THE EFFECTS OF TEAM AND CASE APPROACHES TO THE DEVELOPMENT OF STUDENTS' PROFESSIONAL SKILLS: AN EXPERIENCE ON BEGINNING ACCOUNTING COURSES AND ON A CAPSTONE COURSE IN MSA PROGRAM

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ABSTRACT

The paper reports the results of an innovative teaching method which incorporates the training of other professional skills, such as intellectual, interpersonal, communication, team work, learning to learn, and leadership abilities, in the beginning two accounting courses at the undergraduate level and in a capstone course in a Master of Science in Accounting program. Because the degree of maturity in accounting knowledge differs between students in the beginning accounting courses and in a capstone course for a master's program, the characteristics and approaches to cases are applied differently. The feedback from students, which includes student evaluation, common final exam, and student satisfaction and retention rate, are higher among innovative sections as compared to the sections with traditional teaching approaches.

INTRODUCTION

Due to intense competition, globalization and advances in technology, the environment for business operations is constantly changing. Because of this, accounting education is undergoing a fundamental challenge to prepare graduates with skills, knowledge and attitudes suitable for the changing business world. In recent years, the major documents and events which have prescribed the recommended changes in accounting education include the 1986 American Accounting Association Committee on Future Structure, Content, and Scope of the Accounting Education (Bedford Committee); the recommended curriculum for entry into the accounting profession by the Federation of School of Accountancy (1982), Institute of Internal Auditors (1985), the National Association of Accountants (1996), and the AICPA (1988); The Big Eight Accounting Firms' Prospective on Education: Capabilities for Success in the Accounting Profession; and, finally, the formation of the Accounting Education Change Commission by the American Accounting Association to serve as a catalyst to initiate and to facilitate the change.

The traditional accounting education focuses on a narrower education in technical accounting content within a static business environment. However, the evidence has shown that technical accounting content, while necessary, is insufficient to meet the challenges of the accounting profession in a changing world. The accounting education needs to broaden the educational focus and move from teaching to a learning prospective with an emphasis on the development of skills beyond technical accounting content. These additional skills include intellectual, interpersonal, team work, communication skills, lifelong learning and leadership abilities.

Numerous papers have presented the results of the innovative teaching pedagogy

aimed at training students with one or more of these additional skills beyond the technical content of accounting. The purpose of this paper is to report the results of experiences with innovative teaching approaches in introductory financial accounting, introductory managerial accounting, and a capstone accounting course for a MSA program. Because of the different degrees of maturity of students in accounting knowledge different approaches are employed with successful results.

LITERATURE REVIEW

Numerous articles or statements present the expanded skills of competencies required for success in the accounting profession. In its first position statement published in 1990, the Accounting Change Commission suggested the skills for lifelong learning, interpersonal, intellectual, communication, and knowledge in organization and business as well as the professional orientation are needed for success in the profession. Bhamornsiri and Guinn (1991) summarized the profile of individuals who advanced to partners in Big Six CPA firms with technical competence, communication skills, interpersonal skills, practice development and administrative skills as being most important to success. Siegal and Sorenson (1994), were commissioned by the Institute of Management Accountants and the Financial Executives Institute to survey the needs of corporate customers regarding the accounting curriculum and summarize a curriculum for corporate accountants. Geary and Rooney (1993) note that accounting education has traditionally been based on rule-based type of thinking, whereas the profession today requires more intuitive or unstructured thinking. This implies that the course content and assignments need to give increased emphasis to intuitive or unstructured training to develop students' competencies in the real business world. Simons and Higgins (1993) indicated that both academicians and practitioners from CPA have generally agreed that more emphasis should be given to the development of communication and problem-solving skills. Kimmel (1995) concluded that the instructional strategies, which include cases and cooperative learning, are effective in developing critical thinking skills; while Wolcott and Lynch (1997) indicated that training in the ability to identify, frame, and solve unstructured problems in an uncertain environment is the process of developing critical thinking of accountants.

