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CONTENTS

CREATING LIFELONG LEARNING THROUGH SERVICE-LEARNING

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ABSTRACT

Challenges continue for higher education to improve learning outcomes and better prepare graduates for successful careers. Service-learning, an instructional method that integrates theoretical learning with real life experimentation and community service, offers the positive impacts of its pedagogy in enhancing students' learning and personal growth. This study measures critical aspects of learning in multiple marketing courses using the same applied project. Data are compared to the same courses during prior semesters and for the study semester from three perspectives – the students, the instructor, the businessperson. Analysis includes comparing higher and lower performing students based on examination scores, project grades, and between examinations and projects. The results from each of the three perspectives were that the service-learning project and course learning were successful. Furthermore, the findings have implications to and demonstrate the critical importance of first learning knowledge (textbook) then its applications (project), the integration of not only the content and its application but also across different courses, and the role of team teaching in creating lifelong learning.

JEL: I21; A22; M31

KEYWORDS: Service-learning, business education, course projects

INTRODUCTION

Higher education in general has been for decades and continues to be challenged by employers and more recently within the academy (Menand, 2010). More specifically, business education needs more creativity and imagination. Eric Liu, a leader in the Washington-based organization Creativity Matters, says that a student needs to be "a flexible, adaptive, lifelong learner who can think creatively and solve problems and frame problems creatively. That's what everybody's looking for" (Blankinship, 2007, p. 19A). He believes that "students need to be taught to use their imaginations to solve problems, to connect the dots, …. and project-based and experiential learning should replace some book work and tests" (Blankinship, 2007, p. 19A). However, knowledge ("book work and tests") must preclude most, if not all skill development ("solve problems and frame problems creatively"). For example,

> There is no doubt that having students memorize lists of dry facts is not enriching. It is also true (though less often appreciated) that trying to teach students skills such as analysis or synthesis in the absence of factual knowledge is impossible. Research from cognitive science has shown that the sorts of skills that teachers want from students – such as the ability to analyze and to think critically – *require* extensive factual knowledge. …. Factual knowledge must precede skill. (Willingham, 2009, p. 19)

An instructional method "to connect the dots" is service-learning. Research studies have found positive results in learning outcomes, e.g., knowledge enhancement, by using service-learning projects for business (Walsh, 2002), education (Dudderar and Stover, 2003), medical (Elam et al., 2003), and other (Mastrangelo and Tischio, 2005) courses. Such projects enhance students' knowledge and improve skills

(Eyler and Giles, 1999). Furthermore, service-learning not only improves students' knowledge and skills but also their personal development. These projects provide each student with a sense of community and self awareness, which too empowers them in search for and maintaining a successful career (Elam et al., 2003).

Based on surveys and other techniques, organizations, e.g., National Association of Colleges and Employers, publications, e.g., *Wall Street Journal*, and universities, e.g., Lynn University College of Business and Management, have found consistently that skills, e.g., communication, teamwork, critical thinking, interpersonal, and qualities, e.g., honesty, integrity, work ethic, adaptability, are important characteristics for hiring college graduates. Furthermore, regional, e.g., Southern Association of Colleges and Schools (SACS), and professional school, e.g., The Association to Advance Collegiate Schools of Business – International (AACSB), accrediting organizations require meeting appropriate, mission driven learning outcomes and assurances of learning. The purpose of this study is to address these aspects and to assess the service-learning outcomes. This study includes a review of the services-learning literature, the methodology, data analysis results, the discussion of the findings, limitations of and future opportunities from this research, and the conclusion.

REVIEW OF THE LITERATURE

Service-learning is an instructional method that integrates theoretical learning with real life experimentation and community service. Literature supports the positive impacts of service-learning pedagogy in enhancing students' learning and personal growth (Holland, 2001; Walsh, 2002; Dudderar and Stover, 2003; Elam et al., 2003; Mastrangelo and Tischio, 2005; Sternberger, Ford and Hale, 2005; Soslau and Yost, 2007; Steinke and Fitch, 2007). In a service learning course explicit classroom learning objectives are supplemented by an outside of classroom experiential service project and a reflection assignment for students to bridge theory and application (Dudderar and Stover, 2003; Elam et al., 2003; Sternberger, Ford and Hale, 2005). This integration of education, experiment, and service not only enhances students' learning, but also provides each student with a sense of achievement, satisfaction and effectiveness as a community member, in addition to fulfilling degree requirements (Holland, 2001; Dudderar and Stover, 2003; Mastrangelo and Tischio, 2005; Steinke and Fitch, 2007). The continuity of classroom learning to the real world opens up a broader perspective to the students with insights, awareness, involvement and positive change in attitude, behavior, self-esteem and personal growth, which all constitute a solid foundation for future career success (Eyler and Giles, 1999; Elam et al., 2003; Sternberger, Ford and Hale, 2005).

Faculty's roles in a service-learning course include teaching, project planning, coordination and collaboration with community, and assessment of the learning outcomes of the service-learning course including the assessment of effectiveness of the service project for the community (Holland, 2001). The continued faculty-community partnership could also lead to the improvement of the course and the quality of the project and the course outcomes (Eyler and Giles, 1999; Holland, 2001; Mastrangelo and Tischio, 2005).

Literature on the assessment of service-learning curricular includes both quantitative and qualitative methods. Dudderar and Stover (2003) use qualitative methods of assessing students' journals to evaluate the impact of service-learning pedagogy incorporated into a sequence of courses in the St. Mary's College of Maryland teacher education curriculum. The college students of the education department participated in the Reading Tutuoring Project at local elementary schools, tutored and mentored at risk middle school students, worked in GED program, provided the elementary school students with environmental education, taught after-school enrichment classes and organized and planned special events for local school children. The college students were asked to write about the teaching strategy and educational

vocabulary of the elementary schools and kept reflective journals on their own teaching, mentoring and interaction with the elementary school students.

Dudderar and Stover (2003) indicate that the college students' writing assignments and journals showed an in-depth understanding of the educational contents of the courses resulting from real life experience of reading, tutoring and mentoring at local elementary schools. The college students also demonstrated developing skills such as problem-solving, time management, teamwork, tolerance and reflective abilities. On the personal level, they developed a sense of appreciation for teachers and self, motivation, involvement, discovery and enjoyment of serving and being able to serve.

Mastrangelo and Tischio (2005) describe how a year-long service learning project integrated to first year writing-intensive courses offered at different University of Albany, SUNY departments and in three different disciplinary areas (biology, sociology and philosophy). The first year writing course students have the opportunity to experiment the classroom theoretical learning through participation in a yearlong pen pal project at local elementary schools. The college students' out of classroom activities included writing individual letters to elementary school students, research on nutrition, achievements and socio-economic status of the elementary school students and the educational policy of the elementary schools, in addition to mentoring and connecting with the elementary school students. The authors, who were also the course instructors, report the positive impact of the pen pal project on SUNY students' learning and personal development. The outcomes assessment of the pen pal project was based on assessment of SUNY students' final course reflections and research papers. Mastrangelo and Tischio (2005) state how college students developed the ability to connect their academic knowledge of teaching to the actual reading and assessment of the elementary school students' writings. They state how the college students experienced the impact and contribution of their own work and feedbacks on the elementary school students' writing. Mastrangelo and Tischio especially emphasize how SUNY students developed sense of caring, connection, sensitivity and effectiveness during the two semesters of the pen pal project. As they have stated, the project "enables the students to combine inquiry and action and engage in critical disciplinary learning" (Mastrangelo and Tischio, 2005, p. 35-36).

Furthermore, Soslau and Yost (2007) describe an experiential study with two fifth grade groups of 33 students taught by the same partner teachers. The teachers treated the control group with a traditional method of teaching while the experiential class had a service project in addition to the traditional curriculum. The students in the experiential group researched the various community news about diseases suffered by different community groups. Students in the experimental group experimented life as wheel chair users and developed empathy for wheel chair users, kept reflective journals, oral and visual presentations, had debates on the topic and wrote reports on the experiment. Hands on projects and real life experiments to enhance students learning and personal growth supplemented the regular curriculum of the class. Both qualitative and quantitative methods were used to assess and compare the learning and developmental outcomes of the two classes. The teachers evaluated the reflective journals, benchmark test scores, attendance records and suspension cases.

A baseline comparison showed that the experiential group improved both their mathematics and reading scores by a significantly greater amount than the control group during nine months of the experiment. In addition, the assessment of reflective journals showed that the experimental class connected the classroom educational contents to the real world experiment topic better than the control group. Furthermore, the data indicated that the attendance rate for the experimental group was 1.79% higher than for the control group during the nine months of the class. Finally, the experimental group had six suspension incidents less than the control group during nine months of the experiment. Both higher attendance and lower suspension of the class with service-learning component indicated higher involvement and motivation of students engaged in service-learning projects. Soslau and Yost (2007) study supports the proposition that service-learning as an instructional method enhances students learning, motivation and engagement.

Walsh (2002) explains how a SUNY College at Oneonta undergraduate student Marketing Club has successfully conducted a number of major marketing research projects and consulting services for the community private and public organizations. Walsh points out that the service-learning nature of the club has provided the students with the hands on application of the textbook theories. Most of their Marketing Club projects have been presented to the community organizations as written projects resulted in enhancing students' learning objectives. Students have also acquired valuable skills such as collaborative and creative processes, consulting, teamwork and communication, in addition to personal growth and self-esteem and motivation development. The Marketing Club and students have received international awards at the America Marketing Association Conferences, a fund-raising award, two awards for outstanding special (research) projects, and seven Chapter Performance Awards for the quality of their papers. They also have won recognition as the American Marketing Association's Outstanding Chapter in the Eastern Region for two years. Walsh states the practical experience, success and recognitions have empowered the students in their future career placements and job market competition.

Elam et al. (2003) have used multiple methods and instruments to measure the learning and motivational outcomes of an experiential service-learning elective course in the University of Kentucky College of Medicine. The elective service-learning course integrated to a behavioral science course. The students developed the service component of the elective course with an asset need assessment project. The authors point to the importance of community service as an integral part of medical practice and medical curricula. Elam et al. describe that the community need based experience elective course linked to a pre-existing course with psychological, socioeconomic and legal aspects of health and disease contents at University of Kentucky College of Medicine. The pre-existing course was a two-year preclinical required course, but the service-learning course was a two credit elective, pass-fail course.

The authors have assessed the learning and motivational outcomes of the service-learning course during the two year project period. Faculty assessment, community agency evaluation, students' surveys, reflection questionnaires and course evaluation are used for assessment of the outcome of the service-learning course. Faculty evaluation based on rating criteria of "excellent, good, fair, needs improvement" did not report a consistent trend of students' improvement in the levels of enthusiasm, group interaction and connection of experiment with theoretical learning of the pre-existing course. However, as the authors state, this could be a result from the lack of faculty interaction with the students related to their experiment during the elective experiential course. Nevertheless, the community agency's evaluation indicated a trend of improvement in students' communication, organization and inter-personal skills, and dependability and enthusiasm during the two-year period.

Students' course evaluation of the experimental service-learning elective was higher than other courses. The anonymous course evaluation contained eight core items such as active learning, integration of experiment with theoretical learning, expectations and overall quality. Students' evaluations of all eight items for the service-learning elective were higher than other courses. However, the differences were only statistically significant for four items. The course evaluation also had an open-ended question asking students about the impacts of the elective course on their attitudes, skills and knowledge. The authors state that "the vast majority" of students responded positively to the question. Students' responses reflected improvement in skills such as teamwork, communication, interpersonal, and leadership. In addition, as reflected by the students, the service experiment broadened their community awareness, involvement and commitments.

Steinke and Fitch (2007) in "Assessing Service-Learning" point to the importance of service-learning integration to higher education curricular and discuss different tools to assess the outcomes of service-learning pedagogy. They refer to lack of focus on the student's skill development in higher education curricular and believe that integration of service learning to colleges and university curricular can

contribute to filling this gap. Sternberger, Ford and Hale (2005) refer to service learning as a powerful teaching method promoting students' learning and personal transformation. They discuss the reciprocity of service learning relationship between students and community agency. They describe how in the process of a service project students, teacher and community agency change. The importance of the reflective piece (e.g. the service learning project) and connecting the experience to theoretical learning enhance students' knowledge and comprehension of the learning material. Sternberger, Ford and Hale refer to literature that supports the proposition that service learning enhances "the personal and cognitive development of undergraduate students" (2005, p. 77). Students also practice decision making, communication, critical thinking, interpersonal and leadership skills and personal development such as personal efficacy and social responsibility. All result in promotion of students' awareness of "the world around them" and of their own personal abilities.

In this study, integration of a common service-learning project into four marketing courses will be presented. In the previous semesters, these marketing courses included an experimental project but in a much smaller scale. The scope of the project was a major component in terms of time spent and for evaluation criteria of each course. This paper examines the impact of the service-learning project on student's learning outcomes. Student's knowledge, skills and personal developments will be assessed. In addition, student's demographics, personal characteristics and experiences in relation to the outcomes of the service-learning project will be tested. The research will examine three questions. First, does increasing the quality, scope and extent of service learning project enhance the learning outcome of a course? Second, does service-learning method of teaching result in student's personal development? Third, do student's demographics, characteristics and experiences affect their learning and development in a service-learning course?

THE SERVICE-LEARNING STUDY

The service-learning project was completed during the Fall 2009 semester at Lynn University in Boca Raton, Florida. Lynn University (LU) is an independent, coeducational, residential institution with 2,410 (2,032 undergraduate and 378 graduate) students from 44 states and 81 nations. LU has a 16:1 student to faculty ratio and offers baccalaureate, master and doctoral degrees. The University has six colleges of which the College of Business and Management is the largest (Lynn University, 2009).

The Lynn University and its College of Business and Management have a mission to being "innovative, international, and individualized," offering "applied learning" experiences and "providing timely career-based skills and knowledge" (Lynn University, 2008, p. 17). A design of four marketing courses was completed during the Summer and implemented for the Fall 2009 semester by the second author and the courses' instructor. Since 2000, the College of Business and Management (CBM) has had a relationship with SCORE, a partner of the U.S. Small Business Administration, to provide "real world" learning opportunities for CBM students. During the Fall semester, the third author, a highly successful businessman in manufacturing who is a Counselor for SCORE provided the business project for and worked with 53 traditional undergraduate students.

Courses, the Project and Course Designs

Four Marketing courses (Marketing Communications, Global Marketing, Marketing Research, Business Marketing Management) at Lynn University College of Business and Management were structured exactly the same with the exception of the type of marketing project. Class sessions met either Tuesday and Thursday days or Tuesday evenings. Examinations were 30% of the course grade, course project 30%, and other assignments 40%. Furthermore, the courses allocated time of approximately 60% classroom meetings and 40% field research and project development. In an attempt for accelerating the "norming" process, teams began to work together early in the semester by answering instructor-developed

chapter discussion questions. All teams were required to submit written answers to assure keeping up and knowing the reading assignments, hence a take-home quiz. To further this early team assignment, one team would present and lead the classroom chapter discussion to engage the students in the learning process (rather than a "talking head" instructor) and to enhance presentation skills. The instructor would generally make points not, or not clearly included in the presentation and ask further questions as to applying ("bridging") the chapter to the course project. The textbook was covered and two examinations were completed for each course just after mid-term of the semester.

The remaining semester time was solely for the service-learning project. The courses had a common applied course project, Build Me a Railroad that was based on the cruise ship industry business model. The "good weather" (late Spring, Summer, early Fall) route was from Boston to Washington. The student teams were to complete respective marketing course projects for this route and identify a "bad weather" (late Fall, Winter, early Spring) route. While the courses had the same project concept, they had very different project assignments. For the marketing communications course, three teams selected a target audience, e.g., young adults, and completed an integrated marketing communications plan for both routes. Three global marketing teams identified different countries, e.g., England, and developed an international marketing plan to attract international travelers. For the marketing research course, three teams chose a target market, e.g., senior citizens, and developed a research proposal and did a market research study. Finally, two business marketing teams selected a target market, e.g., cruise ship industry as partners, and developed a business marketing plan. Teams had from three to seven members, depending on the number of students in the course.

Each course had instructor-developed guidelines that were detailed but yet flexible enough to be adaptive and innovative to complete their service-learning project. During the field research and project development period, there were no class sessions. However, the teams used the classroom for meetings and the instructor was available for assistance. In addition, required business/project meetings were held with the businessperson and the instructor in an auditorium on Tuesdays from 12:30 to 1:20PM for the four courses (11 teams). These meetings were to report (project status) and for informational (ask questions) purposes. At Lynn, there are no classes scheduled during this time on Tuesdays, and students were on campus for classes on these days. For the last week of the semester, each team made an oral presentation using PowerPoints and submitted a written plan to the instructor and businessman. At the time of written submission, each team individually rated or evaluated (based on a total of 100%) all team members as to their contribution to the project with no two members having the same rating (percentage). The projects were evaluated (graded) and returned to students during the scheduled Final Week class session. This provided an opportunity for students to ask questions and/or make comments and for timely feedback.

The three authors have worked together during three-week January Terms entrepreneurial course (New Product Development). The second author has used marketing service learning projects for over 12 years that usually allowed only one or two weeks out of classroom time to complete the project, an attempt to complete during the semester as topics being covered in the textbook reading assignments. In two prior semesters, the businessman/SCORE Counselor has worked with the instructor and students in which the student teams developed a marketing communications plans for his clients. However, the difference for this semester (and this study) is the acceleration of knowledge (textbook) which permits more time for knowledge application, skills enhancement and personal development (project) (Blankinship, 2007; Willingham, 2009).

Methodology

A total of 53 students of which nine were in more than one course (six in two courses, three in three courses), or 41 different participating students in the service projects. The nine students were instructor-

assigned to the teams as well as seven other students who have had the instructor (and a service learning project experience) in a prior course (different semester). This strategy provided commonality, communications, and hopefully project activities across courses, e.g., broader and better understanding, hence a more successful learning experience. The prior experienced students enable teams to function more quickly ("norming") by knowing the instructor and the "drill" (project process). The sample is more representative of the College of Business and Management than Lynn University. For the four courses, 39.6% were female while the CBM has 36.3% and LU 47.5%. There were 35.8% international students not being U.S. citizens, e.g., no U.S. or dual citizenships, in the courses but the CBM has 26.3% and LU 16.5%.

To evaluate the success for this different teaching-learning strategy and its increase of learning outcomes, three perspectives have been used – the students, the instructor, the businessman – with qualitative and quantitative methods. At the beginning of the third week, all students participated in a 23 question survey (self-report) that included two parts. The first part was general information, e.g., major, credit hours earned, completion of the internship course, work experience, number of Lynn University sponsored clubs, organizations, athletic and other teams being a member, live on or off campus. The second part was course information, e.g., number of course projects completed, number of course projects with a non-instructor professional, learn more with only exams, exams and a project, and only a project. The second part also included two open-ended perceptual questions – greatest advantage of service learning project and greatest concern about the service-learning project. At the end of the semester (last week), students were given a seven question survey. This was specific questions from the first survey (in future tense) and restated (in past tense) to determine students' (self-report) learning experience. In addition, during the last week of the semester each student had for credit/points a course reflection assignment. This included identifying five areas of the course that they felt were the most important - three specific content areas and two specific skills areas. For each, they were to address (1) what was the most important specific (content or skill) area in this course? why? (2) how will you continue to use this specific (content or skill) area during the remaining time in school? (to remember the content or skill areas), and (3) how will this be of benefit to you during your professional career (after graduation)? (to recognize life-long learning areas).

The instructor evaluated the course assignments, e.g., chapter answers and oral presentations, project written and oral presentations, examinations, all of which used consistent methods with prior semesters to avoid grade/evaluation bias. The businessman evaluated by observation for the project, e.g., questions asked, identifying and solving the problems, the logical and practicality of the plans, and as compared to prior semesters' written and oral presentations of the course projects. Additional data was used for this study, e.g., students' grade point average, students' grades in a prior marketing course with the instructor (if applicable), prior semester averages for the same courses.

Findings

Since 2005, the instructor has taught three of the four courses at Lynn University using service-learning projects but had taught the fourth course (Global Marketing) prior to 2005. In comparison between the semester in this study and prior ones during this period, students earned higher course grades. See Table 1. There was a 40.4% increase in above average grades (A and B). Specifically, course grade of A increased 26.5%. Furthermore, below average course grades (Ds and Fs) decreased 74.0%. In prior semesters, 5.7% of the students failed the course but during the current semester no student failed. Based on course grades there was much better improvement in learning with greater service-learning emphasis.

To examine the students' grades and determine differences and similarities for courses' examinations and project scores, a comparison between high and low grades using t-tests was completed. The results are

Table 1 : Comparative Course Grades for Marketing Communications, Marketing Research, Business Marketing

Course Grade	Prior Semesters	Current Semester	Difference	Course Grade	Prior Semesters	Current Semester	Difference
A, A-	11.3%	37.8%		D+, D	15.1%	5.4%	
B+, B, B-	38.7%	32.4%		F	5.7%	0.0%	
Total	50.0%	70.2%	+40.4%	Total	20.8%	5.4%	-74.0%

This table compares three courses' semester grades between Fall 2005 to Spring 2009 and Fall 2009. The results show substantial grade improvement for extended time for researching and developing a service-learning project.

shown in Table 2 (Panel A for examinations and Panel B for projects). Only significant differences ($p < 0.001$, $p < 0.01$, $p < 0.05$) and similarities ($p > 0.70$) are presented. One comparison criteria is the differences between the two panels. While high examination scores are above average (grades of A or B), the project scores are only the highest (grade of A). This was done to establish more discriminating, critical criteria for the analysis of the project findings, the purpose of this study. For examinations (Panel A), there were 10 factors that were significant – five different and five similar. However, for the project (Panel B) there were 14 factors – nine different and five similar.

To further analyze the results reported in Table 2, a comparison of common factors between the examinations and projects are revealing. First, female students (with a coding scheme of 2) performed significantly better ($p < 0.05$) on both the exams and the project. Second, students who were peer-evaluated the highest for the project (1 for highest to 3 for the lowest) did significantly better ($p < 0.01$) on both the exams and the project. Third and as expected, students with higher grade point averages (1 for A to 11 for F) had significantly better grades on the exams ($p < 0.001$) and the project ($p < 0.05$). Fourth, students who looked forward to another service learning project (1 for strongly agree to 5 for strongly disagree) had similar views ($p > 0.70$) based on high and low exam and project grades.

To critically examine the results, the focus should be on the students' opinion of the course learning experience – with both examinations and a service-learning project. The post-test included five statements using a 5-point Likert-type scale with a coding scheme ranging from 1 for strongly agree to 5 for strongly disagree. Table 3 shows the results. For the purpose of analysis, the results by response percentage are grouped as (1) strongly agree or somewhat agree (favorable), (2) neither agree nor disagree (neutral) and (3) somewhat disagree or strongly disagree (unfavorable). The results were extremely favorable (strongly agree or somewhat agree) with a response range of 62.2% to 94.3%. In comparison, the unfavorable (somewhat disagree and strongly disagree) was minimal with a range of 1.9% to 17.0%. However, there was some opinions as to being neutral (neither agree nor disagree) with a response range of 3.8% to 34.0%. Overall, the mean scores for the five statements were that almost 8 out of 10 students (77.3%) had a favorable course experience and almost 2 (17.0%) had a neutral experience while only less than 1 out of 10 students (5.7%) had an unfavorable course experience.

For further analysis, these five statements were developed for students to report the course experiences that are associated with learning outcomes and include (1) knowledge, (2) skills development, (3) personal development and (4) knowledge and skills. Of the five statements, two are associated to skills – one general and the other specific to the team. The other three learning outcome areas have one statement each. These are shown at the end of each statement in Table 3. Knowledge gained clearing had the highest favorable rating (94.3%). However, skills showed strength for the outcomes with 88.7% favorable. More specifically, team skills statement however was much less favorable (66.0%). The remaining students were evenly split (17.0%) between neutral and unfavorable. This could have influenced (negatively) the general skills statement, as both are skills related. Furthermore, three out of four students (75.4%) recognized the benefit of personal development and indicated a reasonable high

Table 2 : High-Low Grade Comparisons for Course Examinations and the Service Learning Project

Panel A: Course Examinations			
Variable	Above Average (Grade of A or B) n = 19	Below Average (Grade of D or F) n = 13	Mean Differences
Pre-test, Self-report			
Gender	1.68	1.31	0.37***
Prior Service Learning Project Experience with Business	2.21	2.23	0.02****
Expect to Develop New/Better Skills with Service Learning Project	1.21	1.23	0.02****
Look Forward to Work in a Team	1.68	1.69	0.01****
Do Better on Exams Only	2.95	4.00	1.05***
Do Better on Service Learning Projects Only	3.16	2.31	0.85***
Post-test, Self-report			
Look Forward to Another Service Learning Project	1.84	1.92	0.08****
Did Better with Having Exams and Service Learning Project	2.21	2.15	0.06****
Performance Ranking in Team	1.63	2.23	0.60**
From University or Instructor Records			
Grade Point Average	2.74	5.08	2.34*

Panel B: Course Projects			
Variable	High Grade (Grade of A) n = 24	Below Average (Grade of D or F) n = 13	Mean Differences
Pre-test, Self-report			
Gender	1.54	1.15	0.39***
Credit Hours Earned	3.42	3.38	0.04****
Prior Service Learning Project Experience	3.67	3.77	0.10****
Expect to Develop New/Better Skills with Service Learning Project	1.25	1.00	0.25***
Do Better on Exams Only	3.67	3.62	0.05****
Do Better on Exams and Service Learning Projects	2.25	3.15	0.90***
Post-test, Self-report			
Developed New/Better Skills from the Service Learning Project	1.42	2.15	0.73***
Look Forward to Another Service Learning Project	1.88	1.85	0.03****
Look Forward to Another Team Service Learning Project	2.46	1.69	0.77***
Performance Ranking in Team	1.75	2.46	0.71**
From University or Instructor Records			
Number of Common Marketing Courses	1.50	1.00	0.50**
Examination Scores	5.46	7.77	2.31***
Missed Class Sessions	2.08	2.23	0.15****
Grade Point Average	3.46	4.62	1.16***

*This table presents the t-test results for high and low performing students on course examinations and the course project. * (< 0.001), ** (< 0.01), and *** (< 0.05) indicate significance differences while **** (> 0.70) shows similarities.*

level of motivation with looking forward to another service project in the future. Of all students, 62.2% felt favorable towards the knowledge and skills with course examinations and service learning project and 34.0% were neutral while only 3.8% were unfavorable.

A critical aspect of the service-learning project was the businessman. He was very pro-active in engagement with student teams not only providing project information but also in support to a successful completion and positive learning experience. For example, he (1) attended more than 35% of the semester's class sessions for each of the four courses; (2) gave details of the project; (3) guided teams to seek information from specific sources; (4) provided anticipated responses to project interviews and to probe for more information; and (5) was in the classroom for the oral presentations (last week of the semester, prior to Final Week) and at the time the graded projects were returned (last class session during Final Week) to provide feedback and reflection. Moreover, when the businessman was not in the classroom, he was only an email away for the project teams.

The businessman (third author) has worked with and observed service-learning projects for three semesters, this study's semester and the immediate prior two semesters for a Marketing Communications course. During this time, the level of emphasis on the project and out-of-class participation has increased.

Paradoxically, the students have responded by being more engaged in classroom discussions. Between the first observed semester and the second one, more importance was placed on the out-of-class project by placing greater weight on it towards their final grade. Again, between the second semester and this study's semester this weight was increased further in terms of weight of course grade and time allocated for the service-learning project. This approach provided the opportunity to drive home the importance of combining the knowledge acquired through textbook reading and lecture with the practical application. In the prior two semesters, the student teams in general waited until the end of the semester to put significant effort into the project.

Table 3 : Students' Post-Test Results: Summary of Agree, Neither and Disagree

Questions	Strongly/Somewhat Agree	Neither Agree nor Disagree	Somewhat, Strongly Disagree
I learned more about Marketing in this course than a Marketing course without a service (applied) learning project. (Knowledge)	94.3%	3.8%	1.9%
I developed better or new skills in this course than a Marketing course without a service (applied) learning project. (Skills)	88.7%	9.4%	1.9%
I look forward to doing another service (applied) learning course project in the future. (Personal Development)	75.4%	20.8%	3.8%
I look forward to working in a team in the future. (Skills)	66.0%	17.0%	17.0%
I did better in this course that had both examinations and a service (applied) learning course project than without such as project. (Knowledge and Skills)	62.2%	34.0%	3.8%
Mean Score for the 5 Post-Test Questions	77.3%	17.0%	5.7%

This table presents the results of the students' post-test. The responses were measured by a 5-point Likert-type scale (1 for strongly agree to 5 for strongly disagree). For the purpose of analysis, the results by response percentage are grouped as (1) strongly agree or somewhat agree (favorable), (2) neither agree nor disagree (neutral) and (3) somewhat disagree or strongly disagree (unfavorable).

However, during this study's semester students were required to meet as a team and with other teams and the businessman and instructor with weekly "business meetings" during the project time. This provided opportunities to share information, to seek more details and guidance, to gain better direction and to be challenged (due diligence) as to their service-learning project. From the businessperson's perspective, this current semester's (Fall 2009) projects were much more improved and were more acceptable to the business. With the rise of incentive (increased course points) and allowing more time (40% of the semester) for the service-learning project, the students recognized the need to address the project earlier, and related the course knowledge more directly and with greater success than the two prior semesters.

DISCUSSION

The purpose of this study is to determine the value (benefits) of service learning projects and to assess its learning outcomes. This research is designed to achieve this purpose by having three perspectives – the students, instructor, businessperson. All three sources show very positive results for this teaching pedagogy. Concerns prior to the semester became clear, and positive throughout the semester.

While the instructor has used service-learning projects for over 12 years, he expected the project research and its development being drafted during the classroom (textbook) period of the semester. Only one to two weeks at the end of the semester were allocated (with no class sessions) to complete the written and oral presentations. Hence, knowledge, e.g., the textbook assignments, was being learned in sequence with its application (the course service-learning project), which is contrary to some views (e.g., Willingham, 2009). Furthermore, the textbook exams were weighted more than the service-learning course project, e.g., 40% versus 20%.

Therefore, one concern was the concentration, acceleration of the text assignments over the first 60% of the semester and the chance of negative impact on the project. However, this was not a factor. Students

responded positively, and no noticeable change appeared in the exam scores, a (high) probability of students spending more time studying, time associating the textbook to the project (learning reinforcement), and/or the cue to students of equal weight (higher incentive) between the exams and project, e.g., 30% each. In fact, the results support the theory that knowledge (textbook) precedes skill development (project) (Willingham, 2009). Students who had the highest scores on the project (grade of A) did significantly better on exams ($p < 0.05$) than students who had below average project scores (grades of D and F). See Table 2, Panel B. Moreover, students' post-test survey reveals that knowledge (94.3%), knowledge and skills (62.2%) and personal development (75.4%) were rated favorable (Eyler and Giles, 1999; Elam et al., 2003; Sternberger, Ford and Hale, 2005). See Table 3.

A second concern was another area of learning – skills. As faculty have businesspeople to the classroom, see them at the Career Centers, being contacted for an employment inquiry for a student, or on a consulting project for a business, the issue of team skills is often a topic of discussion. This is currently a major job requirement for many career positions, and many expect it to increase in the future. On the other hand, students have a dislike for team assignments that may be a result of several reasons, e.g., a generational or cultural "thing," prior education and training, a bad experience with "slackers." In anticipation of these and other reasons, the instructor implemented a requirement using an evaluation form in which each team would individually rate (each member) all team members (including themselves). A covenant for the rating was that no two members could have the same rating. This avoids the "halo" of the rating while rewarding those with high team contributions at the expense of the "slacker" team members. Moreover, this provided students with a decision making human resource experience (skill development), e.g., evaluating and rating personnel. While 66% of the students were favorable in their rating of looking "forward to working in a team in the future" (Dudderar and Stover, 2003), 17% (9 students) were unfavorable. To investigate this further with a cross-tabulation (this statement and team ranking), the results revealed that six of the nine were rated first (coding of 1) by their team members. Therefore, there remains a challenge to prepare students with team skills, and in this research, two-third were the highest performers as rated by their peers.

An interesting finding from this study was that the students with high project scores (grade of A) who were in multiple courses did significantly better ($p < 0.01$) than those who had below average scores (grades of D and F). Furthermore, all students ($n = 13$) who were below average on the project were in only one course. See Table 2, Panel B. This supports a current trend, effort for integration, cross-course, cross-discipline teaching-learning strategies (Dudderar and Stover, 2003; Elam et al., 2003; Sternberger, Ford and Hale, 2005). As well, with the often presence of the businessman (overall 35% for the semester and 100% for the project) and the instructor in the four classrooms, team teaching the project could have positively influenced the multiple courses and high course service learning grades relationship (Eyler and Giles, 1999; Holland, 2001; Mastrangelo and Tischio, 2005).

In summary, the three research questions were answered and the findings indicate positive results. First, does increasing the quality, scope and extent of service learning project enhance the learning outcome of a course? Table 1 shows that with greater emphasis on service-learning learning outcomes increase, and from the students' and businessperson's perspectives. Second, does service-learning method of teaching result in student's personal development? Table 3 presents students' favorable responses in a post-test (75.4%) for their personal development improvement, and by the instructor and businessperson's observations. Third, do student's demographics, characteristics and experiences affect their learning and development in a service-learning course? Certain demographics, e.g., gender (females), characteristics, e.g., prior learning (grade point average) and current learning (examination grades), and experiences, e.g., enrolled in multiple marketing courses with a service-learning project (two or three), did significantly better ($p < 0.05$) in their service-learning projects.

CONCLUSIONS

The study has indications of being valid. Generally, the sample is representative of the College of Business and Management in terms of gender and international students. The students' grade point average is significant and directly related to the course examinations ($p < 0.001$) and the service learning projects ($p < 0.05$). However, there are limitations to the study. The sample was from one university (Lynn University), one academic unit (College of Business and Management), one specialization (Marketing), and the same instructor (the second author) and businessperson (the third author). The sample also included a much higher proportion of international students than the typical university. Furthermore, the courses were upper division undergraduate (300 and 400 level), and only one underclass student (a sophomore) participated in the study. Lastly, while the instructor used consistent methods with prior semesters to avoid grade/evaluation bias, the vast majority of students were not in the prior semester courses. Therefore, in comparing the results from prior semesters to this study would not account for particular student (sample) characteristics, e.g., grade point average, motivation, commitment.

This study found the service-learning project and teaching pedagogy being successful from three perspectives – the students, the instructor, the businessperson (Sternberger, Ford and Hale, 2005). For example, above average course grades (A and B) increased 40.4% in comparison to prior semesters and used as a baseline point while the below average grades (D and F) decreased 74.0% with no student failing in any of the four courses (Elam, et al., 2003; Soslau and Yost, 2007). See Table 1. Nevertheless, there are future research opportunities that can further explain these results or further extend this study. First, a qualitative study to gain a better understanding of the issues, problems and dynamics of functionally and dysfunctional student team service-learning project assignments would improve learning outcomes and students' preparation for a successful career. Second, a similar quantitative study between business school disciplines or across academic units would provide a better understanding of service-learning value. Third, a study including several, or several types of universities could confirm, or not the results from this study. Fourth, a study of graduate students, e.g., MBA, MS, might find additional understanding of service-learning. Fifth, a longitudinal study over students' undergraduate studies would document improvement, or not in service-learning outcomes.

With greater public and particularly employer expectations of and the increased competition in higher education, universities look to new, or at least different curriculum and teaching pedagogy to increase learning outcomes and to better prepare students for successful careers (Blankinship, 2007). One strategy is to bring the "real world" to the classroom," e.g., businesspeople, *and* to take the classroom to the "real world," e.g., students identifying critical issues, field research and solving business opportunities and problems. Service-learning is a tool to achieve this (Walsh, 2002).

However, this study was successful for several reasons. First, it takes a commitment to applied learning, e.g., Lynn University and its College of Business and Management missions. Second, the success is related to the support from the university administration, e.g., Academic Affairs, academic units, to be innovative and to take reasonable risks. Third, it is critical to have a businessperson to be both committed and supportive to the service-learning experience.

Fourth, students must "buy in" to the new experience by the instructor "selling" the value, e.g., short-term course grade, long-term career benefits, of the service-learning approach. Fifth, knowledge is a critical first step to a successful project while the challenge to the instructor is to demonstrate the "bridge" between the textbook and the following project. Sixth, it is essential to keep students engaged throughout the semester with the integration of course content and its application that creates a logical and seamless flow of learning from the first class session to the last one.

The importance of service-learning is creating lifelong learning. While knowledge precedes skills (Willingham, 2009), the enhancement of knowledge, skills, and personal development are the benefits and key aspects to being competitive in the job market and to successful careers, e.g., learning by doing, the abilities to apply knowledge. Service-learning provides this experience and the students' personal and professional development.

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THE STATEMENT OF CASH FLOWS USING FINANCIAL STATEMENT EQUATIONS

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ABSTRACT

This paper addresses one of the more difficult topics in teaching MBA level financial management, the statement of cash flows. By employing financial statement equations in preparing the statement of cash flows, students: (1) are employing tools that they are more familiar and comfortable with which mitigates their anxiety and enhances their understanding, (2) are better able to understand the logic of the statement of cash flows and the relationships that exist between it and the income statement and balance sheet, (3) obtain a global perspective of the firm's activities and a clearer understanding of how managerial decisions impact the financial statements, and (4) are better prepared to integrate their new knowledge of financial statements into the remainder of the MBA curricular core.

KEY WORDS: Cash flow statement, financial statement equations

JEL: G40, M40

INTRODUCTION

Financial accounting has typically been taught from the preparation perspective. Thus, students learned to prepare the statement of cash flows using the double entry bookkeeping model of debits and credits. While these students are quite capable of preparing the statement of cash flows, they many times fail to grasp a keen understanding of the statement and its usefulness in managerial decision making. Accordingly, this paper employs an algebraic approach in preparing the statement of cash flows with an emphasis on tying together the interrelationships that exist among all the financial statements. This moving away from the debit-credit model to an algebraic approach is more beneficial to the regular MBA student in the long run because it focuses on the fact that the financial statements are the mathematical models of the firm. Financial statement equations make these relationships more explicit and provide a truer perspective and a deeper understanding of the financial statements. Furthermore, comprehension of the algebraic relationships is extremely important for the student when progressing through the MBA curriculum and operating in the real world.

