaver.html.

McKeachie, W. & Hofer, B. (2001). *McKeachie's Teaching Tips: Strategies, Research and Theory for College and University Teachers*. Lexington: D.C. Heath & Co.

Mellow, G. (1997). Visions worth the work. *Community College Week, 9*(16), 4.

Ngeow, K. (1998) Enhancing Student Thinking through Collaborative Learning, ERIC Digest # ED422586. http://www.ed.gov/databases/ERIC_Digests/ed422586.html.

Nussbaum, E. (2002) The process of becoming a participant in small-group critical discussions: A case study: Critical questions help language-minority students to participate more centrally in school discussion groups. *Journal of Adolescent & Adult Literacy, 45*(6), 488-497.

Olsen D. (1999). Constructivist principles of learning and teaching methods. *Education*, Winter, *120*(2), 347-355.

Palloff, R. (2000). *Building Learning Communities*, New Jersey: Jossey-Bass.

Paul, R. (1990). *Critical Thinking: How to Prepare Students for a Rapidly Changing World.* Rohnert Park, CA: Center for Critical Thinking and Moral Critique.

Ridley, D. & Sammour, H. (1996). Viable alternative means of instructional delivery. *College Student Journal. 30*(3), 337-339.

Ridley, D. & Husband, J. (1998). Online education and academic rigor: A research note. *Journal of Instructional Psychology, 25*(3), 184-188.

Royer, R. (1997). Teaching on the Internet: Creating a collaborative project. *Learning and Leading with Technology. 25*(3), 6-11.

Scalia, L. & Sackmary, B. (1996). Groupware in the classroom: Applications and guidelines. *Computers in the Schools, 12*(4), 39-53.

Smith, G., Ferguson, D. & Caris, M. (2001). Teaching College Courses Online vs. Face to Face. *The Online Journal.* http://www.thejournal.com/magazine/vault/A3407.cfm.

Snell, J. & Mekies, S. (1999). Online education and academic rigor: A research note *Journal of Instructional Psychology, 25*(3), 194-195.

Spector, J. & Teja, I. (2001). Competencies for Online Teaching. ERIC Digest # EDO-IR-2001-09. http://www.ericit.org/digests/EDO-IR-2001-09.shtml.

Vrasidas, C. (2000). Constructivism versus objectivism: Implications for interaction, course design and evaluation in distance education. *International Journal of Educational Telecommunications, 6*(4), 339-362.

Vygotsky, L. S. (1998). *Mind in Society*. Cambridge, MA: Harvard University

Zahorik, J. (1997) Encouraging-and-challenging-students understanding. *Educational Leadership, 54*(6), 30-32.

MBA OUTCOMES ASSESSMENT

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ABSTRACT

Outcomes assessment is required of accredited MBA programs. Assessment efforts usually focus on subject matter mastery. A procedure for assessing managerial expertise in MBA students is developed and illustrated. The assessment is based on survey data taken at beginning and end of program and student progress is recorded and compared to faculty objectives for the program.

INTRODUCTION: PROGRAM OUTCOMES

"To prepare students for positions of responsibility and leadership in a variety of organizations." (excerpt from a typical MBA mission statement)

MBA programs exist to educate managers. Objectives of students and programs coincide on this point. Defining statements like the following are readily available.

"It is a professional degree - in that it is intended for those who work in business and management i.e., the intention of a program leading to an MBA is to prepare or further prepare individuals for responsible positions in business - usually managerial positions. (California State University).

"Our program is designed to prepare promising individuals for positions of increasing responsibility and leadership through education in the broad scope of business and through in-depth knowledge in one or more specialized areas of business, (MBA Info).

The prevalence of MBAs in senior management and the continuing recognized benefits of the degree attest to its enduring value. MBA programs do face continuing challenges and must continually evolve in anticipation of (or in response to) changing business and competitive conditions. What is taught and how it is taught is the focus of program evolution.

THE ASSESSMENT REQUIREMENT

Outcomes assessment is a necessary part of an MBA program. National subject matter accrediting agencies for business programs, i.e., Association to Advance Collegiate Schools of Business (AACSB) and Association of Collegiate Business Schools and Programs (ABCSP) require

it as do regional accrediting agencies, e.g., Southern Association of Colleges and Schools (SACS). Not only is assessment required, it is also required that assessment results be the basis for program changes.

MBA faculties are generally responsible for the design and content of programs and program assessment becomes their responsibility as well. As faculties set out to develop formal statements of outcomes for their programs and the means to assess them, subject matter mastery along with management expertise, employability, short- and long-term career success and employer satisfaction are typically identified as principal objectives. All these relate well to typical mission statements. The importance of employability, success and satisfaction is undeniable, but they are influenced by many externalities that stand in the way of their use as an effective guide for program revision and improvement. As a matter of practical reality, the faculty perspective ultimately reduces to subject matter mastery - for which reliable measures are available and which may justifiably be used as the basis for curriculum revision. Here, objective measures of achievement such as the ETS Major Field Tests, (ETS) are available and results are presented in a fashion that facilitates curriculum revision. Faculty also recognize the importance of developing (or developed) management skills and expertise. While difficult to assess, developed expertise in students is important to achieving program objectives. As a practical matter, the development of managerial expertise in students is accomplished informally through faculty sharing their experience and expertise with organizations and their management. Generally, this is accomplished without a formal plan or clear programmatic objectives. Guest speakers or executives in residence often are resources for developing expertise in students.

THE STUDENT PERSPECTIVE

Individual (student) motivations for seeking an MBA generally are a mix of three principal elements:

- The knowledge gained from the curriculum,
- The credential value of the degree, and
- Improved management expertise and skill, notably the (self-) confidence gained from successfully completing the degree program

Knowledge of these motives is based on countless interviews with MBA students and prospective students over more than twenty years as MBA faculty and in MBA program management. These factors square well with the results of broad based surveys of MBAs. For example, the 2002 GMAC Global Survey of MBAs, (GMAC) reports that:

> "… graduates said they are most confident that the MBA is giving them the opportunity to improve themselves personally (48%), followed closely by an increase in their career options (41%), and development of management skills (38%). Thirty-three percent said that they are extremely confident both about getting an increase in earning power and about getting the credentials they desire. Job security is at the bottom of the list. At 11%, less than one-fourth as many graduates said they are extremely confident in getting this from their MBA as said they are extremely confident in the opportunity to improve themselves personally."

From the student's perspective, the value of the degree as a credential for (enlarged) management responsibility is clearly important. This value of the degree has been significant for many years and promises to remain so. There are some dark clouds on the horizon, notably the Pfeffer study (Raskin), that questions the value of the degree based on an examination of forty years of data on MBAs. The article, "The End of Business Schools? Less Success than Meets the Eye," (Pope) suggests radical, discontinuous change in MBA programs is on the near horizon. The continuous improvement tactics mandated by accrediting agencies do not, however, provide a basis for discontinuous change and will not produce results to counter the predicted decline in the (credential) value of the MBA.

MANAGERIAL EXPERTISE

Assessment of developed management skill and expertise, intersecting in goals of both student and faculty, is our focus in the following paragraphs. We attend principally to expertise since skill must be demonstrated and may be improved through practice, something not typically a part of the MBA program.

Expertise can be developed in an educational program and is not entirely dependent on practice and application. There is a significant and highly developed literature on expertise and how it is developed, see for example, (Bell) and (Smith & Tiberius). A particularly noted psychologist observes the following about expertise (Messick):

"…developing expertise … is the differences in modes of information processing between experts or advanced learners and novices or beginning learners. The big surprise is that … many structural aspects of expert information processing are consistent across fields.

"… success in graduate management school is on a continuum with professional management success. Any early indication that a student has skills or behaviors similar to those of a management professional or expert would be considered a favorable sign.
" … (There is an) emerging picture of expertise that has considerable generality from field to field. To begin with experts gather a large store of domain-specific knowledge that is hierarchically or otherwise organized in accord with the underlying structure of the domain. … advanced students or experts in a field not only know more than beginning students or novices but also tend to process information quite differently.
"It also appears that experts, in contrast to novices, not only have a vastly richer store of knowledge accessible in memory but also structure and continually restructure knowledge in more complex ways. In particular experts construct complex schemas or mental models that combine some of the dimensions and simpler schemas used by novices into integrated functional patterns, while at the same time discarding as redundant or irrelevant some other dimensions that novices attend to. Thus experts develop mental models representing new and adroitly usable patterns of perceiving, thinking, and acting that direct, organize, and control both the acquisition of new knowledge and the processing of information in the course of problem solving. In particular, the development of relevant mental models facilitating problem representation has been shown to be a critical aspect of expertise in widely disparate fields.

These comments present a picture of developing expertise as uniquely individual and constantly changing. Any static assessment of developing (or developed) expertise, it would seem, is destined to fail by virtue of the fact that experts "structure and continually restructure knowledge." Different individuals will enter an MBA program with different levels of expertise and, through the program, develop their expertise at different paces and in different directions.

Developing expertise, as noted, is illustrated by changes in students' schemas or mental models of business. These changes, we assert, are reflected in student attitudes of what is important in the business organization. Changes to attitudes and the direction of change can be assessed and used as a method of verifying the pace and direction of developing management expertise. Essentially, developing management expertise will be reflected in changes to student attitudes about what constitutes an effective and productive organization.

ASSESSING EXPERTISE

Successful (effective and productive) organizations and successful (expert) managers are infinitely varied. No single model dominates for organizations or their managers. Organizations, and what makes them successful, have been the object of more than fifty years of study and MBA programs typically include at least one course devoted to the study of organizations.

Significant resources have been devoted to determining the distinguishing characteristics of organizations and the practices of managers within them. For our present purposes, we attend to a

set of organizational characteristics that, in aggregate, define an organization's culture. While, ultimately, it may be true that culture is incapable of complete definition, a set of measures of organizational culture with demonstrated operational validity is useful and valuable. We will employ these measures to reflect an individual's development of management expertise.

Schweiger (2002) has identified a set of fifteen dimensions found to be statistically significant in characterizing an organization's culture. These measures are of demonstrated importance in determining the success of mergers and acquisitions. Each dimension represents a spectrum between two extreme characterizations and the culture of an organization is suggested by a profile indicating where it stands with respect to each of the dimensions. Generally speaking, extremes of the dimensions do not represent bad or good (desirable or undesirable) organizational characteristics.

This set of dimensions for describing an organization's culture is used as the basis for investigating what a manager feels are important organizational characteristics. It is plausible that the manager's model of an effective organization be couched in terms of dimensions representing organizational culture and that, as this model develops, the relative importance of the dimensions will change. Changes observed should be generally related to the MBA curriculum experienced and should also reflect the opinion of faculty about the relative importance of each characteristic.

THE PRELIMINARY STUDY

We have undertaken to test these notions in a preliminary study designed to demonstrate the applicability of this concept and provide guidance for its use in assessment of developing managerial expertise in MBAs. We would expect that, as a result of participating in an MBA program, there would be a change to an individual's opinion of how important different organizational characteristics are to effectiveness and productivity. Our survey is designed to elicit these opinions. We asked students to complete the same survey instrument at two points in the program. First, in a course commonly taken at the beginning of the program and again in a course taken at the end. The instrument presents the fifteen dimensions of the study and asked students to select the ten most important characteristics and indicate their relative ranking. Thus, of 30 characteristics (fifteen pairs), students have to select the ten most important and rank their selections. This design requires that the respondent focus on the most important characteristics.

Tables 2 and 3 describe the instrument employed. In the survey, the "Score" columns are blank and the respondent is asked to use the numbers 1 through 10 to indicate the relative importance of the ten most important characterizations. The instructions emphasize that each number may be used only once in the ranking.

A sample of responses was selected and unusable responses discarded. Data from the resulting twenty responses are summarized in Tables 2 and 3. The Score for each measure is computed as the percentage of respondents ranking the measure in the top ten times the average rank

assigned. (Average ranked values were inverted to produce scores that increased with the number selecting the measure and with the relative importance assigned.) Scores could thus be as high as 10 (every respondent selecting a measure and ranking it "1") or as low as zero (measure not selected at all). The highest ranking was 5.4, indicating significant dispersion in measures selected and their relative importance.

Students completing the survey were generally mature individuals with many years of work experience. Table 1 summarizes student demographics.

Table 1: Respondent Demographics

Characteristic	Beginning of Program	End of Program
Sex (% M/F)	30/70	35/65
Average Age	39	37
Work Experience	10+ years	10+ years

In this preliminary study no effort was made to have the same individuals complete the survey at the beginning and end of the program. Data tracking the same persons from beginning to end of the program would be desirable and could easily be accomplished in a routine administration of the survey over several years.

SURVEY RESULTS

As indicated, Tables 2 & 3 describe student rankings at the beginning and end of the MBA program.

Table 2: Beginning of Program

Score	No.	Measure	Measure	No.	Score
3.05	1	Centralized Decisions	Decentralized Decisions	16	1.85
1.35	2	Fast decision making	Slow decision making	17	0.35
0.2	3	Short-term focus	Long-term focus	18	4.55
0.75	4	Individual orientation	Team orientation	19	4.35
1.75	5	Conflict confronted openly	Avoidance of conflict	20	0.25
1.45	6	High risk tolerance	Low risk tolerance	21	0.0
3.25	7	Focus on results	Focus on process	22	1.7

Table 2: Beginning of Program					
Score	No.	Measure	Measure	No.	Score
2.45	8	Individuals held accountable	Groups held accountable	23	2.8
3.45	9	Horizontal cooperation	Little horizontal cooperation	24	0.5
5.1	10	High trust among people	Highly political	25	0.25
0.0	11	Bureaucratic	Entrepreneurial	26	2.1
0.1	12	Resistant to change	Open to change	27	4.6
5.4	13	Open & honest communication	Guarded communication	28	0.0
0.8	14	Fast communication	Slow communication	29	0.0
2.3	15	Direct face-to-face communication	Indirect communication	30	0.0

Table 3: End of Program					
Score	No.	Measure	Measure	No.	Score
2.65	1	Centralized Decisions	Decentralized Decisions	16	1.45
2.6	2	Fast decision making	Slow decision making	17	0.0
2.4	3	Short-term focus	Long-term focus	18	4.2
1.65	4	Individual orientation	Team orientation	19	3.1
1.55	5	Conflict confronted openly	Avoidance of conflict	20	0.55
2.35	6	High risk tolerance	Low risk tolerance	21	0.45
3.35	7	Focus on results	Focus on process	22	2.8
2.5	8	Individuals held accountable	Groups held accountable	23	1.35
3.15	9	Horizontal cooperation	Little horizontal cooperation	24	0.1
3.75	10	High trust among people	Highly political	25	0.55
0.5	11	Bureaucratic	Entrepreneurial	26	1.45
0.1	12	Resistant to change	Open to change	27	4.55
5.25	13	Open & honest communication	Guarded communication	28	0.55
0.85	14	Fast communication	Slow communication	29	0.55
2.0	15	Direct face-to-face communication	Indirect communication	30	0.0

Table 4 presents a ranking of the top ten dimensions beginning to end of the program.

Table 4: Top Ten, beginning and end of MBA Program				
Rank	Beginning of program	Score	End of program	Score
1	Open & honest communication	5.4	Open & honest communication	5.25
2	High trust among people	5.1	Open to change	4.55
3	Open to change	4.6	Long-term focus	4.2
4	Long-term focus	4.55	High trust among people	3.75
5	Team orientation	4.35	Focus on results	3.35
6	Horizontal cooperation	3.45	Horizontal cooperation	3.15
7	Focus on results	3.25	Team orientation	3.1
8	Centralized decisions	3.05	Focus on process	2.8
9	Groups held accountable	2.8	Centralized decisions	2.65
10	Individuals held accountable	2.45	Fast decision making	2.6

Some preliminary observations may be based on these results. In summary form, they are.

- Eight the items on the Top Ten list of ten are essentially unaffected by students' participation in the MBA program.
- There is significant diversity of opinion at the start of the program concerning whether individuals or groups should be held accountable. The importance of both is perceived as significant. At the end of the program, neither is viewed as sufficiently important to make the 'top ten' list (although individual accountability is number 11 on the list).
- The importance of a team orientation falls from beginning to end of the program. Ranked in fifth place at the beginning, it falls to number seven at the end.
- Decentralization in decision-making is not seen as important (either at the start or the end of the program). Indeed, centralized decision-making is in the top ten at program beginning and end.
- The perceived importance of trust declines through the program. Ranked second at the beginning, it is in fourth place at the end. Focus on results rises from seventh place to fifth and focus on process enters the list in eighth place.

In all, the list is remarkably similar from beginning to end of program. Since the study is preliminary, these observations are only illustrative of the kinds of conclusions that might be drawn from a full study. No analysis of the significance of the differences observed was conducted due to the relatively small sample size.

A further use of the results involves a comparison to broadly based surveys of MBAs. Again referring to the 2002 GMAC Global Survey of MBAs, (GMAC), we see that 57% of graduating MBAs prefer performance-based rewards (with the balance preferring group based rewards). The group surveyed for the present study reveals a much higher preference for individual rewards (Accountability score of 2.5 compared to 1.35, nearly a 2:1 ratio). Our group also prefers centralized decision making in approximately the same proportion. This is in sharp contrast to the broad study where 84% preferred decentralized decision-making. If subsequent results confirm these differences, then we may conclude the students surveyed are not typical MBA alumni (at least for these measures).

PROGRAM PERFORMANCE AND DEVELOPING STUDENT PERFORMANCE

The development and evolution of student perceptions of the importance of the dimensions in the survey comes into sharper perspective when compared to faculty priorities for the MBA program. In Table 5 we present an illustrative ordering of faculty objectives for the program. Such an ordering is formulated from a consensus among faculty as to what should be emphasized in the curriculum.

Alongside the faculty preference ordering, we present students' results. This supports an assessment of the performance of the program with respect to how well faculty conveys their expertise in students, as measured by how well they convey their priorities to students.

Table 5: Faculty Priorities

Faculty Priority	Measure	Student Rank at beginning	Student Rank at end
1	Focus on results	7	5
2	Long-term focus	4	3
3	Entrepreneurial	-	-
4	Open to change	3	2
5	Open and honest communication	1	1
6	Individuals held accountable	10	-
7	High risk tolerance	-	-
8	Team orientation	5	7
9	Focus on process	-	8
10	Decentralized decisions	-	-

IMPLICATIONS

The narrow view of these results suggest that not much movement has occurred in student attitudes during the MBA program and that faculty have not done a particularly good job of conveying their perspectives of what is important in organization to students. Remarkable in their absence from the students' top ten list are entrepreneurial characteristics and risk tolerance. If a subsequent, broader study confirms these conclusions then changes to curriculum and emphasis in individual courses may well be indicated. It should be emphasized that these results are unique to the program from which results were gathered and do not generalize to other programs. They illustrate the kinds of conclusions (and direction for change) that may be developed from survey results.

Taking a broader perspective, it is clear that every MBA program will produce unique, program specific results that may be used as the basis for improvement. Thus, the general implications may be summarized as follows:

1. The survey described indicates development of managerial expertise in students by tracing changes in perception of organizational characteristics important to effectiveness and productivity.
2. Faculty, through curriculum design and instructional methodologies, can influence and encourage the development of managerial expertise in students.
3. A comparison of changes in student perceptions relative to the targets indicated as important by faculty will provide insight into whether faculty objectives for student development are being met and indicate necessary changes to curriculum and teaching methodologies when they are not.