Cases have been shown to be an effective approach in developing students' critical thinking and judgment abilities as well as promoting active learning [Knechel (1992), Craig and Amernic (1994)]. However, the survey results of the case users and nonusers in undergraduate accounting courses regarding the benefits and impediments to case usage (Libby, 1991) concluded the possibility that the benefits of case usage are not being realized because accounting faculty generally use cases only to stimulate discussion or to illustrate a topic as part of a traditional lecture class. Another pedological approach in promoting active learning is cooperative learning. In addition to promoting active learning, cooperative learning may also create a sense of community, team and interpersonal skills, and prompting the concept that knowledge is created rather than being merely transferred and thus is a vehicle to train students with skills in critical thinking and lifelong learning. When the cooperative learning is accompanied by group coordination and presentation, it can also prepare students with skills in leadership and communication. Much literature has discussed the usage of cooperative learning [Cottell and Millis (1993); Peek, Winking and Peek (1995); Sullivan (1996), Johnson and Smith (1997)].

The discussion of the innovative teaching approaches for introductory accounting courses begins with the AECC Position Statement Number Two, the first course in accounting (AECC, 1992). In that article, AECC identifies that the primary objective of the first course in accounting should be viewed and presented as an introduction to accounting and should train students to learn about accounting as an information development system and communication function that supports decision making. The focus of the first course should be on the relevance of accounting to decision making and should place emphasis on teaching students to learn on their own. Accordingly, the teaching approach for the first accounting course should include cases, simulations, and group projects that promote interaction among students and between students and faculty. In addition, faculty teaching this course should be capable of bringing an integrative organizational perspective to the course. Based on the call from this statement, several programs have changed the content and teaching approach for their introductory accounting courses and have reported the results of their experiences. Ainsworth (1994) restructured their introductory accounting sequence with the first course focusing on accounting for business operation, and the second course focusing on investing and financing activities. Active learning is encouraged. The results indicated that the drop out rate for the class was substantially decreased for the introductory courses. Since most of the students who take introductory accounting courses are non-accounting majors, Cherry and Mintz (1996) showed the strong preference of nonaccounting students for user prospective and decision making orientation. The emphasis of the courses should be focused on problem solving and logical reasoning skills development. Therefore, the most important topics in the introductory course should include the balance sheet and income statement; while transaction analysis, journal entry, and financial and reporting standards should be de-emphasized. Basu and Cohen (1994) used introductory managerial accounting projects to develop students' skills in critical thinking, teamwork, communication skills, and problem solving skills with positive results. Numerous articles published in the past reported good results from innovative teaching in the course of managerial accounting as well as some specific topics in the course [Daroca and Nourayi (1994); Ciccolello, D'Amico and Grant (1996); Chen, Manes and Richardson (1991), Kauffman and Sopariwala (1995)].

There has been minimal literature reporting the results of innovative teaching in graduate level accounting courses. None has reported the results of the pedagogical enhancements in an MSA capstone course which addresses the integration among accounting curriculum, as well as other related business disciplines for the accounting issues discussed. It is well known that accounting issues related to business operations can no longer be considered in isolation and must be presented as an integral part in a business decision making process.

ADMINISTRATION OF THE PROJECT

For Introductory Financial Accounting and Introductory Managerial Accounting courses at the undergraduate level, the specific objectives of the project are:

1. to restructure the courses as learning-centered courses with students as active participants in analyzing and solving unstructured, unorganized, no-single-solution cases which mirror the decision making process in the real business world.

2. to revise the content of these courses as information user-oriented rather than information preparer-oriented.
3. to incorporate in these courses the processes of stimulating critical thinking, team building, increasing ability in communication and interpersonal relationships and promoting skills in lifelong learning and leadership.

The strategies employed for the teaching of Introductory Financial Accounting started from the final product of the accounting system - the financial statements of a real company. Students were asked to think not only about the original transactions that resulted in the numbers on the financial statements, but also about the accounting information system used to arrive at these numbers. Through these thinking processes the students, with well-thought out hints from the instructor are able to discover how the financial accounting system works. While training students to think and discover may be an objective in itself, the process may lead to a higher degree of information retention compared to the traditional approach of lecture delivery.