The purpose of this paper is to explain in simple algebraic terms the preparation of the statement of cash flows to MBAs using financial statement equations. The first part of this paper discusses the development and role of the statement of cash flows as the third major financial statement. In addition, this section presents a brief overview of the presentations of the statement of cash flows by several widely used corporate finance and financial accounting texts. Next, the financial statement equation approach to teaching the statement of cash flows is presented. Finally, the advantages of the algebraic approach using basic financial statement equations are discussed including the ease of explaining the direct approach for determining cash flow from operations, the comprehension of the interrelationships among the financial statements, the ability to develop and understand pro forma financial statements, and the facilitation of financial decision making.

BACKGROUND

Investors and creditors use financial statements to make financial decisions. These users develop an understanding of a firm's sales, expenses and profitability by reviewing the income statement. They develop a sense of the firm's financial position at a particular point in time from reviewing the balance sheet. However, with only these two financial statements to review, these users do not have complete information on the extent of a firm's operating, financing, and investing cash flow activities. For example, the cash proceeds from the disposal of investments in property, plant and equipment or the extent of cash flows from long-term debt issuances and repayments are not disclosed in either financial statement. To overcome this problem, a third financial statement, the statement of cash flows is provided to financial statement users. The objective of this statement is to present information on cash provided and used from all activities of the reporting entity.

Historically, cash-basis accounting preceded accrual accounting, but had limitations in measuring an entity's income for the period. With accrual accounting accountants were better able to match revenues and expenses yielding a more precise measure of the entity's income for the period. However, with only a balance sheet and income statement to review, financial managers did not have complete information with respect to the flow of funds within the entity. Thus, a funds statement was developed by financial managers as a tool to indicate, on a historical basis, where the funds came from and how they were used. With wide spread reporting by a significant number of companies of the sources and uses of funds (funds statement) in annual financial reports to shareholders and with the support of the principal stock exchanges, the Accounting Principles Board (APB) in 1963 issued Opinion No. 3, *The Statement of Source and Application of Funds,* which encouraged, but did not require, the presentation of a funds statement in the annual report to shareholders. In Opinion No. 3 the APB offered considerable latitude as to both the form and content of the funds statement, and presentation varied widely among companies.

Recognizing the increased usefulness of the funds statement to users of financial statements, the Accounting Principles Board in 1973 required its presentation in the annual report to shareholders by adopting APB Opinion No.19, *Reporting Changes in Financial Position.* In this opinion the Board sought to establish guidelines for presenting such statements including the requirement that the statement be based on a broad concept of changes in financial position and recommended that the title of the statement be changed to *Statement of Changes in Financial Position.* However, under Opinion 19, the concept of funds could still be defined broadly, primarily either as cash, working capital, or a variation on working capital. In 1987, Financial Accounting Standards Board (FASB) solved the problem of the various definitions of funds by issuing Statement No. 95 (FASB, 1987) which replaced the statement of changes in financial position with the statement of cash flows. In *SFAS No. 95,* the definition of funds was narrowed to include only cash and cash equivalents and the statement's title was changed to the statement of cash flows. The purpose of this definition of funds was to increase comparability of corporate financial reporting and to require all companies to provide information on its activities on a cash basis. On the statement, cash flows are segregated by operating activities, investing activities, and financing activities. This statement of cash flows represents a major step forward for users of financial statement data because of its relevance for analytical purposes. The mandatory focus on cash in this statement results in a more useful document than its predecessor, the statement of changes in financial position where the definition of funds was broadly interpreted across firms within the same industry.

The statement of cash flows requires classification according to the nature of the transaction (operating, investing, or financing) as opposed to the nature of the cash receipt or payment. An objective of this statement is to assist the user in assessing the reasons for differences between net income and associated cash receipts and payments. This is achieved by treating as operating activities all transactions that generally enter into the determination of net income. Another requirement of the statement of cash flows is the disclosure of noncash investing and financing transactions in a separate schedule. The required separate disclosure of noncash

transactions maintains the all important cash focus of the statement of cash flows and distinguishes it from the less informative state of changes in financial position.

The FASB Statement No. 95 allows the option of a direct or indirect method of reporting operating cash flows. The direct method reports the major classes of gross cash receipts and gross cash payments in the operating section of the statement, the summation of which is net cash flow from operating activities. Statements of cash flow developed on the direct basis separately classify as operating cash flows: cash received from customers; cash paid to suppliers and employees; interest and dividends received; interest paid; income taxes paid; and, other operating cash receipts and cash payments, if any. The FASB requires that a reconciliation of net income to net cash flow from operating activities be reported in a separate supplementary schedule when using the direct method. The indirect method of reporting operating cash flows, which is identical to the required supplementary schedule in the direct method, reconciles net income to net cash flow from operations. Net income is adjusted to remove the effects of all deferrals of past operating cash receipts and payments; all accruals of expected future operating cash receipts and payments; and all items whose cash effects are investing or financing cash flows.

This reporting change causes greater emphasis to be placed on cash flows, and justifies discussion of how the statement of cash flows may be best taught to MBA students. While the level, detail and depth of coverage differ from program to program, MBA students universally seem to struggle with this topic. Yet, it may be argued that the statement of cash flows is one of the most important accounting topics, particularly in light of the number of companies now faced with debt-laden balance sheets and whose solvencies are questionable due to the economic downturn.

Table 1: Overview of Leading Accounting Texts

Fundamental Accounting Text	Direct	Indirect	Equations	T-Accounting	Worksheet
Harrison, Horngren & Thomas	Yes	Yes	Full Equations	Yes	No
Kimmel, Weygandt & Kieso	Appendix	Yes	Simple Equations (Appendix)	Yes	No
Needles & Powers	No	Yes	No Equations	Yes	No
Phillips, Libby & Libby	Yes	Yes	Simple Equations	Yes	Appendix

This table shows the presentation techniques of the cash flow statement in leading account texts.

A review of several leading corporate finance texts (Ehrhardt & Brigham, 2008; Brealy, Myers & Marcus, 2009; Ross, Westerfield, & Jordan, 2010) reveals that these authors rely on students developing their more detailed knowledge of the statement of cash flows from their prerequisite financial accounting course. Each of these texts primarily presents a brief description of the statement in just a few pages. Therefore, several leading accounting texts (Harrison, Horngren & Thomas, 2010; Kimmel, Weygandt & Kieso, 2009; Needles & Powers, 2008; Phillips, Libby, & Libby, 2008) were reviewed to determine how leading financial accounting texts cover the statement of cash flows?

Table 1 summarizes the results of the review. First, not surprisingly all of the texts cover the indirect approach to the operating section of the statement given that 99% of surveyed companies use the indirect approach in their annual report to shareholders (AICPA, 2007). One text (Needles & Powers, 2008) does not cover the direct method at all while another (Kimmel, Weygandt & Kieso, 2009) relegates the direct method to an appendix. The other two texts cover both methods, but for one text (Phillips, Libby & Libby, 2008) the primary focus is on the indirect method whiles the other text (Harrison, Horngren & Thomas, 2010) provides equal coverage. Second, only one of the texts (Phillips, Libby & Libby, 2008) covers the worksheet approach, but it is relegated to an appendix. While the worksheet approach was quite useful in preparing the old statement of changes in financial position, it has lost some of its comparative advantage on the preparation side with the new statement of cash flows. Third, all of the texts employed the T-account approach in determining the cash flows for the statement. Finally, authors are beginning to employ, on an elementary level, equations to explain

the computation of the cash flows. When doing so, the equations are related to the T-account approach in determining the cash flow. Only one text did not employ any equations. However, only one text, Harrison, Horngren & Thomas (2010), provides a full set of financial statement equations in their presentation by tying the equations to the t-accounts which they represent.

FINANCIAL STATEMENT EQUATION APPROACH

The financial statement equation approach has been around for some time. Johnson (1966) analyzed algebraically the individual changes in noncurrent accounts to provide a means to calculate directly through equations the individual sources and uses of working capital needed for a funds statement. In addition, he presented an algebraic system for cash-flow analysis. In this paper we begin first with the balance sheet equation and expand it to provide a logical algebraic approach for determination of cash flows. Next, the direct approach for computing the cash flow from operations is presented using the appropriate financial statement equations.

Then, an equation for determining cash flow from operations under the indirect method is presented. Finally, financial statement equations are employed to address the cash flows from investing activities and financing activities. Table 2 presents a listing of financial statement equations and demonstrates their algebraic manipulation. In addition, an example, provided in Table 3, is employed throughout to illustrate the use of the financial statement equation approach.

Table 2: Financial Statement Equations

Financial Statement	Equations
ACCOUNTS RECEIVABLE	A/R_1 + Credit Sales - Collections = A/R_2 Collections = Credit Sales - [A/R_2 - A/R_1]
UNEARNED REVENUE	UR_1 + Cash Advances - Revenue Earned = UR_2 Cash Advances = Revenue Earned + [UR_2 - UR_1]
INVENTORY	I_1 + Purchases - COGS = I_2 Purchases = COGS + [I_2 - I_1]
ACCOUNTS PAYABLE	A/P_1 + Purchases - Payments = A/P_2 Payments = Purchases - [A/P_2 - A/P_2] Payments = COGS + [I_2 - I_1] - [A/P_2 - A/P_2]
PREPAID EXPENSES	PE_1 + Prepayment – Expiration of PE = PE_2 Prepayment = Expiration of PE + [PE_2 - PE_1]
PLANT & EQUIPMENT	$P\&E_1$ + Acquisitions of P&E - Cost Basis of P&E Sales = $P\&E_2$ Acquisitions of P&E = Cost Basis of P&E Sales + ($P\&E_2$ - $P\&E_1$)
ACCUMULATED DEPRECIATION	AD_1 + Depreciation Expense - AD for Asset Sales = AD_2 Depreciation Expense = AD for Asset Sales + (AD_2 - AD_1)
NOTES RECEIVABLE	N/R_1 + Loans Made – Loans Collected = N/R_2 Loans Collected = Loans Made - [N/R_2 - N/R_1] Loans Made = Loans Collected + [N/R_2 - N/R_1]
NOTES PAYABLE	N/P_1 + Borrowings – Loan Repayments = N/P_2 Borrowings = Loan Repayments + [N/P_2 - N/P_1] Loan Repayments = Borrowings - [N/P_2 - N/P_1]
WAGES PAYABLE	W/P_1 + Wages Expense - Wages Paid = W/P_2 Wages Paid = Wages Expense - [W/P_2 - W/P_1]
ACCRUED LIABILITIES	A/L_1 + Accrued Expense – Payment of Accruals = A/L_2 Payment of Accruals = Accrued Expense -[A/L_2 - A/L_1]

Financial Statement	Equations
INTEREST PAYABLE	I/P_1 + Interest Expense - Interest Payment = I/P_2 Interest Payment = Interest Expense - [$I/P_2 – I/P_1$]
DEFERRED INCOME TAX	DIT_1 + Income Tax Expense – Income Tax Payment = DIT_2 Income Tax Payment = Income Tax Expense - [DIT_2 -DIT_1]
CAPITAL STOCK	CS_1 + Issuance - Redemption = CS_2 Issuance = Redemption + [CS_2 - CS_1]
DIVIDENDS PAYABLE	D/P_1 + Dividends Declared – Dividends Paid = D/P_2 Dividends Paid = Dividends Declared - ($D/P_2 – D/P_1$)
RETAINED EARNINGS	RE_1 + NI – Dividends Declared = RE_2 ($RE_2 – RE_1$) = NI – Dividends Declared

This table shows the key financial statement equations

Since our goal is not only to have the student prepare the statement of cash flows but also to be able to use it in decision making, we introduce the student to the concept of sources and uses of funds. The sources and uses of funds statement, a precursor of the statement of cash flows, has been one of the most useful tools for the financial manager as it indicates where, on a historical basis, cash came from and where it was used. When a firm applies for a loan, one of the first questions posed by the loan officer is *what has your firm done with the money it had?* This is usually followed by *when and how is your firm going to repay the loan?* The ability of the sources and uses statement to answer these questions and its early use attest to its managerial usefulness.

Each change in the balance sheet may be classified as either a source or a use of funds. A use of funds is an increase in an asset or a decrease in a liability or equity. A source is a decrease in an asset or an increase in a liability or equity. As indicated in Table 3, the student can easily identify the changes in the balance sheets accounts as either a source or a use. As a check, the sums of sources and uses are equal if the student correctly analyzed the balance sheet account changes. Given the concept of sources and uses of funds, we direct the student to the balance sheet equation and expand it to provide an equation for computing the cash flows.

In the equations below, A = assets, L = liabilities, E = equities, OA = other assets, CC = contributed capital, RE = retained earnings, CL = current liabilities, LTL = long-term liabilities, OCA = current assets other than cash, LTA = long-term assets, NI = net income, and D = dividends.

A = L + E
Cash + OA = L + E
Cash = L + E - OA

Substituting into the above equation $E = CC + RE;\ OA = OCA + LTA;$ and $L = CL + LTL$ yields the following.

Cash = CL + LTL + CC + RE - OCA - LTA.

Since the focus of the statement of cash flows is on ***flows*** or changes in cash, we modify our equation to reflect the changes in the balance sheet accounts.

ΔCash = ΔCL + ΔLTL + ΔCC + ΔRE - ΔOCA - ΔLTA

Substituting into the above equation $\Delta RE = NI - D$ yields

ΔCash = ΔCL + ΔLTL + ΔCC + NI - D - ΔOCA - ΔLTA

And, then rearranging we have the following.

$\Delta Cash = NI + \Delta CL - \Delta OCA - \Delta LTA + \Delta LTL + \Delta CC - D$

This derivation of the cash flow equation from the balance sheet equation clearly illustrates that cash flows are determined by changes in the balance sheet accounts.

The Direct Method for Cash Flow from Operations

Operating activities make up the first section of the statement of cash flows, and it can be presented using either of two methods. The direct method presents the gross operating cash flows for the period. The use of financial statement equations makes the logic of this approach apparent. The cash received from customers is derived from the accounts receivable equation,

$A/R_1 + \text{Credit Sales} - \text{Collections} = A/R_2$,

Which is rearranged to solve for the cash flow (collections),

$\text{Collections} = \text{Credit Sales} - [A/R_2 - A/R_1]$.

For Carson Products, the collections would equal

$\$460,000 = \$500,000 – [\$120,000 - \$80,000]$.

To determine the cash paid for the cost of merchandise purchased requires the use of two equations: the inventory equation and the accounts payable equation.

$I_1 + \text{Purchases} - \text{COGS} = I_2$

$A/P_1 + \text{Purchases} - \text{Payments} = A/P_2$

First, the inventory equation is solved for purchases,

$\text{Purchases} = \text{COGS} + [I_2 - I_1]$.

Next, the accounts payable equation is solved for payments,

$\text{Payments} = \text{Purchases} - [A/P_2 - A/P_2]$.

Then, the purchases equation is substituted into the payments equation to yield,

$\text{Payments} = \text{COGS} + [I_2 - I_1] - [A/P_2 - A/P_2]$.

For Carson, therefore, payments for the cash paid for merchandise is equal to

$\$287,000 = \$300,000 + [\$140,000 – \$90,000] – [\$123,000 – \$60,000]$.

Table 3: Carson Products

Jonathan Carson, president of Carson Products, considers $16,000 to be the minimum cash balance for operating purposes. However, at the end of 2007 Carson Products has a cash balance of only $8,000. As the company reported higher net income for the year, and issued both bonds and common stock, the decline in cash was a mystery to Jonathan.

The following additional information is available for the year 2007:

a. Dividends totaling $9,000 were declared and paid.
b. Equipment was sold during the year at a selling price of $8,000. The equipment had a cost of $20,000 and had accumulated depreciation of $10,000.
c. Preferred Stock was converted into an equal amount of common stock.
d. Long-term investments that had a cost of $20,000 were sold during the year for $30,000.

Required:

1. Prepare a statement of cash flows for 2007 using the indirect method.
2. Since the Cash account decreased so dramatically during 2007, the company's other executives as well as Mr. Carson were interested in seeing the statement of cash flows prepared using the direct method as well.

CARSON PRODUCTS
Comparative Balance Sheet
December 31, 2007, and 2006

Assets	2007	2006	Source	Use
Current assets				
Cash	$8,000	$21,000	13,000	
Accounts receivable, net	120,000	80,000		40,000
Inventory	140,000	90,000		50,000
Prepaid expenses	5,000	9,000	4,000	
Total current assets	273,000	200,000		
Long-term investments	50,000	70,000	20,000	
Plant and equipment	430,000	300,000		130,000
Less: accumulated depreciation	(60,000)	(50,000)	10,000	
Net plant and equipment	370,000	250,000		
Total assets	$693,000	$520,000		
Liabilities and Stockholders' Equity				
Current liabilities:				
Accounts payable	$123,000	$60,000	63,000	
Accrued liabilities	8,000	17,000		9,000
Total current liabilities	131,000	77,000		
Bonds payable	70,000		70,000	
Deferred income taxes	20,000	12,000	8,000	
Total liabilities	221,000	89,000		
Stockholders' equity:				
Preferred stock	80,000	96,000		16,000
Common stock	286,000	250,000	36,000	
Retained earnings	106,000	85,000	21,000	
Total stockholders' equity	472,000	431,000		
Total liabilities and stockholders' equity	$693,000	$520,000	245,000	245,000

CARSON PRODUCTS
Income Statement
For the year December 31, 2007

Sales		$500,000
Less cost of goods sold		(300,000)
Gross margin		200,000
Less operating expenses		(158,000)
Net operating income		42,000
Nonoperating items:		
Gain on sale of investments	$10,000	
Loss on sale of equipment	2,000	8,000
Income before taxes		50,000
Less income taxes		(20,000)
Net income		$30,000

This table presents the Carson Products application of the development of the cash flow statement

Cash payments for income taxes is computed using the following equation,

DIT_1 + Income Tax Expense – Income Tax Payment = DIT_2

where DIT stands for deferred income tax. Solving for income tax payment yields

Income Tax Payment = Income Tax Expense - [DIT_2 -DIT_1].

For Carson this equals

$12,000 = $20,000 – [$20,000 – $12,000].

Finally, before we can compute the cash outflow for operating expenses, we must reduce the amount of operating expenses on the income statement for the amount of depreciation expense, which does not represent a cash outflow ($20,000). The computation for depreciation expense is shown below. Here, two equations are required, the equation for prepaid expenses and the equation for accrued liabilities, as both have terms representing payments for operating expenses.

PE_1 + Prepayment – Expiration of PE = PE_2

A/L_1 + Accrued Expense – Payment of Accruals = A/L_2

Both of these equations are solved for their respective cash flows.

Prepayment = Expiration of PE + [PE_2 - PE_1]

Payment of Accruals = Accrued Expense – [A/L_2 - A/L_1]

The sum of Expiration of PE and Accrued Expense equals the operating expenses requiring a cash outlay, which is equal to the operating expenses on the income statement less depreciation expense or $138,000 [Operating expenses less depreciation = $158,000 - $20,000]. Thus, we can combine these two equations by summing the payments for operating expenses to equal the cash outflow for operating expenses.

Cash outflow for operating expenses = Operating Expense – Depreciation + [PE_2 – PE_1] – [A/L_2 - A/L_1].
For Carson this equals:

$143,000 = [$158,000 - $20,000] + [$5,000 - $9,000] – [$8,000 - $17,000].

The overall result is the cash flows from operations for Carson computed using the direct method in Table 4.

Table 4: Carson Products Statement of Cash Flows (Direct Method) For the Year ended December 31, 2007

Operating activities:		
Cash received from customers		$460,000
Less cash disbursements for:		
Cost of merchandise purchased	$287,000	
Operating expenses	143,000	
Income taxes	12,000	
Total cash disbursements		442,000
Net cash flow from operating activities		$18,000

This table presents the Carson statement of cash flows using the direct method.

The Indirect Method for Cash Flow from Operations

Recognizing that the FASB defines cash flows from operating activities as the cash effects of all transactions and events that enter into the determination of net income, an equation reconciling net income to cash flow from operations is presented incorporating the concept of sources and uses of funds. Rather than trying to remember whether *one adds the decrease or subtracts the increase* in the balance sheet account or vice-versa, the reconciliation equation adjusts net income for the noncash charge of depreciation, adds the sources, subtracts the uses, adds back the nonoperating losses (NOL), and subtracts the nonoperating gains (NOG).

CFO = NI + Depreciation + Sources - Uses + NOL - NOG

The sources, among the operating assets and operating liabilities, for Carson Products are as follows: decrease in prepaid expenses ($4,000), increase in accounts payable ($63,000), and increase in deferred income taxes ($8,000). The uses, among the operating assets and operating liabilities, for Carson Products are: increase in accounts receivable, net ($40,000), increase in inventory ($50,000), and decrease in accrued liabilities ($9,000). There is a nonoperating loss of $2,000 from the sale of equipment that had a cost of $20,000, accumulated depreciation of $10,000, and a book value of $10,000 that was sold for $8,000. There is a nonoperating gain of $10,000 from selling long-term investments that had a cost of $20,000 for $30,000. This leads to cash flow from operations of $18,000, as shown in the following summary calculation. Also, see Table 5, which illustrates the indirect method for calculating cash provided from operations.

CFO = NI + Depreciation + Sources - Uses + NOL - NOG
CFO = 30,000 + 20,000 + 4,000 + 63,000 + 8,000 - 40,000 - 50,000 - 9,000 + 2,000 - 10,000 = $18,000

Cash Flows from Investing and Financing Activities

The cash inflow from investing activities for Carson products equals the selling prices for the long-term investments ($30,000) and equipment ($8,000). The cash outflow for the purchase of plant and equipment can be determined using the following equation:

$P\&E_1$ + Acquisitions of P&E - Cost Basis of P&E Sales = $P\&E_2$.

Solving for the cash flow, in this case, *Acquisitions of P&E* yields

Acquisitions of P&E = Cost Basis of P&E Sales + ($P\&E_2$ - $P\&E_1$)
= $20,000 + ($430,000 - $300,000) = $150,000.

Refer to Table 5. Since the depreciation expense was not listed separately in the income statement, it must be computed from the following accumulated depreciation equation,

AD_1 + Depreciation Expense - AD for Asset Sales = AD_2.

Solving this equation for depreciation yields

Depreciation Expense = AD for Asset Sales + (AD_2 - AD_1).

For Carson depreciation expense is

$20,000 = $10,000 + ($60,000 - $50,000).

The cash inflow from financing activities for Carson Products equals the sale of bonds ($70,000) and the sale of common stock ($20,000). Note that while the change in the common stock account of 36,000 is listed as a

source of 36,000, it must be adjusted for the use of 16,000 from the decrease in preferred stock resulting from the conversion of preferred stock into common stock. Since the conversion of the preferred into common did not require the use of cash, this transaction would not appear on the statement of cash flows. However, it is an important financing decision and is, therefore, reported in a supplemental schedule below the statement of cash flows. Thus, the cash flow from issuing common stock is equal to $20,000 (= 36,000 – 16,000) and there was no cash flow generated from the decrease in preferred stock. The accounting equation for retained earnings is $RE_1 + NI – Dividends\ Declared = RE_2$. The source column in Table 3 shows a source for retained earnings of 21,000. However, that difference shows up on the cash flow statement not in this net amount but as a source of 30,000 (net income) and a use of 9,000 (dividends paid), which equals a net source of 21,000 (see Table 5.)

Table 5: Carson Products Statement of Cash Flows (Indirect Method) For the Year ended December 31, 2007

Operating activities:		
Net income		$30,000
Adjustments needed to convert net income to a cash basis:		
Depreciation expense		20,000
Add sources:		
Decrease in prepaid expenses	$4,000	
Increase in accounts payable	63,000	
Increase in deferred taxes	8,000	75,000
Subtract uses:		
Increase in accounts receivable	($40,000)	
Increase in inventory	(50,000)	
Decrease in accrued liabilities	(9,000)	(99,000)
Nonoperating gains and losses:		
Gain on sale of investments		(10,000)
Loss on sale of equipment		2,000
Net cash flow from operating activities		$18,000
Investing activities:		
Cash was provided by:		
Sale of investments	$30,000	
Sale of equipment	8,000	
Cash was used for:		
Purchase plant and equipment	(150,000)	
Net cash flow from investing activities		($112,000)
Financing activities:		
Cash was provided by:		
Issuance of bonds	$70,000	
Sale of common stock	20,000	
Cash was used for:		
Payment of dividends	(9,000)	
Net cash flow from financing activities		$81,000
Net change in cash		($13,000)
Supplemental schedule of noncash investing and financing activities:		
Preferred stock converted into common stock		$16,000

This table presents the Carson statement of cash flows using the indirect method.

CONCLUSION

One of the most difficult topics for students to master in the initial MBA financial management course is the statement of cash flows. The goal of this paper is to present an alternative technique for student instruction in the creation of the cash flow statement based on financial equation relationships. The development of the cash flow statement using financial equations is a superior methodology to standard approaches used in most accounting and finance texts. By employing financial statement equations in preparing the statement of cash flows, students: (1) are employing tools that they are more familiar and comfortable with which mitigates their anxiety and enhances their understanding, (2) are better able to understand the logic of the statement of cash flows and the relationships that exist between it and the income statement and balance sheet, (3) obtain a better overall perspective of the firm's activities and a clearer understanding of how managerial decisions impact the

financial statements, and (4) are better prepared to integrate their new knowledge of financial statements into the remainder of the MBA curricular core. The cash flow statement is without question one of the key building blocks for the MBA curriculum. The body of this paper presents the financial equations for the balance sheet, the income statement and the cash flow statement with all of the financial relationships illustrated with equations. By working through the equations and without any reference to T-accounts, the student can follow through the development and presentation of the cash flow statement and understand how it is derived from the underlying financial statements.

MBA curricula have changed dramatically in the last two decades. These changes reflect not only the revolutionary transformations that have taken place within organizations and capital markets during this period, but also the theoretical advances developed by graduate schools of business. At the core of these changes is the development and integration of the concept of value creation into MBA curricula. Based on fundamental economic principles, value creation may be stated as follows: Any business decision — such as a new investment, the acquisition of another company, or a restructuring plan — will increase a firm's value only if the present value of the decision's expected future stream of net cash flows exceeds the initial cash outlay required to carry out the decision. Value creation is fundamental to a business's growth and survival. Moreover, the emphasis on value creation has increased the importance of being able to understand and forecast future cash flows in a more rigorous format. The financial equation approach to the cash flow statement as presented in this paper can be directly related to the valuation equations used in developing the concepts of value creation. Thus, the financial statement equation approach provides the students with a single integrated set of financial equation relationships that starts with the basic financial statement equations and ends with the integration of the cash flow statement into the concept of value creation. The future direction of this approach is the development of a complete, integrated set of financial statement equations and applications starting with the financial statement equations and ending with the development of the present value of the future stream of cash flows.

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AN EXPLORATION OF STUDENT SATISFACTION WITH INTERNSHIP EXPERIENCES IN MARKETING

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ABSTRACT

Business internships have become increasingly important and popular in students' learning and career preparation. We conducted a study among eighty-eight business interns to understand the level of satisfaction that marketing students experience from completing internships. Using a factor analysis, this study identified several factors relevant to students' satisfaction with internships. Several hypotheses were proposed linking relevant factors and satisfaction with internships. Students' satisfaction with their internships was found to be related to nature of the internship experience and the benefits received. Based on the findings of this study, some implications were drawn for the students and universities.

JEL: M3

KEYWORDS: Marketing Internships, Student Satisfaction, Internships

INTRODUCTION

Traditionally, the primary goal of education has been the successful transfer of information to students – students have been viewed to be vessels to fill with knowledge (Freire, 1998). Recently, several have questioned whether traditional pedagogical methods, such as lecture, are truly beneficial to students' education (e.g., Bringle & Hatcher, 2003). Guyton (2000), for instance, views traditional pedagogical methods as being responsible for turning students into passive underachievers and Bransford and Vye (1989) speak of an "inert knowledge problem" – a situation where students possess a significant amount of knowledge but are unable to apply that knowledge to real world problems or to make the transition from memory to action. Consequently, many in higher education have called for widespread changes in classroom pedagogy (e.g., Jacoby, 1996).

Similarly, growing criticism has been developing over the nature of business education by business practitioners and by AACSB, the primary accrediting body of collegiate schools of business (AACSB, 1996). Candy and Crebert (1991), for instance, state that although recent business graduates are full of information and theories, they are generally not prepared to solve problems or to make decisions. It is believed that this shortcoming arises from a growing disconnect between the abstract and theoretical bias of business schools and the dynamic practical business environment (Angelidis, Tomic & Ibrahim, 2004). Indeed, some graduates feel their education has not prepared them to enter the business world (Maskooki, Rama & Raghunandan, 1998). This is an issue of importance to marketing educators since preparing students for successful careers in marketing is an important goal of marketing educators. Hence, what and how marketing educators teach their students should arguably be directly affected by the needs of the workplace (Kelley & Bridges, 2005). In response, AACSB has called for increasing ties between business schools and the business community (Maskooki, Rama &Raghunandan, 1998).

The call of AACSB has resulted in a re-examination of the pedagogy used in many marketing programs (Duke, 2000; Elam & Spotts, 2004). Frontczak (1995) states "the move from a traditional, theoretical, positive knowledge-transfer approach to an experiential, interactive method of learning is becoming the norm for marketing educators" (1998, p. 25). More recently, Karns (2005) suggested that this move is

continuing. Although agreement does not exist on a single definition for experiential learning (Frontczak, 1998), the definition of Sakofs, who defined experiential education as "a philosophical orientation toward teaching and learning that values and encourages linkages between concrete educative activities and abstract lessons to maximize learning" (1995, p. 149) has several adherents. Experiential education seems to be consistent with the needs expressed by AACSB since experiential education in marketing has the potential to foster direct contact between students and the business community. Consequently, experiential learning activities have become much more commonplace in marketing classrooms (Gremler, Hoffman, Keaveney & Wright, 2000).

One form of experiential education in marketing which appears to address several of the shortcomings observed in business education by AACSB is internships (Maskooki, Rama & Raghunandan, 1998; Mello, 2006). Internships provide direct business contact for students, usually in an employment setting. As a result, the use of internships in marketing education has become more common (Gault, Redington, & Schlager, 2000). The purpose of this study is to extend knowledge of internships in marketing by identifying the factors associated with higher student satisfaction with the internship experience. Knowledge of these factors will help marketing educators more effectively market internship experiences to their students.

The reminder of the paper is organized as follows. First, past research on internships is reviewed and students' satisfaction with internships is explored. Second, the study is developed and hypotheses are presented. Finally, the results are reported and discussed.

LITERATURE REVIEW

Internships

Student involvement in the business world, such as that facilitated by internships, is not something new. The University of Cincinnati, for instance, initiated their co-op program over a century ago (1906) (Thiel & Hartley, 1997). Internships involve students working with and for businesses in a fashion so that they can become more acquainted with the business world and have a context to apply the knowledge gained from their classwork to real business situations. The purpose of internships is "to provide a planned transition from the classroom to the job" (Coco, 2000, p. 41) and "prepare students with realistic expectations of their future careers and to provide them with opportunities to polish career skills and to gain on-the-job experience" (Paulins, 2008, pp. 105-106). Common characteristics of internships include a specific number of work hours, academic credit, and oversight from a faculty member or other university representative (DiLorenzo-Aiss & Mathisen, 1996). Furthermore, internships can be paid or unpaid (DiLorenzo-Aiss & Mathisen, 1996). Divine, Linrud, Miller, and Wilson (2007) note that approximately 90 percent of colleges offer internships or similar experiences.

Several researchers have listed the benefits that students are believed to gain from participating in internships. Coco (2000), for instance, identifies five benefits: 1) ability to relate classroom concepts to practical applications, 2) improved knowledge of industry career paths, 3) crystallization of interests and career ambitions, 4) reduced shock upon entering the workplace, and 5) faster advancement. Maskooki, Rama, and Raghunandan (1998) identify (1) experience integrating material from the classroom to the workplace, (2) introduction to available careers, (3) developing good work habits, and (4) increased chances of finding employment. These lists, however, are inferred and are not the results of direct empirical research.

Empirical research also attests to the benefits students receive by participating in internships. Hite and Bellizzi (1986) observed that internships in marketing help students to crystallize their job interests and were viewed by students as a more valuable experience than case courses or guest speakers. Several,

including Fang, Lee, Lee, and Huang (2004) and Gault, Redington, and Schlager (2000) have observed that students participating in internships receive a greater number of job offers than those who do not. Gault, Redington, and Schlager (2000) also observed that business school alumni who participated in an internship believe they receive higher initial compensation and experience greater job satisfaction than those you did not. Cook, Parker, and Pettijohn (2004) observed that internship students believe that their internship provide them with interpersonal skills, helped them relate knowledge gained from the classroom to the workplace, helped them to mature, influenced their career goals, and made them more confident in obtaining a job upon graduation. Karns (2005) observed that marketing students view internships as the most effective pedagogy (out of 21 different alternatives) and as being highly preferred (behind only field trips and multiple-choice exams in desirability). Finally, Schneider and Andre (2005) note that business students believe that an internship had significantly helped them to prepare for writing in the workplace.

Others also see benefits for students from being involved in internships during their education. Recruiters, for instance, believe that internships enhance student skills and their preparation to enter the workforce (Knemeyer & Murphy, 2001). In response to the apparent benefits to students from being involved in internships, European business schools often require internships (Adler & Loughrin-Sacco, 2003). Similarly, Cook, Parker and Pettijohn (2004) suggest that the rapid growth in internships is evidence that internships provide numerous benefits to both employers and students.

Satisfaction with an Internship Experience

Although some suggest that participating in an internship should be a required component of students majoring in marketing (as Jenkins states "unfortunately too many schools consider undergraduate internships to be add-ons, instead of integral parts of the educational experience" (2009, p. 54)), most internships offered in departments of marketing continue to be offered as electives (Divine, Linrud, Miller & Wilson, 2007). Consequently, in most marketing departments, the internship must be must be marketed to students to entice them pursue the opportunity. Although the evidence illustrates that students benefit from internship experiences and are cognizant of the benefits, many students still choose not to pursue an internship.

As an elective, it is logical to expect that the choice of many marketing students to, or not to, pursue an internship will be affected by the word-of-mouth they receive from other students. Although many faculty marketing faculty members actively try to promote the advantages of pursing an internship, the relatively higher time commitment required by most marketing internships (when compared to "ordinary" courses) creates challenges. Word-of-mouth from students who have completed satisfying internship experiences can be expected to play a significant role in the choices of other students to pursue an internship.

Paulins (2008) notes additional advantages which accrue from satisfying internship experiences. She suggests that students whose internship experiences are satisfying will have more positive feelings toward the career search process and toward their academic institution. She also suggests that students with satisfying internship experiences will be better able to contribute to their companies when they ultimately begin their careers. Paulins (2008) observed that the following internship qualities are related to satisfaction with an internship in retailing: information and feedback from supervisors, variety of activities, closure with tasks, clear results of tasks, autonomy, and networking opportunities. Unfortunately, since Paulins examined only retailing interns and since her study possessed methodological shortcomings, the generalizability of the results is limited.

The purpose of this study is to better understand the level of satisfaction that marketing students experience from completing internships. Based on the findings of Paulins (2008), qualities associated

with the internship experience itself seem to be able to affect the level of satisfaction students perceive. Hence, the following hypothesis seems appropriate.

H1: Students express higher satisfaction with internships that provide positive experiences and for which they perceive greater personal benefits.

Since enhancing employability and facilitating the subsequent job search process (increasing the ease by which future employment can be gained) are viewed as primary reasons to participate in an internship, the following hypothesis is appropriate.

H2: Students who perceive that their job prospects are improved as a result of their internship are more satisfied with their internship.

Finally, the relationships between time spent by students in internships (duration of the internship experience and hours spent per week as an intern), compensation received from the internship, and student ability (measured by classroom success as assessed by GPA) and satisfaction with the internship were examined. Given the lack of research suggesting relationship direction, the following hypothesis was examined.

H3: *No relationship exists between time spent by students in their internship, the compensation received, and their GPA and satisfaction they receive from their internship.*

METHODOLOGY

The sample was comprised of business students who had recently completed an internship. The data was gathered from students attending several different colleges and universities located in a Midwestern state. The resulting sample consisted of 88 students. Approximately 65 percent of the sample consisted of female students.

To assess the experience and the benefits students receive from participating in an internship, 39 scale items were developed. The items were gathered from a review of several sources which have examined similar issues (e.g. Cook, Parker & Pettijohn, 2004; Fang, Lee, Lee & Huang ,2004; Scholz, Steiner, & Hansmann, 2003). A new list of scale items was developed for this study since existing lists did not seem to cover the entire domain.

A factor analysis was run to identify the underlying factors. Nine factors with an eigenvalue exceeding one were extracted via principal components analysis and were rotated via varimax rotation. Given that the final two items consisted of single items and since the eigenvalues of the last two factors fell precipitously from the previous seven factors, seven factors were retained (factors with eigenvalues exceeding 2). The first factor is comprised of 12 items (alpha = .936) and was named "positive internship experience." The second factor is comprised of four items (alpha = .792) and was named "positive work environment." The third factor is comprised of four items (alpha = .722) and was named "improved job prospects." The fourth factor is comprised of five items (alpha = .835) and was named "new skills." The fifth factor is comprised of three items (alpha = .685) and was named "comfort with work environment." The sixth factor is comprised of three factors (alpha = .712) and was named "communication skills." The seventh factor is comprised of three items. However, since its reliability was low (alpha = .540), it was also dropped from further consideration, leaving a total of six factors. The items comprising each factor are displayed on Table 1.