REFERENCES

AACSB, The Association to Advance Collegiate Schools of Business. From the World Wide Web: http://www.aacsb.edu

ACBSP, Association of Collegiate Business Schools and Programs. From the World Wide Web: http://www.acbsp.org

Bell, M. (1997). *Journal of Physical Education, Recreation, and Dance. 68*(2), 34-38. Published on the World Wide Web: http://www.coe.uga.edu/sportlab/labresearch/completed/expertise/cidevelopment.html

California State University, San Bernardino, The Master of Business Administration (MBA) degree. Available on the World Wide Web at: http://www.sbpa.csusb.edu/mba/

ETS, Educational Testing Service. Princeton, NJ. Available on the World Wide Web: http://www.ets.org

GMAC, Graduate Management Admissions Council. Available on the World Wide Web: http://www.gmac.com/gmac/SurveysandTrends/GlobalMBASurvey2002

MBAInfo, published on the World Wide Web: http://www.mbainfo.com/mbaintro.html

Messick, S.(Autumn, 1988). Testing for success: Implications of new developments in measurement and cognitive science. *Selections, The Magazine of the Graduate Management Admissions Council.* The Graduate Management Admissions Council. 1-15.

Pfeffer, J. & Fong, C.T. (2002). The end of business schools? Less success than meets the eye *Academy of Management, Academy of Management Learning and Education, 1*(1).

Pope, J. (2002). What's an MBA Worth? *Associated Press*, August 27, 2002

Raskin, A. (2002). What's an MBA Really Worth? *Business 2.0,* July 2002 Issue http://www.business2.com/articles/mag/print/0,1643,41346,00.html

Schweiger, D. M. (2002). *M&A Integration.* New York: McGraw-Hill.

Smith, R.A., & Tiberius, R.G. (2002). The nature of expertise: Implication for teachers and teaching, *Essays on Teaching Excellence: The Professional & Organizational Development Network in Higher Education.* http://www.ucet.ufl.edu/essays/topic4-1.htm

SACS, Southern Association of Colleges and Schools. http://www.sacs.org

USING COOPERATIVE LEARNING STRUCTURES TO ENHANCE PEDAGOGICAL EFFECTIVENESS IN ACCOUNTING

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ABSTRACT

The business environment of corporate America is changing rapidly and has necessitated a change in accounting education to keep pace with the needs of the business world. Accounting educators are being urged to reevaluate the curricula and focus on improving students' critical thinking, communication and interpersonal skills, and active participation in the learning process. Businesses need more speed, flexibility, and integration to operate successfully in both the local and global economies. They are finding that the flow of information across business functions is critical to achieving good decision-making. To facilitate the flow of information, companies are developing various types of work teams. The purpose of this study is to discuss the proposed changes in accounting education, provide an overview of the use of teams in the workplace, introduce THE GAME, a structured and collaborative exercise designed to increase student participation in the learning process, and develop some short activities that students work on collaboratively. These exercises contribute to active learning, critical thinking, problem solving, and interpersonal skills, which are attributes critical for success in the accounting profession.

BACKGROUND

The transformation of the business environment has accounting educators facing pressure from the accounting education change movement, especially from the American Accounting Association (AAA, comprised of accountants and accounting professors), the Accounting Education Change Commission (AECC), and the American Institute of Certified Public Accountants (AICPA). Most recently, the AICPA (1999) endorsed a Core Competency Framework for Entry into the Accounting Profession. This framework specifies interaction, leadership, communication, and project management, among other competencies, that students need to develop for entry into the accounting profession.

The AECC (1990) espoused effective teams as the most important interpersonal skill that accounting students should obtain. The AECC objectives go beyond the traditional lecture, textbook

and exam paradigm. Slavin (1983) showed that group assignments do lead to increased learning. He notes that students in teams can address higher level learning tasks, such as analysis and synthesis. Michaelson et al. (1993) states that educators can benefit from industry's experience with high performing teams. He says that the key to success of a student or work group lies in the way in which teams are formed and managed, and the strength of tasks that they are expected to accomplish.

TEAMS IN THE WORKPLACE

Companies need more speed, flexibility, integration and innovation to operate successfully in both the local and/or global economy. Because of the rapidly changing economy and the diverse workforce, accounting educators are being challenged to advocate group work, improve students' communication skills, and encourage students to think critically (Cottell & Mills, 1993). Companies are finding that the flow of information across business functions is critical to achieving good decision-making. To facilitate the flow of information, companies are developing various types of work teams. For instance, Retail Financial Services (RFS) senior management accepted its employees' recommendation that company centers should be organized around teams, with no managers at all (Ashkenas, 2000). When the teams were given the same levels of authority that prior managers had held, improved customer satisfaction and reduced costs resulted.

Another example of the benefits of work teams is Fidelity Investments. Management designed a cross-functional team to reduce direct mail costs and increase customer usage of automated services. Ashkenas (2000) notes that, in addition to reaching their primary objectives, employees also learned to be team players.

Siegel (2000) notes "…three-fourths of management accountants work in companies where they and their colleagues are members of cross-functional teams." According to a Caterpillar accountant, many accountants would prefer not to lead a team, but the accounting person usually assumes a leadership position. The business advisor role encompasses the need to create business strategic options, participate in decision-making, and create processes that measure and monitor success. Because of their extensive company know-how, management accountants serve as the professionals who provide a reality check for the management team.

THE GAME

To encourage more accounting professors to use student teams in the classroom setting, it may be helpful to compile the experiences of accounting professors currently using student teams. If professors know "what works" in forming and managing student teams, then more professors may be willing to utilize them. Studies overall appear to show that there are more benefits than costs from student teams, but this outcome is dependent upon the professor's ability to establish an appropriate

environment, develop effective team exercises, and create an understanding of how team activities can improve the learning process.

For many different reasons not to be fully considered here, educators may encounter lack of participation or sometimes lack of interest from their students, who ideally should participate in the learning process. Experiential learning offers a way to go "outside of the traditional learning box" and allow actual experiences to serve as learning tools.

THE GAME provides a "fun" method that motivates students away from apathy and redirects them to seek knowledge in an exciting way. THE GAME is more than just fun because it reflects real life challenges such as the importance of knowledge, documentation, teamwork and timing. And, as in "real life," despite one's best efforts, the results may not always seem fair.

I. GOALS

THE GAME is just like an energetic quiz show that rewards participants who are both knowledgeable and lucky. The goals of THE GAME include, but are not limited to, the following:

A. encourage students to read actively their textbook, with all of its supplementary features, in preparation for class.
B. teach students the importance of organizational structure and how responsible individual contributions to group goals may establish team building, insure organizational strength, and promote success.
C. require students to utilize web-based technology to communicate among themselves and to find solutions outside of traditional research methods.
D. show students how the rules of THE GAME are similar to the technical requirements of statutes or other detailed public or private regulatory efforts.
E. demonstrate the importance of record keeping.

II. PROCESS

THE GAME is very structured and yet, at the same time, without parameters. THE GAME is the name for knowing how law or any set of regulations effects business activity. Everyone is in THE GAME regardless of choice. THE GAME begins in class as soon as the rules are read.

Students should divide themselves into three more or less equally numbered teams: THE RED, THE WHITE, and THE BLUE within two minutes. After the time elapses, the instructor randomly assigns those participants still without a team to one of them so that everyone is a member of a group. Now, each team must elect a leader and a co-leader within two minutes. After the time elapses, the instructor will randomly select a leader or co-leader for any team that has failed to select one. Leaders can be removed and their replacements elected at any time by majority decision of

members within the individual group. The teams are responsible for determining their own work assignments. Teams, through their elected log keepers, must keep a concise record of their activities.

Each team, through its leader or representative, enters THE GAME by selecting a turned over card, which may be any of the following:

THE PROJECT CARD: Due on the assigned date, a project on a given topic is assigned by the instructor. After it is presented, the instructor rates this effort on a scale of 1 to 10.

THE TEN QUESTIONS CARD: The group with this card creates ten objective questions on the assigned reading, to be approved by the instructor, for those teams that have selected the O or the X cards. If 31% of the test takers get below 70% on the test, then the team producing the questions gains a total of ten points from the sole group taking the test or five points taken from each group, if both teams are involved. It is possible for a team to have a negative number of points.

THE X CARD: The group selecting this card can challenge the project presentation and deliver a better product at the next class meeting. In the discretion of the instructor, the X group can take some or all of the points awarded to THE PROJECT team. As test takers in answering THE TEN QUESTIONS, the team will be given the average test score from one to ten, expressed in whole numbers.

THE O CARD: Members who hold this card can take the TEN QUESTIONS test but are powerless to do anything else. The average test score in whole numbers will be assigned to the group.

THE WILD CARD allows the team to chose within two minutes what role it will play from the remaining cards. If a choice is not made within two minutes, the instructor will make the choice for the group.

Absent special circumstances, THE GAME will be played whenever possible. Extra credit points to the final grade may be awarded by the instructor to the teams in relation to the final score among them.

III. THE GAME: THE FINAL CONFRONTATION

Lessons learned throughout the term are put to the test during the final phase of THE GAME. The instructor will ask a question drawn from the pool of Ten Questions used during the course of the term. Any member from any team may answer. The first person to reply gets the opportunity to respond. If answered correctly, the WINNER's team earns one point and the WINNER gets a reward. If answered incorrectly, the person, giving the wrong answer, will be a LOSER and held in the PIT, isolated from the team. The LOSER can no longer participate until released. If the LOSER's team subsequently answers a question correctly, then the LOSER will be released but no points will be earned. The team may elect to leave the LOSER in the PIT and accumulate points instead. The same question may be repeated until it is correctly answered. If a team is completely

eliminated, then the remaining two teams may continue to compete until (1) all the questions in the pool have been asked, (2) only one team remains, or (3) the instructor decides to end the game.

IV. GRADED ACTIVITY

The importance of documentation cannot be understated. The team log, both hard-copy and on disk, along with each student's documented contributions may be used as the basis for a regular test grade, which is recommended to be at least 20% of the final grade. In a survey of 215 students enrolled in upper-division speech communication and business policy courses at two major universities, Fiechtner and Davis, 1992, found that at least 20% of a grade must be cooperative for goal interdependence to occur and for students to report a positive group experience.

As an added reward to motivate students, the overall point standing among the teams may also be used, in the instructor's discretion, to distribute extra credit points to the final grade of team members. A suggested distribution could be as follows. Third place would earn no points. Second place would result in one extra point. The winning team would earn two extra points to each member's final grade.

V. GROUP SIZE

The class is divided into three approximately equal sections. Sections may consist of three (3) to sixteen (16) members. Group size reflects the kinds of issues, which similarly sized businesses encounter. Smaller group sizes are usually easier to manage but the group member's workload is usually greater. In larger groups, the participant's direct involvement decreases but leadership, communication, and management of human resources become much more important concerns.

VI. TIME REQUIRED

Presentation of THE PROJECT should be limited to twenty (20) minutes. The TEN QUESTIONS test should last no more than ten (10) minutes. When both exercises are done, the total time commitment should be about thirty (30) minutes. Administrative issues concerning THE GAME, such as discussion of the rules, may consume an additional five (5) to eight (8) minutes. The term's FINAL CONFRONTATION, the activity that reviews all the TEN QUESTIONS used throughout the term, should stop after one hour or until all the questions have been answered correctly.

VII. PHYSICAL SETTING

Ordinarily, a regular classroom should be sufficient for conducting THE PROJECT or THE TEN QUESTIONS exercises. For the FINAL CONFRONTATION, a lecture hall would facilitate a stadium effect, which would segregate each team into competitive sections. Exiled team members would then congregate in THE PIT, until their release is won by their teammates.

VIII. MATERIALS

A computer station with appropriate software and Internet access would be most useful in the classroom. If unavailable, an overhead machine or handouts for each student would be adequate substitutes.

IX. PROJECTS

Issues should be presented clearly to avoid confusing students. If the situation appears practical, then the students' interest may be naturally aroused. Students may even relate an exaggerated hypothetical to a potentially real situation in their lives. Some suggested examples follow:

PROJECT 1 (OVERVIEW OF ACCOUNTING)

John, a very bright and hard-working student, is a sophomore enrolled in the college of business at a large state university. He is completing his junior core and is undecided about his major. He has heard that the accounting profession offers good salaries and that jobs are plentiful. After talking to several faculty and relatives, he has learned that there are several areas within the accounting discipline, i.e. tax, audit, financial, managerial, governmental, and information systems. He also has been told, by his uncle who is a CPA employed with a local accounting firm, that the benefits of a professional certification are tremendous. John is unaware of any other professional certification other than the CPA, and is unsure of the benefits of having a professional certification. You are John's advisor and he has approached you with several questions to help him decide upon a major.

Give John an overview of the accounting profession and the various areas within accounting. Also, explain to John the basic differences between financial and managerial accounting. Finally, give John more information on the various professional certifications in accounting and the advantages of having one or more certification.

PROJECT 2 (STANDARDS OF ETHICAL CONDUCT)

Sam is a division manager with Extrusion, Inc. and has seven workers under him. His company has recently implemented a new budgeting system where all division managers are required to submit a semi-annual report about worker productivity. Extrusion operates in a very competitive business environment and has to continually improve on business efficiency to ensure its survival. On completing his report, Sam realizes that six of his seven workers have been very productive and have met or exceeded company budgets. The seventh worker, Jerry, however, has the lowest productivity and falls far short of company budgets. Jerry is Sam's nephew and was hired by Sam because of family pressure. Sam is aware that Jerry could lose his job when he submits his productivity report to the Vice-President and has even considered window-dressing the numbers to conceal Jerry's poor performance. Sam is in an emotional quandary and has approached you, his good friend for several years, for advice.

Provide Sam with an overview of the Standards of Ethical Conduct for management accountants and the implications of violation of these standards. Also, explain to Sam specifically which standard he would violate if he were to "fudge" the numbers.

PROJECT 3 (COST CLASSIFICATIONS & BREAKEVEN ANALYSIS)

Patrick is planning on opening his very own DVD-rental business in town. He has already done some groundwork and has collected information on store rental rates and some possible store locations. He has also obtained information on DVD rental rates from other stores in town and has contacted some whole-sellers, who supply DVDs to retail video stores, about the purchase price of DVDs. Patrick has also compiled a list of possible costs that he will incur on a monthly basis such as rent, electricity, water, telephone, salaries for 2 store employees, advertising, purchase of 3 computers, 2 printers, and some furniture for displaying and storing the videos. After gathering all this data, Patrick is unsure how to determine the viability of this business venture and has sought your help. You are Patrick's neighbor and a successful business owner with more than 10 years of business experience.

Provide Patrick with information on the various costs he may incur and classify the costs as fixed or variable. Also, based on the data collected, explain to Patrick how he can use this information to determine breakeven analysis, potential net income on predetermined sales, and effect of changes in cost information on his projections and decision to open this store.

PROJECT 4 (CAPITAL BUDGETING)

Cindy Westover owns a miscellaneous office services business, Speedy Copy. Services provided include mail, fax, computer use rentals, and photocopying. Since her business has

expanded considerably in the past two years, Cindy is considering investing in an additional state-of-the-art photocopier. She has identified two leading brands, Jensen and Systems Plus, and has gathered the following information on each of these brands.

	Jensen	Systems Plus
Installed Price	$14,500	$15,500
Estimated maintenance & usage/year	$2,300 plus $0.01/copy	$4,050
Estimated salvage value	$1,500	$2,500
Estimated useful life	5 years	5 years
Minimum required rate of return	16%	16%

Speedy Copy expects to charge customers $0.05 per copy with annual sales of about 140,000 to 200,000 copies. Cindy has handed this information to you, the office manager, for your evaluation and recommendation about which brand should be purchased.

What capital budgeting methods could be applied in this situation to make a decision? Discuss the advantages and disadvantages of these methods. Cindy does not understand the significance of the minimum required rate of return of 16% or how it is computed. Please explain. Also, your recommendation should include different decisions for estimated volumes starting from 140,000 copies/year to 200,000 copies/year, in increments of 5,000 copies. Cindy is confused about why the decision is different at different volumes. Please explain.

PROJECT 5 (COST ALLOCATION)

Auto Serve, a local auto shop, offers a variety of specialty services such as transmissions, brakes, electrical, and body-work. Each of these services is treated as a separate division and has a supervisor in charge, with each supervisor having three mechanics reporting to him. While mechanics work on a salary, the supervisor gets paid a salary as well as a bonus that is linked to the profitability of his division. Bonuses are typically a large part of the division supervisor's remuneration. As a result, the supervisors attempt to run an efficient division, keeping a close eye on costs and the productivity of the mechanics. Ben is the division manager of brakes and has had a very busy year. Since Ben runs a very efficient division, he expects to earn a fairly substantial bonus and is extremely disappointed and confused when he receives his year-end report from Spence, the accounting manager. Agitated, he questions Spence, "What is this $63,000 charge from

Auto Serve for allocated services all about? This deduction has almost wiped out my division's profitability for the entire year! What did we do to have all these costs allocated to us?"

Explain to Ben the sources for these charges. Describe the various methods available to allocate costs and discuss the rationale behind cost allocation.

PROJECT 6 (BUDGETING)

Jim is the production supervisor for Filers Doors Inc. and is responsible for preparing the production budget for his company. He has received from the marketing manager the following forecast of filing cabinets sales for 2003:

January	50,000	July	40,000
February	40,000	August	50,000
March	60,000	September	60,000
April	70,000	October	70,000
May	60,000	November	80,000
June	50,000	December	60,000

Beginning Finished Goods inventory on January 1, 2003 is expected to be 15,000 cabinets. Company policy states that minimum ending inventory for finished goods is 15,000 cabinets and that the maximum is half of the following month's sales. Maximum productive capacity is 65,000 cabinets per month. Jim also has to keep in mind that the company wants a fairly constant production output so a constant workforce can be maintained. Jim has passed this task on to you, the staff accountant.

Prepare a production budget stating the number of filing cabinets to be produced each month. Also, explain to Jim the various budgets that the company would have to prepare and how they relate to each other. Also, discuss the various roles that budgets can play and elaborate on some of the key points you observed when preparing the production budget.

PROJECT 7 (RELEVANT COSTS)

Photon manufactures cell phones. The casing for the cell phone has been manufactured in house so far but because of the exponential increase in the demand for cell phones and a shortage of workers, the company is considering outsourcing the manufacture of the casing. Prior to obtaining bids from several vendors, Photon would like to determine the relevant cost of manufacturing the casing in-house so it can use that information as a benchmark to determine if outsourcing is a cost

effective alternative. Matt, the CFO, has assigned Jeremy, the recently hired accountant, the responsibility of providing him with feedback about the costs involved in producing the casing and to determine a maximum price per casing Photon should be willing to offer a vendor if it decided to outsource. Jeremy has collected the following information:

Direct material cost per casing	$4.80
Direct labor cost per casing	$1.60
Fixed factory overhead cost per casing	$3.45
Variable factory overhead cost per casing	$2.75
Total cost per casing	$12.60

Based on this information, Jeremy has recommended to Matt that the maximum price Photon should be willing to offer a vendor is $12.60. Do you agree with Jeremy? If not, discuss the flaw in Jeremy's calculation and determine the correct maximum price the company should be willing to offer a vendor. Discuss the concept of relevant and irrelevant costs and provide at least three examples for each category of fixed and variable factory overhead costs.