For Introductory Managerial Accounting, a real world case is introduced for each subject topic. Students were asked to analyze the case by the method of each topic to develop basic numbers for decision making. However, final recommendations of the students were prepared by incorporating a qualitative assessment of the case regarding the methodology as well as the real world environment under which the company operates.

The ability of critical thinking and lifelong learning are enhanced through indepth research and deliberation of the real world cases in order to develop logical solutions to the cases, while the abilities of oral and written communication are increased through classroom participation, writing and presentation of term projects related to cases. Interpersonal relationships and leadership potential are enhanced through rotated student team work for different class projects with new teams and new team leaders for each case. Under rotated team projects, each student has a chance to work with every other student in the class and the chance to lead and coordinate team deliberation, discussion and presentation.

As the MSA is a professional accounting program, the capstone course is concerned with real problems and is designed to integrate knowledge of various courses taken by students throughout the program. Yet the traditional teaching approach for such a capstone course is still often a conceptually based, business independent, and lecture-centered approach. As an alternative, this project develops a new pedagogical approach and course contents to accomplish the following objectives:

1. To address the integrative nature of the accounting issues in today's economy. The integration is not just in terms of the traditional financial and managerial accounting, taxation, and auditing domains, but more importantly, it is in terms of the decision orientation of the accounting methods choice. Students are trained to examine all aspects of a company, not just financial data - both current and past, but also their relationship to what was happening in the management, its major customers, its major competitors (that can deliver credible threats), the industry, the demographics, and the economy - both domestic and foreign.
2. To incorporate real-world business predicaments in the course to facilitate an easier transition from theoretical discussion of many accounting and financial concepts to

practical applications, which are often industry specific and economy dependent.

3. To develop a working knowledge of capital markets in general, and Wall Street in particular. This would include an understanding of the market's short run irrationality and the roles of accountants and financial reporting.
4. To develop analytical and logical reasoning skills, and the fact finding and understanding skills for both financial and non-financial data, and to train students with the thought processes involved in arriving at a solution or recommendation, rather than to give the answers through a lecture. As in the complex business world and in the face of uncertainty, there is often no clear answers to a problem. Sound professional judgments precede the choice of a successful strategic decision and risk taking.
5. To develop in students the skills of team building, interpersonal relationships, and the oral and written communications skills.

The strategy to accomplish the above objectives was to develop an innovative case approach. Subject to the availability limitations of relevant and efficient cases, the cases chosen included some "live" companies in major industries. Each case illustrates the real-world contexts of accounting-method applications, and it forces students to understand the industries, the companies and the substance of business decisions. Various industries were included in these cases. They included machinery, auto/truck, computer software and services, computer hardware, restaurant and food processing, telecommunications services, and toy industries.

The strategic decisions encompassed in these cases will include financial-statement presentations, revenue recognition, accounting changes, research and development, franchising, off-balance sheet financing, equity investments, merger/acquisition, foreign operations, income taxation, and audit judgments. Written case reports were required. Each student's case report was promptly graded and commented for a concluding review of the case in the immediate following session.

Additionally, to develop an effective active/discovery learning, each student was assigned to one of the live major companies included. The assigned student was responsible for reporting to the class throughout the semester any major news development, and at the end of the semester, a written report on the company. The report included the scope of analysis on reported company data, student's view of analytical perspectives from others such analysts, and a summary of three major news developments during the first twelve weeks of the semester.

The use of web resources was urged, including the interactive Wall Street Journal (http://wsj.com), Yahoo-market & investment (http://www.Yahoo.com/economy/market-and-investment), and EDGAR Database (http://www.sec.gov/edgarhp.htm). A regular reading of The Wall Street Journal was expected.