Table 1: Internship Experience Factor Items

Internship Experience Factors	Factor Items
Factor 1: Positive Internship Experience	1. I really did something worthwhile in my internship. 2. Overall, I would rate my internship experience excellent. 3. I was satisfied with the work assignments I had during my internship. 4. My internship was very interesting. 5. My internship work was satisfying. 6. Projects were beneficial to goal of enhancing overall marketing knowledge. 7. Based on responsibilities I would recommend employer to other students. 8. Right amount of one-on-one time with my manager to review activity. 9. Assigned internship work responsibilities were well defined. 10. The work I did was challenging and stimulating. 11. Learned more from my internship than from guest speakers in class. 12. Felt comfortable talking to supervisor regarding problems encountered
Factor 2: Positive Work Environment	1. I was well received by my co-workers at the beginning of the internship. 2. I received respect from co-workers while interning. 3. I was treated on the same professional level as the other employees. 4. I now feel more comfortable working with different types of people.
Factor 3: Improved Job Prospects	1. Students who have done internships are more likely to get job offers. 2. Feel internships are an effective strategy for gaining employment. 3. I now feel more confident in finding a job upon graduation. 4. Students who have done internships are more likely to have higher starting salary.
Factor 4: New Skills	1. My internship experience improved my networking skills. 2. I feel my personal interests and career ambitions are more defined. 3. My internship work was valuable. 4. I developed new skills and knowledge as a result of the internship. 5. This experience helped me clarify my career goals.
Factor 5: Comfort with Work Environment	1. Application process and interview improved my level of comfort with the employer. 2. I feel that my internship experience gave me a realistic preview of my field. 3. I was satisfied with my interactions with my supervisor.
Factor 6: Communication Skills	1. My internship experience improved my oral communication skills. 2. My internship experience improved my written communication skills. 3. My internship experience improved my leadership/teamwork skills.

This Table shows factors from the factor analysis of thirty-nine items. A factor analysis of student responses identified six internship experience factors. Each of the factors is identified in this table, along with a title.

Similar to Paulins (2008), satisfaction with internship was measured by a single item. Students' perceptions of their job prospects were measured by three single-item measures: students' confidence in their ability to obtain a full-time position, perceived likelihood of obtaining a position with the interning company, and perceived importance of internship to future career success.

Finally, the duration of internship experience, hours per week worked as an intern, the level of compensation received, and GPA were also each measured by single items.

RESULTS

Correlations between each of the internship experience factors and satisfaction with internship is displayed in Table 2. In each instance, a significant (at the .05 level) relationship was observed between the internship experience factor and students' satisfaction with the internship. Hence, support for Hypothesis 1 is observed – students with internships which provided positive experiences and for which they perceive greater personal benefits expressed higher satisfaction with their internships. Visual observation, however, seems to indicate that the relationships involving the internship experience factors are not equal in strength. Consequently, the relative strengths of the relationships between satisfaction with the internship and each of the internship experience factors were examined.

Table 2: Correlations between Internship Experience Factors and Satisfaction with Internship

Internship Experience Factor	Correlation with Satisfaction with Internship	Significance
Factor 1: Positive Internship Experience	.839	.000***
Factor 2: Positive Work Environment	.422	.000***
Factor 3: Improved Job Prospects	.290	.008***
Factor 4: New Skills	.525	.000***
Factor 5: Comfort with Work Environment	.475	.000***
Factor 6: Communication Skills	.282	.009***

*This table shows the correlations between each internship experience factor and the satisfaction students perceived they receive from participating in an internship. The first figure in each cell is the correlation coefficient. The second figure in each cell is the significance level. *** indicates significance at the 1 percent level.*

Several methods have been employed to compare correlation coefficients between a dependent variable and a set of independent variables. Although Hotelling's t-test (Hotelling, 1940) is still considered the standard test for this form of analysis (Meng, Rosenthal & Rubin, 1992), the technique's deficiencies have been clearly identified (e.g., Meng, Rosenthal & Rubin, 1992; Steiger, 1980; Williams, 1959). Instead, Meng, Rosenthal, and Rubin (1992), Neill and Dunn (1975) and Steiger (1980) have demonstrated the superiority of Dunn and Clark's (1969) Fisher z transformation. The results using a Fisher z transformation to test differences between the correlations are displayed in Table 3. The results indicate that factor 1 (positive internship experience) is significantly (at the .05 level) more strongly related to internship satisfaction than the other five factors. Furthermore, the results indicate that factor 6 (communication skills) is significantly (at the .05 level) less strongly related to internship satisfaction than factor 4 (new skills) or factor 5 (comfort with work environment). Lastly surprisingly, factor 3 (improved job prospects) is significantly (at the .05 level) less strongly less strongly related to internship satisfaction than factor 4 (new skills) and is marginally significantly (at the .1 level) less strongly related to internship satisfaction than factor 5 (comfort with work environment).

Table 3: Comparing Correlation Coefficients

Internship Experience Factor	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Factor 1: Positive Internship Experience	---					
Factor 2: Positive Work Environment	7.1833***	---				
Factor 3: Improved Job Prospects	8.275***	1.226	---			
Factor 4: New Skills	6.518***	-1.120	-2.535**	--		
Factor 5: Comfort with Work Environment	7.733***	-.607	-1.626	.590	---	
Factor 6: Communication Skills	11.210***	1.176	.023	2.813***	1.806*	---

*This table shows the relative strengths of the relationships between students' satisfaction with an internship and each of the internship experience factors. Each of the cells reports the results using Fisher z transformation. ***, **, and * indicate significance at the 1, 5 and 10 percent levels respectively.*

Correlations between students' confidence in their ability to obtain a full-time position, likelihood of obtaining a position with the interning company, and the perceived importance of internships to future career success and satisfaction with internship are displayed in Table 4. Significant (at the .05 level) findings were observed for the relationships involving students' confidence in their ability to obtain a full-time position and the perceived importance of internships to future career success. A marginally significant (at the .1 level) relationship was observed for likelihood of obtaining a position with the interning company. The direction of each relationship was in the direction hypothesized. Hence, support was observed for Hypothesis 2 – students who perceived that their job prospects are improved as a result of their internship were observed to be more satisfied with their internship.

Table 4: Correlations between Employment-Related Perceptions and Satisfaction with Internship

Employment-Related Perceptions	Correlation with Satisfaction with Internship	Significance
Confidence in ability to obtain a full-time position	.259	.015**
Perceived likelihood of obtaining a position with the interning company	.199	.066*
Perceived importance of internship to future career success	.281	.010***

*This table shows the correlations between students' employment-related perceptions and their satisfaction with internship. The first figure in each cell is the correlation coefficient. The second figure in each cell is the significance level. ***, **, and * indicate significance at the 1, 5 and 10 percent levels respectively.*

Correlations between duration of internship experience, hours per week worked as an intern, the level of compensation received, and GPA and satisfaction with internship are displayed in Table 5. No significant (at the .05 level) relationships were observed. Hypothesis 3, therefore, was supported.

Table 5: Correlations between Internship Characteristics and Satisfaction with Internship

Internship Characteristics	Correlation with Satisfaction with Internship	Significance
Duration of internship experience	.104	.341
Hours per week worked as an intern	.006	.952
Compensation received	.103	.413
GPA	-.048	.661

This table shows the correlations between characteristics of the internships (and students' GPA) and satisfaction with internship. The first figure in each cell is the correlation coefficient. The second figure in each cell is the significance level. In no instance is a significant correlation observed.

DISCUSSION

Evidence was observed supporting each of the study's hypotheses. Students' satisfaction with their internships, for instance, was found to be related to nature of the internship experience and the benefits received. This is logical since one would expect that students' satisfaction with their internships should be affected by the qualities of the internship. This study, however, appears to indicate that students' assessment of their internships is not unidimensional, but instead arises from several factors.

Although each of the factors was observed to be related to internship satisfaction, the strengths of the relationships were not equal. Clearly, the relationship between positive internship experience (factor 1) and internship satisfaction was stronger than any of the other factors. This suggests that the qualities of the internship itself seem to be the primary issue in students' assessments of the success of an internship. Hence, internship coordinators should be concerned with the activities in which students will be engaged in potential internship positions to ascertain that the experience will include challenging, interesting work with well-defined work responsibilities.

It was interesting that the relationship between communication skills (factor 6) and internship satisfaction was found to be weaker than between comfort with the work environment (factor 5) and new skills (factor 4). There are a couple of possible explanations for this finding. First, students may not perceive that the communication skills gained from their internships was as valuable as other skills which they gained from their experiences. A possible alternative explanation is that students experienced more trials and problems in the area of communication which lowered their satisfaction with their internship. Additional research is needed to more fully illuminate this issue.

Finally, it was surprising to see that improved job prospects (factor 3) were not as strongly related to internship satisfaction than the internship experience, new skills acquired, or comfort with the work environment. This finding suggests that satisfaction with the internship is not synonymous with improved

job opportunities nor is future employment the primary concern. Internship coordinators and faculty members should be pleased that students' satisfaction with their internships seems to be more strongly related to the skills gained than to job prospects. Although job prospects are commonly a primary issue which is stressed as a reason to pursue an internship, the fact that the satisfaction students gain from an internship appears to be more strongly related to skills gained, the acquisition of new skills should also be stressed when attempting to market internships to students.

The finding that students' satisfaction with their internships was related to the internship's perceived ability to help them more readily obtain employment and to the degree of success they perceive they will enjoy in their future career reinforces the employment-related attractiveness of internships to students. To maintain or improve the attractiveness of internships to students, therefore, faculty internship coordinators need to ensure that the internship experiences available to students provide them with experiences which will equip them to compete in the job market. Doing so will provide students with opportunities for increased satisfaction with their internships and provide improved word-of-mouth to other students.

Interestingly, the amount of time students spent on their internships (total and per week) and the compensation received were not found to be related to internship satisfaction. When students are contemplating whether to pursue an internship, the time commitment involved and the compensation to be received tend to be primary considerations. It appears, therefore, that students who are contemplating pursing an internship need to be educated that time commitment and compensation may not be the best criteria to use as they consider whether to pursue an internship or when assessing internship possibilities. Information to this effect shared by students who have previously participated in an internship may be beneficial. Such information shared by students who have completed an internship may be more likely to be taken seriously by students considering an internship than it would be if it was shared by a faculty member – faculty members are expected to make comments concerning focusing on the long-term effects of internships (e.g., ability to aid one's career) while downplaying the short term (e.g., level of pay and degree of work required). Information from students to this effect, however, can be expected to have a larger effect on affecting students' choices.

Finally, since student's GPA was not observed to relate to the satisfaction that they received from an internship, students' GPA does not seen to be a factor in the satisfaction perceived. Hence, a lower GPA may not restrict students from benefiting from participating in an internship. No evidence was noted (from the students' viewpoint) which would suggest that relatively poorer academic performance restrains students from benefiting from an internship to the same extent than students with superior academic performance.

CONCLUSION

The objective of the paper was to extend knowledge of internships in marketing by identifying the factors associated with higher student satisfaction with the internship experience. A sample of 88 business students responded to a scale consisting of 39 scale items developed to assess the experience and the benefits students receive from participating in internships. Factor analysis identified six factors. Each of the factors was observed to be significantly correlated with students' satisfaction with an internship. Correlational analysis also indicated positive relationships between students' satisfaction with their internship and their confidence in their ability to obtain a full-time position and the perceived importance of internships to future career success. A marginally significant relationship was observed for likelihood of obtaining a position with the interning company. Finally, no significant relationships were observed between duration of internship experience, hours per week worked as an intern, the level of compensation received, and GPA and satisfaction with internship.

The study possesses several limitations which may limit the generalizability of the results. The limitations of the study include a small sample (the sample was gathered from students attending colleges and universities located within a single state) and no attempt was made to control for differences in the nature of the internships. Although the sample was gathered from students attending several colleges and universities, they were all located within a single state. Furthermore, no attempt was made to control for differences in the nature of the internships. Future research should extend the analysis to include colleges and universities of different types and should control for different types of internship experiences. Furthermore, the analysis can be expanded to examine other disciplines, such as engineering.

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INTRODUCING IFRS IN INTRODUCTORY FINANCIAL ACCOUNTING COURSES

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ABSTRACT

With the possibility that International Financial Reporting Standards (IFRS)may replace or may change substantially the US Generally Accepted Accounting Principles (GAAP) standards currently in place within the next decade, there is a question for accounting educators about how much of the current accounting curriculum should be devoted to IFRS. This is especially critical in the first levels of accounting, where the fundamentals of accounting are learned. While the major accounting firms are positioning themselves to advise clients when a transition in accounting standards occurs, an understanding of current US GAAP and current and potential IFRS standards will be necessary for today's students. This paper will examine strategies for incorporating IFRS into the introductory levels of the accounting curriculum. The paper will advocate that IFRS education should be incorporated into each introductory level course in accounting. A variety of approaches will be analyzed. The paper will demonstrate that a basic knowledge of IFRS is essential to the business vocabulary for both accounting and non-accounting majors, and therefore a valuable component of the introductory accounting curriculum.

JEL: J3, J25, J26, J27, J28, J29

KEYWORDS: IFRS, IASB, Accounting Education

INTRODUCTION

Prior to 2000, with a full curriculum already in place for accounting students, the addition of course segments devoted to international accounting standards was often minimal in the introductory and intermediate levels of accounting. Recent changes have brought harmonization of international accounting standards and widespread adoption of IFRS International Financial Reporting Standards. The question of whether and how to integrate IFRS into the established accounting curriculum has been controversial for a number of years. Today, with the AICPA announcements that IFRS will be included in the future Certified Public Accountant (CPA) examination, it seems obvious that an understanding of IFRS is a necessary part of accounting education.

Therefore, this paper seeks to demonstrate in the global economy, the value added to an accounting program by introducing IFRS is evident. Introducing IFRS into the curriculum in the initial and intermediate level of accounting requires the development of desired learning objectives and outcomes and coordination with the existing framework of accounting study. Outcomes for study that can be integrated using the IFRS materials include a basic understanding of the History of IFRS development and a comparison of IFRS and US GAAP frameworks. Accounting programs differ in structure but the IFRS related goals of the program will be relatively easy to incorporate in the initial and intermediate level accounting courses.

This paper will discuss integration of IFRS in the Accounting curriculum. First, will discuss the historical background of IFRS, from the International Accounting Standards created under the IASC, to the formation of the IASB, the formulation IFRS, future implementation issues and SEC support for the IFRS usage. Second, will discuss IFRS and US GAAP in the Accounting Curriculum, including AICPA

perspectives; Integration in the Uniform CPA Examination and IASB initiatives. Third, we will discuss development of IFRS Integration Strategies. Fourth, will discuss the differences in integrating IFRS concepts in Intermediate Accounting and Accounting I. Fifth, will discuss methods for implementation of IFRS standards within the curriculum. Finally, will provide conclusions as to the optimal methods placement and timing of IFRS.

LITERATURE REVIEW

IFRS integration will have an impact on the future of accounting information. In the Journal of Accountancy article "How IFRS is Affecting Accounting Education" Kim Nilson identified the fact that most accounting students were not aware of IFRS as of the end of 2008, and that inclusion of IFRS concepts in undergraduate and graduate programs was limited. In addition, in a study by Deloitte and Touche, entitled "Incorporating International Financial Reporting Standards (IFRS) into Intermediate Accounting", the study suggests that intermediate accounting classes should incorporate IFRS education on a section by section basis. The growth of IFRS on an international level and the potential of IFRS integration in the US place new importance on IFRS in the accounting curriculum. International Accounting Standards have been promulgated by several large international accounting standard setting organizations over the past 50 years. In 2000, there was a greater move towards harmonization of international accounting standards and a movement where many economies were ready to join in unified accounting standards. The tremendous growth of acceptance of IFRS standards has the objective of simplifying global business issues. With respect to accounting education the change in IFRS application will be critical.

A paper presented at the American Accounting Association meeting in Long Branch, New Jersey outlined the Mastery Goal Approach to Accounting Education Susan Muzarewa, Morgan State University. With a mastery goal orientation the focus is on learning improvement and mastering of skills. A mastery goal orientation seeks to provide students with the opportunity to grapple with authentic and complex problems using cognitive tools, multiple sources of information and other individuals as resources (Meece, Blumenfeld & Hoyle, 1988). Students develop understanding of the subject matter by solving problems in interactions and exchange with other learners and between teachers and students to promote understanding (Blumenfeld, 1992; Toulmin, 1972). Pintrich, Marx, & Boyle (1993) note that mastery goal orientation can be equated to master–apprentice relationship with respect to instruction. "Like masters, teachers should scaffold instruction by breaking down tasks, use modeling and coaching to teach strategies for thinking and problem solving, and gradually release responsibility to the learner" (Blumenfeld, 1992; Collins, Brown, & Newman, 1989; Palincsar & Brown, 1984). An important and integral part of mastery goal orientation is the wide use of cooperative learning, which has been shown to encourage a deeper approach and improvement in the quality of learning outcomes (Tang, 1998).
This active approach to learning will provide good outcomes in to apply the IFRS framework to education within the first year curriculum.

Background

International Accounting Standards have been promulgated by several large international accounting standard setting organizations over the past 50 years. In 2000, there was a greater move towards harmonization of international accounting standards and a movement where many economies were ready to join in unified accounting standards. This section traces the beginnings of the modern day IFRS, from the formation of the IASC in 1973, to the current IASB. Since 2001, 120 countries have adopted or permit use of IFRS. The tremendous growth of acceptance of IFRS standards has the objective of simplifying global business issues.

International Accounting Standards, as created prior to 2000 were established under the International Accounting Standards Committee, the IASC. A paper by the Deloitte IAS Education group notes the creation of the multinational standard setting body in 1973:

> The International Accounting Standards Committee (IASC) was formed in 1973 through an agreement made by professional accountancy bodies from Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the United Kingdom and Ireland, and the United States of America. Additional sponsoring members were added in subsequent years, and in 1982 the sponsoring "members" of the IASC comprised all of the professional accountancy bodies that were members of the International Federation of Accountants (IFAC). Accounting standards were set by a part-time, volunteer IASC Board that had 13 country members and up to 3 additional organizational members. Each member was generally represented by two "representatives" and one "technical advisor". The individuals came from a wide range of backgrounds – accounting practice, business (particularly multinational businesses), financial analysis, accounting education, and national accounting standard-setting. The Board also had a number of observer members (including representatives of IOSCO, FASB, and the European Commission) who participated in the debate but did not vote. (Deloitte IAS Plus)

The IASC promulgated accounting standards and provided technical advice on multinational accounting issues. The structure of the IASC was radically changed in 2000, and the IASC was replaced by the International Accounting Standards Board (IASB).

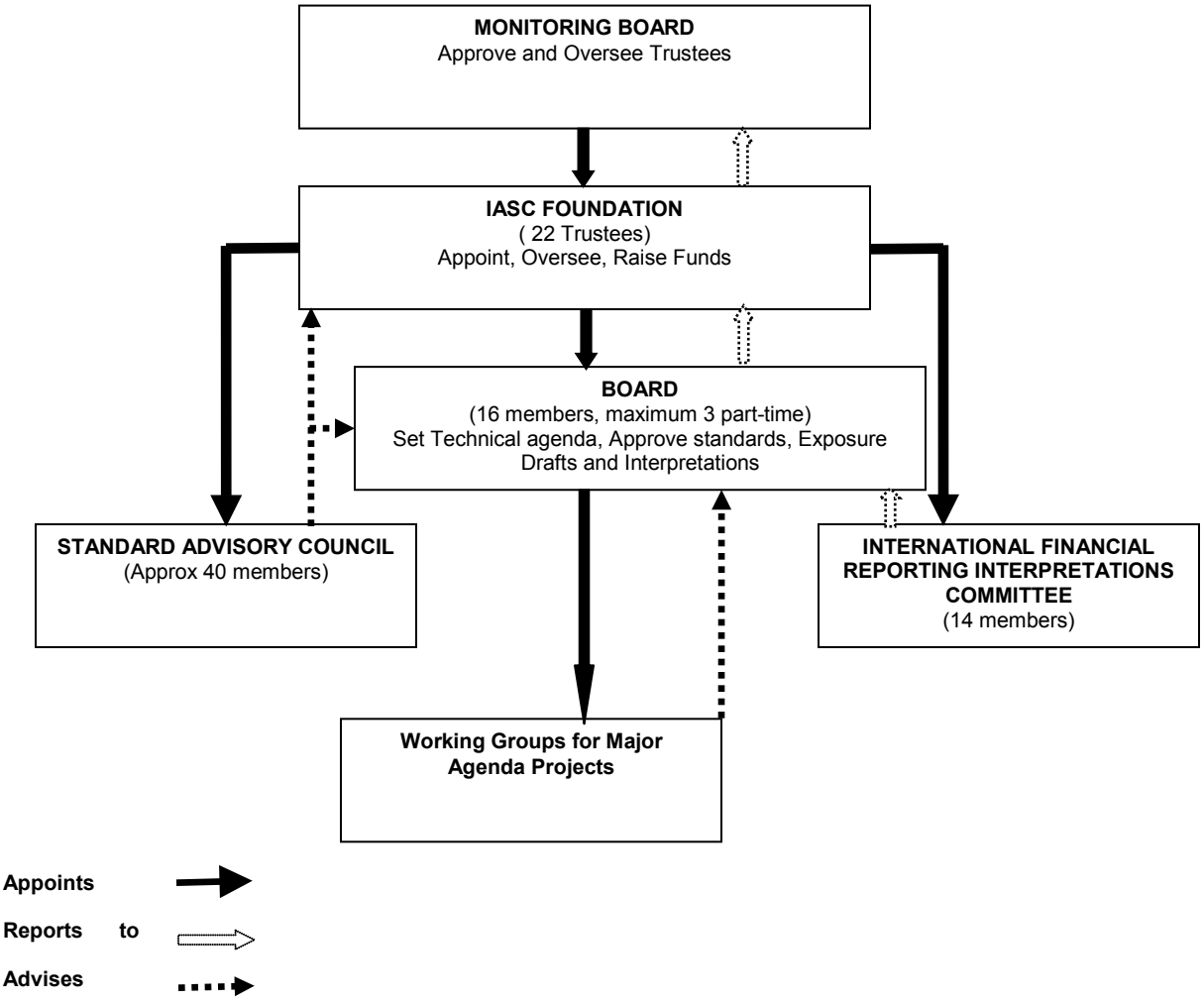
As many countries economies were developing, the need for additional accounting standards encouraged a change in structure for the IASC. The International Accounting Standards Board was created to replace the IASC and has sought to create standards applicable to modern transactional needs and to advocate for widespread harmonization of accounting principles.

> International Financial Reporting Standards, commonly referred to as IFRS, are gaining momentum as the global norm in financial reporting. Issued by the London-based International Accounting Standards Board (IASB), IFRS is currently accepted in approximately 100 countries, including the members of the European Union, Israel and Australia. Many other countries, such as Canada, Mexico, India and Japan have committed to adopt or converge with IFRS by dates ranging from 2009 to 2011.
>
> For years, the Financial Accounting Standards Board (FASB) has been working with the IASB as part of a long-term plan toward convergence of IFRS and U.S. generally accepted accounting principles (U.S. GAAP). With the 2007 decision of the U.S. Securities and Exchange Commission (SEC) to accept IFRS financial statements for foreign filers (without requiring reconciliation to U.S. GAAP), the timeline for U.S. adoption of IFRS is expected to accelerate at a rapid pace. In response to the SEC's decision, accountants, managers and analysts began to question when the SEC would allow, or require, U.S. companies to use IFRS for their annual filings. While the answer to this question is still unknown, other ripple effects of the SEC's decision can already be seen. In May 2008, the AICPA expressed its intent to incorporate IFRS into the CPA exam. In the same month, the AICPA also amended Rules 202 and 203 of the Code of Professional Conduct to recognize the IASB as an international accounting standard, allowing accountants of private US companies to prepare financial statements in accordance with IFRS. (Deloitte IFRS Paper)

The new structure of the IASB is shown in the following diagram; an oversight board provides monitoring of the IASC foundation. On the next tier of operations, a 22 member board of trustees is in place with the goal of fundraising and appointing Board members. The Board is comprised of 16 members and at least 13 must be full time positions. The Board may create subcommittees designed to develop working papers on emerging issues. Independent of the Board and reporting to the Trustees is a

Standards Advisory Council and an International Financial Reporting Interpretations committee consisting of 14 members.

Figure 1: IASB Hierarchy



The IASB Hierarchy is designed to provide a framework for analyzing accounting issues and drafting and promulgating standards. The IASC foundation includes the Standards Advisory Council, the Board, the International Financial Reporting Interpretations Committee and Working Groups.

Standard setting by the IASB occurs as follows: The IASB creates IFRS through standardized review process. International Financial Reporting Standards (IFRSs) are developed through an international consultation process, the "due process", which involves interested individuals and organizations from around the world. The due process comprises six stages, with the Trustees having the opportunity to ensure compliance at various points throughout: setting the agenda , planning the project , developing and publishing the discussion paper, developing and publishing the exposure draft, and developing and publishing the standard.

The IASB has set an agenda for coverage of technical issues involving substance and procedure of adoption and implementation of accounting standards. In A Practical Guide to New IFRS for 2010, the

PriceWaterhouseCoopers group identifies the many new IFRS aspects that will be rolled out between now and 2010. The changes include codifications of basic issues and advanced accounting topics such as consolidations.(PWC 2010)

The Securities and Exchange Commission is actively advocating the use of IFRS. On March 2, 2010, the SEC released Commission Statement in Support of Convergence and Global Accounting Standards. The Statement lists the potential benefits of global accounting harmonization: Greater comparability for investors across firms and industries on a global basis; reduced listing costs for companies with multiple listings; increased competition among exchanges; better global resource allocation and capital formation; lowered cost of capital; and a higher global economic growth rate.

The Statement also gives the current status as to the US consideration as to whether to adopt IFRS, perhaps as early as 2014. "The Proposed Roadmap contemplated that, subject to an assessment of the milestones and other considerations, and after consideration of public comment, the Commission could be in a position in 2011 to decide whether to require the use of IFRS by U.S. issuers beginning in 2014, potentially allowing earlier use by certain U.S. issuers beginning with filings for fiscal years ending on or after December 15, 2009."

Concerns identified by the SEC as to this implementation include: Sufficient development and application of IFRS for the U.S. domestic reporting system; The independence of standard setting for the benefit of investors; Investor understanding and education regarding IFRS; Examination of the U.S. regulatory environment that would be affected by a change in accounting standards; The impact on issuers, both large and small, including changes to accounting systems, changes to contractual arrangements, corporate governance considerations, and litigation contingencies; and Human capital readiness.

This development of the Statement in convergence was the result of many years of discussion as the SEC started a dialog and a series of Roundtable discussions on the use and implementation of IFRS standards for multinational companies. In *Roadmap for the Potential Use of Financial Statements Prepared in Accordance with International Financial Reporting Standards by U.S. Issuers* (Release No. 33-8982; November 14, 2008) the SEC set out a timetable for IFRS integration.

IFRS and US GAAP in the Accounting Curriculum

The American Institute of Certified Public Accountants (AICPA) has been highly supportive about the adoption of IFRS. In 2008, the AICPA called for a three to five year timeline for transition to IFRS. (CPA Letter 2008. The Uniform CPA examination will begin testing on IFRS issues in the next few years. Questions on IFRS are currently under review. The Content Specific Outlines (CSOs) that include the content that will be tested on the Certified Public Accounting Examination were revised to include IFRS in 2008.(The Uniform CPA Examination Alert 2009) Additional guidance is expected on the IFRS content for the exam.

All of the major accounting firms have poised themselves to be ready for the possible convergence of GAAP and IFRS. In addition, the Accounting firms have partnered with educational institutions to advocate the implementation of IFRS in the Accounting curriculum. Some examples of this include: Deloitte IFRS University Consortium, Ernst & Young bi-monthly newsletters on IFRS changes as well as interpretive guidance on select standards, KPMG online library include briefing sheets providing monthly updates on IFRS changes, and the option to order additional resources such as IFRS/national GAAP, PriceWaterhouseCoopers resources including IFRS guidance by topic, comparisons to US (and other national) GAAP, and illustrative financial statements by industry.

RECOMMENDATIONS

There are many education theories on the presentation of accounting topics. This section presents the mastery goal approach to integrate IFRS concepts into the accounting curriculum.

Mastery Goal Approach

A paper presented at the American Accounting Association meeting in Long Branch, New Jersey outlined the Mastery Goal Approach to Accounting Education Susan Muzarewa, Morgan State University.

> With a mastery goal orientation the focus is on learning improvement and mastering of skills. A mastery goal orientation seeks to provide students with the opportunity to grapple with authentic and complex problems using cognitive tools, multiple sources of information and other individuals as resources (Meece, Blumenfeld & Hoyle, 1988). Students develop understanding of the subject matter by solving problems in interactions and exchange with other learners and between teachers and students to promote understanding (Blumenfeld, 1992; Toulmin, 1972). Pintrich, Marx, & Boyle (1993) note that mastery goal orientation can be equated to master–apprentice relationship with respect to instruction. "Like masters, teachers should scaffold instruction by breaking down tasks, use modeling and coaching to teach strategies for thinking and problem solving, and gradually release responsibility to the learner" (Blumenfeld, 1992; Collins, Brown, & Newman, 1989; Palincsar & Brown, 1984). An important and integral part of mastery goal orientation is the wide use of cooperative learning, which has been shown to encourage a deeper approach and improvement in the quality of learning outcomes (Tang, 1998).

This active approach to learning will provide good outcomes in the IFRS framework. The next question is at what level of accounting education is it appropriate to introduce IFRS concepts. This section looks at the introduction in the intermediate level and concerns with introduction in the first year curriculum.
There are papers discussing the integration of IFRS standards for the Intermediate Accounting level courses. A Deloitte publication created by the faculty of Virginia Tech entitled, Incorporating International Financial Reporting Standards (IFRS) into Intermediate Accounting, advocates for inclusion of the IFRS standards, and provides resources for implementation. The paper shows specific areas for inclusion of IFRS standards. The Deloitte paper notes that while the IFRS standards have not been adopted, knowledge of the standards will be important to accounting professionals.

> As of July 2008, there is no timetable for conversion from U.S. GAAP to IFRS for public companies operating in the United States. However, most of the rest of the developed world has adopted IFRS, so it is important that today's accounting students have a basic understanding of these standards even if they do not become U.S. GAAP.(Deloitte IFRS Paper).

The structure of Accounting I differs from that of advanced levels because essential accounting topics must be initially learned, the format of the financial statements, ratio analysis, US GAAP sources. For non-accounting majors in a business major or minor, the first course may be their only introduction to international accounting standards. For these reasons IFRS should be integrated into the first year curriculum. The method of introduction will be added in the next segment and a discussion of the placement of IFRS study within the course will be considered.

Methods of Integrating IFRS standards into the accounting curriculum

There are three basic methods for integration of accounting methods within the first year curriculum. Each alternative poses benefits and challenges. The desired result is to allow students to appreciate the similarities and differences in the different methods. The first method is to incorporate the IFRS

standards directly as each accounting concept is taught. The second method is to create a module at the end of the semester to present the material. Finally the interactive research and workshop presentations may be used to engage students in IFRS issues.

The challenge with integrating IFRS in the first year accounting curriculum is that students are yet unfamiliar with the format and function of the financial statements and of the uses and underlying rationales about the preparation of accounting information. Integrating IFRS directly before a basic knowledge of US GAAP is mastered may cause confusion for students. For example, a knowledge of the basic accounting assumptions is essential prior to engaging in comparative analysis.

At an intermediate accounting level, the students should be better equipped to discuss the distinctions between US GAAP and IFRS on a day to day basis in class. In addition, students will require the IFRS issues for their preparation for the CPA examination and can better examine the professional ramifications of the IFRS standards.

Introduction as a separate module at the end of the year can reinforce the basic US GAAP learned throughout the semester while then allowing students to note similarities and differences in the reporting requirements. This method is probably beneficial because the students have already mastered the US GAAP framework and underlying concepts and are ready to analyze the differences in the IFRS standards.

This module can also be done after a comprehensive view on ratio analysis and the many useful applications of the financial statements. This discussion of comparative and divisional analysis leads to international issues well. Class projects can be an effective method of incorporating IFRS into the curriculum. Several methods are class mini case presentations; group projects and traditional research/workshop problems. The challenge is incorporating the material so students have time to engage the concepts and demonstrate their knowledge. By presenting cases and conclusions students can reinforce their knowledge and gain feedback from the professor and other students.

CONCLUSIONS

The IFRS educational process must be managed in the accounting curriculum. Placement of IFRS modules in the Accounting I curriculum requires special planning considerations, to ensure successful learning. Objectives should be clearly set and delineated.

Three Essential Questions for IFRS Implementation: Integration of IFRS; Level of Integration; Optimal Method of Integration

The conclusions to be gained are based on the questions: Is it time to integrate IFRS Accounting in the Accounting curriculum, where the standards and overall implementation of IFRS standards are still in transition? If so, in what levels of the accounting education system should the IFRS issues be discussed? Finally, what methods should be used in introducing IFRS through the curriculum, and how can we introduce students to the process of transition to IFRS standards?

As to whether IFRS education is an appropriate part of the accounting curriculum, Integration of IFRS in the accounting curriculum is appropriate and indeed an essential component of the program at the present time. With the inclusion of IFRS in the Uniform CPA examination in 2011, the IFRS standards are a core part of the vocabulary of accounting. The support of IFRS standards is overwhelming from the AICPA and SEC among other accounting standard setting bodies.

As such, IFRS standards should be integrated throughout the curriculum and in particular introduced in the first year program. The introductory courses should include IFRS because many business students will not progress to advanced levels of study and should be exposed to international practice standards.

IFRS standards might be incorporated throughout the semester as key accounting concepts are learned, or a separate course module can be created after the fundamentals of US GAAP are learned. Under a mastery goal approach to teaching, interactive workshops concerning concepts and connection with contemporary dialog will be effective in introducing and engaging students in this process.

Because the implementation of IFRS standards is in a transitional stage, it may be best to treat the IFRS topic as a separate course module. Teaching IFRS as an individual module allows students to master US GAAP and understand the history of accounting practices in the United States and the development of international accounting standards. Making this study interactive and exposing students to the issues surrounding implementation of IFRS is an important way of introducing practice issues. Interactive projects and class presentations may ease this process by making the task action oriented. The future of accounting will be a blend of the new rules and teaching students to navigate these issues will ensure their success as accounting professionals.

Over the next few years the accounting academic community will respond to the SEC pronouncements concerning IFRS integration. The risk in including IFRS topics in introductory accounting classes is that the IFRS standards as adopted will be significantly changed, or that the IFRS standards will not be implemented. The future studies that should be done will include the impact of the AICPA addition of IFRS to the CPA exam. Studies will also be done on the potential impact of IFRS education on the profession.

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SKILLS REQUIRED OF BUSINESS GRADUATES: EVIDENCE FROM UNDERGRADUATE ALUMNI AND EMPLOYERS

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ABSTRACT

The results presented in this paper are the responses from 163 undergraduate business alumni of a target school and 45 New Jersey employers to questions to identify the writing, quantitative, and computer skills required at work. The questions were adapted from Western Carolina University's Business Alumni survey. The results of the survey showed strong correlations with the writing tasks (r=0.989), quantitative tasks (r=0.942), and computer software (r=0.972) identified by both the alumni and the employers as being tasks required at work. E-mail, business letters, and memos were the most common written communication required at work. Budgeting, financial accounting, project management, and forecasting were most common quantitative skills required Word processing, spreadsheets, email, and world wide web were most common computer applications used. Based on these results the target school should consider modifying courses within the curriculum so that graduates have these competencies in the writing tasks, quantitative skills, and computer software identified as being required at work by the majority of alumni and employers surveyed.

JEL: A223

KEYWORDS: AASCB accreditation, accountability in higher education, skills, business graduates

INTRODUCTION

Since formation of the Secretary of Education's Commission on the Future of Higher Education in 2005, a national effort has been underway to hold higher education institutions accountable for the preparation of college students to meet the economic and workforce needs of the country (Bisoux, 2008; U.S. Department of Education, 2005). External stakeholders that fund and grant accreditation to colleges have raised accountability issues related to the preparation of college students for jobs that are aligned with the needs of the 21st century.

Often, the issue of accountability in higher education is raised by regional accreditation bodies. As a result, accrediting agencies become both promoters and evaluators of assessment processes (Lubinescu, Ratcliff, & Gaggney, 2001). External stakeholders, such as accrediting agencies and legislators, have cautioned college faculty members that completion of graduation requirements does not necessarily indicate that students have mastered the course content and are prepared to enter the workforce with the necessary knowledge and hands-on skills (AACU, 2008; Dessoff, 2006; Lederman, 2006). As part of the regional accreditation process, as well as for the accreditation process of the Association to Advance Collegiate Schools of Business (AACSB), faculty at colleges and universities periodically review the courses and curricula to ensure that the content is aligned with the needs of the external stakeholders. For AACSB accreditation, faculty are required to assess the learning outcomes of graduates to assure that the graduates have the requisite skills and competencies. These assurances of student learning in AACSB often require feedback from alumni and employers in identifying what skills, and competencies need to be measured to assure that business graduates are prepared for the workplace (Carraher, 2009).

The setting for this study took place at a 4-year public liberal arts college within the New Jersey system of higher education. The targeted college is primarily an undergraduate institution of liberal arts, sciences and professional studies. During the Fall 2007 semester enrollment was 6,766 undergraduates. The targeted college has 256 faculty and is fully accredited by the Middle States Commission on Higher Education (MSCHE), a regional accrediting association. There are 39 undergraduate programs, 8 master's programs, and 1 doctoral program.

In 2004 the business faculty at the targeted college voted to begin the process for initial accreditation by the AACSB. In 2007, the business faculty instituted an assessment committee within the School of Business to develop a methodology to assess student learning in the core courses of the business programs and to begin to tie the student learning outcomes to the AACSB Assurances of Learning. As part of this process, faculty in each of the major tracks (e.g., management, marketing, international business, finance, and accounting) identified where the demonstrable business skills and competencies, as identified from the AACSB assurances of learning, could be measured in the core business courses. To determine specifically what needs to be assessed in the courses, feedback from alumni and employers must be in place to ascertain which workplace skills and competencies should be measured.

AACSB accredited universities and colleges often amass institutional research on follow-up studies of alumni and employers. This study at the targeted college established the first reporting of collective data derived from follow-up studies of alumni and employers of graduates. In focusing the study, an emphasis was placed on the skills and competencies that were needed in the areas of writing, quantitative, and computer software skills. Feedback from business alumni and employers is instrumental to those faculty who choose to revise their course content and to develop assessment instruments.