PROJECT 8 (OPTIMAL UTILIZATION OF SCARCE RESOURCES)

Robert Hegel is the sole proprietor of Sandals Ltd., which specializes in the manufacture of primarily two lines of casual footwear. Sandals is located in a small town, Verdova, about 150 miles south of San Francisco. While the demand for his footwear has been steadily growing, Robert has been having trouble attracting new employees and retaining existing ones, because of the town's small size. Robert is unwilling to move since he has grown up in Verdova and has strong family ties to the area. Due to this labor shortage, Robert is considering discontinuing one of the two footwear lines. He has collected the following data and has hired you, a local CPA, to recommend what he should do.

	Strap-On	Buckle-It
Unit selling price	$60	$85
Unit variable costs	$28	$40

You have asked Robert to provide additional information regarding the total number of available labor hours per month and the number of labor hours it takes to manufacture each of the two lines of footwear. Robert provides the following information but does not understand why and how this information is relevant: total number of labor hours available per month is 520 and it takes 1.8 hours to manufacture one Strap-On and 2.9 hours to manufacture one Buckle-It.

Determine which of the two product lines is more profitable. Explain to Robert the definition of contribution margin and why that is not the criterion determining the more profitable product.

X. DEBRIEFING AND ASSESSMENT

At the conclusion of the Final Confrontation, the instructor should solicit student comments concerning THE GAME. What were the lessons learned, the values taught, and the nature of the experience? The players should also honestly assess themselves, each other, and their leadership. All of these matters should point to how the experience parallels real life and all of its complexities.

XI. CONCLUSION

THE GAME, as developed above, has been applied to an Accounting course format but may be altered easily to be discipline specific. The spirit of competition will encourage students to learn from themselves and from each other. Debriefing the nature of the experience is just as vital as undergoing the experience itself.

USING THE GAME IN AN ACCOUNTING COURSE

THE GAME was incorporated in two sections of Cost Accounting (an upper level accounting course required for accounting majors) during the fifth week of the spring semester in 2003.

THE GAME began in class as soon as the rules were read. Students divided themselves into three more or less equally numbered teams: THE RED, THE WHITE, and THE BLUE within two minutes. Each of the two sections had approximately 25 students, which meant that when the students were divided into the three teams, each team had approximately 8 students each. Then, each team was given two minutes to elect a leader and a co-leader. Finally, each team was given two minutes to elect a log keeper.

THE GAME began with each team, through its leader, selecting a turned over card. In the first section, THE RED team drew THE PROJECT CARD and was tasked to PROJECT 1 (Overview of Accounting). They had four days to prepare for their presentation. Log records indicated that team members were efficient in allocating various responsibilities to individual team members. Each team member was asked to collect information on a specific accounting area (i.e. tax, audit, information systems, etc.). The team leader and co-leader volunteered to put the

information together and make the presentation. The entire team met the day prior to the presentation to do a trial run. The presentation was professional, had quality visual slides, and excellent content. Each team demonstrated good teamwork in roles assigned to individual team members and in answering questions. At the end of the presentation, THE BLUE team conferred and decided to challenge the presentation. Similar to THE RED team, it was given four days to prepare its presentation. The basic premise of their challenge was that THE RED team did not directly address the basic objective of THE PROJECT, which was to help John decide his major. THE BLUE team did a better job of describing the salient features of the accounting profession from a more general point of view. It also provided a more detailed look at the various professional certifications available and the benefits of obtaining each certification.

In the second section, THE BLUE team drew THE TEN QUESTIONS card. The team's task was to create ten objective questions on the assigned reading, to be approved by the instructor. The team initially submitted ten questions of which the instructor approved only seven. On the second attempt, the team submitted five more questions of which the instructor approved an additional three. Questions were rejected on the basis of irrelevance to material covered. THE BLUE team decided to allow 5 minutes to the other two teams to answer the ten questions. At the end of the allotted time, THE BLUE team collected and graded the answers. The leader of THE BLUE team went over the correct answers for the ten questions.

The primary objective of incorporating THE GAME in an accounting course was to observe the perceived benefits of cooperative learning. Cooperative learning is defined as the instructional use of small groups so that students work together to maximize their own and each others' learning. Cooperative learning is characterized by five basic elements: positive interdependence, face-to-face promotive interaction, individual accountability, collaborative skills, and group processing.

Positive interdependence exists when students believe they are linked with the other group members in a way that one member cannot succeed unless the other members of the group succeed. Students had to work closely together to ensure team success. In the second section, for example, THE BLUE team created a ten-question exam, which was to be answered by members of the other two teams. If 31% of the test takers scored below 70% on the exam, then the team producing the questions gained a total of ten points from the sole group taking the test or five points taken from each group, if both teams are involved. The achievement of this attribute is demonstrated by some quotes from students found in their logs. "I learned a lot about teamwork while playing THE GAME. I now further understand the importance of each member of a team. One cannot assume that if they do well the team will also do well. One bad apple can bring down the success of a group." "From THE GAME I learned the importance of teamwork. It became evident that if one member was lacking in any area the whole team is affected. The synergism of team involvement was a major theme in this activity."

Face-to-face promotive interaction occurs when group members discuss concepts and strategies and teach their knowledge to their group members. This aspect was observed during

several instances during the implementation of THE GAME. In particular, in the first section, the team that challenged the initial presentation, engaged in a healthy debate among team members to evaluate the risks of challenging and arriving at a group consensus.

Individual accountability occurs when an instructor ensures that the performance of each individual in the group is assessed and results given back to the group and the individual. The instructor spent about fifteen minutes in each section following the presentation and the ten-question exam assignments, in evaluating the performance of each team and each member. Results, in the form of extra credit points, were also announced in the class immediately following the assignments.

Collaborative skills are leadership skills, decision-making skills, communication, and conflict management skills. Students were required at the outset to divide themselves into three more or less equally numbered teams: THE RED, THE WHITE, and THE BLUE within two minutes. Then, each team was to elect a leader and a co-leader within two minutes. Each of the three teams in both sections demonstrated good decision making and communication skills in selecting a leader and a co-leader. During the working of the assignments, there were numerous instances where team members were required to make a collaborative decision, e.g., choice of final ten-questions and time to be allotted to the other teams to take the exam. As one student commented, "I found that it was very useful. It taught basic leadership and teamwork skills. Also, I found that it allows many to discover whether they are leaders or followers when given a task."

Group processing involves a group discussion of how well the group is achieving its goals and how well it is maintaining effective working relations among group members. This characteristic was indicated by the logs of each team submitted at the end of THE GAME. There seemed to be an overwhelming consensus that there was effective group discussions leading to the achievement of each team's goals and objectives. One inspired students aptly remarked, "I feel that this was a good exercise in teamwork. I wish that we could do it the whole semester so we could have a better idea of how a team environment really works."

CONCLUSIONS AND SUMMARY

Cooperative learning is based on structuring learning environments and experiences to encourage and promote student interaction and improve student learning. The AECC has urged accounting faculty to develop instructional methods where students become active learners rather than to follow the traditional lecture format where students are passive learners. Through appropriately structured cooperative learning exercises, students not only learn the technical subject matter but also improve their interpersonal communication skills and learn how to manage group interactions effectively (Peek et al., 1995). Research findings also indicate that more learning takes place in a cooperative setting than an individual one (Ravenscroft et al., 1995). Cooperative learning exercises stress the value of teamwork and shared responsibility, and prepare students for the accounting profession. Cooperative learning researchers and practitioners have shown that working

together with fellow students, solving problems together, and talking through material together are essential to success in college. Isolation and alienation, on the other hand are the best predictors of failure. As an added bonus, cooperative learning is enjoyable for both students and faculty.

Eventually, however, faculty members must take into account the knowledge, skills, and abilities that students need to best prepare them for the constantly changing workplace. Faculty should also recognize that using teams can be a double-edged sword. A well-structured team concept that utilizes effective team assignments can facilitate the learning process; whereas, an improperly structured team system that utilizes inappropriate team assignments can magnify problems and create new problems that discourage the learning process.

REFERENCES

Ashkenas, R. (2000). How to loosen organizational boundaries. *The Journal of Business Strategy, 21*(2), 11-12.

Cottell, P.G., Jr. & B. Mills. (1993). Cooperative learning structures in the instruction of accounting. *Issues in Accounting Education, 8*(1), 40-59.

Fiechtner, S.B. & E.A. Davis. (1992). *Why Some Groups Fail: A Survey of Students' Experiences with Learning Groups. Sourcebook for Higher Education,* University Park, PA: National Center on Postsecondary Teaching, Learning, and Assessment, 59-74.

Michaelson, L.K., C.F. Jones & W.E. Watson. (1993). Beyond groups and cooperation: Building high performance learning teams. *To Improve the Academy, 12*, 127-145.

Peek, L.E., C. Winking & G. S. Peek. (1995). Cooperative learning activities: Managerial accounting. *Issues in Accounting Education, 10* (1), 111-125.

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.

Siegel, G. (2000). Management accountants: The great communicators. *Strategic Finance, 82*(6), 75-77.

Slavin, R.E. (1983). When does cooperative learning increase student achievement? *Psychological Bulletin, 94,* 429-445.

INTEGRATING FINANCE IN CERTIFIED PUBLIC ACCOUNTING EDUCATION: A COMPARATIVE ANALYSIS OF CPA PRACTICE AND EDUCATION IN THE US AND CHINA

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ABSTRACT

This paper examines what CPAs do and what accounting educators teach in the US and China. The comparison reveals that while practicing CPAs provide many finance and finance related services, accounting educators offer only limited exposure of finance to accounting students. The finding shows that there is a knowledge gap in finance among accounting students. To provide quality finance and finance related service, additional finance training is necessary for the future CPAs. The paper further discusses the difficulties of making curricular changes, and needs and benefits of integrating finance in accounting education. It also makes preliminary recommendations on what and how to integrate finance in accounting curricula.

INTRODUCTION

Profound changes in accounting practice have made it necessary to revise the accounting curricula. The calls for changes in accounting education in US are well documented. In its 1986 report titled "Future Accounting Education: Preparing for the Expanding Profession," the American Accounting Association indicates that a growing gap exists between what accountants do and what accounting educators teach (AAA, 1986). The AICPA's CPA Vision Project: Focus on the Horizon calls for modified education programs to meet the future needs of CPAs (AICPA, 1998). In three separate studies published in 1994, 1996, and 1999, the IMA warns accounting education needs to change if it is to meet the future needs of accountants in industry (IMA, 1994, 1996, 1999). Evidence shows that the previous warnings for changes in accounting education have for the most part been ignored and accounting education is being delivered the same way today as it was 20 or 30 years ago (Albrecht & Sack, 2000). Albrecht and Sack warn that because practice has changed so dramatically and because accounting education has not kept up, accounting programs have lost ground to other business majors, to corporate competitors, and to other types of educational programs.

Chinese accounting profession has undergone significant changes since China adopted the policy of economic reform and opening up to the world. The broad transformation in many aspects in China has completely altered the landscape of the accounting profession. The certified public accountant profession was established in the early 1980's. There were only 500 CPAs in China in 1986. They mainly provided service to clients in foreign invested enterprises. The numbers grew to 3,000 in 1988, more than 10,000 in 1993, and more than 50,000 in 2000 (CICPA, 2001; Li, 2001). Currently, CPAs provide services to a broad range of customers including government agencies, state owned enterprises, foreign invested enterprises, privately owned enterprises, and publicly traded companies. The sweeping changes have a significant impact on accounting education. The CPA major has been established at major Chinese universities. Accounting curricula at higher education institutions were completely revised in the past 20 years (Cooper et al., 1994; Tang, 1997; Smith et al., 1999; Chan & Rotenberg, 1999). Although the Chinese accounting programs have made progress in preparing future CPAs, there are still many areas that need to be improved. For example, content covered in the existing accounting textbooks do not meet the needs of CPA education, and there is a gap between what employers want from new accounting graduates and what is taught in universities' CPA programs (Xun, 2002). Chinese accounting programs should further revise their curricula, update faculty knowledge, and improve pedagogy to better help students acquire knowledge, skills, and abilities needed to advance in their careers.

This paper examines the differences between what CPAs do and what accounting educators teach in undergraduate accounting programs in the US and China. The US is the largest developed country and China is the largest developing country. Professional services such as accounting play an important role in the American economy. What is happening in the accounting profession and education in the US will influence what will occur elsewhere in the world. Specifically, they will affect accounting practice and education in China, whose accounting standards, practice, education, etc. are still at an early development stage. A comparative analysis of what CPAs practice and what accounting educators teach in the US can help the Chinese accounting profession learn from the American experience. Specifically, the paper focuses on the knowledge gap in finance in accounting programs in the US and China. It identifies that finance and finance related business is a fairly large share of current CPA practice. However, it finds that finance education is insufficient in accounting curricula in the US and China. It also discusses recent developments in accounting curricula in the US and China, what are the needs and benefits of integrating finance, and how to integrate more finance into accounting education.

PRACTICE OF CERTIFIED PUBLIC ACCOUNTANTS

CPA Practice in the US

The accounting profession in the US has undergone significant changes due to developments in the global marketplace. Technological advances, market pressure for value added service, globalization of business, presence of non-CPA competitors, new requirements from clients, declining young talent choosing the accounting profession, and other factors have changed the nature of accounting work (AICPA, 1998). Markets for traditional services - accounting, auditing, and tax - have become increasingly saturated. To grow their business, accountants have attempted to develop new streams of revenues. A review of the Big Five's scope of services suggests that nowadays accountants provide many services beyond the traditional accounting services.

Table 1 shows the scope of services provided by the Big Five. The information is collected from their web sites and Hoover's Inc. Table 1 lists the Big Five by order of their annual revenues in 2000. PricewaterhouseCoopers is the largest CPA firm among the Big Five with annual revenues of $21.5 billion. It is followed by KPMG $13.5 billion, Deloitte Touche $11.2 billion, Ernst & Young $9.55 billion, and Arthur Andersen $8.4 billion.

Table 1. Scope of Services of Big Five CPA Firms

Name of CPA Firms	Summary of Scope of Services	
PricewaterhouseCoopers	1.	Assurance and Business Advisory (Assurance; Global risk management; Transaction services)
	2.	Global Tax Services (Customs and duties; eBusiness; Finance and treasury; Int'l assignment; M & A; Personal finance; Tax compliance/outsourcing; Tax technology)
	3.	Management Consulting (Strategic change; Performance improvement)
	4.	Corporate Finance & Recovery (Business recovery; M & A/Private equity; Project finance; Corporate value; Dispute analysis; Technology solutions)
	5.	Transfer Pricing
	6.	Business Process Outsourcing (Application process; Finance/accounting)
	7.	Global HR Solutions (Actuarial; benefits and insurance; HR outsourcing; Organization effectiveness; HR info. System; WorkForce solution)
KPMG	1.	Assurance & Advisory Services (Financial statement audits; Information risk management; Management assurance services; Financial advisory; Corporate recovery; Corporate finance; Forensic & litigation services; Transaction services)
	2.	Tax (Business tax; Global tax; State, local, and property tax; Indirect tax/customs services)

Table 1. Scope of Services of Big Five CPA Firms		
Name of CPA Firms	Summary of Scope of Services	
	3.	Legal Services (Corporate/commercial; Banking/financial; Competition; Employment/labor; Intellectual property; e-commerce; Estates and trusts)
Deloitte & Touche	1.	Accounting and Auditing
	2.	Tax Services (Income tax; Multistate tax; Property tax; Tax controversy; Tax management; International tax)
	3.	Management Consulting
	4.	M & A Consulting (Due diligence; Tax/accounting structuring; Pre/post transaction activities; Closing assistance; Integration of companies)
	5.	Dispute Consulting (Forensic Services; Business insurance; Intellectual asset; Litigation services)
	6.	Corporate Finance
	7.	Human Capital (Actuarial & insurance; Employee benefits; HR strategies; Healthcare services)
	8.	Information Technology
	9.	Reorganization
	10.	Transaction Services
	11.	Emerging Markets Consulting
Ernst & Young	1.	Assurance & Advisory (Fraud investigation; Information system security; Internal audit; Risk management)
	2.	Tax (Business Tax; Economic analysis; Tax rate management; International tax; Tax planning; Tax return review; Transfer pricing; E-commerce advisory; Employment advisory)
	3.	Law (Anti-trust advisory, Bank and securities, Bankruptcy advisory, Commercial and trade, M & A advisory, Environment advisory, Intellectual property, Real estate advisory)
	4.	Corporate Finance (Capital markets, Due diligence, Fairness opinions, IPO services, M & A advisory, Restructuring, Strategic finance, Valuation advisory, Treasury management)
	5.	Entrepreneurial (Going Public, Acquiring/divesting, Int'l expansion, Financing advisory, Operating strategy, Personal finance)
	6.	Other Services (E-commerce advisory, Employment advisory)
Arthur Anderson	1.	Assurance (Attest services, Audit services, Transaction advisory)
	2.	Tax Services (Corporate tax, International tax, Local tax, Personal tax, Tax outsourcing, Tax technology, Tax transformation, Valuation)

Table 1. Scope of Services of Big Five CPA Firms		
Name of CPA Firms	Summary of Scope of Services	
	3.	Business Consulting (Customer/channel, Digital markets/ supply chain, Enterprise technology, Finance and operation; Internet service; Strategy & value)
	4.	Legal Services
	5.	Corporate Finance (Corporate finance; Restructuring; Real estate; Privatization)
	6.	eBusiness (Web site design; Implementation)
	7.	Human Capital (Employee benefits; Risk management)
	8.	Outsourcing (Accounting & fin. Services; ERP application)
	9.	Risk Consulting (Business risk; ebusiness risk; Special risk)
Source: Service Directory of The CPA firms' websites		

It would be ideal to present these service categories by the revenue they generated. However, such segment information is not readily available for CPA firms. Many are privately owned partnerships, which are not required by the SEC to disclose such information. We are able to obtain segment information for two of the Big Five, KPMG and Arthur Andersen from Hoover's Inc. The largest source of their year 2000 revenue was from the assurance business, which generated 41% of the total sales for KPMG, and 45% for Arthur Andersen. Tax and legal services generated 21% for KPMG and 30% for Arthur Andersen. Another major revenue center was consulting, which produced 29% for KPMG and 19% for Arthur Andersen. The fourth major source of revenue came from corporate finance, which generated 8% for KPMG and 5% for Arthur Andersen. Other services accounted for 1% of the total sales for both firms. Using the segment sales of these two firms as a guide, we present the service categories in the order of their revenue generated. Specifically, we show their services in the following order: (1) assurance, (2) tax and legal, (3) consulting, (4) finance, and (5) others. Under each of these major services, more specific sub-group services are presented in parentheses if such information is available.

One striking finding from Table 1 is that finance and finance related services account for a fairly large share of CPA firms' revenue. Although assurance, tax, and legal services still take a lion share of CPA firms' revenue (about 60% to 70%), corporate finance is listed by the Big Five as a major service category except for KPMG, which includes finance in its Assurance and Advisory Services. Furthermore, it is obvious that many sub-group service categories under traditional accounting services of assurance, tax, and legal services are finance related services. The same is true for consulting. Examples of finance related sub-groups include risk management, business valuation, IPO/listing services, M&A, due diligence, bankruptcy and reorganization, and many others. We do not have detailed information about revenues these finance related services generate

for the CPA firms. However, given the frequency and consistency of finance and finance related services listed by the firms in their scope of services, it seems that these services are major revenue generators for the CPA firms.