To promote team learning, students were divided into investment teams (no more than four students per team). The universe of companies were restricted around the case companies and their selected major competitors. The results of trading were recorded and reported throughout the semester.

RESULTS OF THE PROJECT IMPLEMENTATION

For introductory courses at the undergraduate level, the Department offered

four sections of Introductory Financial Accounting with three different instructors during the semester when the project was implemented. One section used the innovative teaching approach while the other three sections used a traditional approach. For Introductory Managerial Accounting, a total of four sections, also with three instructors, were offered in that semester. Two out of four sections of the Introductory Managerial Accounting course were taught by one instructor and used the innovative teaching approach, while the other two used the traditional approach.

Various measures were used to assess the results of the project implementation at the end of the Spring semester of 1996. Among them are focus group discussions, scores of common final exams, special student survey, regular student teaching evaluations, student attrition rate, and the perception of faculty regarding the results of the new teaching approach as compared with the results of the traditional teaching approach.

1. Student Focus Group Discussion

Two meetings of the student focus group were held. One was scheduled for daytime sections; the other was scheduled for evening sections. A total of nineteen students from five class sections which implemented the new pedagogical approach attended the meeting. Project faculty attended the first meeting but were absent from the second, which had the Chair and recording faculty present. The response from the student focus group was overwhelmingly positive about the new teaching approach, particularly about the team and active learning approach used in the new teaching pedagogy.

2. Scores of Common Final Exam

The Department had one-hour common final exams of multiple choice problems for all sections of the Introductory Financial Accounting and Introductory Managerial Accounting. The other hour of the final exams were essay or computation questions prepared and graded by the individual faculty who taught the class. The summary results of the common final exam for sections using the traditional teaching method and the sections using the innovative teaching method are listed in Table 1.

As indicated in Table 1, students from sections using the innovative teaching approach scored higher than students from sections using the traditional teaching method. Students from sections using the innovative teaching method also have a higher average score from questions of each subject area covered in the common final.

3. Special Student Survey

Traditional student evaluations are not usually designed to assess the goals of a new teaching pedagogy. To assess the effectiveness of the project, a special survey to measure the attendant of the project goals was designed and distributed to all sections of Introductory Financial Accounting and Introductory Managerial Accounting. The items with a level of significant at 1% or more between the traditional and innovative teaching method are: I was an active participant in the class (traditional: 74% vs innovative: 88%). My fellow classmates were active participants (72% vs 89%). I spent most of my time in class listening to lectures (94% vs 53%). I came to know my fellow classmates better (65% vs 87%). My ability to work on a team improved (49% vs 75%). My leadership skills were enhanced in this course (43% vs 78%). My oral communication skills improved in this course (32% vs 74%).

4. Regular Student Teaching Evaluations

At the College of Business and Management, faculty are required to have

Table 1
Scores of Common Final Exam
Traditional versus Innovative Approach
Spring, 1996

	Accounting Principles I		Accounting Principles II	
	Traditional	Innovative	Traditional	Innovative
Average score	11.00	12.00	17.40	20.70
Median score	10.00	12.00	17.25	20.25
Highest score	19.00	18.00	25.50	26.50
Lowest score	6.00	7.00	12.50	12.00
Std. Deviation	3.48	3.64	3.31	4.37
No. of Students	37	15	34	28

Table 2
Student Course Evaluation

	Introductory Financial Accounting		Introductory Managerial Accounting	
	Traditional	Innovative	Traditional	Innovative
Average score for overall class rating	5.19	5.46	4.29	4.36

Table 3
Student Faculty Evaluation

	Sections with Traditional Method	Sections with Innovative Method
Professor A	4.96	5.46
Professor B	2.93	4.36

student evaluations during the last week of each semester for every section of courses he or she teaches. Table 2 shows the comparison of average score for overall student rating for sections using the traditional teaching method and innovative teaching method for Introductory Financial Accounting and Introductory Managerial Accounting. Taking out the effects of individual instructors, Table 3 shows the comparison of the average score of overall student rating for each course for the traditional teaching method and the same average score for the sections using the innovative teaching for each of the project faculty. As indicated in Table 3, the students from sections using the innovative teaching method give Professors a consistently higher overall course rating than the sections with the traditional method, even using the traditional student evaluation instrument.