The purpose of this project was to answer the following research questions: (1) what writing tasks are required at work? (2) which quantitative skills are required at work? and, (3) which computer software is required at work? These questions were adapted from the Business Alumni survey of Western Carolina University; permission was granted from Western Carolina University to use their questions. The results presented are the responses from 163 undergraduate business alumni of a target school and 45 New Jersey employers to the questions. This feedback helped guide revisions to courses within the business curricula of the target college to ensure relevancy to the needs of the business community; this feedback will provide direction for future revisions in business courses and curricula. The data is instrumental in developing program and student outcome measures necessary for MSCHE and AACSB accreditation.

This paper presents a literature review of the accountability movement in higher education, the adoption of assurance of student learning, and the incorporation of total quality management (TQM) in higher education. The analysis of data is presented along with recommendations for further research.

LITERATURE REVIEW

Since the mid-1980s, with the publication of the *Nation at Risk* (U. S. Department of Education's National Commission on Excellence in Education, 1983), policymakers and accreditation agencies have labeled the disparity between the needs of the workplace and the skills of the new workers as an emergency (Hartenian, Schellenger & Frederickson, 2001; Van Horn, 1995). External stakeholders questioned higher education leaders about pedagogical techniques, curricular coherence, and lack of focus on student outcomes. In response to these demands from external stakeholders, such as accrediting bodies and legislators, higher education faculty began to reexamine curricula, student outcomes, and the link between college courses and skills needed in the workplace. Roberson, Carnes, and Vice (2002), as well as Jones (2002), stated that measurement of the professional skills of students have often been neglected or has been inadequately measured. Often in business programs neither professional skills nor applied knowledge competencies have received adequate attention.

In the mid-1990s, as part of the drive for accountability, external stakeholders wanted the faculty of the colleges to reevaluate their assumptions that students had learned course content through completion of their program of studies and were prepared to enter the workforce with the necessary knowledge and hands-on skills (Middle States Commission on Higher Education, 2003). From the mid-1990s to the present, policymakers and accreditation agencies continue to focus on outcomes assessment of student knowledge and focus on faculty accountability regarding student outcomes in skills areas of the professional programs. With the formation of the Secretary of Education's Commission on the Future of Higher Education, a national effort was organized to hold higher education institutions accountable for the preparation of college students for jobs that meet the economic and workforce needs of the future (U.S. Department of Education, 2005). Accountability issues raised by the commission focus on the need for graduates to receive academic preparation that is aligned with the employment needs of the 21st century. Accrediting agencies and faculty at colleges are encouraged to provide assessments that indicate students leave college with the skills they need to be productive workers and citizens (Lederman, 2006; Quevedo, 2007; Yankelovich, 2005). Specifically in business programs, faculty should reexamine their curricula, including the important skills that college graduates need to be more effective in the changing workplace (Lederman, 2007; Dessoff, 2006).

In 2008, the Association of American Colleges and Universities (AACU) presented research findings on the views of employers regarding assessment approaches used in institutions of higher education. Issues of access, affordability, and accountability as well as what contemporary college graduates need to know and be able to do when they enter the workplace were addressed. Educators and employers reached a consensus about the learning and skill sets American workers need from their college experience and recommended that presidents, trustees, school leaders, and employers work together to build public understanding of what knowledge and skills matter in a 21st-century college education. These stakeholders should champion and support essential learning outcomes in content and skill areas that college graduates need as they enter the workplace (AACU, 2008).

The following summarizes the skills that the AACU (2008) found the majority of employers would like colleges and universities to emphasize more when preparing graduates for the global economy and workplace: (a) concepts and new developments in science and technology; (b) teamwork skills and the ability to collaborate with others in diverse group settings; (c) application of knowledge and skills to real-world settings through internships or other hands-on experiences; (d) communication skills, both oral and written; (e) critical-thinking and analytical-reasoning skills; (f) global issues and developments and their implications for the future; (g) the ability to locate, organize, and evaluate information from multiple sources; (h) innovative and creative thinking; (i) the ability to solve complex problems; (j) the ability to work with numbers and understand statistics; (k) an understanding of the role of the United States in the world; (l) a sense of integrity and ethics; and, (m) an understanding of cultural values and traditions in America and other countries.

In the process of assessing the learning outcomes of graduates, including the skills and competencies needed for the workplace, there are similarities between outcomes-based education, which identifies outcomes for graduates and emphasizes quality in education, and the TQM approach used in business and industry. For example, both outcomes-based education and the TQM approach focus on the needs of customers and high-quality results (Aaker, 1995; de Jager & Nieuwenhuis, 2005). As part of the TQM movement, the concept of benchmarking has become integrated into the operation of organizations and corporations. Benchmarking requires a company to monitor the external environment and identify new ways to improve processes and meet customer expectations (de Jager & Nieuwenhuis, 2005; Stroud, 2009). TQM and accountability efforts focus on meeting the needs of the marketplace, establishing measurable standards and benchmarks, and providing evidence of student learning.

In higher education, accreditation bodies set standards and call for proof of adherence to those standards (Academic Quality Improvement Program, 2005). For example, the AACSB's (2006) accreditation standards require business programs to provide assurances of learning to external stakeholders and the students who are the consumers of academic programs. To comply with the AACSB's assurances of learning standards, business school faculty must develop, monitor, evaluate, and revise the substance and delivery of curricula and assess the impact of curricula on learners. This curriculum management process necessitates input from faculty, staff, administrators, students, alumni, and members of the business community. To demonstrate accountability, college faculty are incorporating TQM approaches in their strategic planning, assessment of student outcomes, and curriculum development (Wessel, 2007).

In summary, the major reports by task forces, commissions, and accrediting bodies reviewed by the researcher expressed concern about the quality of undergraduate student learning related to skills that are needed in the workplace. In their undergraduate education, students should develop the necessary skills, abilities, attitudes, and values that are essential to success in the complex business world. Faculty in higher education must address the diverse demands placed on graduates rather than concentrate on narrowly focused, job-specific technical skills. If higher education is to provide graduates with the knowledge and skills they need in the workplace of the 2lst century, curricula must change to reflect the dynamic needs of business (AACU, 2008; RAND, 2004).

METHODOLOGY

A survey packet was mailed during April/May 2008 to 2383 alumni and 145 employers of the target college that explained the study, provided information on informed consent for participation in the study and presented the questions for the study. The questions asked respondents what specific writing tasks they are expected to complete such as e-mail, business letters, memos, proposals, training guides, research reports, sales letters, promotional materials, product specifications, technical documentations, web pages, and product documentation. Recipients of the surveys were also asked what specific quantitative skills are required at work such as algebra, geometry, statistics/ probability, queuing/simulation, project management, forecasting, financial accounting, budgeting/cost analysis, rates of return, discounted cash flow analysis, total quality management, operations management, and queuing analysis. Respondents indicated whether they use any of the following programs word processing, e-mail, database, spreadsheet, presentation, multimedia, desktop publishing, World Wide Web, statistical analysis software, programming or computer based training. These questions were adapted from the Western Carolina University survey (Western Carolina University College of Business, 2006). Permission was obtained from Western Carolina University to use the survey questions.

RESULTS

There were 163 alumni and 45 employers that responded to the survey by August 31, 2008. Table 1 lists the writing tasks required at work that were identified by alumni and employers. Responses to the question regarding the writing tasks that are routinely required at work are that greater than 50% of the alumni and employers reported routinely writing email, business letters, and memos; 51% of the employers who responded identified writing proposals as a required writing task.

In analyzing the responses, both the alumni and the employers reported writing emails, business letters, and memos as the writing tasks that they routinely use at work. Based on the data, business faculty may want to focus assignments in their courses that incorporate more written work from the students in the areas of business letters, memos, and writing emails.

The writing tasks that were required infrequently as indicated by fewer than 50% of the respondents were writing proposals, training guides, research reports, sales letters, promotional materials, product

specifications, technical documentation, web pages, and product documentation. Alumni respondents identified writing job descriptions, legal documents, and service agreements as other writing tasks required at work. Employers identified writing investigative reports, recovery letters, and audit reports as other writing tasks required at work.

Table 1: Writing Tasks Required at Work Identified By Alumni and Employers

Writing Task	Percent Alumni	Percent Employer	Number Alumni	Number Employer
E-mail	91%	93%	149	42
Business letters	76%	69%	124	31
Memos	69%	67%	113	30
Proposals	44%	51%	71	23
Training Guides	42%	36%	68	16
Research Reports	34%	33%	56	15
Sales Letters	28%	31%	45	14
Promotional Materials	26%	29%	43	13
Product Specifications	25%	29%	40	13
Technical Documentation	22%	24%	36	11
Web Pages	19%	20%	31	9
Product Documentation	19%	20%	31	9
Other	10%	7%	17	3

Table 1 lists the writing tasks required at work that are identified by alumni and employers. Columns 1 and 2 list the percent of alumni and employers respectively who identified each writing task as being required at work. Columns 3 and 4 list the number of alumni and employers that identified a writing task as being required at work.

In analysis of the data, the rankings by alumni and by employers of writing skills that are not routinely required at work may be due to the higher representation of respondents employed in Finance/Insurance, Heath Care and Professional Services, and Government where more generalized writing skills such as memos, emails, and letters are used routinely. The other writing tasks that are ranked as not routinely used, are those that apply to specific job classifications such as sales letters that would be more directed to marketing and sales positions, training guides that would be required more in positions in the human resources field, while technical documentation, research reports, and product documentation are writing tasks associated with operations management and research positions.

Table 2 lists the percent alumni, percent employers, number of alumni, and number of employers that identified each quantitative task as being routinely required at work. The most important quantitative skills that were identified by at least 50% of the alumni and employers were budgeting/cost analysis, financial accounting, and project management. Forecasting was reported by 50% of the alumni to be a required quantitative task routinely required at work.

In analyzing the responses, budgeting, financial accounting, and project management were the most common quantitative skills required at work as reported by both the alumni and employers. Based on the high proportion of respondents from the financial and professional services industries, the ranking could have been influenced by skills that are job-specific to the industry. For the faculty who teach quantitative skills and operations management, the data may be beneficial to faculty in knowing the importance of the quantitative skills to the workplace. The data may influence content covered in the quantitative skills courses and what is assessed in those classes.

The quantitative skills reported by fewer than 50% as being required at work were statistics/probability, operations management, calculating rates of return, algebra, cash flow analysis, Total Quality Management (TQM)/Statistical Process Control (SPC), queuing/simulation, and geometry. Other quantitative skills that were reported by the employers that were required at work were tax, bond equations, and cost comparisons.

Table 2: Quantitative Tasks Required at Work Identified by Alumni and Employers

Quantitative Task	Percent Alumni	Percent Employer	Number Alumni	Number Employer
Budgeting/Cost Analysis	65%	71%	106	32
Financial Accounting	56%	51%	91	23
Project Management	53%	53%	86	24
Forecasting	50%	42%	82	19
Statistics/Probability	40%	33%	65	15
Operations Management	39%	33%	63	19
Rates of Return	34%	42%	56	12
Algebra	30%	27%	49	8
Discounted Cash Flow Analysis	15%	18%	25	5
TQM/SPC	8%	11%	13	4
Queuing/Simulation	6%	9%	10	3
Geometry	6%	7%	9	4
Other	4%	4%	7	2
None		9%		3

Table 2 lists the quantitative tasks required at work that are identified by alumni and employers. Columns 1 and 2 list the percentage of alumni and employers respectively who identified a quantitative task as being required at work. Columns 3 and 4 list the number of alumni and employers that identified a quantitative task as being required at work.

In analyzing the data, algebra, geometry, and statistics/probability are ranked as not routinely required at work. An explanation for this finding may be due to the courses being the foundation courses upon which higher level quantitative skills build. In addition, TQM/SPC, rates of return, cash flow analysis, queuing/simulation, and operations management may be ranked as not routinely used at work since these are skills associated with specific job classifications within industries that are not strongly represented as areas of employment by the sample populations. Job areas that require specific quantitative skills include: economics, computer support services and analytics, health services, public administration, survey researchers, financial services, and marketing and sales (Burnett, 2002). Although the employment areas represented by employers and alumni include finance and insurance, health care, professional services and government, the specific quantitative skills indicated as required at work by less than 50% of the respondents, may not be important quantitative skills within those areas of employment represented by the sample populations.

Table 3 lists the responses to the question regarding the computer software skills that are required at work. The results were that greater than 50% of the alumni and the employers reported that knowledge of email, spreadsheets, word processing, the world wide web/internet, and databases are required at work. Other software specified by alumni as being required for their work was accountant specific applications such as FoxPro, QuickBooks, and a system for golf accounting sales. Additionally alumni identified Siebel, digital editing programs, and specific programs used in our business, MS Project, Visio as other software program knowledge required for work. Other software specified by employers was proprietary software, electronic medical records, and timesheets.

In analysis of the data, the five computer software skills identified by the alumni and employers are already integrated within the core business courses at the targeted college. The data reinforces that these software skills should remain in the business curriculum. With a response indicating the use of spreadsheets at work as 91% for alumni and 78% for employers, these responses may be influenced by the positions held by the respondents in the accounting, finance/insurance, and professional services areas. These occupational areas often require knowledge of spreadsheet programs.

Less than 50% of the respondents reported that presentation/multi media, computer-based training, desktop publishing, statistics, and programming were software skills required at work. The responses to the question regarding computer software knowledge required at work are closely ranked as the four least required at work as indicated by both the business alumni and the employers. The knowledge of computer-based training, desktop publishing, and programming may be job specific rather than regularly

used software programs such as spreadsheets, presentation, database, word processing, world wide web/internet, and email. Statistics software would be used within the statistics courses or in the management information systems courses which are foundation courses within the business curricula at the targeted college.

Table 3: Computer Software Required at Work Identified by Alumni and Employers

	Percent Alumni	Percent Employer	Number Alumni	Number Employer
E-mail	93%	96%	96	43
Spreadsheet	91%	78%	78	35
Word Processing	88%	96%	96	43
World wide web/Internet	74%	71%	71	32
Database	60%	51%	51	23
Presentation/Multimedia	50%	47%	47	21
Computer-Based Training	40%	38%	38	17
Desktop Publishing	17%	31%	31	14
Statistics	13%	11%	11	5
Programming	10%	22%	22	10
Other	10%	4%	4	2
None	24%	2%	2	1

Table 3 lists the computer software skills required at work that are identified by alumni and employers. Columns 1 and 2 list the percentage of alumni and employers respectively who identified a particular computer software skill as being required at work. Columns 3 and 4 list the number of alumni and employers that identified a particular computer software skill as being required at work.

Table 4 lists the Pearson's r values that were calculated by comparing the alumni and employer data for their answers to the questions about writing tasks, quantitative tasks, and computer skills. There is a strong correlation between the alumni and employer for each of the skills meaning that the alumni and employer agree on what skills are important for writing, quantitative, and

Table 4: Correlations between Alumni and Employer Data for Writing Task, Quantitative Tasks, and Computer Skills Computer Skills

Task/Skill	Pearson r	R^2
Writing Tasks	0.989	0.98
Quantitative Tasks	0.967	0.94
Computer Skills	0.973	0.95

Table 4 lists the Pearson's r value that was calculated by comparing the alumni and employer data for their answers to the questions about writing tasks, quantitative tasks, and computer skills. There is a strong correlation between the alumni and employer for each of the skills meaning that the alumni and employer agree on what skills are important for writing, quantitative, and computer skills

The R^2 shows a less than 5% variation for writing and computer skills which is statistically significant at the 5% level. Quantitative skills have a 6% variation in data. This is an important finding for revising curricula as the target college was able to identify common writing, quantitative, and computer skills as discussed in the previous section and that these findings are statistically significant.

Limitations of the Study

Several limitations existed in this study. One limitation is that data were collected from respondents associated with one college and the findings may not be generalized to other colleges. In addition, data collected from the employers and business alumni from the targeted college were limited by the region in which the business alumni and employers were located; the regional industries were in the following sectors: financial and insurance, hospitality, health care, tourism, education, and public service. There were few industries in the region that were nationally or internationally based. Another limitation of the study was that the mailing addresses for the business alumni and for the employers were not kept current; mailed surveys were returned because of incorrect, undeliverable addresses for the alumni and for employers. Specifically of the 2,383 alumni who received the survey packets, 300 were returned due to

undeliverable addresses. Of the 140 survey packets mailed to employers, 45 surveys were returned because of undeliverable addresses. The sample size of 45 employers is very limited.

Finally, because a convenience sample was used, distribution of respondents was skewed more to two industries: of the respondents, 25% of the alumni and 16%of employers indicated they worked in the professional services sector, which includes accountants; 23% of the alumni and 24% of employers indicated they worked in the finance and insurance industries. The representation coming from the professional services, finance, and insurance industries may have influenced survey responses regarding skills and competencies needed in the workplace.

RECOMMENDATIONS

Based on the findings of this study, the following areas can be assessed within a designated core course in the business curricula: (a) communication abilities, (b) analytic skills, and (c) use of information technology. The assessments can be done through use of written and oral presentations by students to case studies or business simulations, use of technology through presentation software and Excel spreadsheets for data analysis, and through written and oral interpretation of case studies that are based on international business issues and a diverse workforce.

The analysis of data provided faculty with information for course and curricula revisions and to establish assessment criteria in preparation for the AACSB accreditation and the regional reaccreditation by MSCHE. The student learning outcomes assessment measures that will be implemented by the faculty should be monitored each semester by a faculty designee from the School of Business assessment committee. It is recommended that colleges and universities routinely include employer and alumni surveys as part of their curriculum assessments as their feedback can provide valuable information for revising the curriculum.

CONCLUSIONS

The results of the survey showed strong correlations with the writing tasks (r=0.989), quantitative tasks (r=0.967), and computer software (r=0.973) identified by both the alumni and the employers as being tasks required at work. E-mail, business letters, and memos were the most common written communication required at work. Budgeting, financial accounting, project management, and forecasting were most common quantitative skills required Word processing, spreadsheets, email, and world wide web were most common computer applications used. These statistically significant findings confirm that business professionals and employers agree on the skills required for work.

Based on the findings, business faculty can begin to review the needs of the program tracks and set objectives for the skills and competencies students should attain upon completion of a business program track. In revising the content of the core courses, faculty can use the responses of the employers and business alumni regarding the writing, quantitative and computer skills and align course content with those skills and competencies. In designing assessments for the core course content, the data on the skills that are very important and important for the workplace can provide the framework for the areas in which student competency can be assessed. Faculty can meet and determine the instruments and projects that can be used to measure the skills and competencies of the students. In addition, faculty can determine in which of the business core classes the assessments will take place.

In future studies, rather than using convenience sampling, more attention should be given to obtaining matched samples of business alumni and employers who represent the variety of businesses and industries in the region.

APPENDIX

Alumni and Employer Survey Questions: Business Skills and Competencies Needed in the Workplace

1. Sector of employment: __ Public __ Private __ Not for profit __ Self-employed

2. Check the box by the category that best describes your area of employment/organization.

☐	Construction	☐	Public utility
☐	Education (elementary, secondary, higher education)	☐	Real estate and housing
☐	Finance and insurance	☐	Religious and charitable service
☐	Gaming and hospitality	☐	Retail and wholesale
☐	Government	☐	Social services
☐	Health care	☐	Telecommunications/information systems
☐	Manufacturing	☐	Transportation
☐	Professional services	☐	Not currently employed outside the home
☐	Public safety (defense, police, fire)	☐	Other_____

3. Approximately how many people are in your organization? Please circle your answer.

1-49	1,000-1,999
50-99	2,000-2,999
100-499	3,000-3,999
500-999	4,000 or more

4. Which writing tasks are routinely required at work? Check all that apply.

☐	E-mail	☐	Research reports
☐	Memos	☐	Product specifications
☐	Business letters	☐	Product documentation
☐	Sales letters	☐	Promotional
☐	Web pages	☐	Technical documentation
☐	Proposals	☐	None
☐	Training guides	☐	Other (fill in)

5. Which quantitative skills are required at work? Check all that apply.

☐	Algebra	☐	Budgeting and cost analysis
☐	Geometry	☐	Rates of return
☐	Statistics and probability	☐	Discounted cash flow analysis
☐	Queuing and simulation	☐	TQM and SPC
☐	Project management	☐	Operations management
☐	Forecasting	☐	None
☐	Financial accounting	☐	Other (fill in)

6. Which computer software is required at work? Check all that apply.

☐	Word processing	☐	Statistics
☐	E-mail	☐	World Wide Web and Internet
☐	Database	☐	Programming
☐	Spreadsheet	☐	Computer-based training
☐	Presentation and multimedia	☐	None
☐	Desktop publishing	☐	Other (fill in)

Note. TQM = total quality management; SPC = statistical process control. Questions 4, 5, and 6 in this survey were adapted and reprinted with permission from *1998 College of Business Alumni Survey* (pp. 2-3) by Western Carolina University, College of Business, 2006. Retrieved March 10, 2006, from Western Carolina University, College of Business Web site: http://www.wcu.edu/COB/Documents/index.htm

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INFORMATION SOURCES USED TO SELECT A HIGHER EDUCATION INSTITUTION: EVIDENCE FROM SOUTH AFRICAN STUDENTS

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ABSTRACT

This paper aims to investigate the information sources used by South African students when selecting a Higher Education Institution and further to establish whether statistical significant differences occur between the perceptions of high and medium performing students from two Universities of Technologies. This paper provides an explanation of students' decision making process and the utilisation of sources of information when selecting a Higher Education Institution. Three hundred and ninety self-administrated questionnaires were completed and analyzed. The findings indicated that students in South Africa prefer to be informed about Higher Education Institutions by web sites. A high premium is also placed on campus visits and open days followed by high school teachers to obtain information. This implies that although impersonal methods (web site) are the most preferred method, a great premium is placed on personal interaction to obtain information In terms of the perceived performance of the information sources, the same sequence was measured. However significant differences were measured between the expectations of the students and the perceived performance of the information sources which applies that their expectations were not met. Consequently it needs clear planning from the authorities. Some practical implications for Higher Education Institutions, limitations and suggestions for future studies were articulated.

JEL: I2, M3

KEYWORDS: Higher education, information sources, marketing

INTRODUCTION

Higher Education Institutions will have to become more market-oriented to face all the current challenges. Furthermore, in order to communicate effectively with prospective students, they need to identify what the information needs and preferred sources of information of their target market are. They have to understand students 'decision-making processes when selecting Higher Education Institutions or courses to ensure that students make the right decision. These days the choice of higher educational institutions and courses is more complex and critical for students than it was in the past. Students are being bombarded with commercial messages promoting educational institutions and courses. On the other hand information is more widely available, easier to access and likely to be presented in a manner that will assist prospective students to make informed choices. Although this has broadened the sphere of students' choice, the variety also has complicated their decision-making processes (Brown, Varley, & Pal, 2009:311). Studies reveal multiple factors, stages and influences that impinge on students' selection process of Higher Education Institutions. Several international studies on the factors influencing this multifaceted decision-making process have been conducted and published, including Britain (Moogan, Baron, & Bainbridge, 2001), Australia (James, 2000), Belguim (Germeijs, & Verschueren, 2007), Malaysia (Ariffina, Ahmada, Ahmada & Ibrahimb, 2008). Some studies have even focused on the decision making procedures of specific groups of prospective students such as international students *(*Chen & Zimitat, 2006:91), students from lower social classes (Connor & Dewson, 2001) or students from rural areas (Chenoweth, & Galliher, 2004). However, limited research exists on

the perceived value of the information sources utilised by students when selecting a Higher Education Institution.

Problem Statement: higher education is facing increasingly more challenges on the global arena. As Higher Education Institutions in South Africa are very competitive they often take a business stance in order to compete for human and financial capital. This, consequently, gave rise to higher institutions greater emphasis on marketing communication to recruit quality students and to influence students' decisions positively towards their choice of a Higher Education Institution. This is even more so as universities increasingly seek to develop an international presence to attract international students. A critical issue is the lack of information on the source preferences of prospective students to enable Higher Education Institutions to communicate effectively through appropriate sources of information to attract quality students.

Objective of The Study: the primary objective of this study is to determine whether students' expectations are met with regards to information sources when selecting a Higher Education Institutionin South-Africa.

Five secondary objectives were formulated. Firstly, to evaluate the levels of importance of information sources of South-African students when selecting a Higher Education Institution. Secondly, to determine whether there exist significant differences between high and medium performers in terms of the importance of information sources. Thirdly, to evaluate the levels of performance of information sources when selecting a Higher Education Institution. Fourthly, to determine the existence of significant differences between high and medium performers in terms of their perceived performance of information sources. Lastly, to determine the existence of significant differences between the importance of information sources and the perceived performance thereof when selecting a Higher Education Institution.

The article is structured as follows. The literature is reviewed on the sources of information consulted by prospective students when selecting higher education institutions with specific reference to relevant international studies The research methodology are then described, followed by the finding of the study. Finally the limitations of the study and future research possibilities are presented

LITERATURE REVIEW

Customers have to choose how many and which information sources to consult when making decisions. This study focuses on the utilisation of sources of information when selecting a Higher Education Institution, while the rest of the discussion deals with the information-search phase. The two major types of information sources are internal and external. Internal sources are stored in a consumer's memory. This can be information obtained from previous searches or personal experience and is typically the only source consulted when making routine or low-involvement purchase decisions. External sources entail acquiring information from environmental sources outside the consumers' own experience and comprise personal and independent sources (Du Plessis & Rossouw, 1998:87). In the case of students who have to make career decisions, various types of personal sources might be consulted. These can include friends, family, career-counsellors, teachers, reference groups and opinion leaders. The higher education sector also increasingly makes use of advertisements in the media and on the internet, as well as promotional material and other marketing elements such as websites and visits or open days (Brown *et al*., 2009:320).

Veloutsou, Paton and Lewis (2005:281-283) classify these sources of information into three major categories. Controllable sources of information sources originate from and are controlled by the educational institutions. These can be such as promotional material brochures, booklets promotional CDs that are supplied to schools or collected from institutions, or one open days and then increasingly institutions' websites. Non-controllable sources of information are provide by external sources such as friends and family, news in the national or international media and benchmarking league tables

(especially popular in the Britain market). Partly controllable and partly non-controllable sources of information represent a combination of sources including regional and national newspaper publications, popular magazine articles and a range of web-based sources from specialized providers or even social networks.

The role of the various information sources when selecting a Higher Education Institution have been discussed in the previous section. A review of previous international studies will be reviewed next. A recent study on university applicants' choice processes identifies four main information needs of students, namely course and entrance requirements, reputation, location and a range of financial considerations (Brown *et al*., 2009:317). Galoti and Mark (in Domino; Libraire; Lutwiller; Superczynski & Tian, 2006:102) found that parents, guardians, friends and career counsellors were rated as the most important influences when selecting colleges. Hu and Hossler (2000:685) provide evidence that the opinions of parents and other family members have a strong influence on students' considering private institutions. When Domino *et al*., (2006:102) investigated the impact of economic factors on the selection of colleges it was found that the financial capability of the household, the occupation of the parents, the responsibility of paying for studies and ethnic group of parents played an important role. Chenoweth and Galliher (2004) focused on the decision-making process of scholars at high school that are at particular risk of economic, social and cultural influences that could hamper educational success. They identified some major family factors that could influence the decision to enrol for higher education. The family often provides the financial resources to study. Family members can act as role models and are the main source of encouragement in what to study for and during studies.

The important influence of personal information sources on the intentions and attitudes of internal students to study abroad was confirmed by the recent study by Chen and Zimitat (2006:91-100). The purpose of this study was to investigate the motives of Taiwanese students who intended to study abroad at HEIs in the western world. Each student's decision-making behavior that was analyzed using the theory of planned behavior (TPB). This theory suggests that it is imperative to examine and understand the attitudes that influence a consumer's purchase intentions specifically: attitudes towards behavior (AB); subjective norms (SN); and perceived behavioral control (PB). Attitudes towards behavior refer to the strength of positive or negative beliefs that a student harbor about higher education abroad. These include issues such as perceptions of the country of intended study, its economic power, perceived quality of its HEIs, as well as the advantages that accrue from education overseas. Subjective norms (SN) are the perceived social pressures from influential people in the student's life that might influence career and study decisions such as influences of parents, family members, friends, teachers and other students. These influential groups are word-of-mouth sources that can impact on the intention of prospective students to study abroad (Brown *et al*., 2009:321). Perceived behavioral control (PB) is the extent to which a student believes that he/she has control over factors influencing the ability to study. The study demonstrates that the subjective norms or influence of significant others is a significant predictor of a student's intention to study abroad. Thus personal sources might even be more even more important to these students considering studying, abroad due to the high level of risk and cost involved in this type of decision.

Previous studies have identified other major influences on prospective students' choices. James (2000:82) investigated what influenced prospective students to choose specific courses at a university. The findings of the studies indicated that the advice from personal sources was viewed as far less important than other considerations, such as the perceived quality of the course or attaining career success. Thus the extent to which friends and family continue to influence the decision-making process is at issue. Some other studies also showed that external sources were more popular than personal sources when prospective students needed reliable information about an educational institution and its courses. Veloutsou *et al*., (2005:281-283) reported that prospective students used mainly communication originating from the university itself. The university prospectus and open days were the most popular

sources although the use of institutions' web sites to find information was growing steadily. Visits to high school, advice career advisers and news in the media were not used as frequently used students.
In a study Moogan, Baron, and Harris (1999:215) found that prospective students relied mostly on word of mouth from parents and friends, as well as the information in prospectuses to find out about educational and social benefits offered by universities. Open days was also perceived as being valuable in both the information search and decision-making process. In the information available they would consider the quality and content of courses offered, location of the institution, reputation and entrance requirements. A more recent study by Moogan and Baron (2003:271) found that prospectuses were the most important source of information. In spite of this study Maringe (2006:474) found that prospectuses were of limited value to students. Institutions which spent huge sums in advertisements and promotional activities to lure students to their institutions were condemned. Several other literature sources also seemed to disagree on the importance of the information sources that were consulted by prospective students. The conflicting findings of these studies revealed that there seems to be a difference in the degree to which prospective students use and perceive the value of information sources in particular in the South African context. The need for this current study becomes imperative.

RESEARCH METHODOLOGY

Conceptualising the purpose of the investigation: in order to achieve the primary objective of the research, the information sources related to selecting a Higher Education Institutions investigated.

With regards to the objectives the researchers formulated the following research hypotheses:

Ho: There exist no significant differences with regard to the importance of information sources and the perceived performance thereof when selecting a Higher Education Institution.

Ha: There exist significant differences with regard to the importance of information sources and the perceived performance thereof when selecting a Higher Education Institution.

The Sample Framework

A sample of 410 students at the management faculties of two Universities of Technology in South-Africa were selected at random after permission was granted to include pre-determined classes/courses for the purpose of the survey. All respondents agreed to participate in the survey and were supplied with a self administrative questionnaire after the instructions were explained. Only 20 questionnaires or part thereof were discarded that resulted in 390 useful questionnaires. A summary of the composition of the sample is provided in table 1. The sample comprised of 40.5% male and 59.5% female students. The attitudes of the student sample were tested regarding the importance of pre-identified sources of information when selecting a specific Higher Education Institution.

Table 1: Summary of Sample Characteristics

		No	%
Age	16-17 years	2	0.5
	18-19 years	96	25
	20-21 years	122	31.5
	22+	170	43.5
Gender	Male	158	40.5
	Female	232	59.5
Performance of student	High performers	202	51.8
	Medium performers	188	48.2
University Technology	A	230	59
	B	160	41
Total		390	100

This table shows a summary of the sample characteristics.

The Measuring Instrument

A structured questionnaire was developed to measure the importance and performance of information sources when deciding on a specific Higher Education Institution (see Appendix 1). The questionnaire consisted of two sections. In the first section the biographical information of the students was obtained, while the last section measured the level of importance and perceived performance of information sources when selecting a university of technology.

Section A utilised nominal scales whilst a five-point Likert-type scale was used for Section B to measure the levels of importance and the perceived performance with regards to various information sources used to select an Higher Education Institution. The importance scale was categorised as 1=very important, 2=important, 3=not important nor unimportant, 4=not important and 5=not important at all. The perceived performance scale was categorised in 1=excellent, 2=good, 3=neither good nor bad, 4=not good and 5=not good at all. The number 6 was assigned when to variables which the respondents had no experience with and was thus not applicable. The inputs for section B was gathered through an intensive literature study on the topic as well as focus group discussions with students enrolled at Higher Education Institutions.

Data Collection and Analysis

The data was gathered and captured by trained field workers over a period of six months. The SPSS version 17.0 statistical package was utilised to analyse the data. For this analysis the Kolmogorov-Smirnov Test was employed based on the assumption that if the significant values exceeded 0.05, normality could not be assumed and the researchers had to rely on employing non-parametric analysis techniques. As normality could be assumed after applying the Kolmogorov-Smirnov Test the researchers employed the ANOVA test to test the null hypothesis and the alternative hypothesis.

An item analysis was carried out to test the reliability of the questionnaire and an overall Cronbach's alpha of a 0,91 and 0.94 were obtained for both the importance of and the perceived performance of information sources.

FINDINGS

Table 2: Rank Order of Information Sources Used When Choosing a Higher Education Institution

Rank		Mean	SD
1	University web site	1.51	.839
2	Campus visits & Open days	1.55	.793
3	High school teachers	1.65	.936
4	University publications (newsletters & brochures)	1.75	.908
5	Parents	1.85	.984
6	Word-of-mouth (friends & other people)	1.89	.919
7	Events on campus (music festivals, Rag, sports events)	1.94	1.035
8	Advertisement in magazines / newspapers	1.95	.913
9	Other students (alumni)	2.01	.963
10	Advertisements on the radio	2.08	1.035
11	Advertisements on TV	2.09	1.114
12	Other	2.32	1.020

Table 2 indicates the rank order of information sources used when choosing a higher education institution.

From table 2 it is clear that there is a huge difference in the level of importance to which university of technology students rate the different sources of information related to Higher Education Institutions in order to assist them with their decision making process. According to the sample, the most important information source to enable them to make a decision is the universities web site, followed by Campus

visits and open days. It could be argued that due to the increasing importance of technology, web sites as a mean to disseminate information, is regarded as one of the most frequently used information sources. The importance of the traditional methods to disseminate information about Higher Education Institutions, Campus visits and open days, also proved to be top options when in need for information. On the contrary, advertisements on TV and radio have not been pointed out as important sources of information to disseminate information.

Table 3: Importance of Information Sources Used When Choosing a Higher Education Institution and Students Performance

	High performers		Medium performers		T-value
	Mean	SD	Mean	SD	
High school teachers	1.72 3	0.99	1.6 3	0.89	0.79
Word-of-mouth (friends & other people)	1.88 5	0.90	1.92 6	0.95	-1.87*
Advertisements on the radio	2.08 10	1.04	2.08 11	1.04	-0.58
Events on campus (music festivals, Rag, sports events)	1.93 7	1.04	1.95 7	1.04	-0.92
Advertisement in magazines / newspapers	1.96 8	0.9	1.96 8	0.94	-0.69
University publications (newsletters & brochures)	1.76 4	0.96	1.74 4	0.87	0.28
Advertisements on TV	2.12 11	1.17	2.07 10	1.07	-0.55
University web site	1.47 1	0.82	1.55 1	0.87	-1.134
Campus visits & Open days	1.55 2	0.82	1.57 2	0.77	-0.9
Other students (alumni)	2.06 9	0.96	1.97 9	0.97	0.68
Parents	1.89 6	1.0	1.84 5	0.98	-1.6
Other	2.42 12	1.0	2.11 12	1.1	0.74

*Table 3 indicates the level of importance of information sources used when choosing a higher education institution. A distinction is made between high performers and medium performers. ***, **, and *indicate significance at the 1, 5 and 10 percent levels respectively.*

Table 3 indicates that there are no significant differences between the two different levels of performers regarding the level of importance that they attach to the different information sources. In terms of the mean it is clear that there is a direct resemblance between the rank orders that the two groups attach to level of importance of the various variables. The web site; campus visits and open days and high school teachers were rated unanimously as the most important three sources of information to make informed decisions regarding a Higher Education Institution.

On the lower side it is clear that advertisements on both TV and radio have been regarded as less appealing. In terms of the mean, no fixed pattern could be traced in terms of which one of the two groups generally attached a higher level of importance to the various variables. A pattern of diverse levels of importance thus resulted between the different levels of performers.

Table 4 indicates that the university web site is clearly perceived as the best performer in terms of disseminating information for decision making regarding a Higher Education Institution. Campus visits and open days as well as word of mouth are regarded as 2nd and 3rd most powerful sources to disseminate information for the purpose of decision making. On the lower end, advertisements in magazines and on

TV and radio are perceived weakest in terms of performance of information sources for an informed decision.

Table 4: Perceived Performance of Information Sources Used When Choosing a Higher Education Institution

Rank		Mean	SD
1	University web site	2.00	1.05
2	Campus visits & Open days	2.10	1.01
3	Word-of-mouth (friends & other people)	2.18	.93
4	High school teachers	2.24	1.02
5	Parents	2.28	1.00
6	University publications (newsletters & brochures)	2.46	1.20
7	Other students (alumni)	2.50	0.99
8	Events on campus (music festivals, Rag, sports events)	2.65	1.21
9	Other	2.70	1.17
10	Advertisement in magazines / newspapers	2.74	1.09
11	Advertisements on the radio	2.78	1.09
12	Advertisements on TV	3.06	1.23

Table 4 shows the perceived performance of information sources used when choosing a higher education institution.