CPA Practice in China

Chinese accounting profession has undergone significant changes since the early 1980's. The changes have been made in response to China's economic reform and open door policy. Over the past 20 years, China's GDP grew from US$ 300 billion in 1983 to more than US$ 1,150 billion in 2001. China has become the largest foreign investment recipient among developing countries. Since 1979, it has approved more than 380,000 foreign investment ventures with a total contractual amount of US$ 726 billion. The significant transformation at the macroeconomic level has changed the environment for the accounting profession. The following characteristics have emerged: separation of government and business enterprise, emerging capital markets, and more internationalized, diversified economic and business activities (Adhikari & Tondkar, 1992; Tang, 1996; Chau & Chan, 2001). Different from the former central planned economy, where the Chinese government decided on everything, it mainly establishes policies and provides supervision. Business enterprises become separate legal entities and are responsible for their own decisions (Davidson et al., 1996). There are 1,154 listed companies traded on the Shanghai and Shenzhen stock exchanges in 2001. Their total market value is more than US$ 500 billion, more than 44% of China's GDP in 2001. There are 66 million people with investment accounts. More Chinese companies will be traded on these stock exchanges and additional foreign invested enterprises are expected to be listed on Chinese stock exchanges. These companies will also be allowed to purchase shares of state owned enterprises. More Chinese companies will be traded overseas in Hong Kong, New York, etc.

The rapid economic growth and dynamic developments of capital markets in China have changed the nature of accounting practice. The profession's main task was to provide accounting information to government agencies. Now, accountants must also provide information to government agencies as well as capital providers and business managers (Tang, 2000). These new customers demand quality service provided by independent, third- party accounting professionals. Chinese CPA firms have developed rapidly after the promulgation of the Law of the People's Republic of China on Certified Public Accountants in 1993. By the end of year 2000, there are 4,674 CPA firms and 51,349 CPAs in China (Li, 2001).

Many of these CPA firms are small with less than 10 staff accountants. According to CICPA, there were 86 CPA firms with more than 60 CPAs and annual revenue of RMB 15 million or more in 1999. These CPA firms are authorized to provide auditing services to financial institutions. Seventy-four of them are authorized to conduct equity and futures related business. An examination of their location reveals that most of them (50 firms, 58%) are in Beijing (30 firms, 35%), Guangdong Province (11 firms, 13%), and Shanghai (9 firms, 10%). None of the other provinces

has more than five of these CPA firms. To examine these large Chinese CPA firms' scope of business, we selected one firm from Beijing, Guangdong Province, and Shanghai. We also selected one from the following regions: Hebei Province (North China region), Hubei Province (South China region), Shaanxi Province (Northwest region), and Sichuan Province (Southwest region).

Table 2 shows names of these CPA firms and a summary of scope of business, which were collected from the websites of these CPA firms. Since these CPA firms are privately held companies, we do not have information of segment revenue for these firms. The importance of services is listed by the order of services provided by these firms. One characteristic is that most of their services are related to auditing and investment verification as stipulated in the Law of the People's Republic of China on Certified Public Accountants. This reflects that in a market economy, the public, investors, and creditors require an independent, competent third-party to provide opinions on company performance and financing activities. It also suggests that at their infant development stage, Chinese CPA firms have not developed capability or have not leveraged such capability into other service areas.

It is not difficult to find that many services provided by these Chinese CPA firms are closely related to finance. For example, asset valuation service includes merger and acquisition, bankruptcy and liquidation, reorganization and spin-off, sales of company and properties, etc. One unique phenomenon is that a Chinese CPA firm needs a special approval from the regulatory agencies to provide services related to equity and futures trading. CPAs must pass additional tests to be certified for these services. The services include pre-IPO/listing audit, profit forecast, financial reports and audits of publicly traded companies, banks, trust, security/futures companies, etc. These activities are closely related to corporate finance. Many services in management consulting are also related to finance such as financing/investment, reorganization, restructuring, liquidation, M&A, and business valuation.

Table 2. Scope of Services of Large Chinese CPA Firms

Name of CPA Firms	Summary of Scope of Services	
Beijing Yuehua	1.	Auditing (Company reorganization, liquidation, & IPO; Certification of listed companies' profit forecast; Annual & mid year statements; Investment verification; Annual audit of foreign invested enterprises; Annual audit of foreign exchange)
	2.	Tax Services (Tax preparation; Tax advisor)
	3.	Asset Valuation (Company reorganization & listed companies; Merger, joint venture, liquidation, & bankruptcy; Leasing, transfer, auction; Real estate; Intangible asset)
	4.	Consulting (As accounting advisor; Providing accounting services; Design accounting systems; Financial analysis; Financing,; Human resources; Employee compensation)
	5.	Information Technology (Development of accounting and management software; Computer applications training; Development of database for decision making)

Table 2. Scope of Services of Large Chinese CPA Firms		
Name of CPA Firms	Summary of Scope of Services	
Shanghai Lixin Changjiang	1.	Auditing (A & B share offerings, Acquisition; Liquidation; Transfer; Executive leaving office; Investment verification; Net asset; Internal auditing; Special projects; Court cases)
	2.	Asset Valuation (Enterprise investment; Company reorganization; Asset transfer; Merger; Property right mortgage; other government specified asset valuation)
	3.	Legal Services (Legal services; company sep up; reorganization; property right transfer; Merger & acquisition; Sino-foreign cooperation; Bankruptcy & liquidation; Debt to equity)
	4.	Management Consulting (Feasibility analysis; investment analysis; Merger & acquisition; Financing; Accounting advisory; Auditing & accounting research; Design of internal control; Planning of share offering)
	5.	Project Cost Consulting (Project cost consulting; Project audit service; Others)
	6.	Tax (Tax registration; Tax preparation; Tax auditing; Tax advisory; Tax appeal and cases)
	7.	Training (Accounting system; International accounting & auditing; academic exchanges; providing accounting books & journals, video-audio information, and software; accounting service)
Guangzhou Yangcheng	1.	Accounting & Auditing (Auditing of accounts, reports, and providing audit reports)
	2.	IPO (Pre offering planning & recommendations; Enterprise reorganization; Providing audit, investment certification, asset valuation, profit forecast for listed/reorganized companies)
	3.	Consulting (Accounting, finance, tax & management consulting; Design accounting system; Serving as advisor; Project feasibility analysis; providing registration service & preparing documents such as contract, agreement, bylaw; Teaching finance, accounting, auditing, computer application; Training of accounting, auditing, accounting software professionals;)
	4.	Asset Valuation (Asset auction & transfer; Enterprise merger, sales, joint venture; enterprise transformation to share ownership system & share offering; Sino-foreign cooperation; Liquidation; asset mortgage & guarantee)
	5.	Accounting Software (Computerized evaluation; Tax software; Providing accounting computer application; Providing software installation, alternative decision analysis, risk analysis)
	6.	Tax and Accounting Outsourcing (Tax registration, tax declaration, tax deduction report; Tax advisor; Tax research; Tax litigation; Accounting services)
Hubei Daxin	1.	Auditing (Incorporation & IPO/listing; Annual & mid year financial reports; Merger, spin-off, & liquidation)
	2.	Investment Verification (Paid-up capital verification; Net asset verification)

Table 2. Scope of Services of Large Chinese CPA Firms		
Name of CPA Firms	Summary of Scope of Services	
	3.	Asset Valuation (Asset valuation of property rights and their transfers)
	4.	Capital Construction Projects (Budgeting; Settlements of accounts & final accounts; Preparing bid documents)
	5.	Management Consulting (Management information system; Financial management control system; Financing/investment; Incorporation/IPO; Company restructuring; Tax service; Agent service; Computerized accounting system)
	6.	Management Training
Hebei Huaan	1.	Equity & Future Related Services (Company restructuring; Performance auditing; Certification of profit forecast; Financial statements audits; Accounting consulting)
	2.	Auditing (Financial statements audits; Capital investment verification; Foreign exchange; Liquidation; Accounting outsourcing)
	3.	Asset Valuation (Entire or single asset valuation; Asset valuation for various purposes)
	4.	Capital Construction Consulting (Project feasibility study; Project budgeting; Project bidding; Project cost information)
	5.	Consulting (Incorporation and reform; IPO; Restructuring; Financing/investment; Financial analysis; Accounting; Tax)
Xian Xigema	1.	Agent Service (Government policy & regulations; Incorporation & registration; Preparing legal & application documents)
	2.	Auditing (Liquidation; Management succession; Internal audit; Acquisition; Accounting services)
	3.	Strategic Planning (Company reform; Restructuring/merger; Strategy consulting; Investment research and planning; Financing research and planning; Short term investment & financing)
	4.	Tax (Financial and tax planning; Tax training; Tax related services; Tax audit)
	5.	Asset Valuation (Company reorganization and reform; Sale of company; M & A; Assets and auctions; Feasibility study; Liquidation; Asset insurance; Tax services)
Sichuan Redsun	1.	Auditing (Finance related auditing; Financial reports; Construction budget & final accounts; Financing & risky loans; Foreign invested companies)
	2.	Tax Services (Tax preparation; Tax related legal services; Tax consulting/training
	3.	Outsourcing and Consulting Services (Providing accounting services for clients; Management consulting; Working as accounting related advisor)
	4.	Real Estate Valuation (Valuation of real estate sales, leasing, merger, joint venture, and arbitration)
	5.	Asset Valuation (Valuation of tangible and intangible assets)

Table 2. Scope of Services of Large Chinese CPA Firms		
Name of CPA Firms	Summary of Scope of Services	
	6.	Project Cost Consulting (Project budget and final accounts; Project dispute arbitration; Project information)
	7.	Others (Auditing, finance, accounting training; Management training; Legal services)
Source: Service Directory of the CPA firms' websites		

Table 2 indicates that although Chinese CPA firms primarily provide traditional accounting services, finance and finance related services are becoming one of major revenue generators for these firms. To provide services in finance, current and future CPAs need to have a solid knowledge of finance. Although accounting is more closely related to finance than other business functions, there are substantial differences between accounting and finance. Therefore, a sound finance education is needed for future accountants.

Globalization of business has led multinationals to expand into foreign markets. Many international CPA firms have followed their clients overseas. In recent years, China has become the largest foreign investment recipient in developing countries. More than 300 of world's largest corporations have invested in China. It is not surprising that foreign accounting firms have entered into the Chinese market. For example, the Big Five all have their operations in China. Many of their clients are foreign multinationals investing in China. Table 3 lists the Big Five's scope of services for the Chinese markets. We note that unlike their Chinese counterparts, whose scope of services are limited, the Big Five provide a full range of professional services, even though their services may be limited by the host country's regulations and general economic/investment environment. It suggests that they have leveraged their expertise and experience into the Chinese markets.

Table 3. Scope of Services of Big Five in China		
Name of CPA Firms	Summary of Scope of Services	
PricewaterhouseCoopers	1.	Assurance and Business Advisory (Assurance; Transaction services; Global risk management; domestic market initiatives)
	2.	Tax and Legal (Tax audit negotiation; Ownership structures; Transfer pricing; PRC Healthcheck; Holding companies; Transaction support; Due diligence; Internal corp. reorganizations; Foreign contractors; Representative office; Individual income tax planning & compliance; Wholly foreign-owned enterprise formation; International trade and customs; Human resources; Healthcheck; WTO impact study; Entry strategy)

Table 3. Scope of Services of Big Five in China		
Name of CPA Firms	Summary of Scope of Services	
	3.	Management Consulting (Technology solutions; Strategic change; Performance improvement)
KPMG	1.	New Business in China
		Corporate Services (Registration of rep. offices, branches, project offices, wholly foreign-owned enterprises, and joint ventures)
		Tax (Registration with tax authorities; Advice on the structure of entity to simplify tax implications)
		Corporate Finance (Provide market and industry research; Feasibility studies; Asset valuation; negotiation/regulatory issues; Seeking regulatory approvals; Due diligence)
		Human Resource Advisory (Providing overview of local labor laws, compensation and social security requirements; Search for qualified local and expatriate staff)
		Assurance (Examination services on capital injection)
	2.	Day to Day Operation
		Assurance (Attestment; Due diligence; forensic investigations; Statutory compliance; IPO; SEC reporting; A and B share listings, and listing on all national exchanges)
		Information Technology (Selecting and implementing accounting and manufacturing systems; Technology support)
		Tax (Tax compliance and advise; Prepare tax returns; Assistance in dealing with tax bureau)
	3.	Improving Performance
		Business Performance Improvement (Reengineering of operations)
		Corporate Finance (Advising on regulatory issues related to investment and listing on stock exchanges; Providing reports on financial positions and profit forecast)
	4.	Divestment
		Corporate Services (Share transfer and de-registration)
		Assurance (Liquidation; Compliant reports for de-registration)
		Tax (Tax adjustments and tax de-registration)
Deloitte Touche Tohmatsu	1.	Assurance and Advisory (Chinese & international regulations & accounting standards; Financial audit; Consulting; Specialized computer audit services; Internal audit assistance)

Table 3. Scope of Services of Big Five in China		
Name of CPA Firms	Summary of Scope of Services	
	2.	Tax (Tax compliance & planning; Cross-border/international tax planning; Resolution of disputes with tax Authorities; Procurement of information and advance rulings)
	3.	Corporate Finance (Capital raising; Corporate advisory; Corporate restructuring; M & A; transaction services; valuations)
	4.	Management Consulting (Strategy; Operations; Information technology; Human resources; Financial management)
	5.	Chinese Client Services (Advice to foreign investors in China; Chinese firms establishing operations abroad; Raising capital in overseas markets & listing on foreign exchanges)
Ernst & Young (Beijing)	1.	Assurance & Advisory (Auditing to provide practical insights and ideas on financial and business risk)
	2.	M & A (Advising on environment in China; Identifying partners; Providing liaison support)
	3.	Due Diligence (Joint venture; Reorganization and transaction structuring; Risk assessment; Reviewing financial results)
	4.	IPO Services (Assistance in listing securities; Managing listing process; Providing assurance on financial statements; Advising on reorganization and restructuring)
	5.	Internal Audit (Risk assessment; Developing benchmark and best practices)
	6.	Japanese Business Services (Providing assurance services for transactions with and investment from Japanese MNCs)
Arthur Anderson	1.	Assurance (Financial and non-financial info.; Business processes and controls; Regulatory compliance; Info. for strategic transactions; Listing & restructuring; Risk management)
	2.	Business Consulting (Business design & implementation; Performance evaluation; Implementing ERP; Establishing business analysis and decision making models; Management training)
	3.	Corporate Finance (M & A; Divestitures; Restructuring; Raising capital; Optimizing real estate value; Independent/statutory valuation; business valuation; valuation report review)
	4.	eBusiness (eBusiness model; Web site design; Implementation; Background ERP integration)
	5.	Human Capital (Compensation and equity incentives; International Employment solutions)
	6.	Legal Services (Business; M & A; Labor; Real estate; Banking & finance; Intellectual property; information technology law)

Table 3. Scope of Services of Big Five in China		
Name of CPA Firms	Summary of Scope of Services	
	7.	Outsourcing (Design, implementation, & operations of accounting & finance processes)
	8.	Risk Consulting (Risk; related to business processes, technology, regulatory compliance, government contracting, fraud, treasury, and trading activities; Special client risks)
	9.	Tax Services (Corporate tax; International tax, indirect & local tax; Personal tax; Financing & management; Technology transfer; Joint venture negotiations)
Source: Service Directory of The CPA firms' websites		

Without detailed segment information, it is difficult to assess the revenues generated from each service category. It is likely that traditional accounting services accounted for the most revenues. It is nevertheless important to note that corporate finance and finance related services are consistently included in each and every one of the Big Five's scope of services. Again, many accounting services are finance related.

In sum, the above examination shows that the Big Five CPA firms clearly indicate that finance and finance related services have become one of major revenue generators for these firms. Their China specific services also include finance and finance related services as important components. Although the local CPA firms in China still receive most of their revenues from auditing and asset valuation, it is not difficult to see that they start to list finance and finance related services as part of their scope of services. When the traditional accounting services become saturated and competitive, the local CPAs would follow the suit of their US counterparts to drive more revenues out of finance and finance related business. The finding of what CPAs do suggests that current and future CPAs need to have a solid knowledge of finance.

EDUCATION OF CERTIFIED PUBLIC ACCOUNTANTS

CPA Education in the US

We have shown that CPA firms provide a fair amount of finance and finance related services. It is natural that CPA firms require that new accounting graduates have a sound finance education. Randall (1999) states it will always be critical that accountants have a strong foundation in finance. To investigate accounting education in the US, we selected several leading undergraduate programs listed in the U.S. News and World Reports (September 11, 2000) and a regional state university

from the Midwest. They include accounting programs at the University of Illinois at Urbana-Champaign (ranked the 1st in the best accounting programs in the US), University of Southern California (ranked 5th in the best accounting programs), Ohio State University (ranked 16th by the best academic reputation in the US), Michigan State University (ranked 19th by the best academic reputation in the US), and a state university from the Mid-west. We collected complete course requirements for a bachelor's degree in accounting at these universities from their websites or catalogs. Table 4 shows complete course requirements for a bachelor's degree in accounting at these institutions.

Table 4. Undergraduate Accounting Curriculum at Universities in the U.S.

University of Illinois at Urbana Champaign		University of Southern California		Ohio State University	
		Sample Lower Division Program		Sample Curriculum	
	Hours	First Year	Units	Freshman Year	Qtr.Hrs.
Univ. Comp. Req.	7-11	WRIT 140* Writing & Critical Reasoning	4	College Algebra	4
Gen. Ed. Req. 1	24	Gen Ed* Cat. VI	4	Finite Math	4
Foreign Language Req.	0-12	Gen Ed Choose from Cat. I, II, III or IV	4	Calculus	5
Business Core Req.	49-50	MATH 117 Intro to Math for Bus/ Econ	4	Princ. of Econ	5
ACCY 201 & 202 Prin of Acctg I & II	6	Gen Ed Choose from Cat. I, II, III or IV	4	Univers. Survey	1
B ADM 200 Legal Environment of Bus.	3	Gen Ed Category V	4	Computer Prob. Solving	5
B ADM 202 Principles of Marketing	3	MATH 118 Fund. Prin. of the Calculus	4	English Comp.	5
B ADM 2102 Mgt & Org Behavior	3	ITP 101 x Intro to Comp. & DP	4	GEC (history)	10
B ADM 389 Business Policy	3	Second Year		GEC (social sciences)	5
C S 105 Intro to Computing w/Applic. to Business & Commerce	3	ECON 203 Principals of Microeconomics	4	Total hours	44
ECON 102 & 103 Micro & Macro	6	MATH 218 Probability for Business	4	Sophomore Year	
ECON 172 & 173 Econ Stat, I & II	6	BUAD 250a Core Concepts Acctg Info	4	Prin. of Acctg	10
ECON 300 Interm. Microecon Theory	3	Gen Ed Choose from Cat. I, II, III or IV	4	Princ. of Econ	5
FIN 254 Corporate Finance	3	ECON 205 Prin of Macroeconomics	4	Elements of Stat.	9
MATH 125 & 1343 Intro Analysis for Social Scientists	7	BUAD 250b Core Concepts Acctg Info	4	Decision Theory	4
SPCOM 101 Princ. of Effective Speaking	3	BUAD 306 Business Finance	4	GEC (arts and humanities)	5
Major	21	WRIT 340 Advanced Writing	4	GEC (natural sciences)	10
Minimum requirements in major for Bachelor of Science Degree in Accountancy are:		Junior Year and Senior Year Program		GEC (2nd writing course)	5

Table 4. Undergraduate Accounting Curriculum at Universities in the U.S.