5. Student Attrition Rate

The attrition rate is defined as the proportion of students who drop out of the class before the final examination. The average attrition rate for all sections with the traditional teaching method in two Introductory Financial Accounting courses is 13.99%, while the average attrition rate for all sections with innovative teaching method is 10.22%. The attrition rate is consistently lower for all sections with the innovative teaching approach than for sections with the traditional teaching approach.

6. Faculty Perception

From the wrap-up meeting with the project faculty, as well as the final reports of the project faculty which described the accomplishments of the classes and the problems and improvements for future implementation of the teaching pedagogy, the project faculty are quite positive about the accomplishments of the new teaching pedagogy. The positive perceptions of the project faculty are consistent with the focus group presentation and the results of special survey of students in all sections of Introductory Financial Accounting and Introductory Managerial Accounting courses. Details of the faculty report are available upon request.

For the graduate capstone course, a section is offered once a year for an MSA program and is required for all students in the program. The following two assessments were used to gauge the effectiveness of the new teaching approaches.

1. Performance Assessment and Feedback Through Case Grading

Success in an active/discovery learning course obviously requires both advance preparation of each case before due, and active participation in the class. To ensure that students are motivated, in addition to the company-student alignments, each case report was collected and promptly graded. Through this grading, the instructor gets a first-hand understanding of the efforts and the achievements. The instructor's written comments on the case reports also provide an invaluable means of individualized teaching. A general feedback discussion in the immediate following session concludes the coverage of the case. Grades were also assigned for class participation, and for a written report on the company assigned.

2. Feedback and Evaluations from Students

In addition to regular student evaluation implemented in the department, a special student evaluation was developed to assess the accomplishment of the specific objectives of the project. Also, a class discussion was

held at the end of the semester to obtain the pros and cons of the new pedagogical approach and the students' assessment of the curriculum content; suggestions for improvement from students were sought for future implementation.

Compared with the traditional teaching approach for the course, the new teaching approach proved very successful in active learning. Students worked hard preparing reports for class presentation, actively participating in class discussion, and developing positive attitudes toward the course and accounting as a whole. In addition, all students who started the class have completed the course. Student comments in the special student evaluation are available upon request.

CONCLUSION

As presented, short cases are used for introductory accounting courses at the undergraduate level; while larger cases, which involve disciplines other than accounting, plus the investment club type of team work, were used for the capstone course in the MSA program. Because the degree of maturity in accounting and business knowledge differs between students in the beginning introductory accounting courses and in a capstone course for a MSA program, students have benefitted from the different characteristics of cases and different approaches to cases in the class. In addition, we believe the successful results of the project can be attributed to the following factors:

1. Careful planning before the implementation. Project faculty participated in various seminars and workshops presenting the new teaching approaches experienced by other institutions. Numerous meetings were held to discuss and to finalize the new teaching approach.
2. Sales by the project faculty about the new teaching method to students during the first class meeting of the semester. A presentation of the goals and purpose of the project, as well as the teaching approaches to be used in the class, were fully disclosed.
3. Team effort used to solve problems during the implementation. For undergraduate courses, project faculty scheduled meetings throughout the implementation period. Problems encountered in an individual class were discussed and solved by joint effort. Class visitation among faculty have also provided critiques for improvement.
4. Speedy response to student reports and case analyses to reinforce their learning. Weekly reports from students in case analysis and in investment team activities received detailed feedback from the instructor before next class meeting. In addition, summary reports from the instructor regarding the case reports served as a concluding review of each case.
5. The student body of the program. Close to eighty-five percent of the undergraduate students and more than ninety percent of the graduate students in the project work twenty or more hours a week. The instruction of real world cases or problems accompanied by active student participation in team learning drew the interest of students with working experience.

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NOTES

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