Table 5: Perceived Performance of Information Sources Used When Choosing a Higher Education Institution and Students Performance

	Good performers		Average performers		T-value
	Mean	SD	Mean	SD	
High school teachers	2.27 4	0.98	2.23 3	1.0	-0.85
Word-of-mouth (friends & other people)	2.11 3	0.9	2.25 4	1.0	-2.47*
Advertisements on the radio	2.81 11	1.1	2.73 10	1.1	-0.93
Events on campus (music festivals, Rag, sports events)	2.58 8	1.2	2.69 9	1.2	-1.2
Advertisement in magazines / newspapers	2.73 9	1.1	2.75 11	1.1	-0.72
University publications (newsletters & brochures)	2.48 7	1.2	2.42 6	1.2	-1.1
Advertisements on TV	3.05 12	1.3	3.06 12	1.3	-1.6
University web site	2.01 1	1.1	1.97 1	1.0	-0.1
Campus visits & Open days	2.08 2	1.0	2.09 2	1.0	-0.17
Other students (alumni)	2.43 6	1.0	2.55 8	1.0	0.69
Parents	2.28 5	1.0	2.26 5	1.0	-0.03
Other	2.8 10	1.1	2.43 7	1.4	0.72

*Table 5 shows the perceived performance of information sources used when choosing a higher education institution. A distinction is made between good and average performers. ***, **, and *indicate significance at the 1, 5 and 10 percent levels respectively.*

Table 5 indicates that except for word of mouth as information source, no significant differences are measured between the two groups of performers in terms of the perceived performance of each of the information sources. The university web sites as well as visits to campuses and open days are regarded as

best perceived information sources by both samples. Average performers perceived the first mentioned source better than good performers while the latter was perceived slightly better by the good performers. Advertisements on TV, radio and magazines are regarded by both samples as weakest in terms of performance.

Table 6: Importance versus Perceived Performance of Information Sources

	Importance		Perceived performance		T-value
	Mean	SD	Mean	SD	
High school teachers	1.653	.936	2.244	1.023	-11.03***
Word-of-mouth (friends & other people)	1.896	.919	2.183	.931	-5.794***
Advertisements on the radio	2.0810	1.035	2.7811	1.093	-11.62***
Events on campus (music festivals, Rag, sports events)	1.947	1.035	2.658	1.218	-10.26***
Advertisement in magazines / newspapers	1.958	.913	2.7410	1.097	-11.95***
University publications (newsletters & brochures)	1.754	.908	2.466	1.204	-11.05***
Advertisements on TV	2.0911	1.114	3.0612	1.299	-12.68***
University web site	1.511	.839	2.001	1.052	-8.684***
Campus visits & Open days	1.552	.793	2.102	1.015	-10.30***
Other students (alumni)	2.019	.963	2.57	0.99	-8.640***
Parents	1.855	.984	2.285	1.0	-7.677***
Other	2.3212	1.020	2.79	1.17	-1.908***

Table 6 shows the importance versus the perceived performance of information sources when choosing a higher education institution.
****, **, and *indicate significance at the 1, 5 and 10 percent levels respectively.*

Table 6 clearly indicates that there are significant differences between the means of importance and perceived performance. Yet the ranking of importance and perceived performance of the information source appears to be the similar. The universities web site and campus visits/ open days were rated as the two most important sources of information, as wells as the two best perceived information sources. Still statistical significant differences were found between the importance and perceived performance of these variables. This means that students' expectations are not met. This is also the case with all the other variables. It appears that the institutions realize which the most valuable sources are, although they seem not to meet the students' expectation in this regard.

The performance of advertisements on TV and radio were perceived amongst the last in the list of information sources but also rated amongst the least preferred sources.

CONCLUSION

The primary objective of this study is to identify the most important information sources that are available for potential students when in a process of selecting a tertiary institution in South-Africa as well as the perceived performance of the mentioned information sources. In an environment of intense competition amongst universities to attract the most promising students and retaining them, the most effective

methods to accomplish these goals should be implemented. This implies that the most effective information sources should be utilised to disseminate information that will enable students to make an informed decision regarding their preferred Higher Education Institution. Students are well served by a wide array of information sources that may disseminate relevant information. However, it should be determined which available sources of information will serve the purpose best. In this regard and with in mind the diverse nature of Higher Education Institutions, universities of technology should in collaboration with their students, determine the most efficient sources of information before embarking on a recruitment campaign. This process is important regardless of the positioning attempts that might already be in place by universities. Students will as part of their decision making process at one stage or the other, have a desire to acquaint themselves with the specific characteristics of a particular Higher Education Institution. In order to create and benefit from a competitive advantage, Higher Education Institutions should concentrate on the most appealing sources to disseminate information. The study performed in South Africa, revealed that students prefer to be informed about Higher Education Institutions by the web sites. A high premium is also placed on campus visits and open days follow by high school teachers to obtain information. This implies that although impersonal methods (web site) are the most preferred method, a great premium is placed on personal interaction to obtain information. This is probably due to the important nature of the outcome that will determine the decision makers' future career. Similarly, UK students put a higher premium on university prospectus, university open days and the web site. The first and the last implies that students also prefer to investigate the prospects on an indirect way but also see the universities open days, where interaction can take place, as an important source of information to choose between universities (Veloutsou et al., 2004).

With regards to high and average performers, no significant differences were measured between them in terms of their three most preferred information sources. The three most preferred information sources were also in the same rank order as the entire sample. Similar to the total sample, the least preferred information sources to consult for decision making purposes were advertisements by various kinds of media that includes the radio, television and the printed media. This outcome is debateable as no evidence is available that they regard these methods of obtaining information as unimportant purely because they know it is available.

Regarding the perceived performance of the information sources, the total sample as well as high and average performance distinctively, indicated that the web site was the best perceived information source followed by campus visits and open days. No significant differences were measure between the two groups in this regard. While good performers perceived word of mouth (friends and other people) as the third best performer, average performers perceived high school teachers as third best perceived source of information.

Although significant differences were measured between the expectations and the perceived performance of all information sources to disseminate information, it appears as if both web sites and campus visits (including open days) as most preferred sources met the needs of the sample in terms of the ranking thereof. However in both cases expectations were strictly spoken not met. The study clearly indicates the merit for engaging and concentrating on identified information sources. Regarding the web site, that is impersonal, it should be with in mind to make it accessible over a wide geographic and social spectrum and be welcoming and reassuring to prospective students. Finally from a marketing perspective, recruitment of the most promising students should keep in mind the outcome of the study in order to position itself with the aid of the most appropriate information sources.

This study is not without limitations. The findings of this study cannot be generalised to the South African population, as the composition of the sample only included students of the management faculties of two Universities of Technology in South-Africa. Therefore it can also be extended to other faculties as well as other types of tertiary institutions such as public universities and private tertiary institutions. It

would also be constructive to determine whether there are differences between the sources of information for prospective students from other faculties such as arts or humanities. Since the majority of students at the selected universities of technology are Black African students, there might be differences when compared to universities where the majority of students are non-Non Black African students.

The research approach followed in this study was quantitative in nature, so a more in-depth qualitative investigation on the specific findings would be relevant. For example, this research highlighted the importance of the web sites, campus visits and open days as information source for prospective students. Future studies could focus on in depth studies on exactly what prospective students want to hear and see when using the information sources to make informed decisions about their future career.

APPENDIX

Appendix 1

Questionnaire number: | | | | |

This study investigates the factors that have influenced your choice with regard to higher education. Please fill in the questionnaire as completely as possible. All answers are confidential. No names are required.

Please tick the appropriate box(es) with an X

1	How old are you?	Bin	
	16-17 years	1	[4]
	18-19 years	2	
	20 – 21	3	
	21- 22	4	
	Older than 22	5	
2	What is your home language?		
	Afrikaans	1	[5]
	English	2	
	Zulu	3	
	Xhosa	4	
	Tswana	5	
	Venda	6	
	Tsonga	7	
	Swazi	8	
	Pedi	9	
	Ndebele	10	
	Sotho	11	
	Other	12	
2.1	If other please specify.		[6]
3	What is your gender?		
	Male	1	[7]
	Female	2	
4	Indicate your current academic study year (e.g. First year or Second year)		
	If you are a pre-degree student, please go to question 6		
	If you are a first to fourth year student, please answer question 5		
	Pre-degree (bridging course/short course)	1	[8]
	First year	2	
	Second year	3	
	Third year	4	
	Fourth year	5	
5	Please indicate the numbers of years you have already enrolled for this course?		
	1 year	1	[9]
	2 years	2	
	3 years	3	
	4 years	4	
	5 years and more	5	

6	How did you become aware of the Educational Institution?		
	You may choose more than one option		
	Friend	1	[10]
	Media, press, radio, TV	2	[11]
	Family member	3	[12]
	The institution it self	4	[13]
	Teachers	5	[14]
	Other	6	[15]
6.1	If other please specify.		[16]

7	Indicate who of the following people (familiar to you) have enrolled at a Higher Education Institution?	7	
	You may choose more than one option		
	No one	1	[17]
	Parent / Guardian	2	[18]
	Brothers or sisters	3	[19]
	Close friend	4	[20]
	Other	5	[21]
7.1	If other please specify.		[22]

8 Please indicate the subjects you wrote for your Grade 12 / matric examination in Column A. Mark the symbol you achieved in the subjects in Column B. Mark the grade at which you wrote them in Column C (H - higer grade S - Standard grade L - Lower grade)

	Subject	Symbol	Grade	
1		A B C D E F	H S L	[23- 25] [26- 28]
2		A B C D E F	H S L	[29- 31]
3		A B C D E F	H S L	[32- 34]
4		A B C D E F	H S L	[35- 37]
5		A B C D E F	H S L	[38- 40]
6		A B C D E F	H S L	[41- 43]
7		A B C D E F	H S L	[44- 46]
8		A B C D E F	H S L	[47- 49]
9		A B C D E F	H S L	[50- 52]
10		A B C D E F	H S L	[53- 55]
11		A B C D E F	H S L	[56- 58]
12		A B C D E F	H S L	[59- 61]

9	What was the main reason for your studies?		
	Higher income	1	[62]
	Better Job opportunities	2	
	Status	3	
	Personal development	4	
	Other	5	
9.1	If other please specify.		

10	**Who is paying for your tuition?**		
	You may choose more than one option		
	Self	1	[64]
	Parents/Family	2	[65]
	Loan	3	[66]
	Bursaries	4	[67]
	Other	5	[68]
10.1	If other please specify.		[69]

11	What is your usual living arrangement during your studies?		
	Own house/flat	1	[70]
	Parents' home	2	
	Relatives	3	
	Rented flat	4	
	Rented room	5	
	University residence	6	
	With friends in Communal home	7	

12	What means of transport(s) are you usually using to travel to the university.		
	You may choose more than one option		
	Private		
	Car	1	[71]
	Walk	2	[72]
	Bicycle	3	[73]
	Motorcycle	4	[74]
	"None-Private"		
	Taxi	5	[75]
	Train	6	[76]
	University bus	7	[77]
	Other Busses	8	[78]

13	Overall, to what extent are you satisfied with the "**none private"** transport you are currently using to travel to the institution?		
	Answer this question if you are using "none-private"		
	Very satisfied	1	
	Satisfied	2	
	Not Satisfied nor dissatisfied	3	(79)
	Dissatisfied	4	
	Very dissatisfied	5	
	Not applicable	6	

14 Please indicate the level of **IMPORTANCE (**left column**)** and the level of **EXPERIENCE** (right column**)** with regard to the following variable related to Higher Education.

IMPORTANCE					**EXPERIENCE**					
Very important	Important	Neither important, nor unimportant	Not important	Not important at all	Excellent	Good	Neither good nor bad	Not good	Not good at all	Not applicable
1	2	3	4	5	1	2	3	4	5	

	IMPORTANCE Very important (1)				Not important at all (5)	**EXPERIENCE** Excellent(1)				Not good at all (5)	N/A		
Location of the Institution	1	2	3	4	5	1	2	3	4	5		[80]	[13
Size of student population	1	2	3	4	5	1	2	3	4	5		[81]	[13
Distance to institution	1	2	3	4	5	1	2	3	4	5		[82]	[13
Availability of public transport	1	2	3	4	5	1	2	3	4	5		[83]	[13
Parking facilities on campus	1	2	3	4	5	1	2	3	4	5		[84]	[13
Security/Safety conditions on campus	1	2	3	4	5	1	2	3	4	5		[85]	[13
Hostel accommodation	1	2	3	4	5	1	2	3	4	5		[86]	[13
Private accommodation near institution	1	2	3	4	5	1	2	3	4	5		[87]	[13
Academic reputation of institution	1	2	3	4	5	1	2	3	4	5		[88]	[14
Sport reputation of institution	1	2	3	4	5	1	2	3	4	5		[89]	[14
Sport facilities of institution	1	2	3	4	5	1	2	3	4	5		[90]	[14
Academic reputation of faculty	1	2	3	4	5	1	2	3	4	5		[91]	[14
Reputation of lecturers at institution	1	2	3	4	5	1	2	3	4	5		[92]	[14
Availability of information about faculty	1	2	3	4	5	1	2	3	4	5		[93]	[14
Marketing activities of Institution	1	2	3	4	5	1	2	3	4	5		[94]	[14
Scholarships available	1	2	3	4	5	1	2	3	4	5		[95]	[14
Well equipped Computer facilities	1	2	3	4	5	1	2	3	4	5		[96]	[14
Well equipped Library facilities	1	2	3	4	5	1	2	3	4	5		[97]	[14
Recreation facilities	1	2	3	4	5	1	2	3	4	5		[98]	[15
Small classes for better learning	1	2	3	4	5	1	2	3	4	5		[99]	[15
Reasonable class fees	1	2	3	4	5	1	2	3	4	5		[100]	[15
Admission requirements	1	2	3	4	5	1	2	3	4	5		[101]	[15

Attractive campus	1	2	3	4	5	1	2	3	4	5		[102]	[15
Reputation of study program	1	2	3	4	5	1	2	3	4	5		[103]	[15
Comprehensive educational program	1	2	3	4	5	1	2	3	4	5		[104]	[15
Spacious well equipped classes	1	2	3	4	5	1	2	3	4	5		[105]	[15
Tuck shops on campus	1	2	3	4	5	1	2	3	4	5		[106]	[15
Dining halls on campus	1	2	3	4	5	1	2	3	4	5		[107]	[15
Bookstores conveniently located / stocked	1	2	3	4	5	1	2	3	4	5		[108]	[16
Hassle free registration process	1	2	3	4	5	1	2	3	4	5		[109]	[16
Academic staff approachable/informed	1	2	3	4	5	1	2	3	4	5		[110]	[16
Administrative staff approachable/informed	1	2	3	4	5	1	2	3	4	5		[111]	[16
Career Advisors (of institution)are accessible and informed	1	2	3	4	5	1	2	3	4	5		[112]	[16 4
Offer wide range of degrees/majors	1	2	3	4	5	1	2	3	4	5		[113]	(16
Social activities/night life	1	2	3	4	5	1	2	3	4	5		[114]	(16
Provide variety of internship/practicum programs	1	2	3	4	5	1	2	3	4	5		[115]	(16 7
Industry/community oriented	1	2	3	4	5	1	2	3	4	5		[116]	[16
Student focussed	1	2	3	4	5	1	2	3	4	5		[117	[16
Competitive through put reputation	1	2	3	4	5	1	2	3	4	5		[118]	[17
Effective induction program	1	2	3	4	5	1	2	3	4	5		[119]	[17
Attracts high quality students	1	2	3	4	5	1	2	3	4	5		[120]	[17
Priority of attracting foreign students	1	2	3	4	5	1	2	3	4	5		[121]	[17
Offers courses of international standard	1	2	3	4	5	1	2	3	4	5		[122]	[17
Well known for attracting foreign students	1	2	3	4	5	1	2	3	4	5		[123]	[17
Has international acclaimed faculty/staff	1	2	3	4	5	1	2	3	4	5		[124]	[17
Has international student culture	1	2	3	4	5	1	2	3	4	5		[125)	[17
International accepted qualifications	1	2	3	4	5	1	2	3	4	5		[126]	[17
Participates in student and staff exchanges	1	2	3	4	5	1	2	3	4	5		[127]	[17
International postgraduate reputation	1	2	3	4	5	1	2	3	4	5		[128]	[18
International competitive research outputs	1	2	3	4	5	1	2	3	4	5		[129]	[18
Aggressive international positioning	1	2	3	4	5	1	2	3	4	5		[130]	[18
Reputation for easy access	1	2	3	4	5	1	2	3	4	5		[131]	[18

15 Please indicate the level of **IMPORTANCE (**left column**)** and the level of **EXPERIENCE** (right column**)** with regard to the following variable related to information sources of Higher Education.

	IMPORTANCE					**EXPERIENCE**							
	Very important (1)				Not important at all (5)	Excellent(1)				Not good at all (5)	N/a		
High school teachers	1	2	3	4	5	1	2	3	4	5		[184]	[196
Word-of-mouth (friends & other people)	1	2	3	4	5	1	2	3	4	5		[185]	[197
Advertisements on the radio	1	2	3	4	5	1	2	3	4	5		[186]	[198
Events on campus (music festivals, Rag, sports	1	2	3	4	5	1	2	3	4	5		[187]	[199
Advertisement in magazines / newspapers	1	2	3	4	5	1	2	3	4	5		[188]	[200
University publications (newsletters & brochures)	1	2	3	4	5	1	2	3	4	5		[189]	[201
Advertisements on TV	1	2	3	4	5	1	2	3	4	5		[190]	[202
University web site	1	2	3	4	5	1	2	3	4	5		[191]	[203
Campus visits & Open days	1	2	3	4	5	1	2	3	4	5		[192]	[204
Other students (alumni)	1	2	3	4	5	1	2	3	4	5		[193]	[205
Parents	1	2	3	4	5	1	2	3	4	5		[194]	[206
Other												(195)	(207

If other please specify (208

16	What is your overall level of satisfaction with the university where you are currently enrolled?					
			EXPERIENCE			
	Very satisfied	Satisfied	Not satisfied nor unsatisfied	Not satisfied	Not satisfied at all	(209)
	1	2	3	4	5	

Question 17 : Any additional comments you would like to raise with regards to the Institute of Higher Education where you are enrolled?

Thank you for completing the questionnaire!

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INVESTIGATING THE DARPS MARKET MELTDOWN THROUGH AN INVESTMENTS PROJECT

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ABSTRACT

Dutch Auction Rate Preferred Stock (DARPS) was created in the 1980s as a way for fully taxable corporate investors and tax-exempt issuers to share the tax benefits of the dividends received deduction. DARPS dividend yields were reset every few weeks through an auction, minimizing price risk and allowing corporate treasurers to use the shares like a money market asset. However, as tax regimes changed, the appeal of DARPS to corporate investors waned, and broker/dealers began to market the assets more heavily to retail clients. When these dealers stopped supporting the DARPS auctions in early 2008, the individual investors lost all of their liquidity, learning the hard way that preferred stock is not a cash equivalent. In this paper, we explain how we incorporated this market drama into a traditional, Excel-based project for an undergraduate investments course.

JEL: G01, G32, A22, K34

KEYWORDS: Preferred Stock, Auction, Investments Pedagogy

INTRODUCTION

> *Auction rate preferred securities is the largest fraud ever perpetuated by Wall Street on investors. It dwarfs all frauds in history, including Madoff. There are three takeaways from this fraud. First, you cannot believe anything—absolutely anything—that anyone on Wall Street tells you. Second, Wall Street is only interested in the fees it can extract from you. Third, Wall Street (i.e. its representatives) has absolutely no interest in whether the item(s) it sells you has any long-term (or short-term) value whatsoever. - Harry Newton, investment blogger*

In early 2008, the $330 billion market for auction-rate securities froze. The broker/dealers who had been providing liquidity for the market suddenly stopped supporting the auctions, stranding investors with billions of dollars' worth of virtually illiquid "cash equivalents." Two years later, some investors are still trying to access their cash. Issuers stuck with assets that are either prohibitively expensive for them or profoundly unattractive to investors (or both) are scrambling to devise alternatives. Meanwhile, attorneys general and other authorities are struggling to understand what went wrong, and to hold someone accountable.

Dutch Auction Rate Preferred Stock (DARPS) was created in the 1980s as a cash management tool for corporate investors. Corporations are able to exclude from tax a majority of their dividends received. DARPS was designed to allow corporate investors to take advantage of this tax benefit while protecting themselves from price risk. However, DARPS was tailored to very specific market conditions, and when those conditions changed, DARPS became much less relevant and attractive to its traditional corporate clientele. To keep the DARPS market afloat, broker/dealers in recent years expanded their marketing efforts to individual investors. These investors enjoyed no special tax breaks from preferred stock; they were simply using DARPS as a money-market alternative, based on the advice of these broker/dealers. Given their desire for liquidity, these retail investors were devastated when auctions began to fail, prohibiting them from accessing their savings. Without auction buyers—including broker/dealers—

investors were essentially stuck holding their preferred stock. They learned the hard way that preferred stock is not a cash equivalent.

Dramatic market events like these can stimulate students' interest in finance course material. In this paper, we describe our efforts to incorporate the auction-rate meltdown into a comprehensive project for investments students. This is a project covering the traditional scope of an investments course, addressing, for example, the characteristics of single assets, measures of comovement, portfolio creation, and performance measurement. However, while including an extensive project in investments is common, using that project to explore a current market event is not. Broadening the project's scope in this way may make the material more interesting and memorable for the students—making it worth the instructor's effort.

The paper proceeds as follows. In the next section, we give some background on DARPS, first explaining briefly how the rate reset auctions work, then describing the breakdown of the market in early 2008. In the third section, we describe some of the resulting fallout, especially the legal actions initiated by the regulators of New York and Massachusetts. We then turn to the investments project, describing the relevant literature and outlining how we incorporated elements from the DARPS debacle into the traditional project structure. Finally, we present some of the output from the project, and conclude.

LITERATURE REVIEW AND BACKGROUND

Auction Rate Preferred Stock (ARPS), the precursor to DARPS, was created in 1982. Corporate investors sought high-dividend stocks for dividend-capture programs in order to take advantage of the dividends-received deduction (DRD), which was then 85%. As attractive as the DRD was, however, it was coupled with the risk of holding the stock that produced the dividend. ARPS helped corporate cash managers avoid the price risk of preferred stock by resetting the dividend rate every quarter. However, since the new rate was always set at a fixed spread over the highest-yielding Treasury, it could not compensate for changing credit risk of issuing companies. ARPS also forced investors to wait three months for a reset, which was much longer than the 46-day minimum holding period for dividend capture. ARPS therefore mitigated, but did not eliminate, the price risk of a dividend-capture program.

Investment bankers addressed these drawbacks of ARPS when they designed its successor, Dutch Auction Rate Preferred Stock (DARPS). The dividend rate for DARPS was reset through a Dutch auction every seven weeks, a term that matched investors' required holding period much more closely. In addition, since the new rates were determined at auction, they could better account for the relative credit risk of issuers. This worked as follows. Investors who wished to enter the market would place a competitive bid—a desired yield and dollar quantity—to the broker/dealer running the auction, who then ranked the bids by yield. The available DARPS shares were allotted to the lowest-yield bidders first, and so on; the highest yield accepted (the clearing rate) then set the dividend rate for the entire auction. If the quantity of bids at the clearing rate exceeded the number of shares available, current investors bidding at that rate were allocated shares pro rata, but new investors bidding at that rate were excluded. (This auction process is nearly identical to the single-price format for Treasury auctions, although the Treasury system does not discriminate against new investors bidding at the clearing rate, as DARPS does.)

The DARPS auction rates were often constrained by collars, or maximum and minimum allowable reset rates. In the early days of DARPS, the common "max rate" was 110% of the contemporaneous AA-rated commercial paper (CP) rate. This ceiling was meant to compensate investors for possible auction failure; if there were insufficient demand at auction, DARPS would pay a penalty rate of 110% of the yield on a comparable money market asset. For corporate cash managers, this was reassuring: should an auction fail, they would receive a higher rate that they could get investing in CP, and would still not be taxed on 85% of the dividend received (while CP returns would be fully taxable). On the other hand, the collar's

floor was designed to equate the after-tax DARPS rate with the after-tax CP rate, making a corporate investor indifferent between the two assets. (Thus, if demand were very strong, the corporate investor would be no worse off than he would have been by investing in CP.) While the floor rate fluctuates depending on the tax regime, for the 85% DRD and 46% marginal tax rate that existed when DARPS was created, this equilibrating minimum rate was 58% of the AA CP yield. (We demonstrate this equivalence later in the paper.)

The design of Dutch Auction Rate Preferred Stock was meant to accommodate the tax-based incentives of scarcely taxed issuers and highly taxed investors. DARPS issuers were not concerned about the tax benefits of debt, either because they were not taxed or because they were utilizing some other tax shelter. DARPS was attractive to these issuers because it allowed them to obtain financing at a lower rate than with they could with debt (for example, with commercial paper). As discussed above, corporate cash managers were seeking to obtain higher after-tax returns than they could earn on money market assets, by buying dividend-yielding preferred stock and capitalizing on the DRD. DARPS was a financial innovation that allowed these corporate investors to achieve this goal with relatively little risk.

While the DARPS design initially was successful, it was meant to cater to very specific needs and market conditions. When those conditions changed, DARPS became less valuable to its traditional clienteles. The Tax Reform Act of 1986 lowered marginal corporate tax rates to 34% and the DRD to 80%. (The DRD fell further the following year, to 70 %.) At the same time, the number of non-debt tax shields available to issuers decreased. As these exogenous factors changed, the market for DARPS deteriorated. Issuers became more attracted to debt because they had fewer alternatives. Investors, required to pay taxes on more of their DARPS dividends, but taxed less heavily than before on alternative assets, became less interested in DARPS. As the traditional players left the market, broker/dealers began to search for new markets for this specifically tailored asset. Ultimately, they expanded into the retail market, despite the fact that individual investors cannot take advantage of the DRD—the benefit DARPS was created to exploit.

The new investors in DARPS appeared to be less aware of auction failure than their predecessors had been. The risk of auction failure is unavoidable—in fact, without this risk, DARPS could not qualify for the DRD at all (see Alderson and Fraser, 1993). However, as the dealers pushed the market farther from its original clienteles, the new retail participants—who were buying the DARPS as cash equivalents, not as tax shelters—may have misunderstood the attendant liquidity risks. (In the next section, we discuss the contention that retail buyers were deliberately misled about these risks.) They were therefore ill prepared for the breakdown of the market in early 2008.

A DARPS auction fails when the number of sell orders exceeds the number of hold or buy orders. This insufficient demand results in current investors' having to hold onto their shares. The auction rate is set at the contractual "max" or "penalty" rate—the upper half of the collar discussed above. (As noted earlier, when the DARPS market was young, this rate was usually 110% of the AA CP rate. In more recent years, it has evolved, with contracts setting fixed or floating max rates—or both—often tied to LIBOR. See McConnell and Saretto, 2009.) One result of downturn of the subprime mortgage market was a general reassessment of credit risk, and ultimately a rash of credit downgrades. Given that the DARPS market is highly credit-sensitive (see Alderson and Fraser, 1993), increased risk aversion led investors to retreat from the DARPS market.

In the face of this investor retreat, broker/dealers stepped in and bid themselves in the auctions they facilitated, to ensure sufficient demand. This kept the market afloat for a while. However, as their positions grew, continued support became untenable. As the Regional Bond Dealers put it in their testimony to the Congressional Committee on Financial Services hearing on the matter:

> *Many lead managers began to recognize internally that they were accumulating imprudently large ARS [auction-rate securities] inventories and that they would have to stop bidding at auctions. However, that information was never disclosed to the market at large, neither to investors nor to distributing dealers. By mid February 2008, the capacity of the ARS lead managers to continue to support the market by buying securities was exhausted and ARS auctions began to fail on a widespread basis. (CFS, 2008)*

It is worth noting that these broker/dealers were well aware both that their concentrated DARPS positions were risky and that investors were retreating from the market. To divest their holdings, they had to make a concerted effort to market DARPS as a cash equivalent to individual investors—investors who may have been unaware of the inherent risks of DARPS and of the market conditions that were increasing the probability of auction failures. As more and more auctions failed, these retail investors suffered an abrupt wake-up call. They had been promised that DARPS were liquid cash equivalents, but without clearing auctions, they could not sell their shares at par. Instead, they were forced to hang onto their shares (and receive the penalty dividends), or to sell for a loss. As may be expected, this unsustainable situation—involving individual investors—has led to a wealth of legal ramifications. We briefly examine these in the following section.

CRISIS FALLOUT

The evaporation of liquidity in the auction rate market, and its devastating consequences for individual savers, begged a regulatory response. As with the mutual fund debacle of 2003, the New York state attorney general (albeit now a different person) was at the forefront of this response. In this section, we describe several of the actions taken by New York Attorney General Andrew Cuomo, as well as some by the Secretary of State of Massachusetts, William Galvin.

Cuomo and Galvin have asserted that many investors were told that auction-rate securities were cash equivalents—as Galvin put it, as "liquid, safe and risk free." (Auction rate securities, or ARS, include both auction rate preferred stock and auction rate bond issues.) Cuomo obtained audio recordings of sales members from Charles Schwab telling customers that, "If you need to have that access to them [your funds] at any time, that's [ARS] a good place for those to be. You know if you think you might need to get into that money, that's probably as good a place if not better than anywhere to leave them." (All of the quotes in this section are from Cuomo, 2008a, 2008b, 2008c, or CFS, 2008.)

Customers receiving such a sales pitch might not have been briefed properly on the risk of auction failure. (In fact, neither may those who were doing the pitching: for example, one Schwab employee was taped asking, "How could an auction fail?") Thus, when auctions failed, customers felt "blindsided by the very people who were supposed to have their best interests at heart."

At the broker/dealer firms, there may have been a strong disconnect between what salespeople knew and what management knew. Some managers surely knew that auctions could fail, since they were busy propping them up. Actions by both Galvin and Cuomo against UBS provide a case in point.

Cuomo obtained e-mails showing that UBS's short-term desk had "exceeded multiple times in 2007 and early 2008, the amount of capital it was authorized to use to support auctions," and that the group had repeatedly requested an increase in its funds cap. Corporate cash managers were removing their capital from the market, forcing UBS to increase its support for the auctions—thereby building up its ARS inventory to unsustainable levels. In August of 2007, insiders at UBS were emailing each other about the vulnerability of the auction market and the increasing likelihood that UBS would pull out of the market. Finally, not wanting to get caught holding billions' worth of illiquid securities, the company began a marketing campaign to help offload their ARS. They created a new group specifically tasked with selling the securities, and gave them a goal to double sales. In December of 2007, the Global Head of Municipal

Securities Group and Head of Fixed Income Americas pushed the salespeople to stress to customers—people saving for college, preparing for retirement, or running small businesses—the "value" in ARS at the prices for which UBS was selling them. Meanwhile, he proceeded to sell his personal holdings of ARS because his "risk tolerance from a credit perspective was something that drove me to want to sell." He was not alone: seven top UBS executives also sold off $21 million in personal auction rate securities.

Galvin's investigations tell a similar story. His office was contacted by customers of UBS who had placed money into ARS after being told it was a safe instrument—100 percent principal-protected and liquid, thanks to auctions held every 7 to 28 days. His complaint alleges that the company had to closely monitor bid rates on ARS so they would be just high enough to allow auctions to clear, but just low enough not to upset the issuers (the underwriting clients). UBS knew that auctions would fail if it did not continue to bid; in fact, UBS did allow certain auctions to fail because the company did not want to add to its ARS inventory. On February 13, 2008, UBS stopped supporting its auction rate program completely, without notice to its customers, rendering their ARS completely illiquid.

The Merrill Lynch case demonstrates the same sort of conflict of interest. In August 2007, a Merrill analyst published the research piece expressing concerns about the ARS market. After company management, including the managing director of the auction desk, reviewed its content, they called the analyst and told him to retract the report and replace it with a "sales friendly piece." The analyst initially refused, because he felt the report represented what was happening in the market. The managing director of the auction desk then forwarded her complaint to her boss and to the senior research analyst. One particular email sent to persons in the Financial Products Group included the following, in all caps:

> *I HAD NOT SEEN THIS PIECE UNTIL JUST NOW AND IT MAY SINGLE HANDEDLY UNDERMINE THE AUCTION MARKET. IF YOU ARE GETTING ANY CALLS, PLEASE LET ME KNOW. I HAVE ASKED FOR AN IMMEDIATE CLARIFICATION TO BE PUBLISHED AND A RETRACTION OF THIS.*

The report was replaced with a piece endorsing ARS as a "buying opportunity for investors who are looking for short-term" investments. The offending analyst ran future reports past his superiors to ensure that they did not upset the auction desk.

On February 12, 2008, Merrill Lynch ceased supporting ARS program, allowing auctions to fail the following day. The firm had made approximately $90 million in profits from its auction rate program over the previous two years.

The avalanche of failures in February 2008 left investors stuck with billions in auction rate securities. Retail investors, charities, and small- to mid-size business could not get their cash out of their "cash equivalents." They felt the broker-dealers had breached their trust by stopping their support for the auction market.

New York Attorney General Andrew Cuomo stepped in to resolve the impasse. "Our goal has been to give investors relief from the collapse of the auction rate securities market," by making deals with investment banks to buy back the securities. Cuomo's jurisdiction comes from New York's Martin Act, a 1921 "blue-sky" law (a state securities law) that Cuomo's predecessors have used to bring actions against (and get settlements from) companies like Tyco, WorldCom, Qwest, and Citigroup. The Martin Act can be a "fierce sword in the hand of a zealous prosecutor" (McTamaney, 2003). Cuomo has gotten settlements requiring firms to fully reimburse all retail investors who sold their auction rate securities at a discount after the market failed; to consent to a special, public arbitration procedure to resolve claims of consequential damages suffered by retail investors as a result of not being able to access their funds; and to reimburse all refinancing fees to any New York State municipal issuers who issued auction rate

securities since August 1, 2007. More directly, he has returned over $61 billion to investors of auction rate securities. "Not only are we returning liquidity to these investors, we are also restoring investors' faith in their ability to invest with the assurance that authorities will protect their interests." "The industry is now taking responsibility for correcting a problem they helped create, and we'll continue to make all investors whole."

William Galvin is making similar efforts, using his authority under state laws such as the Massachusetts Uniform Securities Act. For example, he has reached settlements with UBS, Merrill Lynch, Bank of America, and other underwriters and sellers of ARS to purchase their ARS back at par or to compensate investors who had already sold their securities at a discount. Firms have agreed to repurchase tens of billions of dollars' worth of these securities from retail and other customers. Galvin has also made five important suggestions for improving regulation of institutions to prevent such a meltdown from happening in the future: (1) conflicts of interest need to be monitored more aggressively and, when appropriate, disclosed to investors; (2) financial advisor incentives need to be disclosed and training of financial advisors should be enhanced; (3) (supposedly) objective research reports need to be regulated more tightly; (4) regulators need to recognize that principals-based regulation is not effective to prevent scandals such as this one; and (5) state regulators, in conjunction with their federal counterparts, need to continue to be involved actively in enforcement actions.

Having introduced DARPS and the recent market drama surrounding it, we now describe how we incorporated its study into the investments project.

EXPLORING DARPS THROUGH THE INVESTMENTS PROJECT

Erickson (1999) describes the pedagogical benefits of bringing a finance course "alive" by using real data. (See also Faulk and Smolira, 2007.) It is common for investments instructors to accept this challenge by incorporating into their courses a data-driven experiential learning component, allowing students to explore portfolio construction. For example, Kalra and Weber (2004) outline a basic task-based investments project covering the standard metrics for a single stock. Other authors have shown how this simple structure can be enhanced: for example, Neumann (2008) describes a project motivated by the *Wall Street Journal's* long-running dartboard contest, making the project more relevant and accessible; Girard, Pondillo, and Proctor (2005) demonstrate the incorporation of performance attribution analysis, perhaps making it more professionally practical. For more academically rigorous courses, Carter, Dare, and Elliott (2002) demonstrate the creation of an Excel-based spreadsheet to find mean-variance efficient portfolios; Johnson and Liu (2005) extend this procedure to allow for short sales. However, while these papers suggest a broad embrace of investments projects and real-world data, none of these exercises incorporates contemporary market events.

In our work, we extend the investments project to consider the DARPS-market meltdown of 2008. (See Livingston, 2005, for extensions to both the 9/11 attacks and the 2003 mutual fund scandal.) As with traditionally structured projects, our basic scope covers portfolio theory and efficient markets topics. The main changes for the DARPS inquiry were in the choices of assets, the subjects of the hypothesis tests, and the timing of the event study and beta stability tests. Table 1 outlines the scope of the project, including the DARPS additions.

Table 1: Overview of the DARPS Investments Project

I.	**CHARACTERISTICS OF SINGLE ASSETS**
	collect data
	calculate daily and weekly returns; arithmetic and geometric means (compare)
	calculate variances and standard deviations; coefficient of variation; skewness and kurtosis
	compare CP discount percentage summary statistics with CP BEY values
II.	**HYPOTHESIS TESTS**
	investigate the S&P's returns by day of week
	investigate autocorrelation by comparing S&P's daily and weekly variances
	tabulate and plot CP BEY, the actual DARPS rate, and the equilibrating DARPS rate against time (from Plesko)
	design an empirical test addressing either the DARPS/CP spread or the DARPS/LIBOR spread
III.	**COMOVEMENT AND PORTFOLIO BASICS**
	calculate covariances and correlations
	create and plot multiple 2-asset portfolios, both using actual correlation values and using assumed value of -1
	create an equally weighted portfolio; track it over the sample period; compare its summary statistics to earlier results
	create and plot multiple 3-asset portfolios; compare 2- and 3-asset cases, looking for dominance
	compare 1-, 2-, and 3-asset equally weighted portfolios; consider the potential benefits of naïve diversification
IV.	**THE CAPM**
	identify the risk-free asset; describe its comovement with all other assets
	plot the CML
	find covariances and correlations with M of various portfolios on the CML
	find asset betas using regression and cov(i,M)/var(M); compare results
	find published beta values and compare to calculated betas
	plot empirical SML; compare to theoretical
	decompose asset variances into systematic and unsystematic components
	compare actual covariances with estimates from Single Index Model
V.	**TESTING BETA STABILITY**
	run a t test on the null hypothesis that an asset's beta in the first subperiod equals that in the second subperiod
VI.	**TECHNICAL ANALYSIS**
	test for autocorrelation by regressing daily error terms on lagged errors
	test for autocorrelation by performing a runs test
	plot high-low-close charts for both subperiods; create a technical trading rule using the first subperiod; test in the second
	compare technical rule results to buy-and-hold
VII.	**EVENT STUDY**
	use a 2-day event period to perform an event study, testing for significant reaction to February, 2008 auction failures
VIII.	**PORTFOLIO MEASUREMENT TECHNIQUES**
	Find Sharpe ratio, M^2, Treynor measure, T^2, Jensen's alpha, and the information ratio for assets
	plot cumulative raw and adjusted returns for assets v. S&P
	determine length of abnormal performance required for statistical significance, using calculated alpha values
IX.	**OPTION PRICING**
	use natural logs of stock price relatives to estimate annual volatility
	use Black-Scholes model to determine call value; compare to actual call premium; explain any discrepancies

This table lists the basic elements of the investments project. The underlined steps are specific to the DARPS project, and demonstrate how current event considerations can be incorporated into the basic project framework.