University of Illinois at Urbana Champaign		University of Southern California		Ohio State University	
		Sample Lower Division Program		Sample Curriculum	
	Hours	First Year	Units	Freshman Year	Qtr.Hrs.
ACCY 300 Pro. Development Workshop	3	Students required to take 9 of 10 core courses offered.		Total hours	48
ACCY 301 Acctg Measrmt & Discl	3	Core Program		Junior Year	
ACCY 302 Dec. Making for Accountancy	3	BUAD 302T* Bus. Com. (acctg majors)	4	Bus. Skills and Envrmt.	4
ACCY 303 Acctg Inst & Regulation	3	BUAD 304 Organizational Behavior	4	Cost Accounting	5
ACCY 304 Acctg Control System	3	BUAD 306 Business Finance	4	Intermediate Accounting	9
ACCY 305 Assurance & Attestation	3	BUAD 307 Marketing Management	4	Intro to Intern. Bus.	4
ACCY courses may not be taken on a credit/no credit basis unless all requirements of the major have been satisfied. A limit of 33 hours of accountancy courses (including ACCY 201 and ACCY 202) may be counted toward the 124 total hours required for the Bachelor of Science Degree in Accountancy		BUAD 310 Applied Business Statistics	4	Legal Env. of Bus.	4
Electives	0-32	BUAD 311 Applied Mgt Science	4	Principles of Finance	4
Total hours for the degree min	124	BUAD 350 Macroeconomic Analysis, or	4	Principles of Marketing	4
Note 1. For courses that meet this requirement, see the Office of Undergraduate Affairs.		BUAD 351 Econ. Anal. For Bus. Decisions	4	Organizational Behavior	5
Accounting courses (33 semester hours) account for 27% of the total hours of 124.		BUAD 403T* Legal Environ. of Bus.	4	Operations Management	4
Finance course (3 hours) accounts for 2.4% of the 124 hours.		BUAD 497 Managerial Decision-Making & Planning (for seniors only)	4	GEC (arts and humanities)	5
		Additional Required ACCTG Courses		GEC (natural sciences)	10
		BUAD 305x Abrid.Core Con. Acc Info	4	Total hours	58
		ACCT 360 Acc Issues & Dec. Making I	3	Senior Year	
		ACCT 361 Acc Issues & Dec. Mak. II	3	Acctg Info Systems	5
		ACCT 362 Acc Issues & Dec. Mak. III	3	Acctg Special Topic	4
		ACCT 450ab Ext. Fin. Report. Issues	3-3	Acctg Special Topic	4
		ACCT 451 Tax Issues for Business	3	Adv. Financial Acctg	4
		ACCT 452 Accounting Info Systems	3	Seminar in Bus. Policy	4
		ACCT 455 Internal Reporting Issues	3	Economics option	5
		ACCT 456 Auditing & Assurance Issues	3	GEC (arts & humanities)	5
		Total Hours	131	GEC (contemp.world)	5

Table 4. Undergraduate Accounting Curriculum at Universities in the U.S.

University of Illinois at Urbana Champaign		University of Southern California		Ohio State University	
		Sample Lower Division Program		Sample Curriculum	
	Hours	First Year	Units	Freshman Year	Qtr.Hrs.
		Accounting courses (27 semester hours) account for 21% of total hours of 131		Electives	10
		Finance course (4 hours) accounts for 3% of the 131 hours.		Total hours	46
				Total hours for graduation	196
				Acctg courses (41 qtr hrs) account for 21% of total hours of 196.	
				Finance course (4 hours) accounts for 2% of the 196 hours.	

Source: University websites and catalogs.

Typically, in addition to two basic accounting courses, which are required for any business majors, the accounting majors must take two intermediate accounting, one accounting information system, one cost accounting, one auditing, one tax, and one advanced accounting. This pattern can be clearly identified by the curricula at Ohio State, Michigan State and the regional university. In the two leading accounting programs at University of Illinois and USC, especially at the former, the pattern is changing. Their curricula structure and course titles are more aligned with what CPAs do in the real world. Although there are some differences in course offerings, the selected universities require accounting majors take 9 to 10 accounting courses, which represent about 21% - 25% of the total credit hours of 120 to 131 semester hours.

By contrast, accounting students at these universities are required to take one basic finance course, which represents 2% - 3% of the total credit hours. The typical basic finance course introduces terms and concepts of time value of money, risk and return, investment decisions, financing decisions, working capital management, and other special topics. These are important finance topics, most of them are not covered in accounting courses. However, given the nature of the course (a survey course for all business majors) and the time limit (typically a 3-semester hour course), it cannot cover the subject in depth and breadth. In today's competitive market place, finance and finance related transactions have become very complicated. To provide competent finance and finance related services, CPAs need to know more than what is taught in the basic finance class.

One of the obvious omissions in these accounting curricula is Personal Finance. A significant amount of research evidence has shown that Americans lack basic personal finance knowledge. There is little personal finance education in primary and secondary schools and high school students

repeatedly fail to pass basic personal finance tests. There is little research on how universities perform in terms of providing sound personal finance basics to college students. However, survey results show that college students are not knowledgeable about personal finance (Danes and Hira 1987; Volpe et al. 1996; Chen and Volpe 1998). If high school and college students have poor knowledge, it is not surprising that American adults are not knowledgeable about the subject. Financial illiteracy has serious consequences. Personal savings are low and the number of credit card delinquencies has increased. Personal bankruptcies are at record levels. Workers' productivity is affected because they worry about their personal finances. Improving personal finance education is essential to properly help people manage their finances.

People's illiteracy about personal finance has created opportunities for personal finance professionals. Comprehensive personal financial planning and its many facets have experienced significant growth in the past decades and are projected to grow at a 20% rate over the next ten years. The trend has attracted the attention of CPA firms. More than 400 accounting firms nationwide have formed alliances with brokerage firms and mutual-fund houses to provide financial services (MacDonald, 1997). The AICPA has viewed financial planning as one of the core services of CPA firms in the future (AICPA, 1998). Strangely, none of the reviewed accounting curricula require accounting students to take a single Personal Finance course. Accounting majors may be able to take more finance courses as their electives. Most schools allow students to select their own electives, which typically include about three or more courses. Out of five universities we selected, only the University of Southern California does not have electives. We do not have information as to how many finance courses the accounting majors take as their electives. Yet, we would not be surprised that most of the electives will be additional accounting courses.

Table 4. Undergraduate Accounting Curriculum at Universities in the U.S.
(Continued)

Michigan State University			A Regional State University	
I.	WRITING	Credits	General Degree Requirements	Hours
	ATL 110-150 Amer. Thought & Lang	4	ENGL 1550 Writing I	3
II.	Integrative Studies (24 minimum)		ENGL 1551 Writing II	3
	ISB 200 level Biological Science	3	PHIL 2625 Intro to Prof. Ethics	3
	ISP 200 level Physical Science	3	Artistic & Literary Perspectives Electives	6
	ISB L or ISP L Lab	2	Natural Science Electives	3
	IAH 201 Arts and Humanities	4	Lab Science	4
	IAH 200 level Arts and Humanities	4	COMM 1545 Comm. Theory & Practice	3
	ISS 200 level Social Sciences	4	Societies & Institutions Elective	3
	ISS 300 level Social Sciences	4	PSYCH 1560 Gen. Psych	3

Table 4. Undergraduate Accounting Curriculum at Universities in the U.S.
(Continued)

Michigan State University			A Regional State University	
III.	Business Core (54 credits)		GER Elective (Art & Lit. Persp. Or Nat. Sci. only)	3
a.	All of the following courses (51 credits):		Tool Courses	
	ACC 201 Princ. of Fin. Acctg	3	BUS 1500 Dynamics of US & Global Bus.	3
	ACC 202 Princ. of Mgt. Acctg	3	MATH 1548 College Bus. Math I	3
	BUS 309 Bus. Info Sys. & Tech.	3	MATH 1549 College Bus. Math II	4
	CSE 101 Computing Concepts 2	3	ECON 2610 Principles I	3
	EC 201 Intro to Microecon	3	ECON 2630 Principles II	3
	EC 202 Intro to Macroecon	3	MGT 2604 Legal Env. of Bus. I	3
	FI 311 Financial Management	3	ACCTG 2602 Financial Accounting	3
	GBL 451 Law of Commercial Trans.	3	ACCTG 2603 Managerial Accounting	3
	MGT 315 Managing HR & Org. Behavior	3	ECON 3780 Bus. & Econ. Stats	4
	MGT 409 Bus. Policy and Strat. Mgt.	3	ECON 3781 Bus. & Econ. Stats Workshop	1
	MSC 300 Managerial Marketing	3	Core Courses	
	MSC 303 Intro to Supply Chain Mgt.	3	FIN 3720 Business Finance	3
	MSC 317 Quant. Bus. Research Methods	3	MKTG 3703 Mktg Conc. & Pract.	4
	MTH 103 College Algebra 4	3	MGT 3725 Fund. of Management	3
	MTH 124 Survey of Calc. w/Applic. 1	3	MGT 4850 Strat. Management	3
	STT 315 Intro to Prob. and Stat. For Bus.	3	Major Requirements	
	1 additional Econ at the 300 or 400 level	3	ACCTG 3701 Intermediate Acctg I	4
b.	One of the following courses (3 credits)		ACCTG 3702 Intermediate Acctg II	4
	EC 340 Survey of International Econ	3	ACCTG 3709 Acctg Info Systems	3
	MSC 310 International Business	3	ACCTG 3711 Cost Accounting	3
IV.	Major Field - a min. GPA of 2.0ACC 250 Prepar. For		ACCTG 4801 Advanced Acctg	3
	Acctg Career (P-N)	1	ACCTG 4808 Auditing	4
	ACC 300 Interm. Fin. Acctg I	3	ACCTG 4813 Federal Tax	4
	ACC 301 Interm. Fin. Acctg II	3	MGT 3714 Legal Env. of Bus. II	3
	ACC 321 Acctg Info Systems	3	Bus. Upper Div. Electives	9
	ACC 331 Fed. Inc. Tax Acctg	3	Non-Bus. Electives	10
	ACC 341 Cost and Managerial Acctg	3	Total Hours	124
	ACC 411 Auditing	3		
	ACC 308 Gov. & Not-for-Profit Acctg	1		

Table 4. Undergraduate Accounting Curriculum at Universities in the U.S.
(Continued)

Michigan State University			A Regional State University	
V.	Elective Credits Outside College of Bus.Minimum of 9 credits outside College of Bus. & Dept. of Stat. & Prob. are required.		Accounting courses (31 semester hours) account for 25% of the total hours of 124.	
VI.	Other Elective Credits		Finance course (3 hours) accounts for 2.4% of the 124 hours.	
	Remaining credits for grad. are electives.			
VII.	Requirements for Graduation	120		
Accounting courses (26 semester hours) account for 22% of the total hours of 120.				
Finance course (4 hours) accounts for 2.5% of the 120 hours.				

Source: University websites and catalogs.

CPA Education in China

Accounting education in Chinese universities has undergone significant changes in the past two decades (Tang, 1997). Under the old centralized planning economy, Chinese higher education followed the model of the former Soviet Unions. There were many highly specialized majors in universities, which were in turn controlled by government ministries in charge of the related industries. Within accounting, there were many specialized majors such as Industrial Accounting, Petroleum Accounting, Foreign Trade Accounting, etc. With the economic reform and opening up to the world, significant changes occurred in the Chinese socio-economic environment, which in turn have brought about transformation to the accounting profession (Cooke & Wallace, 1990; Baydoun & Willett, 1995; Tang, 1997). The new market oriented economy requires separation of government and business enterprise, calls for capital markets, and involves more internationalized, diversified economic and business activities (Adhikari & Tondkar, 1992; Tang 1996; Chau & Chan, 2001). New accounting standards, practices, and profession are needed to meet the requirements of China's modernization program. Part of Chinese accounting reform is accounting education reform (Chan & Rotenberg, 1999).

Accounting programs and curricula have been revised to bring these programs and curricula more in line with the needs of economic reform and with practice abroad (Cooper et al.,1994; Hu & Marts, 1994; Yu, 1994; Gao, 1995; Lin et al., 1998; Chan & Rotenberg, 1999; Tang, 2001). In 1994, seven universities with doctoral programs in accountancy were approved to set up a CPA specialization in their undergraduate programs. An additional 16 universities offering master degrees in accounting were allowed to offer the CPA specialization in 1995. We collected eight CPA programs from the 23 universities. They include universities from various regions in China.

Specifically, they are Shanghai University of Finance and Economics, Xiamen University, Fudan University, Jiangxi University of Finance and Economics, Beijing Technology and Business University, Tianjin University of Finance and Economics, South West University of Finance and Economics, and Xi'an Jiaotong Univeristy. We collected accounting curriculum information for the CPA specialization from their websites. Table 5 presents courses offered by the accounting programs at these Universities. Required courses are numbered except for Xiamen Univeristy, Fudan University, and Beijing Technology and Business University, whose courses are listed as courses available. It is not certain if CPA majors need to take all of these courses.

Although the data are sketchy, Table 5 shows that Chinese accounting programs provide extensive coverage of accounting subjects, which are similar to those covered in undergraduate accounting programs in the US. A CPA major must take at least 7 required accounting courses (South West University of Finance and Economics). At Xi'an Jiaotong University, a CPA major must take 12 accounting courses, which include practice and thesis. Other universities require similar credit hours with about 8 required accounting courses plus several electives. The total accounting credit hours account for 30% of total required credit hours to graduate (Tang, 1997). We confirm this percentage from Xi'an Jiaotong University's curriculum flow chart.

As to finance, two universities, Shanghai University of Finance and Economics and Xi'an Jiaotong University, require Financial Management for CPA majors. Financial Management is not required by Tianjin Univeristy and South West University. For the other four universities, there is not enough information to determine if the course is required. Even for the two universities that require Financial Management, the exposure of finance is minimal compared with extensive coverage of accounting subjects. It is also noted that none of these leading Chinese universities with CPA specialization require Personal Finance, which is not even listed in electives.

INTEGRATING FINANCE EDUCATION IN CPA PROGRAMS

Knowledge Gap of Accounting Majors

A review of what CPA firms do and what accounting educators teach is summarized in Table 6. In the first column, it shows that in the US, CPA firms provide services beyond the traditional services in accounting, auditing, and tax. Many of them are finance and finance related services. In the second column, it also suggests that by offering a comprehensive coverage of accounting materials, undergraduate accounting programs in US universities provide students with broad exposures to accounting, auditing, and tax topics. The required accounting courses account for 21% to 27% of the total credits for graduation. However, finance education is neglected. The importance of finance and finance related services is not reflected in the existing curricula both in terms of time allotment and content coverage. The required finance course represents 2% - 3% of the entire

curriculum. The limited time allocated to finance education may not be sufficient to give accounting majors a sound finance education. Table 6 shows clearly accounting majors' knowledge gap in Corporate Finance. They need to study more advanced materials in investment analysis, financing analysis, business valuation, M&A, reorganization, restructuring, public offerings, compensation/benefits, risk management, real estate, etc. In the field of Personal Finance, they need to learn the concepts, theories, and applications of the life cycle of financial planning, management of savings and borrowing, investment, tax, risk management, retirement and estate planning, etc. It is not surprising to find that accounting graduates who successfully pass the uniform CPA exam sorely lack basic concepts in Finance (Miller, 1999). Further, the lack of finance education may be one reason that accounting majors are not knowledgeable about Personal Finance (Volpe & Chen, 1996). To provide competent finance and finance related services, accounting students need more advanced training in finance.

Table 5. Undergraduate Accounting Curriculum for CPA Specialization at Chinese Universities

Shanghai University of Finance and Economics	Xiamen University	Fudan University	Jiangxi University of Finance and Economics
Common Requirement Finance Int'l Finance Int'l Trade Money & Banking Marketing Management Int'l Laws Computer Applications I & II Required Courses 1. Elementary Accting (3) 2. Intermediate Accting (6) 3. Cost Accting (4) 4. Managerial Accting (3) 5. Advanced Accting (6) 6. Auditing (3) 7. Financial Mngt (3) 8. Computer Applications in Accting (4) Electives Accting English (6) Accting for Security Companies (3) Mngt Consulting (3) Foreign Invested Enterprises Accting (2) Foreign Exchange Accting (2) Accting Theory (3) Computer Applications in Auditing (2) Auditing Theory (2)	Common Requirement Public Finance Finance English Economics Management Main Courses Offered 1. Principles of Accting 2. Intermediate Accting 3. Advanced Accting 4. Financial Mngt 5. Auditing 6. Cost Accting 7. Managerial Accting 8. Mngt Consulting 9. Economic Laws 10. Tax laws 11. Computer Applications in Accting & Auditing	1st & 2nd Year Finance Principles of Accting Management Org. Behavior Marketing Micro Economics Int'l Finance & Trade Accting Courses 1. Financial Accting 2. Management/Cost Accting 3. International Accting 4. Tax Accting 5. Auditing 6. Computer Applications in Accting 7. Accting Research Non Accting Courses Multinat'l Fin. Mngt MIS Investment Insurance Int'l Commercial Laws Real Estate Int'l Marketing Mngt Int'l Finance and Trade Multinat'l and Human Resource Mngt System Analysis and Design Options & Futures Accting English	Common Requirement Management English Economics Accting Courses 1. Principles of Accting 2. Intermediate Accting 3. Cost Accting 4. Managerial Accting 5. Auditing 6.Computer Applications in Accting 7. Advanced Accting 8. Int'l Accting Other Courses Financial Mngt Internet and eBusiness

Source: Websites of the universities. For Shanghai University of Finance and Economics, course credit hours are put in parentheses. For Fudan and Jiangxi University of Finance and Economics, their listed non-Accounting course may not indicate that all courses are required. For the latter, the list may not represent full course requirements.

Table 5. Undergraduate Accounting Curriculum for CPA Specialization at Chinese Universities
(Continued)

Beijing Technology and Business University	Tianjin University of Finance and Economics	South West University of Finance and Economics	Xi'an Jiaotong University
Main Accting Courses 1. Principles of Accting 2. Intermediate Accting 3. Advanced Accting 4. Managerial Accting 5. Financial Mngt 6. Cost Accting 7. Auditing 8. Computer applications in Accting 9. Fin.l Statements Analysis 10. Investment 11. Mngt Consulting 12. Special Research on Finance and Accting	Required Courses 1. Principles of Accting 2. Intermediate Accting 3. Int'l Accting 4. Computer Applications in Accting 5. Financial Accting 6. Cost Accting 7. Managerial Accting 8. Advanced Accting Electives Design of Accting System Computing Technology Bank Accting Budget Accting History of Accting Insurance Accting Theory of Accting Asset Valuation Accting Laws & Regulations Independent Auditing Int'l Investment Excel Fin. Analysis Int'l Fin. Mngt Intagible Assets	Foundation MIS Foundation of Accting Statistics Western Economics Financial Mngt Economic Laws Management Marketing Core Courses 1. Financial Accting 2. Cost Accting 3. Auditing 4. Computer Applications in Accting Electives (3 out of 5) 5. Managerial Accting 6. Bank Accting 7. Advanced Accting Accting for Government & non-profit org. Auditing for Banking and Finance Other Eectives Accting for Investment Auditing for Investment Asset Valuation Insurance Accting Listed Co. Disclosures Special Topics Money and Banking Public Finance	Foundation Economics Management Accting Required Courses 1. Principles of Accting 2. Intermediate Accting 3. Advanced Accting 4. Auditing 5. Financial Mngt 6. Cost Accting 7. Managerial Accting 8. Tax Accting 9. Computer Applications in Accting and Auditing Required Practice 10. Accting Simulation 11. Internship 12. Thesis

Source: Websites of the universities. For Shanghai University of Finance and Economics, course credit hours are put in parentheses. For Fudan and Jiangxi University of Finance and Economics, their listed non-Accounting course may not indicate that all courses are required. For the latter, the list may not represent full course requirements.