Data

The traditional project format has students choose groups of stocks. However, we used four types of reference assets, all of which have been used in prior DARPS research: Treasuries, money market rates, a general market indicator, and SIFMA indexes. The market indicator was the S&P500, the standard benchmark used for beta calculation in the traditional investments project. (See, for example, Neumann, 2008.) Below, we briefly discuss the other assets and their use in earlier empirical work.

Winger *et al.* (1986) note that adjustable rate preferred (ARPS, the precursor to DARPS) is priced relative to the highest of three Treasury rates: the 91-day T-bill, the 10-year T-note, and the 20-year T-bond. We

use all of these rates as benchmarks. Since we wanted to limit the number of series assigned to each student group, we tracked the longer assets only for various subsets of our full period. However, since T-bills are such common benchmarks for DARPS, we tracked them for the full period (see, for example, McConnell and Saretto, 2009, who used the 1-month bill, and Alderson, Brown, and Lummer, 1987, who use the 2-month).

While Treasuries were used to price ARPS, and are common general benchmarks in many other applications, commercial paper (CP) has traditionally been the standard reference asset for DARPS. As Alderson, Brown, and Lummer (1987) note, original DARPS collars were usually defined relative to contemporaneous AA commercial paper rates. For example, as discussed above, under the original 85% DRD/46% tax rate regime from the early 1980s, DARPS collars were often set at 110%/58% of the AA CP rate. (The 58% floor was set by equating the after-tax return on DARPS with the after-tax return on CP. We explain this calculation below, using equation (1).)

(A pedagogical note about commercial paper: CP is quoted on a discount basis, using a 360-day year. This discount data should be converted to a bond equivalent yield; see, for example, Alderson, Brown, and Lummer, 1987, footnote 7. The instructor may wish to have students examine the discount and BEY series to compare their relative variances and covariances with the other assets.)

Using CP as the common benchmark, researchers have examined both the potential tax benefits of DARPS and its changing risk premiums. In the earliest study, Alderson, Brown, and Lummer (1987) compare before- and after-tax yields on DARPS and CP to estimate the potential value to both the issuers and corporate investors from tax benefit sharing, finding that both sides gain. Plesko (2005) updates these findings, measuring the implicit tax on DARPS by comparing it to fully taxable CP. While he finds that the tax benefits of DARPS are still shared by the issuer and investor, they devolve heavily toward the issuer over time. One explanation for this shift is changing risk expectations about DARPS. For example, Alderson and Fraser (1993) cite risk to explain issuers' redemption decisions after the Tax Reform Act of 1986. Measuring cost as the ratio of the dividends rate over the contemporaneous AA CP yield, they find that higher-cost shares were more likely to be redeemed. They conclude that "much of the observed redemption activity can be explained by the exit of issuers that experienced declines in credit quality, making their shares unsuitable for the cash management clientele." Similarly, Winkler and Flanigan (1991) show that DARPS yields rise relative to commercial paper in unstable market conditions, concluding that DARPS therefore is not an acceptable substitute for money market assets.

While early auction-rate securities were tied to commercial paper, more recent issues have used a much wider variety of benchmarks, as have more recent empirical studies. For example, to investigate the allegation that investors were tricked into buying auction rate securities by broker/dealers selling them as "cash equivalents," McConnell and Saretto (2009) compare ARS to T-bills, 7-day certificates of deposit, and money market funds. We follow their lead, also using CDs (ours are one-month, as is our commercial paper), and three comparison funds/ETFs: SPDR Barclay's Capital 1-3 month Treasury bill fund (BIL; inception date 5/23/07), iShares Barclay's Short Treasury ETF (SHV; inception date 1/5/07), and PowerShares VRDP Tax Free Weekly Portfolio (PVI; inception date 11/15/07). (We covered only the ETF SHV for the full sample period, given the late inception dates for the other funds.)

For our auction-rate yields, we used the Securities Industry and Financial Market Association's (SIFMA) auction-rate preferred 7-day taxable index and the comparable tax-exempt index (using the latter primarily for comparison purposes). The SIFMA indexes are averages of the rates set at qualifying weekly auctions. Only securities whose resets are based on 7-, 28-, or 35-day auctions are used, and these assets must be public (private deals like 144A issues, or issues sold only to qualified institutional buyers or other accredited institutional investors, are excluded). These indexes are reported weekly. Students therefore had to create comparable weekly series from their daily money market data in some parts of the

project. (This also meant that the number of observations for some of the hypothesis tests were very low, making them less powerful. This is one of the instances when our empirical methodology was sacrificed for project tractability.)

Having described the assets used in the DARPS version of the investments project, we now consider the new empirical tests, starting with the hypothesis tests.

Tests

The project has always included some hypothesis testing. Early on, we compare weekly returns and variances for the S&P500 to their daily counterparts, testing, for example, for autocorrelation. We also look for seasonalities in day-of-the-week returns, especially for Mondays: are Monday returns systematically different (i.e., worse) from those of other days, as French (1980) found? In the DARPS version of the project, we added an additional set of questions that had students apply these hypothesis-testing skills to updating several empirical DARPS results, both old and new.

The first of these questions was based on Plesko's (2005) study of the DARPS market. He has two main findings: that investors' share of the potential tax benefits of DARPS declines over time, and that the marginal tax rate implied by the relative yields of DARPS and commercial paper is lower than the maximum marginal corporate rate. The students were tasked with updating both of these findings using more recent data, including some surrounding the meltdown of 2008.

Plesko demonstrates his results in both graphical and tabular form, as the students must do. His Figure 1 demonstrates his first result by plotting the actual commercial paper and DARPS rates along with an equilibrating DARPS rate. The latter is the DARPS rate at which a corporate investor would be indifferent between DARPS and the CP. This theoretical lower bound for the DARPS rate is found as:

$$\text{equilibrating DARPS rate} = \frac{CP*(1-T)}{\left[1-T*(1-DRD)\right]}, \quad (1)$$

where DRD is the dividends received deduction, CP is the actual before-tax rate on AA commercial paper, and T is the maximum marginal corporate tax rate. (The right-hand side simply multiplies the CP rate by the relative tax burdens: CP is fully taxable, leaving the investor only CP*(1-T), while a corporate DARPS investor is only taxed on (1-DRD)% of her dividends.) The difference between the CP rate and the equilibrating DARPS rate represents the potential tax benefit to be shared between issuer and investor. A difference of zero, for example, would obtain if the marginal investor were tax exempt—he would suffer no tax liability from CP, and would receive no tax benefit from DARPS. Larger differences imply larger tax burdens for the marginal investor, as he becomes more willing to accept lower DARPS rates because of their tax benefits.

Plesko's plots show that the actual DARPS rates move closer to the implied lower bound over his sample period. He quantifies this migration toward the bottom with the "premium as share of yield difference"—that is, the amount by which the actual DARPS rate exceeds the lower bound, expressed as a proportion of the difference between the CP rate and the lower bound. As relative DARPS yields fell, so did this premium (falling from 43% in 1985 to 17% in 1992 and 24% in 1993). His interpretation of this decline is that issuers began taking a larger share of the potential tax benefits from DARPS, forcing investors to accept lower yields. This is the result that students updated in the project, by both recreating his graph and recalculating the relative premiums.

Plesko's second result is that actual relative yields imply marginal tax rates less than the maximum. He asks what marginal corporate tax rates are implied by the observed DARPS rates: that is, if the observed

rates are interpreted as the lower boundary, what T is implied? If we substitute the actual DARPS rate for the implied equilibrating rate, we can see that the answer to this question involves simply a rearrangement of equation (1):

$$\text{equilibrating tax rate} = \frac{(actualDARPS - CP)}{[actualDARPS * (1 - DRD) - CP]}. \quad (2)$$

All else equal, the larger the share of tax benefits taken by issuers—the closer the actual DARPS rate gets to the lower boundary from (1)—the higher is this implied marginal tax rate. Investors facing higher taxes are more anxious for a tax shelter, and will accept lower DARPS yields.

(We can also use equation (2) to consider the implications of the DRD. As long as the actual DARPS rate is less than the CP rate, as was the case throughout Plesko's sample period, $\delta T/\delta DRD < 0$. As the DRD rises, the actual DARPS rate implies a lower equilibrating tax rate. A higher DRD means less of a tax burden; we would expect this to translate into lower acceptable DARPS rates. However, for a *given* difference between CP and DARPS rates, a higher DRD implies that the marginal investor is demanding a higher rate on DARPS despite the potentially large benefit from the DRD. He must be less able to capitalize on the DRD—because he faces a lower marginal tax rate, and is less driven by the search for a tax shelter.)

The second empirical question tackled by the students required them to design a test updating one of two historical DARPS findings: that in the late 1980s, the spread between DARPS and CP widened significantly when the market became less stable (Winkler and Flanigan, 1991); or that, during the 2008 crisis, the spread between auction rate securities and 1-month LIBOR "increased markedly" (D'Silva, Gregg, and Marshall, 2008).

The first result came from a time when DARPS was still the exclusive province of corporate investors. Winkler and Flanigan (1991) compare DARPS to CP (as do all papers from that period) to see if DARPS deserves its status as a cash equivalent. They find that DARPS had an 83-bp default premium over CP during stable market conditions, but that this premium increased to 192 bp in November 1987 after the October 19 market crash. (The default-premium increase for lower-rated DARPS was even larger.) They conclude that DARPS is "not an acceptable substitute for commercial paper during times of unsettled equity markets."

D'Silva, *et al.* (2008) study the more recent DARPS market meltdown of 2008. They compare their auction-rate indicator (the SIFMA index) to LIBOR, finding that LIBOR was 175 bp higher before the crisis, but that the "rates converged on January 9, 2008, and subsequently the average ARS rate exceeded the LIBOR—a historical anomaly."

As discussed in the next section, the students' updated results were quite different from some of these historical findings, underscoring the dramatic shift in the auction-rate market over the last few years.

SAMPLE OF PROJECT RESULTS

As noted above, our investments project has always included beta stability tests and an event study. In this section, we will first briefly review the students' work on these issues for the DARPS project. We then will discuss more fully their updates of the empirical literature just described.

In the beta stability tests, students compare the betas for their assets, and for an equally weighted portfolio of their assets, over two different periods. (These tests are motivated by Blume, 1971.) We assigned student groups to subperiods that they covered throughout the project. (All groups covered January and February, 2008, plus either January/February 2007, August/September 2008, or September/October

2008.) As expected, the students found that the portfolio's betas were relatively stable over their two subperiods; the test statistics for these t-tests were usually low in absolute value, and never were significant. However, there were some interesting findings elsewhere in our sample. For example, the T-bill series was fairly volatile: an abnormally large 6% return on September 18, 2008 caused the series' beta to be over 6 for the subperiod (although still not different enough from the earlier subperiod to be statistically significant). The nontaxable SIFMA index also exhibited high variability in 2008. Its beta was over 3 for the early part of the year, but negative in the fall. While this was not statistically significant (our tests had few observations, and therefore low power), it is suggestive, especially since the taxable index was relatively stable, with betas close to 1. The nontaxable index would pick up the very high penalty yields suffered by many municipal issuers, some of whose issues did not even have rate caps. (Issues backed by tax revenue were deemed able to avoid default without the added assurance of rate caps. While these issues' rates may now be very high, their auctions have not failed in nearly the numbers of their rate-capped counterparts. See CFS, 2008.) On the other hand, the taxable index—comprised in part of closed-end funds' issues, which often benefitted from low, fixed penalty rates—would remain relatively stable, despite auction failures. (See McConnell and Saretto, 2009.)

In the event study, students evaluated the performance of their SIFMA indexes around February 12, 2008, the day that the market truly melted down. (67% of the auction rate securities' auctions—258 of 386—failed on the 12th, followed by 87% on the 14th, and 66% on the 20th; Committee for Financial Services, 2008; Plancich and Starykh, 2008.) Students performed a traditional event study, following Partch (1987). They did not find significant results, despite the tremendous disruption in the market. There are several possible explanations. First is our small sample size: we only had up to eight weekly observations for our estimation periods, so that our tests were not powerful. In addition, as noted above, the penalty rates for the taxable issues were often not that different from the rates set at auction, so we would not expect a significant result for the taxable SIFMA index.

Having described the results from the parts of the project that we use every year, we now turn to the sections specific to the DARPS version. The students' updates of Plesko's (2005) results and their self-designed empirical tests provided the most interesting outcomes from this application. We now discuss these findings. Quotations come directly from the students' reports.

As described above, Plesko's results revolved around the tax benefits of DARPS to corporate investors—the dividends received deduction. The asset yields during his sample period reflected this tax differential, with CP > actual DARPS > implied lower bound for DARPS. However, when our students updated these relationships using data from 2007 and 2008, they found something very different (but consistent with the "historical anomaly" described by D'Silva, *et al.* in 2008): the CP rates for all subperiods were always lower than the actual DARPS rates. (See Figure 1.) "In Plesko's results, the CP rate maintains a premium of anywhere between 67 and 193 basis points above the DARPS rate. In our results, the DARPS rate maintains a premium over the CP rate of anywhere between 188-150 basis points." They explained their results by noting that "the DARPS auctions [were] starting to fail and having to reset the yield at over 100% of the commercial paper yield." (For example, for the SIFMA nontaxable average, "the actual DARPS rate went from 2.7% to 5% to 12.05% in the span of three consecutive weeks in September of 2008.")

This reversal of relative yields, of course, led to vastly different results than Plesko's for the equilibrating tax rates and yield spread premiums. Since the actual DARPS rates are higher than the CP rates, Plesko's "premium" (the difference between the actual and implied DARPS rates) is greater than the difference between CP and the lower bound—making the "premium as a share of yield difference" (i.e., $\frac{actualDARPS - lowerbound}{CP - lowerbound}$) no longer fractional, but greater than 1 (100%). (In fact, much greater

than 1 in some cases: no values were less than 2, and there was one observation of 20.7.) Equivalently, given the higher DARPS rates, all of the "equilibrating tax rates" (from equation (2)) were *negative*. "A NEGATIVE equilibrating tax rate—what does that even mean?!" "There are almost no data points where the equilibrating tax rate makes any sense at all." Then, addressing their own observations: "This leads us to believe that the DARPS market was being propped up with absurdly high yields," "making the investor much better off during our observation period." (Of course, while their yields were higher, investors were now stuck with their DARPS; the higher yields were partial compensation for the complete loss of liquidity during this period.)

Figure 1: The students Updated Plesko's (2005) Results About the Relationship between DARPS and Commercial Paper (CP).

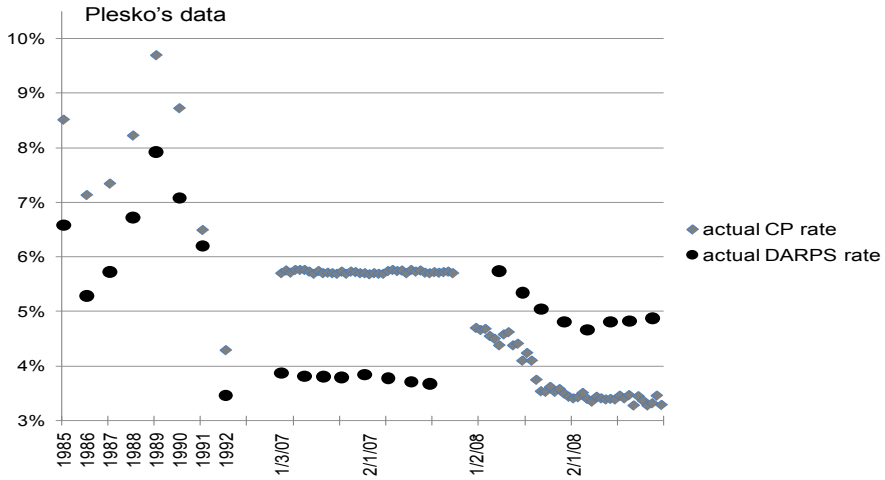

Figure 1. The students updated Plesko's (2005) results about the relationship between DARPS and commercial paper (CP). While Plesko's data shows the traditional relationship—DARPS is less than CP, as illustrated in the far left section of the graph—the students found that this relationship reversed during 2008 (the far right section of the graph). This reversal meant that our 2008 values for "premium as share of yield difference" were much greater than 100%, while our equilibrating tax rates were negative.

The second empirical addition to the project required students to design a test updating either Winkler and Flanigan's (1991) finding on the DARPS/CP spread or of D'Silva *et al.*'s (2008) on the DARPS/LIBOR spread. One group chose the former, regressing the DARPS rate on the equilibrating DARPS rate from equation (1) for both the January-February and September-October, 2008 subperiods. For the earlier period, which encompasses the initial wave of auction failures, their model's R^2 was 0.85, so that the realized commercial paper and DARPS rates were highly correlated. However, this relationship evaporated in the fall (p-value = .242). Interpreting the latter period as "more unsettled," this student group pronounced their results consistent with Winkler and Flanigan's.

The rest of the teams chose to update the more recent DARPS/LIBOR result. One group tested the null hypothesis that the SIFMA and LIBOR values were equal against the alternative that SIFMA was larger. (Note again that, historically, SIFMA would be smaller.) They used both the tax-exempt and taxable SIFMA indexes over the January-February and September-October, 2008 periods. While they failed to reject the null for the tax-exempt issues, they did so for both subperiods using the taxable index ($p < .001$ for both tests). Another team created a spread variable (SIFMA – LIBOR, again recognizing that the traditional relationship had reversed), then tested the null that this variable's behavior during a 2007 base period was the same as that during the meltdown in winter, 2008. They found that the spread was significantly larger in 2008, changing from a mean value of -0.0154 to 0.7073. They attributed this behavior to the increased relative default risk of DARPS, noting that the relationship changed coincident with the auction failures of mid-February, 2008. Graphing the SIFMA and LIBOR series over 2008, they

note that "[t]he LIBOR rate remains relatively unchanged until September, when the risk in the financial system translated in to [a] higher LIBOR rate. Note that even at the peak return (and probably perceived risk) of LIBOR in September, the [DARPS] were considered exponentially more risky."

PROGRAM ASSESSMENT

To gauge students' impressions of the DARPS application, we conducted a student-only focus group after the completion of all relevant parts of the project. We explored a number of questions, including: Did the project enhance students' understanding of DARPS beyond what had been learned in Financial Markets (for those who have taken that preceding course)? Did students learn anything about asset classes by incorporating DARPS into their project work? Did studying DARPS enhance their understanding of investment vehicles or did it hinder their ability to internalize investments/portfolio concepts? How was their experience working with real data, and with the assigned asset classes? Would they have been more engaged working with a stock of their choosing? What impressions did the event study analysis of the February 2008 auction failures leave? We report our findings in this section.

Overall, the students thought that the project did not enhance their understanding of Dutch Auction Rate Preferred Stock. They felt instead that the project was a basic overview of how assets move and how risk is determined, not an in-depth study of DARPS in particular or of the other assets with which they were working. They were especially confused about the SIFMA indexes and their construction, and about how to interpret their quoted yields. Thus, instructors who wish to attempt an application like this should devote adequate class time to its motivation. Our investments class is designed to be the second course in a senior-level sequence—a quantitative follow-up to the qualitative fall-semester course in financial markets. We discuss DARPS at length in the markets course, with special emphasis on its use during the 1980s (the period for which it was designed). In investments, we provided the readings from the earlier course for background reading, and we spent one class day reviewing DARPS. In addition, as part of the project, students were required to write a description of the methodology behind the SIFMA indexes. However, this motivation was insufficient; students still had questions about the DARPS application. While we did have some new students in the investments course (students who had not taken financial markets), that alone probably does not explain the residual confusion about DARPS. Students in the focus group thought that having a presentation and a question and answer session (and actually reading the background papers) may have helped them internalize the meaning of the DARPS data.

Students did identify some beneficial aspects of incorporating DARPS into the investments project. For example, they felt it increased their understanding of how assets are securitized, how they are employed in different environments, and how they continue to be used even when the environment changes. Additionally, this project gave them perspective on financial innovation, and on Wall Street's creation of assets for specific purposes. This exposure allowed the students to make newly informed inferences and judgments about financial institutions and their incentive-based behavior.

In general, the students were also glad to have had exposure to real data, in addition to the theoretical concepts that are taught in class. Specifically, students noticed that the application ensured thoughtful consideration of results, given that real data is messy and unexpected results occur. Students reported that they learned the most from two specific parts of the project: the event study and the updating of Plesko's results and graphs. We received the most positive feedback about analyzing the event of February 12, 2008 and on the graphing the compared yields of commercial paper and DARPS.

Overall, while the students did not feel that incorporating DARPS into the project hindered their ability to internalize investment and portfolio concepts, neither did they feel that it gave them a better understanding of the mechanics of different investment vehicles. They also doubted that they would

encounter DARPS in the real world. They would have preferred to have been able to analyze a stock of their choosing.

CONCLUSIONS

Incorporating a data-based Excel project in the investments course allows students to get practical, hands-on experience. However, most projects focus exclusively on applications of textbook concepts, missing the potential enrichment that comes from incorporating current events. In this paper, we describe our experience integrating the project with a study of the 2008 meltdown of the DARPS market. Using assets employed throughout the DARPS literature, our project had students evaluate the relative performance of DARPS and money-market comparison assets; update prior studies' empirical results, such as Plesko's (2005) result that more of the potential tax benefits of DARPS were accruing to issuers; test DARPS' beta's stability over various periods from 2007 through the fall of 2008; and perform an event study test around the onset of systemic auction failures in February, 2008. These practical, timely applications give special context to students' study of investments. Their completed project will also be a unique "deliverable" to showcase for potential employers.

Instructors who attempt an application like this should be prepared to motivate the extension thoroughly early on. Using real data presents challenges that students will be more willing to negotiate if they are more "bought in." Throughout the semester, frequent writing assignments requiring students to address their empirical work and to reflect on the broader implications might enhance student engagement. Encouraging students to describe the project to potential employers also should allow them to take more ownership of it. From the feedback that the instructor has received from earlier project applications (addressing the 2001 terrorist attacks and the 2003 mutual fund scandals), we believe that student appreciation of such an application grows over time, as they compare their experience to those of their future coworkers. Studying an asset—even one as apparently arcane as DARPS—does enhance student outcomes from the investments course, as long as the instructor is willing to devote the requisite time to developing the necessary context.

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OPTIMAL PRICING OF EXECUTIVE MBA PROGRAMS

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ABSTRACT

The purpose of this research is to determine the most strategic tuition pricing strategy that can be utilized by senior management in Business Schools when pricing Executive MBA Programs. To determine this information, the state of the Executive MBA market and three pricing strategies were reviewed in detail and an analysis ensued on the viability and applicability of each strategy for pricing Executive MBA Programs. The main findings of this study indicate that the "Value Based" pricing model is the potentially most strategic strategy that can be implemented, out of the pricing models evaluated, for pricing Executive MBA Programs so long as Business Schools have the ability to not only align the value of a particular program to the market demanded value but can also effectively communicate this value in the marketplace. The results of this exploratory study can have significant implications on the discussion of pricing Executive MBA Programs on senior management within Business Schools.

JEL: M31

KEY WORDS: Executive MBA Program, Pricing Strategies**,** Marketing

INTRODUCTION

Executive MBA Programs are considered the most lucrative degree programs within graduate management education. (Zell, September 2005). Deans, who are under immense pressure to grow revenues and resources, often turn to its institution's Executive MBA Program as its gateway to increase revenue. Universities themselves, often view its Executive MBA offering as a "cash cow" and net contributor to the bottom line. (Simmons, Wright & Jones, 2006).

The Executive MBA offering is traditionally a full MBA offered by an institution within the executive style format. The offering, which utilizes a premium pricing strategy, includes significant "bells and whistles" above and beyond the traditional full-time or part-time MBA programs. (Petit, 2005). Such "bells and whistles" can include overnight accommodations for residencies, food throughout the program, laptop computers as well as travel expenses for the capstone international experience. (Speizer, January 15, 2007). In addition, Executive MBA students are willing to pay a premium as they can complete this degree in a time efficient manner while keeping their full-time jobs. (Petit, 2008).

Overall, Executive MBA Programs have proven to be "cash cow initiatives" for many institutions. A simple example can be seen with Queens University and the University of Western Ontario, both Canadian institutions, who have generated over $15 million per year on EMBA tuition revenue alone. (Canadian Business, November 11, 2002). As one can see, Executive MBA Programs can be a powerful revenue generator.

With all this as a background, the purpose of this research is to illustrate, in detail, three specific pricing strategies Business Schools can implement for the successful management and execution of its Executive MBA Program. While the functional area of Marketing indicates that "Product", "Promotion" and "Place" are instruments to communicate value, "Price" is the only vehicle to capture this value with revenues and profits. (Nagle and Holden, 2002). With this said, the goal of this study is to not only discuss in detail three separate pricing strategies and their potential applicability as a strategy to price Executive MBA Programs but it will also determine which is the most potentially effective for Business

Schools to implement in order to capture the optimal amount of value through revenue and profit generation.

It is the general belief and hypothesis of this research that the "Value Based" pricing model is the most effective strategy that Business Schools can implement in order to capture and maximize value. Even though corporations are paying less and less full freight for such programs, it is the hypothesis of this research that executive students are willing to pay more out of pocket for these programs if the value exists and it is effectively communicated. Consequently, the goal of this research is to determine and illustrate why the "Value Based" pricing model is potentially the most effective for Business Schools to utilize.

Overall, this paper will discuss the state of the Executive MBA industry as well as what the research has documented on pricing practices within this sector. It will then introduce three pricing strategies in detail and will analyze the viability and applicability of each strategy for pricing Executive MBA Programs. Conclusions will then be determined as to the most strategic pricing strategy.

LITERATURE REVIEW

The Executive MBA Industry

From a historical perspective, the first Executive MBA Program was launched by the University of Chicago in 1943. (Embaworld.com). By the 1960s, universities began to explore the Executive MBA concept further as it allowed executives the opportunity to obtain the MBA degree in a time efficient manner while remaining employed and it also allowed institutions of higher education the opportunity to increase the leadership skills of these high level executives. (EMBA.org). Such contact with professionals can not only potentially increase the resources and reach of any Business School in question but it can also develop, within the EMBA Cohort structure, a tight bond and camaraderie among the classmates that is very powerful. (Petit, 2008). In 1981, the Executive MBA Council was formed with the assistance of AACSB International and by 2000, the EMBA Council become an independent organization due to the domestic and international growth of such programs. (emba.org).

Therefore, the purpose of this next section is to illustrate the status of the Executive MBA market from an overall industry perspective. At first glance, there certainly seems to be momentum and growth moving the industry. Yet when one digs deeper, there are indicators, more specifically the dwindling level of full corporate financial support plus the growing disparity of program tuition, that can leave a significant impact on the industry. This next section will discuss the trends coupled with these factors.

Overall, the Executive MBA market continues to grow. This is especially true with new programs developing outside the United States. (EMBA Council, 2007). More specifically, 84% of all non U.S. programs have been established since 1990 with private institutional programs receiving a 21% growth rate since this time. (EMBA Council, 2003). There has also been a 25% increase with the admission application rate for Executive MBA Programs with the Northeast region within the United States experiencing a 14% increase with applications received and an 8% increase in class size. (EMBA Council, 2007). As a result, acceptance rates for such programs have decreased from 67% to 63%. It should also be noted that 57% of programs worldwide are considering program expansion either by increasing enrollments or by offering their program in different regions. (EMBA Council, 2007). Furthermore, the mean class size for such programs has increased from forty two (42) students in 2007 to forty four (44) students in 2008. (Business Wire, December 19, 2008). In 2008, enrollment has remained steady. (EMBA News, Fall, 2009).

Executive MBA students are also not only very satisfied with their academic experience but have also witnessed a surge with their mean salaries. More specifically, 99% of students would not only refer their programs to prospective students but also 33% received a promotion during their studies. (EMBA Council, 2005). In addition, 80% of graduates indicate that their value to their employer increased upon enrolling in a program and almost all graduates mentioned these programs either met or exceeded expectations. (Executive Connections, 2008). Such value has led to a 21% increase in the overall mean salaries for EMBA graduates jumping from $96,300 in 2001 to $130,056 in 2007. (EMBA Council, 2007). In 2008, this figure increased to $144,361. (Desiderio, Spring 2009).

The above mentioned statistics are the positive indicators that have emerged from the market which has illustrated growth and momentum. However, the dwindling level of full corporate financial support, for example, cannot be ignored. More specifically, in 2001, 44% of Executive MBA students enrolled received full corporate financial sponsorship to attend these programs. (EMBA Council, 2003). In 2007, this figure has decreased to 33%. (EMBA Council, 2007). In 2008, this figure has decreased further to 32%. (Business Wire, December 19, 2008). In addition, in 2001, only 9% of students enrolled were self-funded. (EMBA Council, 2003). In 2007, this figure is up to 33%, a major increase. (EMBA Council, 2007). This percentage has remained steady in 2008. (EMBA News, Fall 2009). Overall, what these trends indicate are that the demand for Executive MBA Programs from the prospective students is growing even though companies are paying less and less tuition to support such degrees. This change in corporate support, according to Ethan R. Hanabury, Associate Dean for EMBA Programs at Columbia Business School, is fundamentally changing the entire paradigm of the industry. (Speizer, January 5, 2007).

In addition to the dwindling levels of corporate support for such programs, another area of concern can be seen with the vast disparity of tuition prices for these programs. For example, within the New York City market, there are five main Executive MBA providers. Four of these schools are private institutions while one is a public institution. According to each Business School's web site during the Spring 2010 term, each program has the following total tuition price as listed in descending order: $144,000, $138,000, $137,000, $85,000, and $70,500. As one can see, there exists a vast disparity of tuition pricing for the New York City market with other markets being no exception.

Yet how do institutions strategically price Executive MBA Programs? One general theory is to price a particular program similar to what the mean salary of the students enrolled in that program. (Scalberg, Spring 2001). Since each of the above prices are from institutions from the New York City market, there exists a strong possibility that the mean salary for students enrolled for such programs are well above the $100,000 mark. The mean salary, for example, for students enrolled in the Fordham University Executive MBA Program in New York City in 2009 was $132,371. (Enrollment Statistics, 2009). Hence, this could be a potential rule of thumb that certain institutions follow. However, there is not much available research on the strategies that institutions of higher education utilize to price such programs.

As one can see by the data that has been presented, Executive MBA Programs seem to be operating in the growth stage of its product lifecycle at least on the international level. The proliferation of programs both within the United States and abroad substantiate this growth. (Petit, 2008). However, the dwindling levels of full corporate financial support along with the disparity of tuition prices among various programs can potentially have an impact on the future direction of the industry. Such a phenomenon can certainly impact institutions given the imperative and strong financial motivation Business Schools have to grow such programs. (Jahera, 2006). This phenomenon can also impact the future tuition pricing strategies that institutions can implement.

Three strategies that could potentially be implemented in pricing Executive MBA Programs are the "Value Based Pricing" Strategy, the "Dynamic Pricing" Strategy and the "Customer Segmentation by Value Perception" Strategy.

The "Value Based" pricing model differs significantly from the traditional "Cost Based" pricing model. Within the "Cost Based" strategy, the price is determined by the overall costs incurred by producing a specific product coupled with the forecasted sales volume for that product. (Nagle & Holden, 2002). Once the price is determined within the "Cost Based" model, it is left to the marketing and sales divisions to communicate the value of the product in the hopes that the consumer will purchase it. The sequence for the "Cost Based" strategy can be seen as follows: (1) Product; (2) Cost; (3) Price; (4) Value; and (5) Customer. (Nagle & Holden, p. 4, 2002).

An overall flaw with this strategy is that it is very difficult, if not almost impossible, to accurately predict the forecasted sales volume for any product in question. (Nagle & Holden, 2002). Since the price determination within this strategy is so tied to the overall costs of producing the product plus the forecasted sales volume, it is very common to not achieve targeted revenue goals as a result of a discrepancy between the forecasted volume verse actual sales volume. Overall, common mistakes within the "Cost Based" pricing model can be seen by "overpricing" in weak markets and "underpricing" in strong markets. (Nagle & Holden, 2002). Hence, here lies the major weakness with the "Cost Based" pricing model.

However, the "Value Based" pricing model can potentially avoid such an occurrence. Within the "Value Based" strategy, price is not determined by the overall costs and forecasted volume but rather on what the customers or prospective customers truly value with the product or service in question. Once the key value drivers are deciphered, a price is then determined based on the thrust of this value. Once the price is determined, it is then critical for the marketing and sales divisions of the organization in question to effectively communicate this value in the marketplace. The effective communication of this value is central to how customers perceive and respond to the price determined. With this said, the sequence for the "Value Based" pricing model can be seen as follows: (1) Customers; (2) Value; (3) Price: (4) Cost; and (5) Product. (Nagle & Holden, p, 4, 2002).

Overall, within the "Value Based" pricing model, the goal is to determine what in fact customers truly value and then price accordingly. The goal is to price the product and/or service on the producer's desired price offering and effectively communicate the value per that price. Costs and forecasted volume do not dictate the price within the "Value Based" pricing model. (Nagle & Holden, 2002).

The second pricing strategy that can be utilized is "Dynamic Pricing". Within this strategy, prices respond to changes with demand pressures in the market in either real time or near real time. This strategy has been a long-time staple within the airlines and hotel industries. (Sahay, Summer 2007). There exists two mechanisms for the "Dynamic Pricing" strategy. The first mechanism is to establish "posted prices" visible to all interested consumers. The second mechanism, which is referred to as "price discovery", allows consumers and potential consumers the ability to determine the acceptable price points which will be paid. (Sahey, 2005). This can be seen in the airline industry where consumers know, understand and accept that if the airline ticket is booked months in advance, a lower rate will prevail. However, if the ticket is purchased just prior to the flight, a much higher airfare will be the result.

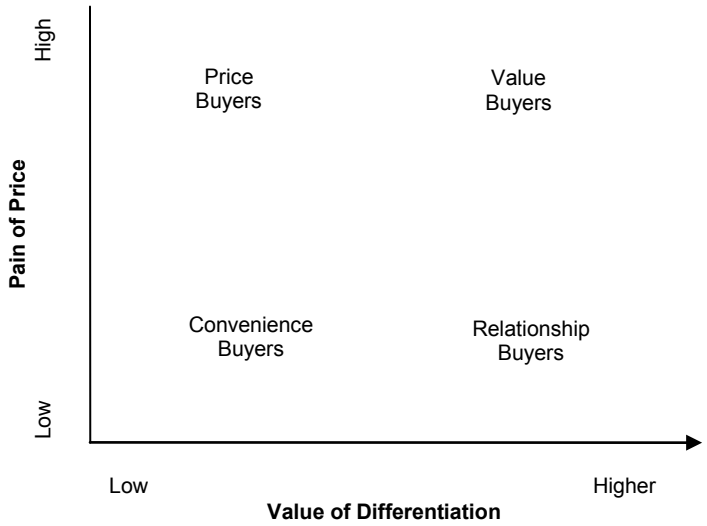
Consequently, within the "Dynamic Pricing" model, the price will fluctuate for specific reasons and consumers know, understand and accept this phenomenon as part of the rules. In order for a "Dynamic Pricing" strategy to be fully effective, there must exist a "high latitude of price acceptance" and consumers must feel that they have participated, own and understand the pricing process. (Sahey, 2005). The goal of "Dynamic Pricing" is to offer customers, in a transparent format, the various price levels in

which a particular product can be purchased. If done effectively, this non-fixed pricing strategy can potentially result in higher revenues and profits. (Sahey, Summer 2007).

The third strategy that can be implemented is the "Customer Segmentation by Value Perception" strategy. Within this strategy, it is critical to know and understand the type of customers who traditionally purchase one's products and/or services over time. Such an analysis will allow organizations to know and understand not only how one is perceived in the marketplace but also what one's brand identity is all about. More specifically, this strategy is based on price and value sensitivities for one's products and services. Once such sensitivities are revealed and discovered, such knowledge can certainly dictate future pricing strategies for one's goods and services. (Nagle & Holden, 2002).

Table 1 illustrates the "Customer Segmentation by Value Perception" strategy. Within Table 1, there are four types of buyers for products and services in the marketplace. These buyers are as follows: (1) Price Buyer; (2) Convenience Buyer; (3) Value Buyer; and (4) Loyal (Relationship) Buyer. These unique set of buyers all have distinct perspectives on price and value sensitivities for any product and/or service in question. For example, the "Price Buyer" traditionally has a very "high pain of expenditure" and a very "low pain for differentiation". The "Price Buyer" will purchase a product and/or service on price alone and traditionally has no loyalty to a product or service if a less expensive alternative suddenly becomes available. (Kotler, 2005). The price in and of itself is the driving force behind the "Price Buyer."

Table 1: Customer Segmentation by Value Proposition



In Customer Segmentation by Value Perception, there are four types of buyers for products and services in the marketplace. These buyers are as follows: (1) Price Buyer; (2) Convenience Buyer; (3) Value Buyer; and (4) Loyal (Relationship) Buyer. These unique set of buyers all have distinct perspectives on price and value sensitivities for any product and/or service in question.

The "Convenience Buyer", however, can have a very "low pain of expenditure". So long as the product is "convenient" for one's lifestyle then the consumer will most likely purchase the product, regardless of the price. The "Convenience Buyer" also traditionally has a very "low pain for differentiation". (Nagle & Holden, 2002). The "convenience" of the product or service in and of itself, whether based, for example, on location, scheduling or timing, will be the top attribute of importance for the "Convenience Buyer" exceeding that of product differentiation.

The "Value Buyer" certainly values what the product or service is all about. The "Value Buyer" will usually have a very "high pain of expenditure". If the "Value Buyer" perceives that this product has the

acceptable amount of value that this consumer is seeking, then this buyer will make that investment. This buyer will not, however, make an investment on a product or service if there is a belief that the value level does not meet one's expectations. The "Value Buyer" also subsequently needs a very "high level of differentiation". Again, the product must have an acceptable level of value. Within the concept of value, the product or service must be differentiable, unique and must satisfy a specific need or desire amongst consumers. (Kotler & Keller, 2006). Therefore, the "Value Buyer" demands this acceptable level of differentiation for the product that he or she is seeking.