In the third and forth columns, Table 6 summarizes what CPAs do and what professors teach in China. At the current stage, Chinese CPAs mainly provide services in traditional accounting areas. Some large CPA firms, who are authorized to provide equity and futures related business, also provide services related to finance such as valuation, IPO/listing, M & A, reorganization, and raising capital. They do not provide any personal finance related services. One area needs to be mentioned is that they do not provide service related to international operations. For example, all work related to Chinese companies' listings on overseas exchanges are monopolized by foreign CPA firms, especially the Big Five. We believe that as China furthers its economic reform and programs of open door policy, Chinese CPAs will expand their services into areas as their counterparts in the US. As to the CPA education in universities with CPA specialization, the current curricula are similar to those in the US. Extensive emphasis is given to accounting topics, and accounting courses represent about 30% of total courses required for graduation. Only one basic finance course is required.

Table 6. Summary of CPA Practice and CPA Education in the US and China

CPA Practice in the US	CPA Education in the US	CPA Practice in China	CPA Education in China
Accounting Services 1. Assurance 2. Tax and Legal Service	Accounting Education [1] 1. Principles of Accounting I 2. Principles of Accounting II 3. Intermediate Accounting I 4. Intermediate Accounting II 5. Accounting Information System 6. Cost Accounting 7. Auditing 8. Tax 9. Others 10. Electives The required accounting courses account for 21% - 27% of the total credit hours for graduation.	Accounting Services 1. Auditing Auditing reports Capital verification reports Audit related to merger, splitting, or liquidation of an enterprise 2. Accounting Services Outsourcing 3. Tax	Accounting Education[4] 1. Principles of Accounting 2. Intermediate Accounting 3. Cost Accounting 4. Managerial Accounting 5. Tax 6. Auditing 7. Computer Applications 8. Others 9. Electives The required accounting courses account for about 30% of the total credit hours for graduation.
Finance and Finance Related Services 3. Corporate Finance IPO/listing Mergers & Acquisitions Due diligence Restructuring, spin-off, and disposal Valuation and appraisal Project finance Risk management Treasury management Real estate Employee benefits/ executive compensation 4. Personal Finance Financial planning process Investment planning Risk management planning Tax planning Retirement planning Estate planning	Finance Education [2] 1. Financial Management The required course accounts for 2% - 3% of the total credit hours for graduation.	Finance and Finance Related Services 4. Corporate Finance IPO/listing Mergers & Acquisitions Reorganization & restructuring Raising capital Asset valuation	Finance Education[5] 1. Financial Management
Other Services 5. Consulting Human Resource Solution Information Technology Strategic Planning International Expansion	Others [3]	Other Services 5. Consulting Accounting and tax advisor Design & implementation of accounting systems Project consulting Strategic consulting Human resource	Others [3]

Source: Service directories of the CPA firms and catalogs and websites of accounting curricula from the universities.

Note:

[1] The first 2 courses are required for all business majors. Course 3 to 8 are required for accounting majors across many undergraduate accounting programs. The "Others" includes courses such as Advanced Accounting, Laws and Regulations, etc. Electives can be a variety of courses.

[2] All accounting programs have required one basic finance course. None require Personal Finance. Additional finance content may be covered in electives.

[3] These topics may be covered by other business courses and/or electives.

[4] Course 9 may includes courses such as Advanced Accounting, International Accounting, Bank Accounting, Accounting for Government and Non-profit Organizations, etc.

[5] Selected programs require one Financial Management course. None of universities list Personal Finance as a required or elective course.

Needs and Benefits of Incorporating Finance

CPAs need more finance knowledge. Albrecht and Sack (2000) quote one practitioner, "My job is no longer putting numbers together. I do more analysis. My finance skills come into play a lot more than my CPA skills." Professional accounting organizations in the US have also acknowledged the importance of finance. For example, new professional certification programs in finance have been created by the AICPA and IMA. The former offers the Personal Financial Specialist (PFS) specialty certification to CPAs, and the latter has added the Certified Financial Management (CFM) professional certification.

Both accounting practitioners and professional organizations in the US have urged accounting educators to revise accounting curricula. The AAA warned in 1986 that "A growing gap exists between what accountants do and what accounting educators teach." Yet, during the past 15 years, little has changed in the accounting curricula. From 1990 to 2000, little if any has been added to accounting curricula except accounting courses (Albrecht & Sack, 2000). A key reason is that making substantive curricular changes requires the elimination of certain courses and/or the addition of others. These changes are stressful because professors must stop teaching what they are familiar with and retool to teach new content/courses (Volpe & Chen, 2001). Further, the curricular changes may involve dropping accounting courses and adding non-accounting courses. Accounting departments are reluctant to give up the teaching opportunities, consequently resources, to another department. The territorial mentality has played a role resisting change in accounting curricula.

In 1999, the AICPA endorsed a new framework, which identifies three core competencies for future development of courses and research. The three core competencies are functional, personal, and broad business-based competencies. Many elements of the competencies are related to finance. For example, skills of Risk Analysis, Measurement, and Research listed in the functional competencies; and M & A, financial issues facing the business, cost/benefit analysis of new regulation listed in broad business-based competencies can be learned from finance courses. Integrating finance can help students acquire many technical and business-based skills. When examining the effect of combining the Monopoly game with accounting reporting, Gill and Gore (2001) observe that the investment segment of the game further strengthens students' analytical skills. M&A, international finance, financing, cost/benefit analysis in the broad business-based competencies can also be learned from more advanced finance classes. There is evidence that there are culture and knowledge disparities between accounting and other professionals (Mills & Tsamenyi, 2000). Learning more finance will help future CPAs narrow the culture and knowledge gap between accounting and finance professions, thus enhancing their communication with others. More importantly, more finance education will enhance students' ability to think forward and equip them with tools and techniques to deal with future uncertainties. In sum, more finance education will help accounting students broaden their knowledge base, improve analytical skills, and correct their backward thinking mentality.

The knowledge deficiency in finance can prove even more challenging for CPAs in China. Many CPAs lack knowledge, skills, and experience in dealing with finance related transactions. The problem is compounded by the fact that China has joined the WTO. The accounting profession will face more competition and have to deal with more complex transactions involved in international transactions. Another new development is that Chinese companies will expand their business abroad. Chinese CPA firms should capture a share of this new market and break the monopoly of foreign CPA firms. In sum, the task of improving finance knowledge and skills among existing and future CPAs becomes more urgent in China. Both CICPA and academics in CPA programs in Chinese universities realize the problem of CPA education. A special meeting was held among government officials, accounting professors and others in July 2001. The participants recognize that content covered in the existing textbooks do not meet the needs of CPA education, and there is a gap between what employers want from new accounting graduates and what are taught in universities' CPA programs (Xun, 2002). They recommend that new materials should brought into accounting textbooks, more qualified experts with accounting experience should be hired to teach in universities, and more accounting practice and cases should be added to new curricula.

Incorporating Finance into Accounting Education

Revising curricula always presents a challenge. Yet, we must change accounting education quickly (Albrecht & Sack, 2000). To determine what subjects accounting students should learn, the accounting educators should closely examine core services provided by CPA firms, identify new trends, and assess their potentials. Any gaps and deficiencies in the existing curricula should be closed and eliminated. A through understanding of the AICPA's core services along with core value and competencies also provide a foundation for a revised accounting curriculum. One way to provide a solid finance education is to recommend that accounting students select double majors in accounting and finance. An alternative would be double minors in accounting and finance. Under a traditional setting, accounting students can select finance as a minor. Accounting majors should be required to take more finance classes as their electives. Providing opportunity to accounting majors to solve real world accounting and finance problems is another approach. These problems and cases can be collected from CPA firms or other practitioners in industry. As discussed in previous sections, many real world problems are closely related to finance. Solving these problems will help accounting majors learn finance. Of course, they must first learn finance basics. Other means to deliver more finance related coverage include internships and cooperative programs in finance, and finance related seminars and independent studies.

With the fast-growing domestic capital markets, further reform of state owned enterprises, and opening up to world markets, the Chinese accounting profession will confront problems experienced by their US counterparts. Traditional accounting work will become a commodity business. The profession will have to find additional sources of revenue. Corporate and personal

finance related services are the most likely revenue generators for CPA firms. As China transforms itself from a planned economy to a market economy, there will be more demand for CPAs to provide finance and finance related services such as investment analysis, financing analysis, business valuation, M&A, reorganization and restructuring, public offerings, compensation and benefits related issues, risk management, and real estate. Additionally, recent surveys have shown that the Chinese have learned the importance of personal financial management and started to seek professional help in this area.

We have already seen encouraging signs of changes. Two national institutions, National Accounting Institutes in Beijing and Shanghai, have been established and started operation. Their main function is to offer continuing education to CPAs, senior executives, government officials, and others. We have examined their recent course offerings. Their courses are more aligned with those used in the US. Some courses are developed and taught by scholars and practitioners from abroad. It is noted that many courses are finance courses and finance related. For example, National Accounting Institute in Beijing can offer courses such as Financial Management, International Finance, Capital Markets and Derivatives, and Financial Statement Analysis. Shanghai National Accounting Institute has offered Financial Management for Non-financial Managers, CFO Seminar, Strategic Cost Management and Performance Evaluation, etc. It is clear that they realize that finance is important for accounting professionals. Otherwise, they would not spend scarce resources to develop finance courses at the expense of other accounting courses at the beginning of their operation.

CONCLUSION

Profound changes in the accounting profession have required CPAs to master a new set of skills. This paper focuses on what is missing in accounting education in the US and China. Specifically, it examines accounting students' knowledge gap in finance. We compared what accountants do and what accounting educators teach. The comparison reveals that while practicing CPAs provide many finance and finance related services, accounting professors offer only limited exposure of finance to accounting students. It is clear that additional finance training is necessary for future CPAs to provide quality services.

After considering what CPA firms do, what accounting educators teach, changes occurring in the accounting profession in US and China, the AICPA's Core Competency Framework, and the CICPA's concern about accounting education, we recommend that accounting students should learn more finance knowledge and skills. They include more advanced coverage of investment analysis, financing analysis, business valuation, forecasting, and planning, M&A, reorganization and restructuring, public offerings, employee compensation/benefits, risk management and real estate related issues. They should also include personal finance related areas such as the personal financial

planning, management of savings and borrowing, investment, tax, risk management, and retirement and estate planning.

To fill the knowledge gap, accounting students can choose to major or minor in both accounting and finance, or take finance as their minor. They should also be required to take more finance classes as their electives. This will give them an opportunity to take more advanced finance classes. They should be encouraged to solve real world problems. Many real world problems contain finance elements. Finance related internships and cooperative programs, seminars, and independent studies should also help accounting students learn finance knowledge and skills. Accounting programs can also design cross-functional courses and materials.

It is a challenging task to make changes to the accounting curricula. What and how much of finance and other business elements should be integrated into the new accounting curricula will be open to debate. We believe that the case for inclusion of additional finance knowledge and skills in accounting education is compelling. Given the increasing demand for additional finance elements in accounting education from employers, students, and professional organizations, accounting educators must take the issue seriously and update the accounting curricula sooner, rather than later.

REFERENCES

Adhikari, A. & R.H. Tondkar (1992). Environmental factors influencing accounting disclosure requirements of global stock exchanges. *Journal of International Financial Management and Accounting, 4*(2), 75-105.

Albrecht, W. S. & R. J. Sack. (2000). *Accounting Education: Charting the Course Through a Perilous Future.* Vol. 16, the Accounting Education Series, a joint project of the AAA, the AICPA, the IMA, Arthur Andersen, Deloitte & Touche, Ernst & Young, KPMG, and PricewaterhouseCoopers.

American Accounting Association, Committee on the Future Structure, Content, and Scope of Accounting Education (AAA) (1986). Future accounting education: Preparing for the expanding profession. *Issues in Accounting Education* (Spring), 168-195.

American Institute of Certified Public Accountants (AICPA) (1998). *CPA Vision Project: Focus on the Horizon.* New York, NY: AICPA.

Baydoun, N. & R. Willett (1995). Cultural relevance of western accounting systems to developing countries. *Abacus, 31*(1), 67-92.

Bliss, R. T. & M. E. Potter (2000). Integrating the undergraduate business curriculum: The case of Babson College. *Journal of Academy of Business Education, 1*(Spring), 1-13.

Chan, L. & W. Rotenberg (1999). Accounting, accounting education, and economic reform in the People's Republic of China. *International Studies of Management & Organization, 29*(3), 37-53.

Chau, G. & T. Chan (2001). Challenges faced by accountancy education during and beyond the years of transition - Some Hong Kong evidence. *Journal of Accounting Education, 19,* 145-162.

Chen, H. & R. P. Volpe (1998). An analysis of personal financial literacy among college students. *Financial Services Review, 7*(2), 107-128.

Chinese Institute of Certified Public Accountants (CICPA) (2001). Introduction of CPA Profession. Retrieved January 29, 2001, from http://www.cicpa.org.cn/industry/hygk.htm.

Cooke, T. E. & R. S. O. Wallace (1990). Financial disclosure regulation and its environment: A review and further analysis. *Journal of Accounting Public Policy, 9*(2), 79-110.

Cooper, B. J., Y. W. Tang & L. Chow (1994). Accounting education in China. In J. O. Burns & B. E. Needles, Jr. (Eds.), *Accounting Education for the 21st Century: The Global Challenges* (pp. 23-28). New York: Pergamon.

Davidson, R. A., M. G. Gelardi & L. Fanyue (1996). Analysis of the conceptual framework of China's new accounting system. *Accounting Horizon, 10*(1), 58-73.

Gill, S. & R. Gore (2001). Using REIT financial statements to enhance the value of monopoly as a vehicle for interactive accounting instruction. *Journal of the Academy of Business Education, 2*(Spring), 52-62.

Gao, S. S. (1995). Accounting education and practice in China: Perceived problems and solutions. In J. Blake & S. Gao. (Eds.) *Perspectives on Accounting and Finance in China* (pp. 299-318). London: Routledge.

Hu, Y. & J. A. Marts (1994). A comparison of accounting education systems in Australia, the United States of America, and the People's Republic of China. In J. O. Burns & B. E. Needles, Jr. (Eds.), *Accounting Education for the 21st Century: The Global Challenges* (pp. 117-125). New York: Pergamon.

Institute of Management Accountants (IMA) (1994). *What Corporate America Wants in Entry-level Accountants.* Montvale, NJ: IMA.

Institute of Management Accountants (IMA) (1996). *The Practice Analysis of Management Accounting: Results of Research*. Montvale, NJ: IMA.

Institute of Management Accountants (IMA) (1999). *Counting More, Counting Less: Transformations in the Management Accounting Profession.* Montvale, NJ: IMA.

Li. Y. (2001). Report of China Institute of Certified Public Accountants. Retrieved January 29, 2001, from http://www.cicpa.org.cn/newss/news_122.htm.

Lin, Z. J., D. C. Yang & L. Wang (1998). *Accounting and Auditing in China.* Brookfield, Vermont: Ashgate Publishing Limited.

MacDonald, E. (1997). Accountants increasingly poach on brokers' turf. *The Wall Street Journal,* (February 12), C1.

Mills, J & M. Tsamenyi. (2000). Communicative action and the accounting/marketing interface in industry. *Journal of Applied Management Studies, 9*(2), 257-273.

Miller, C. (1999). Letter to the editor. *The Ohio CPA Journal*, (October-December), 63.

Randall, R. F. (1999). New challenges in finance. *Strategic Finance*, (March), 35.

Smith, S. R., P. M. Johnson & P. Tong (1999). China's transitional economy and its effects on accounting education and practice. In M. C. Frazer & M. Chatterji. (Eds.), *Management Education in Countries in Transition* (pp. 151-165). London: MacMillan Press Ltd.

Tang, Y. W., L. Chow & B. J. Cooper (1996). *Accounting and Finance in China.* Third Edition. Hong Kong: FT Law & Tax Asia Pacific.

Tang, Y. W (1997). The recent accounting development and internationalization of accounting education in China. *Issues in Accounting Education, 12*, 219-227.

Tang, Y. W. (2000). Bumpy road leading to internationalization: A review of accounting development in China. *Accounting Horizon. 14*(1), 93-102.

Volpe, R. P., H. Chen & J. Pavlicko. (1996). Personal investment literacy among college students: A survey. *Financial Practice and Education, 6*(2), 86-95.

Volpe, R. P. & H. Chen (2001). Finance: A missing dimension in accounting education. *The Ohio CPA Journal, 60*(2), 49-51.

Xun, P. (2002). Further Strengthen Education of CPA and Asset Valuation Specialization. Retrieved January 14, 2002, from http://www.cicpa.org.cn/newss/news.asp?id=832.

Yu, X. (1994). Reform of economic systems and university accounting education in China. In J. O. Burns & B. E. Needles, Jr. (Eds.), *Accounting Education for the 21st Century: The Global Challenges* (pp. 51-57). New York: Pergamon.

LIGHTS, CAMERA, ACTION . . . USING "REEL" LIFE TO BRING "REAL" LIFE INTO THE COLLEGE CLASSROOM

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ABSTRACT

Among its seven principles for good practice in undergraduate education, the American Association of Higher Education includes the encouragement of active learning, the encouragement of cooperative learning among students, and respect for diverse talents and ways of learning. Research in higher education supports the contention that integrating both active learning and cooperative learning strategies into the college classroom enhance the learning environment.

While there does exist a rich menu of alternatives to traditional projects which faculty can add to their repertoire, it is important to continue to communicate to colleagues methods which have proved successful in the classroom. This article describes the use of movies or "reel life" to enhance the learning experience by bringing "real" life into the classroom and having students apply what they have learned. One specific project, the Movie Project, which has been developed over several semesters and used in an individual income tax accounting course, is presented in detail.

Evidence from the authors' classrooms as well as the literature indicates that students not only enjoy the projects but also develop an appreciation of the impact of the subject matter on their everyday lives.

INTRODUCTION

The subject matter in both authors' classrooms–income tax accounting and health information management--is highly technical and statute-oriented. While traditional lecture and other more passive learning methodologies are employed for the initial introduction to the material, research in higher education (Bonwell & Eison, 1991; Johnson, Johnson, & Smith, 1991; Meyers & Jones, 1993; and Silberman, 1996) and business education (Becker, 1997; Bradford & Peck, 1997; and Salemi, 2002) shows that effective instructors select alternative strategies that involve students as active participants in the learning process (the concept of active learning) and use a variety of

teaching methods including their superior presentation skills to stimulate interest in the subject matter. Active learning includes any of a number of activities in which the students participate rather than passively listening to a traditional lecture. "A single teaching method typically cannot create all the conditions necessary for a given learning objective. In practical terms, an accounting instructor needs to carefully employ multiple teaching methods to achieve all the learning objectives of a given accounting course, since these objectives likely encompass the full range of types of objectives" (Bonner, 1999). With active learning, less emphasis is placed on the transmission of information and more on developing higher-order thinking skills in the students. Students must "talk about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives" (Chickering & Gamson, 1987).