The "Loyal Buyer" (Relationship Buyer) does not traditionally have a "high pain of expenditure" nor does this buyer traditionally have a "high value for differentiation." The "Loyal Buyer" already has a very strong preference for a brand based on past experience or brand reputation. Overall, the "Loyal Buyer" does not believe there is an urgent or even serious need to evaluate the product/service alternatives in the marketplace so long as the trust between the consumer and brand has not been broken. (Nagle & Holden, 2002). In general, the "Loyal Buyers" will remain even if the product and/or service is on the declining stage of its lifecycle. The "Loyal Buyers" are with a brand until the end.

METHODOLOGY

This study carefully examines the current status of the Executive MBA market and its increasingly important role as a revenue generator for not only Business Schools but for Universities themselves. Three pricing strategies are then discussed in detail with a goal of determining each strategies' potential applicability and effectiveness with the successful pricing of Executive MBA Programs. Conclusions are then determined as to the benefits and also shortcomings of each strategy with the ultimate goal of providing senior management with a roadmap of capturing maximum value with its Executive MBA pricing strategy.

Strategy # 1 – Value Based Pricing

Can "Value-Based" pricing be effectively implemented for Executive MBA programs? In order to answer this question, one must first determine what product attribute (s) do Executive MBA students actually value in the offering?

There have been two recent studies that have addressed this issue head on. The first study analyzes price sensitivity for fifty (50) randomly selected prospective Executive MBA students, within the Northeast region in the United States, during their search and selection process for programs. The goal of this study was to determine where does the pricing attribute rank in terms of importance during both phases of search and selection.

The results of this study indicate that during the Executive MBA search process, the following attributes were ranked, in order, as principle attributes of importance during this process: (1) Program Format; (2) Brand Value of Institution; (3) Program Location; (4) Length of Program; and (5) Program Price. (Petit, 2008).

However, when it came down to selecting an Executive MBA Program to attend, the attributes of importance changed somewhat. Below please find how prospective students ranked the following attributes of importance during the Executive MBA selection process: (1) Program Format; (2) Brand Value of Institution; (3) Program Price; (4) Program Location & Length of Program (Tie); and (5) Cohort Format. (Petit, 2008).

The results of this study indicate that the Program Format and Brand Value of Institution attributes take on critical importance during the Executive MBA search and selection process for prospective students

which was reinforced by the significance level of the p-value of the test statistic. Such formats, for example, can be the traditional every other Friday/Saturday or the one weekend per month (Friday-Sunday) model. Even with a changing Executive MBA market which has seen not only a dwindling level of corporate financial support for such programs, a more junior candidate interested in these programs but also increased program options available, the tuition price for such programs does not rank as the top attribute of importance when searching and selecting a program. This study indicates that prospective students are willing to pay more out of pocket so long as the format is convenient for today's busy executive and the institution has a top quality brand perception in the marketplace. (Petit, 2008).

A similar study, namely the Second Annual Executive MBA Council Student Entry Benchmarking survey, released in March 2008, reinforced these findings. The conclusions of this study indicate that a School's Reputation and the Program Format ranked as the second and third most important attribute when selecting an Executive MBA Program for prospective students. The top ranked attribute in this study was the Quality of Faculty. (EMBA Council, 2008).

Overall, these studies indicate that price is not the leading attribute of perceived value during the Executive MBA search and selection process. Prospective students value something greater than the price, namely the program format, the overall brand of the institution and the dynamic faculty. With this said, a "Value Based" pricing model can potentially work effectively for Business Schools who are offering the Executive MBA Product. In order to do so, the value of the brand plus the format of the program as well as the top rated faculty must be effectively communicated within the marketplace and must be the top value drivers communicated to prospective students. If done so effectively, prospective students, according to the research, should be willing to pay more out of pocket for such programs given the recent decline in corporate financial sponsorship so long as the program is priced accordingly to its value as compared to its competitors. If also done effectively, in a "Value Based" pricing format, the goal would be for prospective students to pay the price that the institution would like to offer the product rather than basing it on the cost, the forecasted volume and what the consumer is initially willing to pay. The key to the whole process is for institutions to be as innovative and effective as possible in communicating the top value drivers of Executive MBA Programs as seen by prospective students. Given that there already exists research on these value drivers, the "Value Based Pricing" strategy can potentially be very effective.

Strategy #2 –Dynamic Pricing

The second question one must ask is can the "Dynamic Pricing" strategy be effective in pricing Executive MBA Programs? Overall, there are various potential methods that this can be done. First, are there any opportunities to create itemized options for students? More specifically, instead of all students paying one fixed tuition rate for a program, can there exist various payment levels similar to Economy Class and Business Class within the airlines, in which students can select to participate? For example, if there exists within an Executive MBA Program residencies within a conference center, can students be offered a lower tuition rate if they do not utilize the overnight room accommodations at the conference center? Can they be offered a different tuition rate if they buy their own lunches instead of having it included in the tuition? Similar to the airlines, can a program charge a lower tuition price to someone who commits to a program months prior to it commencing as opposed to weeks before it commencing? In addition, if there exists stronger demand for prospective students to start an Executive MBA Program during the Fall start date, as opposed to the January (Spring) start date, can a lower tuition price be charged for the January (Spring) start date in order to encourage prospective students to start their studies in the Spring as opposed to the Fall?

The examples above are potential scenarios in which Executive MBA Programs can implement a "Dynamic Pricing" strategy within its business model. By offering transparent price options to the

market, prospective students can freely select which payment options work best. In addition, if done correctly, such a strategy, as indicated in the literature, can not only potentially increase sales revenue but can also lessen peak time periods and transfer the excess demand to periods of undercapacity.

The only hesitation that exists if an institution were to implement a "Dynamic Pricing" strategy is in regard to class camaraderie and bonding. One of the key takeaways of any Executive MBA Program is the bonding that forms as a result of this cohort program. (Petit, 2006). If students were to be offered different price options and as a result, different services, features/benefits and program experiences, this could perhaps have a negative impact on the overall cohort bonding that results from a fixed price Executive MBA Program structure. Mr. Mandell Crawely, Senior Vice President at Morgan Stanley and a member of the Fordham University Executive MBA Class of 2009 indicates that his "classmates made his EMBA Experience….traveling the entire academic journey with the same group of people created a tremendous bond within our cohort." Therefore, creating different price points and a potentially different experience among the individuals within the cohort could have a major impact on the EMBA Experience. Overall, it should be noted that additional research in this area must be conducted to test if in fact this potential phenomenon is correct.

Strategy #3 – Customer Segmentation by Value Perception

The third question that must be asked is can the "Customer Segmentation by Value Perception" pricing strategy be effective in pricing Executive MBA Programs? In order to determine the answer to this question, one must seek out who has traditionally purchased one's products over time. For example, have the students who have attended a specific Executive MBA Program been "Price Buyers" or "Convenience Buyers" or "Value Buyers" or "Loyal Buyers?" Once this is determined, then perhaps an effective pricing strategy can be implemented.

In addition, if it is found that the students who have attended a specific Executive MBA Program are considered "Price Buyers", then these students are attending a specific program for price alone. While these students may value some form of program differentiation, the tuition price is the driving factor behind enrollment. If this is the case, one strategy a specific institution can follow is to keep its tuition as the most attractive tuition for Executive MBA Programs within that market. If price is what traditionally drives students to enroll at a specific institution, then keeping the tuition option low can be an effective strategy.

Alternatively, if it is discovered that students who attend a specific Executive MBA Program are "Convenience Buyers", then institutions should realize that this student population are not necessarily price sensitive or value sensitive. The convenience of the Executive MBA offering, whether based on schedule, location, timing, etc., is the driving force behind enrollment. If this is the case, then an aggressive pricing strategy may be a good option.

If it is discovered that the students who attend a specific Executive MBA Program are "Value Buyers", then it is imperative that an institution keep innovating. The students should be willing to pay a premium for the offering so long as these students believe that the Executive MBA Program is offering or exceeding the value that is desired. Such value can be various offerings such as the institution's brand, dynamic faculty, strong student base, job placement and alumni networking to name a few. Consequently, "Value Buyers" are willing to pay for such value and differentiation. It is thus imperative that institutions understand what are the value drivers and build this value accordingly. If this is continually achieved, institutions should be able to adhere to an aggressive and/or premium pricing strategy.

Lastly, if it is discovered that the students who attend a specific Executive MBA Program are "Loyal Buyers", then institutions should be able to charge a premium for the offering since "Loyal Buyers" are, to a certain extent, price insensitive and do not value differentiation. Consequently, institutions do not necessarily have to rush to innovate with "Loyal Buyers" since these buyers would like to attend as, for example, because four generations within their family have attended this university. Therefore, if many students in a program are considered "Loyal Buyers", institutions must realize that this student base will not be price and value sensitive and should develop pricing strategies accordingly.

Overall, the "Customer Segmentation by Value Perception" strategy, if strategically applied, can potentially allow an institution of higher education to maximize its revenue and profits within its Executive MBA offering. The potential negative repercussions of this strategy is that it can limit a Business School and Executive MBA Program from a positioning perspective. While it allows a Business School to capitalize, from a pricing perspective, from the buyers who attend a program, it does not potentially allow a particular program to reach out to a new segment and/or new set of buyers. This strategy, in essence, can potentially limit a program seeking to expand to varying value perception customers.

IMPLICATIONS ON AACSB ACCREDITATION

Implementing a pricing strategy that is strategic in nature for an institution's Executive MBA Program can have a positive impact on the institution on all fronts, including the AACSB Accreditation process. However, a non-strategic pricing strategy can potentially have negative implications on the product (program) itself, the brand image and inevitably the Accreditation process. Overall, according to the AACSB web site, this international accreditation agency for "Schools' of Business" assures the following for the multiple stakeholders of an accredited institution: (1) manage resources to achieve a vibrant and relevant mission; (2) advance business and management knowledge through faculty scholarship; (3) provide high-caliber teaching of quality and current curricula; (4) cultivate meaningful interaction between students and a qualified faculty; and (5) produce graduates who have achieved specified learning goals. (http://www.aacsb.edu/accreditation/).

As one can see from these assurances, the goal for attaining AACSB Accreditation status is to assure all stakeholders of a particular institution, as well as the institution itself, that it is delivering the best possible business education that it can deliver. With this said, a pricing strategy for an Executive MBA Program that is not strategic in nature can potentially have a direct impact on the perception of the "teaching quality" and "curricula" frameworks within these assurances.

More specifically, an Executive MBA Program that implements a top tier premium pricing strategy is potentially vulnerable to negative consumer perceptions if the product does not deliver or meet expectations. For example, an institution that implements this strategy is open to having prospective as well as current students undergo what is known as the "Price-Quality Effect". This phenomenon occurs when the price of a product or service is a signal of value or expected value that the consumer will receive through consumption. Overall, a high price, within the "Price-Quality Effect" psychologically signals greater value. (Nagle & Holden, 2002). Whether it is, for example, a $350 per hour lawyer verse a lawyer that charges only $100 per hour, there is a naturally tendency to believe the lawyer that has a rate of $350 per hour is providing a better service. This same concept can hold true for Executive MBA Programs. Since students are paying a premium in tuition, there is a natural tendency to believe and expect that the entire program experience, which can include the faculty, curriculum, classmates and career service options, to be top rate. (Petit, 2006). Consequently, if institutions are going to charge a top tier premium price for its Executive MBA Program, it must now more than ever deliver on the academic quality of the product itself as a result of this "Price-Quality Effect." If a program falls short of expectations, there could be major disappointment among the student stakeholders. Such disappointment will not bode well

when these students are interviewed by an AACSB Visiting Accreditation Team especially within the "teaching quality" and "curricula" assurances.

The second area of concern for an Executive MBA Program that is not strategically priced falls under the "End-Benefit Effect". Overall, a program that implements a top tier premium pricing strategy could also fall victim to the "End-Benefit Effect" among prospective and current students. The "End-Benefit Effect" is the relationship of a specific purchase to a larger benefit or end goal. (Nagle & Holden, 2002). More specifically, if a student pays a premium tuition price, especially out of pocket, what is the expectation and/or the "end benefit" of the student? Is it job placement? Is it being a part of a dynamic and professionally diverse alumni network? If an Executive MBA Program does not deliver on this expected "end benefit" then the current students and/or program alumni will not be potentially satisfied with the overall Executive MBA Experience. If this occurs, such dissatisfaction will be communicated during the AACSB Accreditation Process when the Visiting Team interviews the alumni stakeholders. Overall, a non-strategic pricing strategy for Executive MBA Programs could in fact have a negative impact on the AACSB Accreditation process especially within the "Price-Quality Effect" and the "End-Benefit Effect". Such a pricing strategy can set expectations among stakeholders which may not be met thus leading to dissatisfaction.

CONCLUSION

The Executive MBA market has experienced change. Among these changes are an increased number of prospective students and program options available, a steady dwindling of full financial corporate sponsorship, a more junior candidate submitting applications and a disparity of tuition prices for such programs. With these changes occurring within this market, senior management within Business Schools must be very strategic with their tuition pricing strategies, now more than ever, for these high revenue generating programs.

A summary of the three pricing strategies presented for this paper can be seen in Table 2. From this research and subsequent analysis, it appears that the "Value Based" pricing model is the most strategic one to implement. The reason supporting this conclusion is that there have been recent studies generated indicating what in fact Executive MBA prospective students' value during the program search and selection process. If institutions can keep proactively informed of this desired value and can effectively communicate this value in the marketplace, industry trends have indicated that prospective and current Executive MBA students are willing to pay more out-of-pocket for such value.

Table 2: Summary of Pricing Schemes Presented

Strategies	Key Elements
Value Based Pricing	Price product and/or service on producer's desired price offering and effectively communicate price accordingly.
Dynamic Pricing	Fluctuate price via demand pressures in market Allow for posted price and price discovery
Customer Segmentation by Value Proposition	Determine current customer scheme (Price Buyer or Convenience Buyer or Value Buyer or Loyal Buyer) and Price product or service accordingly

This table summarizes the key points of each pricing strategy discussed within this research. From this research and subsequent analysis, it appears that the "Value Based" pricing model is the most strategic one to implement.

The "Dynamic Pricing" model, while it has potential in generating a high level of tuition revenue, certainly presents risks. The risks associated with this strategy has to do with student bonding and camaraderie that develops within a cohort. These interpersonal dynamics naturally develop when a cohort travels the "academic journey" with one another. (Petit, 2006). They are, in essence, in this

program together as a unit. If students pay varying tuition prices for such programs, it may take away this unit type of mentality which can be a big takeaway of such programs. Consequently, in order to determine if the "Dynamic Pricing" model is a strategic strategy to implement, additional research must be completed as to its potential impact on the student bonding experience.

Lastly, the "Customer Segmentation by Value Perception" model has its merits as it itemizes how one's brand is not only perceived in the marketplace but also what consumers' value from one's brand. As a result, institutions can then price the Executive MBA offering accordingly. However, the weakness of such a strategy is that it does not potentially allow an institution to rebrand itself via price. In essence, the "Customer Segmentation by Value Perception" model allows institutions to price on current market perception as opposed to pricing on future or desired market perception.

Overall, additional research must be conducted as to determine the most strategic pricing strategy senior management in Business Schools can implement for pricing Executive MBA Programs. Once that is determined, institutions will not only create value with its Executive MBA offering but will also capture the optimal level of value with its pricing strategy.

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BIOGRAPHY

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EDUCATION AND GENDER EQUITY: EVIDENCE FROM THE CZECH REPUBLIC AND UK

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ABSTRACT

A network of public services, Social Watch, has created alternative indicators for the measurement of equity between men and women called Gender Equity Index, GEI), and the satisfaction of basic human needs called Basic Capability Index, BCI. This paper focuses on gender inequity in education, participation in the economy and empowerment. Primary attention is devoted to education, specifically tertiary education. The question of tertiary education is approached not only from the global viewpoint, but also at national level, i.e. from the view of the Czech Republic. This republic is one of the leaders of the theoretical ranking within the education GEI dimension. The situation is not so positive in the remaining two dimensions, participation in the economy and empowerment. It is necessary to find solutions leading to the improvement of the current position.

JEL: I21; I23

KEYWORDS: Higher education, gender equity, rate of return

INTRODUCTION

At the United Nations conferences about Social Development in Copenhagen (1995), and about Women in Peking (1995), the removal of poverty and gender equity were identified for the first time as a collective global target: one of the main targets alongside peace and human rights. The inter-relations at national and global level plays a very important role by creating various indices and statistical comparisons. They provide comparable international information and a macro-perspective. They also offer data about the situation of individual countries. The network of public services, Social Watch, found indicators for the measurement of the status of development (regresssion or improvement) in terms of equity of men and women, Gender Equity Index (GEI) and satisfaction of basic human needs, Basic Capability Index BCI (Silná, 2008).

The main goal of this paper is to combine our research results with the gender conditions described by the Gender Equity Index. The first part of this paper is devoted to gender equity worldwide. All three GEI dimensions are compared in this section in individual regions. The next part is aimed at the first GEI dimension: education; again first by worldwide regions and then in the Czech Republic. The last chapter focuses on our research: rate of return to higher education – its data, methodology, results and concluding comments.

LITERATURE REVIEW AND BACKGROUND

The literature on returns to investment in education is now substantial. It examines all levels of education – primary, secondary, and higher. These issues have been explored at both micro and macro levels (see Psacharopoulos, 2004; Kruger, 2001). Micro level approaches have generally been concerned with evaluating the returns individuals and society as a whole obtain from investment in higher education, whether this investment is public or private in origin (see Arrozola, 2003; Maani, 1991; Nonneman, 1997; Sakellariou, 2003; Wolter, 1999). The returns individuals obtain are generally refered to as private returns. The returns which society as a whole obtains are generally refered to as social returns. Macro

level studies, by contrast, have been concerned with the relationship between investment in education, by both private and public investors, and its pay off in terms of economic growth (Kruger, 2001).

These studies – both micro and macro – have been undertaken in a variety of countries and have focused sometimes on development related issues in so-called less developed countries (see Glewwe, 1996; Maani, 1991). In other cases, advanced economies have been the focus of investigation. In both cases it is important that finite resources are allocated efficiently and effectively often leading to a strong policy orientation in these studies. Machin (2004) Measured returns to investments in education reflect under-investment in this activity which results in a cost for the individual and for society. (Llears, 2004) The optimal level of investment in education occurs when the returns to investment in education equal the returns to other kinds of investments with similar characteristics e.g. small manufacturing enterprises. Investment in education has a high risk and low liquidity (Psacharopoulos, 1994) mainly because it cannot be sold. (Becker, 1964)

Most studies of returns to education at the macro level have demonstrated a positive association between investment and outcomes (Blundell, 1999). The same is true for studies at the micro level, although there are significant differences between the returns obtained from different levels and types of education. Most studies show higher levels of returns for primary education than for secondary education (see Barr, 1998; Clare, 2005; Psacharopoulos, 1973, 1981, 1985, 1999).

A large number of academic studies have demonstrated quite conclusively that there are substantial private and social returns to higher – as well as primary and secondary – education (see Blundell, 1999; Psacharopoulos, 1981, 1985, 1999). As a consequence governments in developed economies have accepted that there is a very strong case for the public subsidisation of higher education. Indeed in many countries the government has been the major sponsor of higher education. That is to say, the costs of higher education have been borne by taxpayers for the most part.

The rates of return at each level of education have been found to vary by gender, with females generally experiencing higher rates of return than males at all levels (see Blundell, 1999; Maani, 1991; Nonneman, 1997; Psacharopoulos, 1985, 1999; Daoud, 2005).

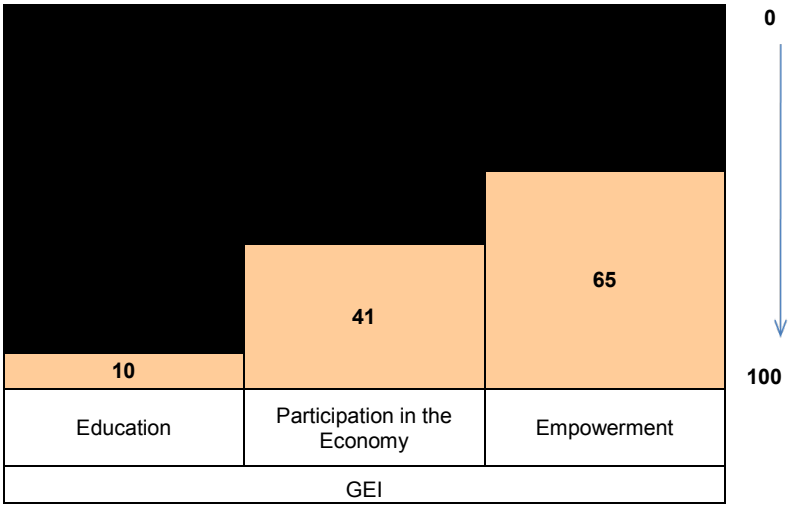
DATA AND METHODOLOGY

Gender Equity

The Gender Equity Index is based on internationally available comparable data that makes it possible to position and classify countries according to a selection of indicators relevant to gender inequity in three different dimensions: education, participation in the economy and empowerment (see Figure 1 and Table 1).

In 2008, GEI ranks the present situation of 157 countries, based on the most recent statistics available, and is able to determine evolution trends in the near future. The index has a maximum possible value of 100, which would indicate no gender gap in each of the three observed dimensions. The GEI measures the gap between women and men, not their welfare (i. e. the total level of education, participation in the economy and empowerment).

Figure 1: The Stairway to Gender Equity



This figure shows the points achieved in each of the GEI dimension (grey colour = equity; maximum is 100 points): 90 points in Education, 59 points in Participation in the Economy, and 35 points in Empowerment. The orange gaps measure the inequity of individual GEI dimensions. Source: own elaboration of the data provided by (Bissio, 2008)

Table 1: GEI Regional Average by Component

DIMENSION	1. DIMENSION EDUCATION	2. DIMENSION ECONOMIC ACTIVITY	3. DIMENSION EMPOWERMENT
WORLDWIDE	**90**	**59**	**35**
Central Asia	**92**	65	30
East Asia	**94**	62	37
Europe	**99**	68	49
Latin America and Caribbean	**99**	57	45
Middle East and North Africa	**90**	35	19
North America	**100**	73	53
South Asia	**80**	47	20
Sub-Saharan Africa	**73**	61	24

In this table there are points achieved in all GEI dimensions within individual regions. The best situation in „Education" is in the North America (100 points), in „Economic activity" in Europe (68 points), and in „Empowerment" in the North America (53 points) again. Source: (Social Watch, 2008)

Education is the only component in the index where many countries have actually reached parity level. Indeed when education is not available to a great number of children and the gender disparity in access to education has decreased. When parity has been reached, obviously no further progress is possible. But beyond the fact that many countries do not progress, the GEI education component reveals that many of them are regressing. In the two other dimensions, related to women's integration into economic and political life, no country shows complete parity yet. The GEI shows that income differences between countries are no justification for gender-based inequities. Many poor countries have achieved a high level of equity, which is a positive achievement, even when that means an equitable distribution of poverty. In fact, the reverse is often true: many countries that have acceptable average figures in social indicators frequently hide behind those averages enormous disparities between men and women. The elimination of gender disparities can be achieved with active policies and does not require that countries improve their income levels in order to succeed.

Sweden, Finland and Norway continue to have the highest rankings in the 2008 GEI (see Table 2). Although the three countries do not lead in all the dimensions that make up the index (see gaps in Education, Economic Activity and Empowerment) they have good performances in all of them. Germany ranks fourth and Rwanda – one of the poorest countries in the world – takes the fifth place. In all these cases, gender gap has been reduced through active policies, including gender quotas for political participation in elected bodies and pro-equity regulations in the labor market (on behalf of major equity).

The Czech Republic is in 52nd position according to the GEI for 2008, with a value of 69, together with Cyprus, China, Honduras, Peru and Brazil. It is also one of the countries with a decreasing index value. It is ranked among those countries where inequalities and disproportions in general social status of men and women are increasing. This result confirms regressive development in the area of gender equity, though only in the context of international comparison. The non-profit sector and the scientific community have been drawing attention to this situation for some time. Not-surprisingly, the Czech Republic has it's worst index value (43) in women's empowerment (i.e. women's representation in political and other top management and technical positions). However, women´s participation in the Czech economy is also a long way from reaching gender equity (64).

In education, the Czech Republic reaches index value 97, which is almost parity with men´s and women´s education. Comparing the Czech Republic with other countries is also quite interesting, because these countries are often stereotypically presented by Czech media as gender oppressed. For example, it has the same index value as China. Better index value results can be found in countries like the Russian Federation, the Philippines, the Ukraine and Cuba. Although we cannot apply this comparison to the whole social situation, it does offer us a measure of women´s and men´s position in the economy and it highlights the negative social development in the Czech Republic. This includes the level of non-democratization in the social configuration when viewed from the gender perspective. (Uhde, 2009)

First Dimension – Inequity in Education

Inequity in education is derived from the gender difference in 4 indicators: level of literacy, participation in primary school, participation in secondary school and participation in tertiary education. Education is the GEI dimension with the highest number of countries attaining a satisfactory level of equity. Nevertheless, the situation is alarming and in 40 % of countries it appears to be getting worse. According to the United Nations Population Fund (UNFPA), while in 2000 31 % of women lacked school education, only 18 % of men were in the same situation. So, what is the overall development in the sphere of education? The proportion of improving and worsening countries is disquieting. The cases of regression outnumber the cases of improvement by more than 2:1.

Education and Worldwide Regions

Inequity of access to education for reasons of gender is concentrated in only a few regions and therefore becomes invisible or at least 'opaque' when analyzed in combination. At the regional level, major differences are found in North Africa and minor differences in South Asia, Latin America and Central Asia (see Figure 2). On the other hand, gender discrimination mechanisms in the area of education do not only refer to access, but also operate within the system itself, making access to the education system an important element but not the sole one. These mechanisms are very often reiterative and become more elusive. For this reason, it is crucial to pay attention to the approaches to education and the running of educational organizations. In many cases it is precisely the teaching materials that perpetuate models of behaviour that reproduce negative gender stereotypes. (Řehořová, 2007, 2010).

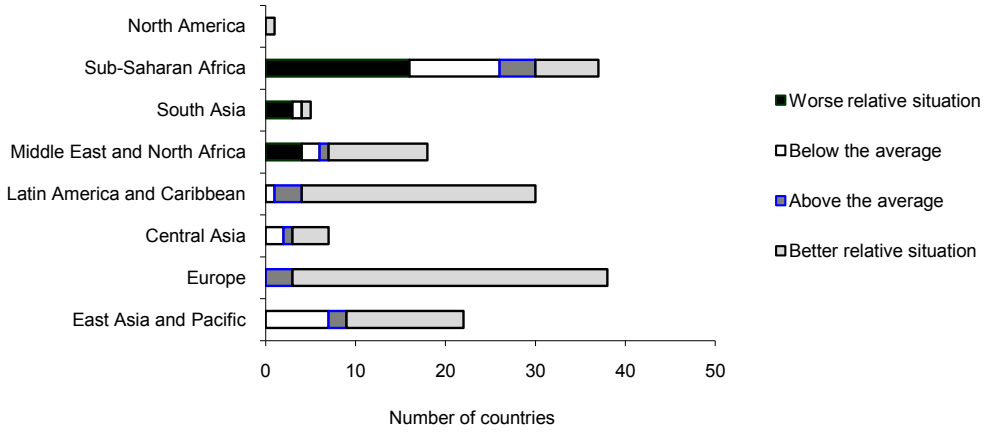
Table 2: Gender versus Tertiary Education and Incomes (selected countries by GEI 100-75)

Countries (BCI value ♣, 0-100)	Achieved GEI Level	Gross Tertiary Enrolment Ratio Gap (men/women) •	Estimated Earned Income Ratio (women/men) ♠
Australia (99)	76	1.25	0.7
Barbados (99)	77	2.46	0.6
Denmark (98)	80	1.39	0.7
Philippines (77)	76	1.23	0.6
Finland (100)	85	1.21	0.7
Iceland (100)	78	1.91	0.7
Canada (99)	76	1.36	0.6
Kazakhstan (98)	75	1.43	0.6
Columbia (90)	75	1.09	0.6
Congo (79)	78	1.91	0.5
Lithuania (99)	77	1.56	0.7
Latvia (99)	76	1.79	0.7
Netherlands (100)	78	1.07	0.6
Norway (100)	84	1.53	0.8
New Zealand (98)	78	1.49	0.7
Russian Federation (98)	76	1.37	0.6
Rwanda (23)	80	0.62	0.7
United Kingdom (99)	75	1.39	0.7
United States (99)	75	1.41	0.6
Spain (99)	77	1.22	0.5
Sweden (100)	89	1.55	0.8
Uruguay (96)	75	2.02	0.6
... Czech Republic (99)	… 69	1.16	0.5

This table shows the situation in tertiary education and incomes in the selected countries by GEI 100-75. This GEI level is mentioned in the second column. In the third column there is the gross tertiary enrolment ratio gap (i.e. men/women); the worst situation is in Barbados (2.46), Uruquay (2.02), and Iceland (1.91). In the last column there is the estimated earned income ratio (i.e. women/men); the situation is almost similar in these countries. Note: ♣ BCI = Basic Capabilities Index, • proportion of gross percentage of women registered in schools offering tertiary education, to gross percentage of men registered in schools offering tertiary education. ♠ proportion of estimated women´s incomes to estimated men´s incomes; inasmuch as all the data structured by gender are not available – the United Nations Development Program prejudged the incomes of women and men on the basis of the following data: rate of non-farm women´s wages to non-farm men´s wages, proportion of women and men in economically active population, total women and men population, and GDP per capita (in purchasing power parity, in USD) Source: own elaboration of the data provided by (Social Watch, 2008)

When we measure equity in education, the gender gap varies with respect to access to the different levels of education. The literacy gap indicator shows categorical differences between countries. In those countries with the worst situation, there are two illiterate women for every illiterate man. Whereas in those in a better situation the impact of illiteracy by gender is more evenly distributed though still not entirely equal. This is because in countries in a relatively better situation illiteracy is found in older generations, which were educated when equal opportunities for men and women had not been implemented into the education systém. This demonstrates the inherent inertia that distinguishes gender inequity: a fact that alerts us to the importance of starting equity measures early on and, in particular, to keep them going over time. This conclusion is validated when we consider enrolment gaps in primary, secondary and tertiary education. Equity measures not only protect women from discrimination, but also lead to women having a higher enrolment rate than men. (Bissio, 2008) This tendency in countries in better situations becomes particularly striking at tertiary level, where, for every five people enrolled, three are women and only two are men.

Figure 2: Current regional situation of gender inequities in education



This figure shows the current regional situation of gender inequities in education. The scale measures the current situation in the countries of individual regions (i.e. from the "worse relative situation" to the "better relative situation"). The best situation is in the North America and in Europe (almost all countries achieved the better relative situation), the worst situation is in Africa. Source: (Global Education Digest, 2008)

Education in the Czech Republic

The Czech Republic started struggling to meet the European strategy targets in the area of education and employment in the first half of the nineteen nineties. The Lisbon strategy targets are included in all fundamental strategic documents and policies adopted by the Czech Republic even before EU admission (e.g. National Action Plan of Employment, National Development Program of Education in the Czech Republic, Development Strategy of Human Resources for the Czech Republic, Long-term Plan of Education and Development, etc.).

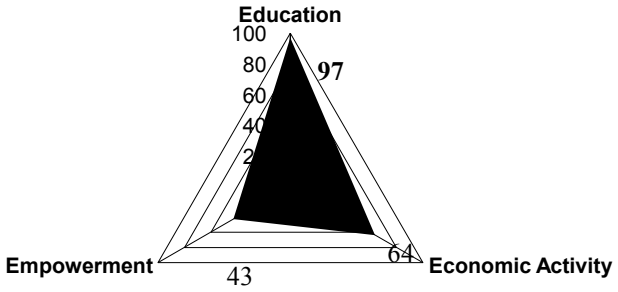
As already mentioned, the Czech Republic almost reaches gender equity in the first GEI dimension, i.e. "Education" (index value 97 – see Figure 3). However, this does not mean that there is no room for improvement, in fact, just the opposite. So, at the end of year 2008 the long-discussed reform of tertiary education was launched.

There are five main reasons for this reform (Reforma terciárního vzdělávání, 2008). First, the system of tertiary education was under-financed because sources of public finance are limited and private sources are minimal. Second, the system was not so diversified. Expansion might threaten quality so it is necessary to move ahead from quantity to quality. Third, the system was managed by methods which do not correspond to the new role of tertiary education in society or the economy. The weak role of management in the institutions of tertiary education. Fourthly, the system was not very efficient. That is, participants have the tendency to maximize inputs without any responsibility for results. And finally, competition is also lacking in the system.

The main characteristics of tertiary education reform are: autonomous recruitment; the recruitment of executive council powers; the establishment of a Council for Tertiary Education; the formation of dedicated research universities (faculties), i.e. centres of research excellence, with the emphasis on the education and training of Ph.D. students; basic and applied research; the creation of innovative potential; the existence of a department providing professionally-oriented education (links to the labour market and cooperation with employers); a central system of accreditation for all institutions of tertiary education (academic and professional); the existence of an internal system for assessment and quality management;

an emphasis on "LLL – Life Long Learning" and individual national projects – Operational Programme, Education for Competitiveness and Tertiary Education Reform.

Figure 3: Gender Equity Index in the Czech Republic



In this figure there are all three GEI dimensions in the Czech Republic. In „Education" it is almost parity of men´s and women´s education (97 points), the worse situation is in „Empowerment„ (43 points), the worst problem is in „Economic Activity" (only 64 points). Source: (Global Education Digest, 2008)

RESULTS

Descriptive Analysis of the Data

There are differences between higher education systems all over the world, including Europe. In many countries, the government has been the major sponsor of higher education. In the Czech Republic there is free entry for students to public universities as well as support of private universities with fee payments in the last couple of years. So why do people study at private schools when they have to pay much more? On the basis of human capital theory, we can infer that these students expect higher salaries and other forms of profit from their education than those from public universities. Can we confirm this hypothesis on the basis of data we gathered from a questionnaire? (Urbánek, 2003, 2005)

During the academic years 2004/2005 – 2007/2008 a survey of earnings expectations was undertaken of first year students at three Czech economics universities (Technical University of Liberec, University of Economics Prague and University of Pardubice) and at the University of Huddersfield Business School (UK). This research is an ongoing project continuing into 2008/2009 and 2009/2010 (development project No. 402/09/1123. Students completed questionnaires in Czech (Prague, Liberec and Pardubice) or English (Huddersfield). Altogether there were 2,609 respondents. First year students were surveyed during their first term because their decision to enter higher education had been a recent one. The questionnaire began with general questions relating to gender and age in an attempt to categorise the data. In the second part, the students were asked about their expectations of income immediately after graduation in their first job and then after ten years of work experience, at a minimum, average and maximum level. They were also asked about the level of earnings they would expect if they had only secondary-level education. They should also estimate the income of their possible acquaintances including graduates with and without work experience. The last questions concerned their family background, education and the income of their parents.

Table 3 presents several quantiles of the empirical distribution of the central tendency of respondent's earnings expectations, as expressed through the subjective median. It shows findings for both groups of respondents divided by gender. We find that earnings expectations vary little between the groups, but

significantly within each group. We can elicit from the level of different quantiles slightly higher level of earnings expectations at private schools for both male and female. This tendency can be seen in nearly all cases. There is also some correspondence between the earnings expectations of male and female, but we can say that male expectations are higher in all quantiles in both groups.

Table 3: Quantiles of Respondent´S Earnings Expectactions

Respondent Group	Empirical Quantile		
	0.1	**0.5**	**0.9**
Public Univ. Male Graduates	18000	20000	33000
Private Univ. Male Graduates	16000	19000	32150
	0.1	**0.5**	**0.9**
Public Univ. Male10-years experience	20000	35000	75000
Private Univ. Male 10-years experience	26000	35000	80000
	0.1	**0.5**	**0.9**
Public Univ. Female Graduates	10000	15000	27500
Private Univ. Female Graduates	13000	17000	35000
	0.1	**0.5**	**0.9**
Public Univ. Female 10-years experience	18500	27250	50000
Private Univ. Female 10-years experience	23000	28000	50000

In this table there are eight respondent groups (public univ./private univ. male/female graduates, public univ./privat univ. male/female 10-years experience) and three empirical quantiles (0.1, 0.5 and 0.9). The quantiles show the average values of expected minimum, most likely and maxium salary (CZK/month). Source: own calculations

One Way Analysis of Variance

Next, we conduct a one way analysis of variances using the usual techniques as follows:

$$s^2 = \frac{\sum_{i=1}^{k}\sum_{j=1}^{n_i}(x_{ij} - \bar{x}_i)^2}{n-k} \qquad s_0{}^2 = \frac{\sum_{i=1}^{k} n_i(\bar{x}_i - \bar{x}^2)}{k-1}$$

k - number of groups, which is in our research k = 2

The test criteria: $$F = \frac{s_0^2}{s^2} \qquad (1)$$

If the hypothesis H_0 is valid there is a distribution F where k-1 and n-k are the degrees of freedom. $F \geq F_{1-\alpha}[k-1; n-k]$, in our case $F \geq F_{1-0,05}[1; 3601]$. We find the value for this distribution F [1;3601] = 3.844. Table 4 shows the level of a test criteria = 5.318. There is an F-critical value 3.844 on the level of significance 0.05. Here we see that 5.318 > 3.844, therefore we reject hypothesis H_0 about independence. The calculated value is higher than the F-critical value, therefore we can say that the level of earnings expected by the students after graduation in this case is dependent on the type of school. In this part we proved statistically significant dependence.