The Movie Project in tax accounting is a group project. Working in peer groups, a first step in "cooperative learning," can be useful in helping students understand and retain material, aids in developing better communication skills, (Lie, 1999) and helps students prepare for the reality of the job-world where cooperative interaction is a daily occurrence (Kagan, 1994). In more than 168 studies conducted between 1924 and 1997 which compared the efficacy of cooperative, competitive (students compete against each other for the higher grades) and individualistic (students are evaluated against predetermined criteria) learning, results indicate significant increases in achievement when cooperative learning strategies are employed rather than competitive or individualistic approaches (Johnson, Johnson, & Smith, 1998). Further, these studies indicate that interpersonal relationships are enhanced when cooperative rather than competitive means are used (Johnson, Johnson, & Smith, 1998). Other researchers report that students are more willing to take responsibility for (their) educational experience when they have more input into decisions (as will be seen, in the case of the Movie Project this involves the decision to include an issue on the identification list) rather than being dependent on and subordinate to the teacher (Rubin & Hebert, 1998, and Forsyth & McMillan, 1991).

GROUP FORMATION

There are three additional considerations when adopting group learning strategies–selecting the appropriate mix of personality types or learning styles in forming groups, insuring that the instructor actively monitors and facilitates group activities, and insuring productive participation by all group members. With regard to group formation, a heterogeneous group (gender, ethnicity, academic performance, personality type) appears to be most productive especially when the groups will work together over long periods of time or on complex projects (Paulson, 1999). In the tax accounting class, the instructor administers an abbreviated Myers-Briggs test to determine individual learning styles and forms the groups with an appropriate mix of personality/learning styles. Finally, in deciding on the ideal size of the group, consider which size will allow full participation by all

members but also provide for a variety of viewpoints. After experimenting with groups of three, four, five, and six, the professor's observations and results of student peer evaluations indicate that groups of four (or five) have worked most efficiently for the project described here.

The Personality Profile shown in Table 1 is completed by all students on the first day of class. The profile, an abbreviated Myers-Briggs instrument, is derived from one included in a presentation entitled "Targeting Teaching by Psychological Type" by Richard D. Grant, associate professor of psychology at Auburn University, at the 1998 AICPA Tax Education Symposium. According to Grant, "students can team up with fellow students of opposite type preferences in order to speed up problem solving, offer inclusive, balanced strategies of approach, assist each other in their respective 'blind spots,' and provide a systematic method for practicing a team approach to accounting practice."

The instructor "scores" the tests and assigns a "personality profile" to each student based on four preferences: learning--(E)xtroverted or (I)ntroverted; information-gathering--(S)ensing or (N)Intuitive; organizing--(T)hinking or (F)eeling; and workstyle or lifestyle (J)udging or (P)erceiving. For example, as Table 2 indicates, (E) personalities prefer speaking to writing and are motivated by face-to-face group discussion while (I) types prefer internal deliberation and writing over oral communication. An (S) is stressed by assignments to be "creative" while an (N) shows innovative creativity. (T) personalities like to solve problems through objective analysis while (F) types are stressed by being limited to managing a situation in an objective, competitive, impersonal manner. Finally, (J)s tend to take the initiative in organizing activities, prefer to stay on schedule, and complete one task at a time while (P)s are energized by the unplanned and do not like over scheduling, preferring to move from one task to another without completing the first. Successful groups need a mixture of all types as, for example, a group consisting solely of (P) types may never complete a project. The author has found that in addition to advancing the formation of more well-rounded groups (although Ps and Ns in an upper-level accounting class are scarce), the students enjoy learning about themselves as their "test" scores and the information in Table 2 is distributed to each of them at the end of the first week of class.

Table 1: Personality Profile

I. Part I: Answer questions A, B, and C by indicated your answer (E) or (I) in the blank next to the question.

___A. Are you usually: (E) a good mixer OR (I) rather quiet and reserved

___B. In a large group, do you more often: (E) introduce others OR (I) get introduced

___C. At parties, do you more often: (E) always have fun OR (I) sometimes get bored

II. Record your answers on the score sheet on the right. Moving from left to right, place "mark" or "blackout" the appropriate circle on the score sheet.

1. Are you more impressed by (a) principles or (b) emotions?
2. Is it worse for you to (a) be "in a rut" or (b) have your "head in the clouds?"
3. Do you prefer to work (a) just "whenever" or (b) to deadlines?
4. Are you more often (a) a cool-headed person or (b)a warm-hearted person?
5. Are you more interested in (a) what is possible or (b) what is actual?
6. Does it bother you more having things (a) completed or (b) incomplete?
7. Which rules you more (a) your head or (b) your heart?
8. In doing things are you more likely to (a) do it your own way or (b) do it the established way?
9. Which is more admirable (a) the ability to adapt and make do or (b) the ability to organize and be methodical?
10. Which is more of a compliment (a) "There is a very logical person" or (b) "There is a very compassionate person?"
11. Are you drawn more to (a) overviews and variations or (b) facts and fundamentals?
12. In general would you rather have things (a) open-ended or (b) pinned down?
13. Which comes more naturally for you (a) clarity of reason or (b) depth of sensitivity?
14. Are you more frequently (a) an imaginative sort of person or (b) a down-to-earth sort of person?
15. Do you tend to be more (a) spontaneous than deliberate or (b) more deliberate than spontaneous?
16. Are you more interested in (a) design and research or (b) production and distribution?
17. Would you say that you are (a) more ingenious than practical or (b) more practical than ingenious?

III. Score Sheet

	a	b		a	b		a	b
1	○	○	2	○	○	3	○	○
4	○	○	5	○	○	6	○	○
7	○	○	8	○	○	9	○	○
10	○	○	11	○	○	12	○	○
13	○	○	14	○	○	15	○	○
	T	F	16	○	○		P	J
			17	○	○			
				N	S			

1. Add up the total number of "filled in" circles from top to bottom in each column.
2. Place the number in the appropriate blank.

_____T

_____F

Table 2: What's Your Style?	
E (Extrovert) or I (Introvert) – *preferences in Teaching/Learning*	
E:	energized by external contact; seeks visual verbal physical contact in order to learn; needs to experience in order to learn; needs to talk about an idea/assignment before working on alone; likes to move from external examples or models to discussion of principles/theories. Prefers trial-and-error approach in approaching new material. Often prefers speaking over writing in communicating. When needing to concentrate or write needs to be in environment free from external distractions. Stressed by isolation understimulation. Feels acknowledged/motivated by face-to-face or group discussion feedback. May prefer timed multiple-choice exams over essay tests.
I:	energized by internal concentration; seeks to create conditions of concentration in order to learn; needs to understand in order to experience; may look non-reactive when idea/assignment is first presented. Moves from internal deliberation to external discussion. Prefers writing over speaking. Has little difficulty concentrating in order to write even with some external distractions. Stressed by having concentration interrupted by abrupt requirement to talk. Dislikes extemporaneous speaking in class. Feels acknowledged/motivated by written feedback or e-mail messages about work. May prefer essay open-book or take homes exams.
U.S. Population is 50/50 and there are no gender differences between E and I.	
S (Sensing) or N (Intuitive) – *how we gather information*	
S:	Experience is the teacher; likes "hands-on" and exact observation. Moves from solving everyday problems to a practical use of concepts/theory. Likes to memorize established facts and methods. Likes material presented a step at a time. Sees trees and forest but prefers to talk about the tree and its applications. Stressed by assignments to be "creative" with no examples or precedent. May get stuck dealing first time with an anomaly where tried-and-true methods don't apply.
N:	Words/ideas are the "teacher." Likes a theoretical conceptual approach drawing on the abstract work of good sources. Moves from proven ideas to solving everyday problems. Remembers models theories ideas impressions more than facts. Needs external prompts to remember isolated facts. Likes the big picture. Sees forest and trees but prefers to talk about the pattern of the forest and its relation to the larger reality. Is stressed by doing routine piecemeal work which does not link to an overall concept or higher meaning. May get stuck figuring out the first step of application; may become overwhelmed by all the possibilities.
U.S. population is 68% S and 32% N. In CPA firms Big Four sent to be S while self-employed tend to be N.	

Table 2: What's Your Style Continued	
T (Thinking) or F (Feeling) -- *how we organize; the organizing/deciding dimension*	
T:	Focuses on accurate information competence of teacher fairness of grading system. Likes to solve problems through objective analysis establishing cause-and-effect sequences. Wants to be evaluated objectively according to work not only personal effort. Under pressure may be too blunt and unintentionally hurt people's feelings. Thrives on competition. Tracks accuracy of content. Stressed by stupidity needless repetition; having to manage a situation primarily through personal subjective values.
F:	Focuses on personal connection and values as vehicle of learning; imitates the personal enthusiasm of the teacher for the subject matter; likes to solve problems through consensus-building. Wants to be acknowledged and appreciated for personal effort and not only the objective merits of the work. Personal comments/feedback on papers highly valued. Under pressure may take feedback/situations too personally. Tracks non-verbal cues relationship maintenance connection. Is stressed by disconnection indifference conflict and by limited to managing a situation in an objective competitive impersonal manner.
By the 4th grade this is defined. Females: 60% F and 40% T. Males: 40% F and 60% T. Northerners tend to be T and Southerners F. Latino: F.	
J (Judging) or P (Perceiving) – *work style lifestyle approach to profession*	
J:	Wants to know goal and establish routine to get there. Hinges self-esteem on attaining goals; will schedule/allocate time and energy to attain them. Needs to know exactly what is expected; does not like unexpected changes "pop" quizzes digressions from prepared classroom lecture. Needs feedback about progress to goal. Likes to finish one topic/assignment before moving on to another; work left undone can cause stress. Getting off schedule or losing control is stressful. May take initiative to organize activities and/or other students. Is the mast in the sailboat. Works like an ant rather than a grasshopper. Likes to learn by advice from a trusted authority. Assumes responsibility is a motivator. Shares the assumptions/values of the traditional; classroom: discipline teacher-driven delay of gratification self-control. Planning is everything. Emphasizes efficiency.
P:	Wants to work adaptively and flexibly to maximize the opportunity to present moment. Needs freedom to push limits and to explore. Curious playful does not need to finish projects to learn from them. Does not like over scheduling micro managing mere memorization of established practices. May move into new projects before finishing old ones; being forced by J-preference persons to become more "organized" can be very stressful. May take initiative to explore exceptions or present circumstances; energized by the unplanned unscheduled. Is the sail in the sailboat. Works like a grasshopper rather than an ant. Likes to learn by consequences. Assumes self-interest as a motivator. Shares assumptions/values of the open classroom: discovery student-driven "learning moments." Timing is everything. Emphasizes effectiveness.
U.S. population: 58% J and 42% P.	

Because maintaining group cohesiveness and productivity can be difficult in spite of the instructor's best efforts to form productive groups, the instructor should continue to monitor and

facilitate group activities by formally requesting feedback from the group as the project progresses. Group pages are set up on the Blackboard Course Management System to facilitate communication, with the instructor included as a member of each group. Further, groups are asked to keep a log of their meetings and copies of their communication through e-mail. Should problems occur and mediation fails, the instructor may recommend *The Team Memory Jogger,* a book that guides students through the teamwork process including tips on preparing to be an effective team member, getting a good start, getting work done in teams, and knowing when and how to end problems with teams.

Finally, any cooperative learning activity, including this group learning Movie Project, should be structured so that the contributions of all members are considered and respected and so that no member is allowed to contribute less than his or her fair share. Further, each student should be accountable for his or her contribution. In the tax accounting classroom, the instructor promotes accountability by including ten group project participation points in the grading base. Group members evaluate each other's performance based on agreed upon expectations by assigning points to fellow members. The instructor averages the points assigned. To insure that all group members assist with group assignments so that the burden does not fall on a few students, any group member who fails to receive at least 70 percent of the participation points (or an average score of seven on a 10-point scale) will not receive the group grade but will instead receive a grade prorated based on the percentage earned. Thus, a student who receives an average group participation grade of six, will receive only 60 percent of the group grade on the project. Any student who fails to receive a 50 percent or greater on the group evaluation receives a zero on the group project.

THE MOVIE PROJECT

Movies have been used extensively in both secondary and post-secondary education for a number of years. Morgan and Bender (2000) reported the usefulness of Hollywood movie in the development of management case studies citing that "the development of situational models from movies and television provide an almost unlimited availability of situational material that can be used to characterize reality." In fact, several movie studios routinely provide study guides to movies. Movies have also been used extensively in higher education classrooms including those in psychology (Hemenover, Caster, & Mizumoto, 1999; Bolt, 1976; Conner, 1996; and Desforges, 1994), criminal justice (Cook & Bacot, 1993), history (Sprau, 2001), English (Cross & Mitchell, 1995), science (Borgwald and Schreiner, 1994), and nursing (Raingruber, 2003), among others. In the health information management classroom, movies have been used to stimulate learning and to provide an interesting alternative to lecture. For example, *The Verdict* starring Paul Newman is an interesting and informative story about medical malpractice. It offers a refreshing change to the classroom as well as gives a good description of the legal machinations of medical malpractice.

Norma Rae (the establishment of a union), *Crackers* (a mental health drama) and the classic *One Flew Over the Cuckoo's Nest* (another excellent mental health drama) offer both a learning opportunity and a needed entertainment break for the students.

The idea for the Movie Project in the tax classroom originated from John Everett of Virginia Commonwealth University who presented the idea at an education session at the Mid-Year Meeting of the American Taxation Association. Dr. Everett screened excerpts of the movie *Indecent Proposal* during class to promote classroom discussion of the numerous tax issues in the movie (for example, the tax status of the $1,000,000 payment from Robert Redford to Demi Moore and the $1,000,000 charitable contribution from Woody Harrelson). The author has used the Movie Project in various forms in alternating semesters over the past several years to drive home the fact that tax issues affect students as individual taxpayers every day in ways they may not realize.

For this project, each group selects a movie which they view outside of the class and evaluate from a tax perspective. While the instructor provides students with a list of recommended movies as illustrated in Table 3, the group may select any movie with instructor approval. The movies included on the list are rich in tax issues--some extraordinary (lottery winnings, $1,000,000 payments) but most ordinary. Recommended movies include *The Untouchables* (tax evasion, illegal income); *It Could Happen to You* (lottery winnings, divorce issues, formation of business, gifts); *Baby Boom* (formation of business, business use of home, adoption, business expenses); *Indecent Proposal* (classification of $1,000,000 payment, charitable contribution, business expenses, hobby income/losses); *Maverick* (gambling income, theft losses, casualty losses); *You've Got Mail* (sale of business/assets, formation of business, divorce); *Pretty Woman* (corporate takeover, trade or business expenses, gift/compensation); and *Pollyanna* (adoption, filing status, medical expenses). For more complex issues, *Wall Street* (illegal income, insider trading, corporate buyouts) is also a good choice while *Soul Food* offers several family-oriented issues.

Groups are instructed to view the movie, and prepare a report as detailed in Table 4. Students first prepare a comprehensive list of all tax issues introduced in the movie. While the Movie Project also has a research component, the issue-identification portion of the project which is the focus of this article has two major objectives: (1) to enable students to identify issues that may have tax consequences and should be further researched, and (2) to make students aware of the impact that taxes have on our everyday lives. In terms of grading, the instructor's preparation of the "answer key list of issues" for each movie is initially time-consuming. A sample "key" for *It Could Happen to You* is provided in Table 5. The author has comprehensive keys for several of the movies listed as well as others and will share those lists. As the library of movies is built, this part of the process becomes easier. In addition, there are several websites which give summaries of movies and which provide search capabilities using key words. Sites which may be useful include the following: Teachwithmovies.org; Allmovie.com; and Uk.imdb.com.

Table 3: Description of the Movie Project

MOVIE PROJECT
Each group should meet and select EITHER one of the following movies to view and analyze for tax issues (these have been reviewed and contain substantial tax issues) or select a movie of your choice.
THE UNTOUCHABLES--Booze is illegal and people are dying for it. Federal treasury agent Eliot Ness is determined to bring down Chicago gangster Al Capone and his bootlegging empire. Ness assembles his team and the bullets fly. ®) (Note: this movie contains strong language and excessive violence.) (Kevin Costner, Sean Connery, Andy Garcia)
IT COULD HAPPEN TO YOU--Nicolas Cage, Bridget Fonda and Rosie Perez star in this irrepressible romantic comedy inspired by the true story of a humble cop who leaves a $2 million tip to a hard-luck waitress. (PG)
BABY BOOM--When J. C. Wyatt, a total workaholic, in charge of her life and career inherited a 13-month-old baby girl, she finds her life is no longer her own. Fleeing the city and moving to the country, J.C. and Elizabeth market their applesauce which becomes a nationwide success. But. . . will she then return to the city and the fast lane when an offer comes her way. (PG) (Diane Keaton)
INDECENT PROPOSAL--One million dollars. No questions asked. David and Diana Murphy can end their financial worries if they accept the offer of billionaire financier John Gage. ®) (Some explicit scenes) (Robert Redford, Demi Moore, Woody Harrelson)
MAVERICK--Ante up--for laughter and action a plenty! Mel Gibson is sly gambler Bret Maverick and Jodie Foster is a charming scam artist and James Garner is a laid-back lawman in *Maverick*, the crowd-pleasing hit that deals you a winning hand. (PG)
YOU'VE GOT MAIL– Three little words that Joe Fox (Tom Hanks) and Kathleen Kelly (Meg Ryan) long to hear. Superstore book chain magnate Hanks and cozy children's bookshop owner Ryan are anonymous e-mail cyberpals who fall head-over-laptops in love, unaware that they are combative business rivals. (PG)
PRETTY WOMAN –When successful corporate mogul Edward Lewis (Richard Gere) meets carefree Vivian Ward (Julia Roberts), their two lives are worlds apart. But Vivian's energetic spirit challenges Edward's no-nonsense approach to life, and soon they are falling in love. (Some explicit scenes). ®)
POLLYANNA–Here you'll meet Pollyanna, the orphan who brings sunshine into the lives of everyone she meets. But her strict Aunt Polly is too concerned with appearances, propriety and local politics to appreciate her effervescent niece. (G) (Hayley Mills, Jane Wyman, Richard Egan).

For the remainder of the project, the group must select three major tax issues in the movie (their major issues do not always coincide with those selected by the instructor, which is acceptable as long as their issues are significant and not minor points), and prepare a technically detailed report on those issues and the various alternative tax treatment for the issues (the research component). For the movie, *It Could Happen to You*, certainly the treatment of the lottery winnings, the treatment of the $2,000,000 transfer from Charlie to Yvonne, the purchase of Yvonne's business, and the tax status of the $600,000 in donations to Charlie and Yvonne are major issues. The summary of each issue must include a discussion of any choices the taxpayer has regarding the reporting of that issue, the requirements for the specific action to be taken citing specific Code and Regulation sections, the effect of the item on Form 1040 and accompanying schedules, and the impact of related items under current tax law. Thus, this component of the project also serves as an exercise in tax research, a valuable benefit to all students but especially those who plan to sit for the new CPA exam which will include tax research cases. When possible, a representative of the CCH Tax Research Network, the network available on campus, conducts a one-hour tax research seminar to assist the students with their research. In other semesters, the instructor provides written research instructions. The final project is evaluated on the completeness of the identification of the tax issues, the selection of the major issues, the technical accuracy of the information reported, and the elements of the written report including presentation, organization, clarity, punctuation and grammar. Three excerpts from recent projects on *Baby Boom* and *It Could Happen to You* are included in Table 6.

Table 4: The Movie Project Instructions

1. You are to prepare a report as follows:
   - a. Introduction
   - b. PART I: List of tax issues as they occur in the movie.
   - c. PART II: Select what your group thinks are the three main tax issues. In this section of the paper you should do the following for each issue:
     - (1) Discuss any choices the taxpayer has regarding that issue. (For example, a single taxpayer with a dependent child for whom he/she is maintaining a home may file single or head of household, but head of household is more advantageous.)
     - (2) Discuss requirements for the specific action to be taken. (For example, discuss the requirements of filing head of household, citing specific CODE sections and REGULATION sections.)
     - (3) Discuss the effect of the item on the Form 1040 and accompanying schedules. (For example, the filing status must be entered on the face of the 1040 and will affect the amount of the taxpayer's standard deduction taken on page 2 of the Form 1040.)
     - (4) Discuss any other related items needing explanation. Be sure to consider current tax law.
   - d. Conclusion
2. You will be graded on three specific criteria--your identification of all relevant issues, your technical coverage of the issues identified including all the elements described in 1 above, and your written communication skills including adherence to the required format.

Table 5: List of "Key" Issues–It Could Happen to You

Additional standard deduction for blind individual
Accident–casualty deduction
Birth of child in taxi–dependency exemption child credit child and dependent care credit earned income credit
Tax consequences of Yvonne's bankruptcy
Yvonne's initial filing status–married but husband gone
Muriel/Charlie filing status while married
Muriel's wages as hairdresser; Charlie's wages
Charlie's deduction for police uniforms (MID)
Unreimbursed employee business expenses
Taxability of lottery winnings–to whom taxable
$2 million tip from Charlie to Yvonne
Robbery & damage to Korean grocery store
Theft of woman's purse–Theft deduction
Medical expenses (Charlie's broken arm)
Taxability of workers' compensation–Charlie
Taxability of Yvonne's wages/tips
Yvonne's purchase of business
Tax status of business–form of business ownership
Deductibility of self-employed health insurance
Deductibility of business expenses
Depreciation expense on business assets Charitable contribution–meals to indigents?
Charitable contribution–Policeman's Widows Fund
Charitable contribution? –season tickets
Charitable contribution? –to individual
Charitable contribution–chair to Goodwill
Deductibility of free ride to subway commuters
Deductibility of renting Yankee stadium?
Deductibility of medical expense–plastic surgery
Tax status–Muriel's improvements to apartment and plan to convert to rental property
Moving expenses to New Jersey
Tax status of attorney's fees for divorce
Tax consequences of Charlie and Muriel's divorce settlement
Tax consequences of Yvonne's divorce
Taxability of jury duty pay
Tax consequences of Yvonne's sale of business
Deductibility of postal uniforms
Tax status of $600000 Charlie & Yvonne received
Muriel and Jack's filing status (Jack left country)
Charlie & Yvonne's filing status if marry
Possible phase-outs due to high income
Capital gains on mutual funds

Table 6: Excerpts from Movie Project

Baby Boom; Kasey Castille, Tiffany Decou and Jared Doucet–Excerpt from First Issue–Adoption Expenses

JC adopts Elizabeth after she decides that the couple the adoption agency had chosen was not right for Elizabeth. Adoption expenses are an allowable credit according to code section 23. Under section 23(a) a credit is allowed for the year before after or during which the adoption becomes final. According to section 23(b)(1) the amount of the credit shall net exceed $5000 or $6000 in the case of a child with special needs. The Taxpayer Refund and Relief Act of 1999 would have allowed an increase in the maximum credit for adoptions with special needs individuals. The maximum would have increased from $6000 to $10000. The $10000 would have been all-inclusive unfortunately the Taxpayer Refund and Relief Act of 1999 was vetoed allowing no increased credits. Under section 23(d)(1) the expenses that are considered qualified would be: adoption fees court costs attorney fees traveling expenses and other reasonable expenses. In order to take the adoption expense credit the taxpayer must adopt an eligible child. According to section 23(d)(2) an eligible child is one who is under 18 years old or physically or mentally incapable of caring for himself or herself. Being that Elizabeth was only a baby she would qualify as an eligible child.

JC's credit could be phased out if her AGI would exceed $75000 and would be completely phased out at $115000 according to section 23(b)(2). However section 23(b)(3)©) provides that any unused adoption expense credit can be carried over for up to five years. The adoption credit is first filled out on Form 8839 and then flows to page 2 of the 1040 line 45.

It Could Happen to You; Sherie Edmond, Melissa Michon, Katie Hebert and Laci LeBlanc-- Excerpt from First Major Issue–Lottery Winnings

According to the Internal Revenue Code inclusion of qualified prizes is subject to the constructive receipt regulations. Prior to 1998 lottery winnings were subject to the constructive receipt doctrine: the amount is made readily available to the taxpayer and the taxpayer's actual receipt is not subject to substantial limitations or restrictions (Reg. 1.451-2(a)). However in 1998 Congress initiated a provision to section 451(h) stating lottery winnings can be received in installments and included in gross income as the installments are actually received.

The lottery winnings whether received in full or installments is reported as "Other income" online 21 on the face of the 1040. This inclusion ultimately increases the adjusted gross income.

It Could Happen to You; Allison Broussard Amber Domingue, Chastity Lanclos, Brandi Manuel and Tabatha Moxley; Excerpt from Second Major Issue–Tip Income

Out of the four million dollars that Charlie and Muriel won from the lottery, two million dollars was given to Yvonne. Yvonne was the waitress that Charlie promised half of lottery winning to in the place of a tip. There are two ways to think about this two million dollars that was given to Yvonne. If it is considered a tip, then it is taxable income. The code section for the reporting of tips is Section 6053. If Yvonne reported the money as a tip to her employer, the amount would be included on her W-2 and the appropriate taxes would have been taken out. If the tips were not reported to her employer Yvonne will have to fill out a Form 4137 to pay the correct amount of Social Security and Medicare tax on the unreported amount. The amount computed on Form 4137 will go on line 54 of the taxpayer's 1040.

If the money given to Yvonne was considered a gift it is not taxable to her. The general rule for a gift is found in the Code Section 102. It would not be tax deductible for Charlie and Muriel whether it was classified as a tip or a gift. The first $10000 of the gift given to an individual is not subject to the gift tax. However, Charlie and Muriel may pay a gift tax on the amount over $10000. They would have to file a gift tax return using Form 709.

STUDENT EVALUATION OF THE PROJECT

Student response to the project has been positive. While reaping the previously discussed benefits inherent in group work, students report that "digging for tax issues" was fun and achieved the instructor's goal of bringing real life into the classroom. One group wrote that "becoming aware of tax consequences for each endeavor in life opens one's eye(s) to a new world of perspective of whether or not his endeavor is beneficial from a 'tax' point of view" while another commented that "the tax students of Accounting 420 see a new and exciting edge to the plot (of the movie)–the effect on the tax return." The group who viewed *Maverick* concluded that "we were able to watch the movie from a different perspective and apply what we have learned from Acct 420 to the characters and their situations." Students were less enthusiastic about the tax research element of the project, but did express appreciation for the opportunity to hone their research skills

In order to more objectively assess student perceptions of the issue identification section of the Movie Project (that is, the use of the movie to identify tax issues), a questionnaire was distributed via e-mail three months after the end of the semester to the 53 students enrolled in the tax class in Spring 2003. Responses were received from 48% of the former students who were encouraged to submit answers anonymously. Students were asked to indicate their agreement with five statements using a 5-point Likert scale with 1 indicating "strongly agree," 2 "agree," 3 "no opinion," 4 "disagree" and 5 "strongly disagree." Results included on Table 7 indicate that the students agreed that both objectives of the project were met; that is, the project enabled them to identify issues that may have tax consequences and should be further researched (1.78) and the project made them aware of the impact that taxes have on our everyday lives (1.6). They further stated that the use of the movie for issue identification should be continued (2.17). The students were less supportive of the statement that the use of a case may have achieved the objective better than the movie project (2.5) although some students, in their comments, expressed a preference for a case. Finally, the students agreed with the statement: "I enjoyed the issue identification portion of the Movie Project" (2.04). Student responses to a request for comments are included in Table 8.

Table 7: Movie Project Assessment–Questions	
One of the objectives of the movie project is "to enable students to identify issues that may have tax consequences and should be further researched." Indicate on a scale of one to five the extent to which you believe this objective was achieved.	1.78
A second objective of the movie project is "to make students aware of the impact that taxes have on our everyday lives." Indicate on a scale of one to five the extent to which you believe this objective was achieved.	1.60
Assume that the same objective could have been achieved with a tax case similar to those used in Management classes. Indicate on a scale of one to five the extent to which you think the use of a case may have achieved the objective better than the movie project.	2.50
Keeping in mind that a research project will continue to be required in Acct 420, indicate on a scale of one to five whether or not you think the use of the movie for issue identification should be continued in the tax class.	2.17
Indicate on a scale of one to five your agreement with this statement: "I enjoyed the issue identification portion of the Movie Project."	2.04
1= Strongly Agree 2 = Agree 3 = No Opinion 4= Disagree 5 = Strongly Disagree	

Table 8: Movie Project Assessment--Student Comments
I was glad to answer the questions! I think that the movie project is a great idea! I found that while watching the movie I felt that I got to be the Accountant standing there with them seeing nothing but the tax issues and having little concern for too much else.
I took Acct 420 twice and in both classes the group project was different. Even though I found the movie project to be slightly harder that the case project I found that I learned more doing the movie project than I did doing the case project in the other class. The case project was just a lot of rules and didn't allow me to apply those rules to everyday life like the movie project did so I was unable to absorb the facts of that case.
I think that the movie project was a really good one. I enjoyed doing the project as much as tax projects can be enjoyable. I do not think that a case would be as good or better because cases are really boring. At least the movie project is kind of fun.
I think the idea of using a movie to relate tax issues to everyday life is fun and unique idea. How often do watch movies for a grade in a 400 level class. Although it was a great idea I think using cases to get the "tax" point across is a better way of doing things. With movies you kind of reached out pretty far for issues and then they weren't really "everyday things". I think using cases that happen in real world would be better to relate to. is fun and unique idea.
Maybe another form of research like a case study would better suit the project.

I am trying not to take into consideration the contributions provided by everyone in the group on the project. Just like other assignments involving groups of people there are individuals who are not "outgoing" or very verbal. This puts a strain on the rest of the members contributing to take the full load of the assignment to try and keep their grade at an acceptable or high level. Individual case studies are beneficial because focus and concentration is developed. The part about the movie project I enjoyed the most was the section involving the research. Various resources from our books to the internet were utilized to develop an appropriate answer to the question. I did enjoy trying to find the tax issues related to the movie. The only problem is getting too involved in the plot of the movie and actually forgetting to look for the tax issues!

To add a little the tax case in my mind would not have helped me out personally. I think the movie really showed how tax is affected by our every day lives and vice versa. The movie project was a big help to me and I think it will continue to help students.

I enjoyed the movie project because even though we were doing a research project at the same time it did not feel like we were doing a research project. It was a different way of doing a research project and not your same old case study problems.

THE LEARNING PROCESS

For a more theoretical evaluation of the project in terms of the type of learning taking place, parallels between the various steps in the Movie Project and Kolb's (1981) four-stage learning model–concrete experience, reflective observation, abstract conceptualization, and active experimentation–may be drawn. The model, which "conceptualizes the learning process in such a way that differences in individual learning styles and corresponding learning environments can be identified," supports the author's use of Myers-Briggs personality profile which identifies learning preferences in the group formation process. According to Kolb, at each of the four stages of the learning cycle, different learning abilities are required. Therefore, carefully constructed educational activities should not only address the four stages, but also give students with different learning strengths an opportunity to use these abilities (Svinicki and Dixon, 1987).

Kolb's first stage, concrete experience, involves the direct experience of using one's senses. In the case of the Movie Project, viewing the movie is considered a stage one activity. While watching the movie, students identify tax issues, some of which will later be researched and presented in a written report. In stage two of the learning model, reflective observation, the learner reflects upon the experience through various means such as discussion and written journals. Stage two activities include reviewing/discussing the list of tax issues with other group members. In this stage, some creativity is necessary to "dig" for tax issues. For example, in *It Could Happen to You*, the main character is hurt in a robbery attempt. From that brief scene, students should identify many issues including theft loss, possible workers' compensation, medical expense deduction, and reimbursement for medical expenses, among others. In general, those students with imaginative ability that lends itself best to the generation of original ideas are most proficient performing tasks

based on the first two stages. In terms of learning styles and preferences, "E" students who are energized by external contact and who seek experience in order to learn find stimulation in stages one and two. These students prefer speaking to writing and do not like working alone.

From this point, a learner then moves to the third stage, abstract conceptualization, in which one interprets, reasons, analyzes, evaluates, and draws conclusions in order to explain the earlier experience. The analysis and evaluation of each issue in the long list leading to the selection and research of the three major issues from the movie are stage three activities. The final stage in the process, active experimentation, has students applying what they have learned in the prior three stages. Producing the written paper is an activity in this stage. Students whose greatest strength is the practical application of ideas rather than the generation of ideas have dominant abilities in stages three and four. In terms of learning preferences, "I" students find stimulation in the internal concentration required for research and prefer writing to speaking.

CONCLUSION

In our effort to prepare our students for successful professional careers, educators search for and experiment with teaching methodologies by creating a pleasant, dynamic, thought-provoking classroom environment to optimize student learning. Research indicates that active learning strategies have many advantages in the college classroom, among them the promotion of higher-level thinking skills, while cooperative learning strategies help prepare students for the daily group interaction of the job-world. The authors have found that the movie project presented here, one such active learning project incorporating a first step in cooperative learning, has enhanced the learning environment in their classrooms by bringing real life into the classroom and giving the students an appreciation of the practical applications of their subject matter. Further, the movie project appears to have something for every learner, providing a complete learning experience that develops students' abilities in all four stages of the learning process. Finally, it should be noted that although the instructor has used the project exclusively in tax accounting, it can be adapted to other courses as well. For example, the plot in *Wall Street* as well as the storyline in *Pretty Woman* includes stock options, pension plans, and mergers and acquisitions–issues covered in intermediate accounting.

REFERENCES

Accounting Education Change Commission (AECC). (1993). Evaluating and rewarding effective teaching. Issues Statement No. 5. *Issues in Accounting Education* 8 (2), 436-439.

Becker, W. E. (1997). Teaching economics to undergraduates. *Journal of Economic Literature,* (35), 1347-73.

Bolt. M. (1976). Using movies based on literature in teaching psychology. *Teaching of Psychology*, (3), 189-190.

Bonner, S. E. (1999). Choosing teaching methods based on learning objectives: An integrative framework. *Issues in Accounting Education*, (14, 1), 11-39.

Bonwell, C. C. & J. A. Eison (1991). *Active learning: Creating excitement in the classroom.* ASHE-ERIC Higher Education Report No. 1. Washington, D.C.: The George Washington University, School for Education and Human Development.

Borgwald, J. M. & S. Schreiner. (1994). Science and the movies: The good, the bad, and the ugly. *Journal of College Science Teaching*, (23), 367-371.

Bradford, B.M. & M. W. Peck (1997). Achieving AECC outcomes through the seven principles for good practice in undergraduate education. *Journal of Education for Business,* 72(6), 364-368.

Chickering, A.W. & Z. F. Gamson (1987). Seven principles for good practice in undergraduate education. AAHE Bulletin (March), 3-7.

Conner, D.B. (1996). From Monty Python to Total Recall: a feature movie activity for the cognitive psychology course. *Teaching of Psychology*, (23), 33-35.

Cook, K. L. & H. Bacot. (1993). Movies in the classroom: Popular images of criminal justice, criminology and the law. *Journal of Criminal Justice Education,* 4(1), 199-209.

Cross, S.M. & D. Mitchell. (1995). Dead poets do tell tales. *English Journal,* (84, 7), 84-86.

Desforges, D. M. (1994). Applying theories of development: An exercise for teaching adolescent psychology. *Teaching of Psychology*, (21), 245-246.

Forsyth, D. R.& J. H. McMillan, (1991). Practical proposals for motivating students. In *College Teaching: From Theory to Practice*. R. J. Menges and M.D. Svinicki, ed. New Directions for Teaching and Learning. 45. San Francisco: Jossey-Bass.

Grant, R. (1998). Targeting teaching by psychological type. In material for 1998 AICPA Tax Education Symposium. Las Vegas, Nevada.

Hemenover, S. H., J. B. Caster, & A. Mizumoto. (1999). Combining the use of progressive writing techniques and popular movies in introductory psychology. *Teaching of Psychology,* (26, 3), 196-198.

Johnson, D. W., R. T. Johnson & K. A. Smith (1991). *Active learning: Cooperation in the college classroom*. Edina, MN: Interaction Book Company.

Johnson, D.W., R.T. Johnson & K.A. Smith. (1998). Cooperative learning returns to college: What evidence is there that it works? *Change,* (July/August), 27-35.

Kagan, S. (1994). *Cooperative learning.* San Juan Capistrano, CA: Kagan's Cooperative Learning.

Kolb, D. (1981). Learning styles: Implications for improving educational practice. ASHE-ERIC Higher Education Report, No. 4. Washington, DC: George Washington University, School of Education and Human Development.

Lie, A. (1999). Cooperative learning: Changing paradigms in college teaching. *ACUCA Journal,* Manilla, Philippines.

Meyers, C. & T.B. Jones (1993). *Promoting active learning strategies for college classroom*. San Francisco: Jossey-Bass.

Morgan, W.B. & J. Bender. (2000). Hollywood: Fictitious and factual case models for teaching situational reality. *Academy of Educational Leadership Journal,* (4, 2), 31-35.

Paulson, D. (1999). Active learning and cooperative learning in the organic chemistry lecture class. *Journal of Chemical Education*, (77, 8), 1136-1140.

Raingruber, B. (2003). Integrating aesthetics into advanced practice mental health nursing: Commercial film as a suggested modality. *Issues in Mental Health Nursing,* (24), 467-495.

Rubin, L. & C. Hebert (1998). Model for active learning: Collaborative peer teaching. *College Teaching,* 46(1), 26-30.

Salemi, M. K. (2002). An illustrated case for active learning. *Southern Economic Journal,* 68(3), 721-731.

Silberman, L. (1996). *Active learning, 101 Strategies to teach any subject.* Boston, MS: Allyn and Bacon.

Sprau, R. (2001). I saw it in the movies: Suggestions for incorporating film and experiential learning in the college history survey course. *College Student Journal,* 35 (March), 101-113.

Svinicki, M.D., & N.M. Dixon. (1987). The Kolb model modified for classroom activities. *College Teaching*, (35), 141-146.

The Team Memory Jogger. (1995). First edition. GOAL/QPC and Joiner Associates, Inc.