If we look at expectations after 10 years of experience the situation is different. In this case, we cannot prove a significant dependence on the type of school. Table 5 shows the level of test criteria = 2.997. There is an F-critical value of 3.844 at the level of significance 0,05. Now we have 2.997 < 3.844, therefore we can accept hypothesis H_0 about independence. The calculated value is lower than the F-

critical value. We can say that the level of earnings expected by the students after 10 years of experience is independent of the type of school. In this case, we did not prove statistically-significant dependence. Because the results of these two groups are different, we did not confirm unambiguously a significant dependence of level of earnings expectations on type of school. (Urbánek, 2008)

Table 4: Expectations of earnings of graduates Single Factor Anova

Panel A: Summary						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Public	3,214	63,091,000	19,630.06	100,821,586		
Private	389	8,121,850	20,878.79	109,396,901		
Panel B: Anova						
Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	541,093,498	1	541,000,000	5.318104387	0.021161488	3.844036
Within Groups	36,638,600,000,000,000	3,601	120,000,000			
Total	36,692,700,000,000,000	3,602				

This table measures the Anova analyses, i.e. variation between groups and within groups (public and private universities). The degrees of freedom are 1 and 3,601. The value for this distribution is F 3.844. The level of a test criteria is 5.318, so we can say that the level of earnings expected by the students after graduation in this case is dependent on the type of school. Source: own calculations

Table 5: Expectations after 10 years of experience Single Factor Anova

Panel A: Summary						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Public	3,214	121,246,600	37,724.51	3,445,853,579		
Private	389	17,384,300	44,689.71	23,585,954,482		
Panel B: Anova						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	16,834,426,684	1	16,834,426,684	2.997633217	0.083472	3.844036
Within Groups	2,022,290,000,000,000,000	3,601	5,615,906,106			
Total	2,023,970,000,000,000,000	3,602				

This table measures the Anova analyses, i.e. variation between groups and within groups (public and private universities). The degrees of freedom are 1 and 3,601. The value for this distribution is F 3.844. The level of a test criteria is 2.997, so can say that the level of earnings expected by the students after 10 years of experience is independent of the type of school. Source: own calculations

Rate of Return to Czech Higher Education

For the calculation of perceived returns from an additional educational qualification (economic university degree) the following short-cut method can be used:

$$r_s = \frac{AE_i - AE_j}{k \cdot S \cdot AE_j} \qquad (2)$$

where,

AE_i = average gross income of people with a university degree,
AE_i = average gross income of people with secondary level education,
k = coefficient equal 1,
S = number of years spent at university,
r_s = percentage perceived change in salary per additional year of HE study. (Mincer, 1993)

The results are presented in Tables 6 and 7. The results of the surveys of Czech and British students show that students are very well aware of their expected earnings. There are some differences among male and

female expectations, especially in relation to expected returns immediately after graduation (see more in Urbánek, 2003, 2005, 2008). We hope to replicate the results of this research by obtaining further samples in England to gain additional insights. It would be especially useful to include at least two more Business Schools to provide direct comparability with the Czech data. It may also be beneficial to extend the geographical scope of this study of student perceptions of the financial returns to higher education. Although the results of this study show a striking similarity between student perceptions in the Czech Republic (GEI 69) and United Kingdom (GEI 75), this does not automatically mean that the same will be true in other countries.

Table 6: Rates of Return (in %)

Academic Year	Huddersfield (UK)				Czech Republic			
	Graduates		10 Years Experience		Graduates		10 Years Experience	
	Male	Female	Male	Female	Male	Female	Male	Female
2004/2005	14.64	19.38	22.53	29.20	11.72	11.39	15.12	13.85
2005/2006	12.66	15.38	17.76	18.02	13.45	11.86	22.30	7.19
2006/2007	9.95	15.18	18.50	14.77	12.26	11.65	23.65	17.62
2007/2008	13.48	13.00	18.12	29.67	12.72	10.59	22.69	18.10
Total Average	12.68	15.74	19.23	22.92	12.54	11.37	20.94	14.19

Table 6 presents a break-down by gender of rates of return from the Czech Republic and Huddersfield. For Huddersfield the results reflect the result of other studies focused on current returns i.e. women expect a higher rate of return to higher education than men. On the other hand, the data from Czech universities provide different results. Male respondents expect higher rate of return than females. It is also interesting to see that female students in Huddersfield expect higher rates of return than those from the Czech Republic whereas male students from Huddersfield expect lower returns than their Czech peers. Source: (Urbánek, 2008)

Table 7: Rates of Return According to Age and Gender

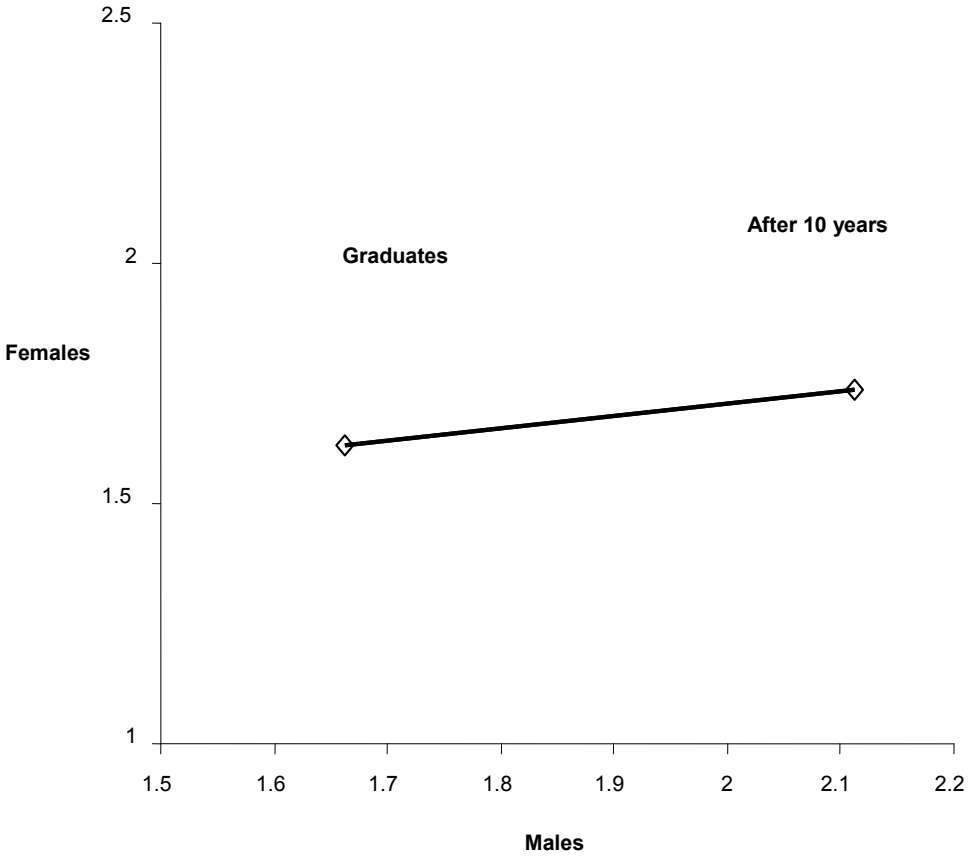
				Rates of Return (in %)	
Age	**Percent Occurrence**	**Gender**	**Rate in %**	**Graduates**	**10 Years Experience**
19	42.83	Male19	17.14	20.08	8.63
		Female19	82.86	10.69	14.00
20	**34.41**	**Male20**	**36.55**	**12.80**	**20.72**
		Female20	63.45	12.46	14.18
21	13.12	Male21	41.33	14.42	18.77
		Female21	58.67	12.00	18.51
22	5.07	Male22	58.62	10.67	20.24
		Female22	41.38	12.77	25.72
more than 22	4.57	Male more than 22	53.85	20.28	10.75
		Female more than 22	46.15	8.72	10.31

This table shows the rates of return according to age and gender. The most respondents are 19 and 20 years of age, most of them are females. There are differences in rates of return among students after graduation and students after 10 years of experience: e.g. Male 19 (graduates) = 20.08 % compared to Female 19 (10 years experience) = 14.00 %; Male 22 (graduates) = 10.67 % compared to Female 22 (10 years experience) = 25.72 %; etc. Source: own calculations

Regression of Data

There was a lot of regressions on the Higher Education data in Europe and in the world. Mincer's equation is one of the most often calculated regressions and the resulting returns to education are published in many books, articles, working paper etc. (see Cohn, 2003; Harmon, 2001 and many others).

Figure 4: College Wage Gain by Gender and at Labor Market Entry and 10 Years After Entry



Similarly to Brunello et al. (2001), we calculated the college wage gain by gender and at labor market entry and 10 years after entry. The results are in this figure: males (graduates and also students after 10 years experience) expect higher wages than females. Source: own calculations (scan from IS Statgraphics program)

CONCLUDING COMMENTS

Attention is shifting from national to multinational levels within the various studies with progress in globalization. Tariq Banuri recommends viewing the world as an "Earthland". On the global level, we find more inequalities today within and between every country of the world. Therefore, it is possible to consider the world as just one managed developing country (Banuri, 2008). "North" and "South" are being drawn apart faster: in developing countries we may find pockets of extreme wealth and in developed countries there are large pockets of poverty. Undoubtedly poverty is by far the most important negative issue for men and women, therefore it is necessary to categorize it strictly by gender, type, ethnicity, etc. People who are fighting against global poverty are not taking into account the inequalities between men and women; and people who are fighting for women´s rights without any interest in poverty are not basing their views on solid research. They would not study all poor humans and all women, but they would conduct their research only within the framework of narrow interest groups, i.e. rich women of the "North" or poor men of the "South".

The main goal of this paper was to combine our research results, rate of return to higher education survey, with the gender conditions described by the Gender Equity Index. We added data from the questionnaire, which was aimed at students of the first year at public and private universities. We took a random sample of two groups of universities - private and public, which specialized in economic studies and one of them

in economics of hotel services area. We used one way analysis of variance to prove the independence of earnings expectations on type of school. Then we calculated the rate of returns to higher education in the Czech and British schools. For Britain, the results reflect the result of other studies focused on current returns. That is, women expect a higher rate of return to higher education than men. On the other hand, the data from Czech universities provides different results. Male respondents expect higher rates of return than females. It is also interesting to see that female students in Huddersfield expect higher rates of return than those from the Czech Republic, whereas male students from Huddersfield expect lower returns than thein Czech peers. In the future, we would like to replicate the results of this research by obtaining further samples in England. It would be especially useful to include at least two more British schools to provide direct comparability with the Czech data. It may also be beneficial to extend the geographical scope of this study of student perceptions of the financial returns to higher education (e.g. France, Spain, Germany).

As was mentioned in the introduction, it is possible to see gender inequity in three different dimensions: education, participation in the economy and empowerment. According to GEI index, 2008, many countries have actually reached gender parity within the component of education (100). In the other two components, related to women's integration into economic and political life, there is a much more serious situation and in most countries the components´ index values move only at the level or even under the level of the medial value (50). Currently it is not possible to determine the time period necessary for reaching parity level within the second and third GEI dimension, i.e. within economic activity and empowerment. Furthermore, the research carried out at Liberec university (see Chapter: Rate of Return to Czech Higher Education - Survey) concerning the rate of return to higher education does not give us any closer answer as yet.

APPENDIX

Appendix A: Questionnaire on Students' Perceptions of Returns to Higher Education

Questionnaire on Students' Perceptions of Returns to Higher Education
When answering the following questions please do not include inflation in your salary expectations and consider them in current prices. Also all perception questions should be filled as honestly as possible and according to what *you* think, feel and expect.

1. You are: Female Male

2. Your age is: ……

3. What are *your* salary expectations immediately after you graduate from the university and get a job? Please specify your expectations regarding:
- Minimum salary CZK/month……
- Most likely salary CZK/month ……
- Maximum salary which you think you can earn as a 'fresh' graduate CZK/month ……

4. What are *your* salary expectations 10 years after university graduation? Please specify your expectations regarding:
- Minimum salary CZK/month ……
- Most likely salary CZK/month ……
- Maximum salary CZK/month ……

5. What salary would *you* expect if you now decided not to study at the university and to find a job? Please specify your expectations regarding:
- Minimum salary CZK/month ……
- Most likely salary CZK/month ……
- Maximum salary which you think you can earn now without a university degree CZK/month ……

6. What salary would *you* expect in 10 years if you decided not to study at the university?
- Minimum salary CZK/month ……
- Most likely salary CZK/month ……
- Maximum salary which you think you could earn in 10 years without a university degree CZK/month ……

7. What is your father's and mother´s highest level of education?
School College University
8. What approximately is your father's and mother´s salary a month?

CZK	0 - 10,000	≅	USD 0 - 555
CZK	10,000 - 20,000	≅	USD 55 - 1,110
CZK	20,000 - 30,000	≅	USD 1,110 - 1,665
CZK	30,000 - 40,000	≅	USD 1,665 - 2,220
CZK	40,000 - 50,000	≅	USD 2,220 - 2,775
CZK	50,000 and more	≅	USD 2,775 and more

9. Where do *you* intend (would like) to work after you graduate from the university?
Please tick max 2 options.
North England
Midlands
South England
London
European Union
North America
Australia or New Zealand
Elsewhere abroad ……. (please specify)
I don't know
I don't care

Thank you for your cooperation!

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THE EFFECTS OF NON-TRADITIONAL PEDAGOGIES ON STUDENT MOTIVATED BEHAVIOR

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ABSTRACT

This research assesses student perceptions of newer pedagogies within the business curriculum. The purpose of this study is to advise business faculty regarding potential student behavioral responses to these newer pedagogies. Because different students will experience these instructional changes differently, it is important that the business faculty understand the potential behavioral responses on the part of the students. This is particularly important so that the business instructor can take steps to anticipate and mitigate adverse responses on the part of some students which would otherwise limit the effectiveness of the newer pedagogies in achieving their stated goals. Thus, this research endeavors to facilitate the introduction of non-traditional pedagogies and increase their effectiveness by providing business faculty with a better understanding of the behavioral implications of less traditional instructional approaches.

JEL: M19

KEYWORDS: need strength and perceptions of instructional method; student manifest needs; implications for instruction

INTRODUCTION

Despite the long-standing criticism that business schools need to revise their curricula and employ newer and more engaging pedagogical strategies that are better suited toward developing the necessary professional skills essential for today's business students (Jenkins & Reizenstein, 1984; American Accounting Association, 1986; Porter & McKibbin, 1988; Buckley, Peach, & Weitzel, 1989; Commission on Admission to Graduate Management Education, 1990; Linder & Smith, 1992; Dulek & Fielden, 1992; Elliott, Goodwin & Goodwin, 1994; Pfeffer & Fong, 2002), there is little evidence that instructional methodology has changed over time (Pfeffer & Fong, 2002; Richardson, 2003). Although the curriculum has changed to incorporate new knowledge, the course structures and basic concepts taught have remained the same (Pfeffer & Fong, 2002).

If business schools are to respond to these criticisms, more non-traditional pedagogical strategies (i.e., interactive and experiential, student-centered strategies) must be employed within the business curriculum. All things considered, these strategies are superior not only in reaching the more complex educational outcomes of application, analysis, synthesis and evaluation (McKeachie, 1963; Chickering, 1977; Weston & Cranton, 1986), but also in developing the necessary professional skills essential for today's business students: oral communication skills, interpersonal skills, leadership skills, critical-thinking abilities, teamwork, decision making abilities, and written communication skills.

However, despite the potential benefits afforded by these more non-traditional pedagogical approaches, many business faculty members continue to rely upon more traditional (i.e., instructor-centered and individual-based) teaching strategies for a variety of reasons. Some have argued that the faculty-reward structure is too oriented toward research and publication, paying only lip service to teaching effectiveness (Richardson, 2003; Elliott, et al., 1994; Linder & Smith, 1992; Dulek & Fielden, 1992). Others assert that business faculty may not be adequately trained to teach business (Benke & Hermanson, 1990; Elliott et al., 1994; Linder & Smith, 1992; Leavitt, 1991). Unless training in different pedagogical strategies are

provided, business-education instructors tend to rely upon the methods and materials with which they are most familiar, often the traditional methods that they experienced as students (Done, 1979; Weston & Cranton, 1986). To complicate matters, many faculty members have spent years honing their skills in these traditional instructor-centered strategies and have thus become quite proficient in their use and perhaps resistant to change in technique.

Finally, due to the breadth of the required business curriculum, undergraduate business students take many introductory courses where the classes are larger, the focus of instruction is on the lower levels of the cognitive domain (knowledge and comprehension), and the more traditional instructor-centered and individual-level learning strategies are particularly efficient and effective. As such, undergraduate business students become quite familiar with these traditional teaching strategies and understand clearly what is expected of them when these strategies are employed in the classroom. For all of these reasons, it is not surprising that business schools are resistant to adopting the more non-traditional, interactive and experiential instructional strategies.

Therefore, the purpose of this paper is to facilitate the successful introduction of newer pedagogies and increase their effectiveness by providing business faculty with a better understanding of the implications of utilizing non-traditional instructional approaches in terms of student perceptions and behavior. This research endeavors to develop a greater understanding of the potential student behavioral responses to the non-traditional pedagogies. It is important that business faculty be aware of students' potential behavioral responses so they can anticipate and take steps to mitigate adverse reactions on the part of some students that would otherwise limit the effectiveness of non-traditional pedagogies.

LITERATURE REVIEW

Research in the area of improving business education by incorporating non-traditional instructional techniques is important for several reasons. First, today's business educators are too focused on delivering the knowledge-based content of the business curriculum and, as a result, are neglecting the wider array of educational processes by which business-related content and skills can be learned. Traditional pedagogical strategies often limit the scope of knowledge acquisition and comprehension, due both to the passivity of the student and the theoretical nature of the material. These traditional approaches do not reach for the more complex outcomes that are concerned with application, analysis, synthesis, and evaluation (Chickering, 1977; Needles and Anderson, 1991). Nor do these traditional approaches address and develop the essential skills deemed as necessary for success in the business professions. The consequences of this misplaced focus on the acquisition of knowledge are business graduates who are technically competent but who lack the judgment and other skills necessary for long-term success in the business professions.

Second, many of today's business curricula focus more on teaching and less on student learning. Teaching emphasizes inputs and the teacher, while learning emphasizes outcomes and the student (Boyatzis, Cowen, & Kolb, 1995). Consequently, a learning approach places greater attention on the students and how they respond to the educational process. This paper focuses attention on the latter half of the teaching-learning equation by surveying undergraduate business students on how they perceive various pedagogical strategies (both traditional and non-traditional) in terms of their ability to facilitate student learning. Since students experience the curriculum, it is important that business faculty understand how curricular changes might be perceived by students.

Third, since many business schools have not changed their curricula on their own, AACSB International, the international accrediting body for schools of business, has revised their Business Accreditation Standards in 2003 to require business schools to modify their curricula. As a first step, AACSB International is putting greater emphasis on interactions between students and faculty members. For instance, AACSB's revised Standard 13 outlines the teaching responsibilities of individual faculty members to include actively involving

students in the learning process, encouraging collaboration and cooperation among the students in the learning process, and ensuring prompt feedback on student performance. Previously, Standard 13 only called for *effective instruction*. Likewise, Standard 14 is an entirely new standard, spelling out students' responsibilities in the learning process. According to this new AACSB Standard, students are *not* to be passive recipients of education. Rather, they are expected to be active participants, and the accrediting review teams will "look for instances of what is called active learning, where students are involved in problem solving or where students are involved with either real or practice-field examples which illustrate the ideas they are learning about, and are not simply listening to lectures" (Thompson, 2004, p. 435). To facilitate this, business faculty members must begin to incorporate more non-traditional instructional techniques in the classroom.

The following section provides a brief overview of pedagogical strategies that are the focus of this study. This is followed by a discussion of the behavioral implications of the differing pedagogical strategies. Next, the research method employed is described, and the research results are presented. Finally, the study's findings are discussed and suggested approaches for successfully implementing non-traditional pedagogical strategies into the business school curricula are outlined.

Pedagogical Strategies

While not all-inclusive, the instructional strategies used in this research represent some of the more popular strategies used in higher education. Weston and Cranton (1986) provide an overall perspective of pedagogical strategies and factors important in the selection of instructional strategies. Thus, employing the delineation described by Weston and Cranton (1986), the pedagogical strategies used in this paper are grouped into four general categories: instructor-centered strategies, individual-learning strategies, interactive strategies, and experiential-learning strategies. These strategies are further differentiated by classifying the two former strategies as traditional and the latter two strategies as non-traditional in nature.

In the case of instructor-centered strategies, communication is one-way, from the instructor to students. The focus is on the instructor, who is responsible for imparting information to the students who are passive recipients (Weston & Cranton, 1986). The most common form of instructor-centered strategies is the lecture. Lectures are particularly efficient and effective for large class sizes and for instruction at lower levels of learning (i.e., knowledge acquisition and comprehension; Weston & Cranton, 1986). In this research we examined perceptions of both applied lectures and theory lectures.

Individual-learning strategies permit students to learn at their own pace, and therefore require regular immediate feedback so students can assess their progress (Weston & Cranton, 1986). One individual-learning strategy considered in this research is programmed instruction. Programmed instruction involves breaking instructional information down into a series of smaller, sequential units. Each unit contains a stimulus-response pattern that allows the student to progressively learn concepts and skills. For example, students are presented with material in a series of units which they cover at their own rate. At the conclusion of each unit, students are presented with questions that will test their comprehension of the material. The students answer the questions, receive immediate feedback about the correctness of each response, and can only move on only after demonstrating their learning through correct responses. Many instructional technologies now utilize programmed instruction via online quizzes. Additional individual-learning strategies considered in this research are: homework, examinations, required readings, and term papers.

Interactive strategies involve two-way communication between the instructor and students as well as communication among students. With these approaches, students have an opportunity to actively participate in the learning and teaching process (Weston & Cranton, 1986). A commonly used interactive strategy is class discussion, in which students talk with one another about their individual opinions or arguments on given topics or questions. This methodology is effective in small classes, and works well to facilitate higher

levels of cognition (i.e., analysis, synthesis, and evaluation of information; Weston & Cranton, 1986), better than lecture strategies (McKeachie, 1963). For larger classes, small-group discussions can be used to the same ends. A more structured interactive strategy is cooperative learning, in which students who have mastered the material accept the role of instructor and teach the material to other students. This is a particularly useful technique when there is a high degree of variability in students' abilities or experiences (Weston & Cranton, 1986). Finally, the use of group projects is an interactive instructional strategy which allows students to actively engage each other, while the instructor serves as a facilitator and resource (Weston & Cranton, 1986). This group project strategy could prove highly beneficial for business students, as it is becoming increasingly more likely that entry-level business graduates will work in a group environment (Avolio, Jung, Murry, & Sivasubramaniam, 1996). In addition to immersing students in the learning process, group projects are recommended when higher learning outcomes concerned with application, analysis, synthesis, and evaluation are desired (Weston & Cranton, 1986). The interactive strategies considered in this research include: cooperative learning, group projects, seminars, small-group discussion, large-class discussion, and argumentative discussion.

The basis of experiential-learning strategies, in either real or simulated-work settings, is active learning in which the student actually performs a task or uses a skill. Because the student takes an active role, these strategies are more effective than the traditional educational approaches in reaching the more complex educational outcomes of application, analysis, synthesis, and evaluation (Chickering, 1977). The active participation on the part of students allows them to reflect on their experiences and develop hypotheses based on these learning experiences, which can be further tested with additional active learning exercises. In a sense, the students are taught how to learn (Kolb, 1976). May, Windal, and Sylvestre (1995) report that 63.6% of accounting educators believe that the objective of the accounting curriculum should be to teach students how to learn on their own. Students who experience these more active strategies are more likely to maintain their interest in education and learning. Successful learning experiences tend to beget a desire for more; as a result, lifelong learning, which is so vital in the business professions, is fostered. The experiential-learning strategies considered in this research include: internships, case analyses, management simulations, structured-experiential exercises, and role-playing.

Motivated Behavior

If we consider business education as a training program for students' professional business careers, then we must attend not only to their learning of the material, but also to the transfer of that knowledge to the work setting (Baldwin & Ford, 1988; Goldstein & Ford, 2002). It is certainly necessary for students to learn the material presented to them in their business curricula. However, that increase in knowledge and skill is irrelevant if students are unable to maintain that knowledge over time and use it on the job. Although traditional pedagogical strategies (i.e., instructor-centered and individual-learning strategies) may be successful for attaining temporary acquisition of knowledge, non-traditional approaches will likely be necessary for facilitating the transfer of that knowledge to the job. The more interactive and hands-on nature of these non-traditional pedagogical strategies is more likely to result in a deeper level of learning on the part of the students than the more passive traditional strategies because the newer strategies should be better able to meet students' motivational needs, resulting in more motivated learning.

To test this proposition, this research will employ needs theory to investigate the behavioral implications of utilizing non-traditional pedagogies. A general theory of human needs and the environmental pressures that affect them was first developed by Murray (1938), who proposed that motivated behavior was a function of the relative strength of multiple different needs (Murray suggested 19 different needs). Needs theory predicts that people will be motivated to seek out and perform well in assignments that match their needs. For this reason, McClelland (1980) suggested that organizations should match employees to jobs that would allow them to satisfy their needs. In the same way, needs theory has implications for instructional strategy, suggesting that students will be motivated to perform well in educational environments that allow for the

fulfillment of their needs. Thus, understanding need patterns among students may help to explain resistance from some students when assignments fail to address and satisfy their needs. Also, recognizing individual student needs may help educators to use a student's talents in a manner consistent with his or her underlying needs. This research focuses on four widely investigated needs within needs theory: (1) need for achievement (*nAch*), (2) need for affiliation (*nAff*), (3) need for dominance (*nDom*), and (4) need for autonomy (*nAut*).

A high *nAch* is characterized by an aspiration to accomplish difficult tasks and maintain high standards, and a willingness to work toward long-term, challenging goals. A high *nAch* individual responds positively to competition and is willing to put forth effort to attain excellence (McClelland, 1985b). Students who are high in *nAch* are concerned with improving their own performance or bettering that of others, not for the purpose of pleasing others but because it is intrinsically satisfying (James & Mazerolle, 2002). These students also have a preference for situations in which personal responsibility can be taken for outcomes, a strong desire for performance feedback, and a tendency to set moderately difficult goals that provide for calculated risks (Steers, 1987).

Given the competitive, challenge-seeking, success-driven nature of the high *nAch* student, we propose that these students will find the experiential learning strategies very helpful. These pedagogical strategies are complex and comprehensive and are likely to pose a challenge to students. Furthermore, because high *nAch* students desire performance feedback and individual accountability, they will likely find some of the individual-learning strategies useful to their learning as well. In particular, exams, term papers, and homework are areas in which high *nAch* students can challenge themselves to improve upon their own performance and receive fairly immediate feedback regarding their success. Therefore:

> *Hypotheses 1: nAch will be positively related to the perceived helpfulness of experiential learning strategies (internships, case analyses, management simulation, experiential exercises, and role playing) and select, feedback-oriented individual learning strategies (homework, exams, and term papers).*

A high *nAff* is characterized by the enjoyment of being with friends and people in general, the ready acceptance of people, and a desire to achieve friendships and maintain associations with people (Murray, 1938). Students who have a high *nAff* have a strong desire to establish and maintain friendly, compatible interpersonal relationships; they like to like others, and they want others to like them. Additionally, they have a facility to learn social networks quickly and a proclivity to communicate often with others. They prefer to avoid controversy and competition and sometimes exhibit strong conformity to the wishes of their friends. Students with a high *nAff* tend to be more concerned with developing and maintaining relationships than with assignments and decision-making (McClelland, 1965). These students may be perceived as ineffective helpers, perhaps because they are not task-oriented enough.

Because of the strong desire to relate to and interact with people, it is plausible that students with a high *nAff* will perceive interactive strategies which require them to work collaboratively with others as very helpful to their learning process, and therefore be quite motivated to learn in such situations. Likewise, many of the experiential learning strategies typically involve a high degree of interdependence among students or between students and work colleagues. Therefore, high *nAff* students will excel in these strategies as well. Thus, we propose:

> *Hypothesis 2: nAff will be positively related to perceived helpfulness of interactive learning strategies (cooperative learning, group projects, seminars, small-group discussions, large-class discussion, and argumentative discussion) as well as those experiential learning strategies that typically involve interaction with others (internships, management simulation, experiential exercises, and role playing).*

A high *nDom* is characterized by attempts to control the environment and to influence or direct other people. Individuals with a high *nDom* express opinions forcefully and enjoy the role of leader, often assuming it spontaneously (Murray, 1938). Students who are high in *nDom* strongly desire to make a significant impact or impression on others, seek out social settings in which they can be influential, and act in an attention-getting manner in groups. Also, some people who are high in *nDom* have a tendency to be talkative and occasionally argumentative (McClelland, 1985b)

Therefore, like high *nAff* students, high *nDom* students will likely benefit (i.e., have their needs met) when they are able to interact with others. The only way a person with a high *nDom* can assume a leadership role is if there are others around whom they can influence and impress. Thus, although the reasons are different, high *nDom* students should prefer the same learning strategies as high *nAff* students:

> *Hypothesis 3: nDom will be positively related to perceived helpfulness of interactive learning strategies (cooperative learning, group projects, seminars, small-group discussions, large-class discussion, and argumentative discussion) as well as those experiential learning strategies that typically involve interaction with others (internships, management simulation, experiential exercises, and role playing).*

A high *nAut* is characterized by attempts to break away from restraints, confinement, or restrictions of any kind and by the enjoyment of being unattached to people, places, or obligations (Murray, 1938). Students who are high in *nAut* have a strong desire to work independently, tend not to work well in teams, and do not enjoy participating in discussions. More specifically, they have a preference for going it alone and tend to be less successful when working with other students.

Therefore, we propose that unlike students with a high *nAff* who desire to be liked in social interactions and high *nDom* students who desire to be influential in social interactions, high *nAut* students will prefer to avoid interactive learning strategies. They will likely have a negative reaction to being placed in interactive situations and consequently demonstrate a lower learning motivation when forced in them. Specifically:

> *Hypothesis 4: nAut will be negatively related to perceived helpfulness of interactive learning strategies (cooperative learning, group projects, seminars, small-group discussions, large-class discussion, and argumentative discussion) as well as those experiential learning strategies that typically involve interaction with others (internships, management simulation, experiential exercises, and role playing).*

METHODOLOGY

Sample: Participants were senior undergraduate business students (n = 371) from two AACSB accredited institutions, one private and one regional state university, both located in the Northeastern United States.

Measures: Participants were provided with the list of the 18 pedagogical strategies employed in this research and indicated on a 5-point Likert scale (1 = *unhelpful*; 5 = *most helpful*) the extent to which each strategy facilitated their acquisition of knowledge or learning.

In addition, needs for achievement, affiliation, dominance, and autonomy were measured using the 20-item Manifest Needs Questionnaire (Steers & Braunstein, 1976). Each need was assessed with a five items designed to measure the behaviors individuals perform to satisfy these needs. Participants indicated the extent to which they agree with the behaviors on a 7-point Likert scale (1 = *always*; 7 = *never*). Sample items include: "I try very hard to improve on my past performance at work" (nAch); "When I have a choice, I try to work in a group rather than by myself" (nAff); "I find myself organizing and directing the activities of others" (nDom); and "In my work projects, I try to be my own boss" (nAut).

RESULTS

Hypotheses 1-4 were tested by correlating each of the four psychological needs (*nAch*, *nAff*, *nDom*, and *nAut*) with the perceived helpfulness of the pedagogical strategies. These correlations are presented in Table 1.

Table 1: Correlation Coefficients for the Relationship between Psychological Needs and Perceived Helpfulness of Pedagogical Strategies

Pedagogical Strategy			Manifest Needs			
	M	SD	nAch	nAff	nDom	nAut
Instructor-centered strategies						
Applied lectures	4.51	0.76	0.05	0.02	-0.03	-0.10*
Theory lectures	3.50	1.04	-0.07	0.01	-0.03	0.05
Individual-learning strategies						
Homework	4.38	0.80	0.06	0.04	-0.00	-0.08
Exams	3.80	1.01	0.10*	-0.03	0.01	-0.05
Programmed instruction	3.81	0.92	0.04	0.05	0.01	-0.06
Required readings	3.91	1.00	0.02	-0.05	-0.09	0.02
Term papers	3.29	1.10	0.10*	0.04	0.02	0.05
Interactive strategies						
Cooperative learning	4.07	0.95	0.10*	0.09*	0.01	-0.05
Group projects	4.07	0.99	0.24**	0.09*	0.12*	-0.08
Seminars	3.68	1.08	0.08	0.12*	0.04	-0.08
Small-group discussion	4.10	1.01	0.08	0.26**	0.15**	-0.20**
Large-class discussion	3.47	1.04	0.06	0.09*	0.08	-0.03
Argumentative discussion	4.07	1.06	0.10*	0.07	0.16**	0.03
Experiential learning strategies						
Internships	4.10	1.02	0.25**	0.13*	0.10*	-0.01
Case analyses	4.04	1.00	0.24**	-0.00	0.13**	0.06
Management simulations	4.01	1.02	0.24**	0.16**	0.23**	-0.04
Experiential exercises	3.75	0.99	0.18**	0.11*	0.13**	0.02
Role playing	3.70	1.16	0.12*	0.17**	0.25**	-0.11*
M			5.11	3.97	4.50	4.06
SD			3.97	0.56	0.82	0.60

This table reports Pearson correlations between the perceived helpfulness of different pedagogical strategies and the four psychological needs.
*** and * indicate significance at the 1 percent and 5 percent levels, respectively.*

Hypothesis 1 proposed that *nAch* would be positively related to the perceived helpfulness of the experiential learning strategies and the feedback-oriented individual-learning strategies. Need for achievement was positively and significantly related to helpfulness ratings of all five of the experiential learning strategies (*r*'s ranged from .12 to .25). In addition, *nAch* was also positively related to helpfulness ratings for two of the three hypothesized individual learning strategies (exams and term papers; $r = .10$ for both); contrary to expectations, *nAch* was unrelated to the perceived helpfulness of homework. Overall, however, Hypothesis 1 was generally supported (see Table 1).

Hypothesis 2 proposed that *nAff* would be positively related to the perceived helpfulness of the interactive learning strategies and the experiential learning strategies that involve interaction with others. As can be seen in Table 1, *nAff* was positively related to perceived helpfulness of all but one of the interactive strategies (*r*'s ranged from .09 to .26 for cooperative learning, group projects, seminars, small-group discussion, and large-class discussion; *nAff* was unrelated to perceptions of argumentative discussion). Likewise, *nAff* was positively related to helpfulness ratings for all four of the hypothesized experiential learning strategies (*r*'s ranged from .11 to .17 for internships, management simulations, experiential exercises, and role playing). Therefore, Hypothesis 2 was generally supported.

Hypothesis 3 proposed that *nDom* would be positively related to perceived helpfulness of all of the interactive learning strategies as well as those select experiential learning strategies that typically involve interaction with others. Table 1 shows that *nAff* was positively related to helpfulness ratings of all of the hypothesized experiential learning strategies (*r*'s ranged from .10 to .25) and three of the six interactive learning strategies

(group projects, small-group discussion, and argumentative discussion; r = .12, .15, .16, respectively). Thus, overall, Hypothesis 3 was generally supported.

Hypothesis 4 proposed that *nAut* will be negatively related to the perceived helpfulness of the interactive learning strategies as well as those experiential learning strategies that typically involve interaction with others. However, Table 1 reveals that Hypothesis 4 was largely unsupported. Need for autonomy was only significantly negatively related to the perceived helpfulness of one of the six hypothesized interactive strategies (small-group discussion, r = -.20) and one of the hypothesized experiential learning strategies (role playing, r = -.11). Although many of the remaining relationships were in the hypothesized direction, only the two correlations mentioned above reached statistical significance. Thus, all in all, Hypothesis 4 remains unsupported.

DISCUSSION

The purpose of the current study was to compare the motivational potential of traditional teaching strategies with that of non-traditional strategies. We proposed that non-traditional instructional approaches were more likely to fulfill students' needs than traditional instructional approaches, and students should therefore find these non-traditional, more interactive learning environments more motivational.

As hypothesized, need for achievement was positively related to perceptions of all of the experiential learning strategies and two of the three feedback-oriented individual-learning strategies (exams and term papers) which provide the student with an opportunity to excel and compete. Perceptions of the other feedback-oriented individual-learning strategy (homework) were unrelated to *nAch*. Often, homework assignments are not graded formally or are only "spot-checked;" so, perhaps the competitive nature of homework assignments is not as salient to the high *nAch* student.

Need for affiliation and need for dominance were both, albeit for different reasons, proposed to be positively related to the perceived helpfulness of all six of the interactive learning strategies as well as the experiential strategies that offer significant interaction. For *nAff,* nine of the ten hypothesized relationships were significant. Only perceptions of argumentative discussion were unrelated to *nAff*. In hindsight, the high *nAff* student's desire to avoid controversy and competition with others likely makes this form of interaction unappealing.

Likewise, seven of the ten hypothesized relationships with *nDom* were significant. Three of the interactive strategies (cooperative learning, seminars, and large-class discussion) were unrelated to *nDom*, suggesting that students with a high need for dominance may not perceive that there is much opportunity to influence their classmates in large class environments. Furthermore, students with a high need for dominance may not perceive that teaching other students is not the same as influencing them or making an impression on them. However, a student's need for dominance may be met in small group projects and small group discussion, particularly if that discussion is argumentative in nature.

In addition, although not hypothesized, case analysis (an experiential learning strategy that is more individual in nature) was positively and significantly correlated with *nDom*, suggesting that this strategy provides the high *nDom* student with opportunities to express and elaborate on his opinion in a persuasive manner. Furthermore, it is possible that students associate case analysis with case discussion that often occurs in class, which would afford the high *nDom* student with an opportunity to convince others of his position on the case.

Need for autonomy was hypothesized to be negatively related to perceptions of all six of the interactive strategies and the four experiential strategies that are interactive in nature. However, only two of the ten hypothesized negative relationships were significant. Both small-group discussion and role-playing were significantly, negatively correlated with *nAut*. This reflects the desire that students with a high need for

autonomy have to avoid participating in discussions and interacting closely with others. Of the remaining non-significant, hypothesized relationships, six demonstrated a relationship in the hypothesized negative direction, although they were not statistically significant. The weaker relationships exhibited by the need for autonomy may be due to the high *nAut* student's realization that his or her autonomy needs must be subjugated within the formal educational environment. However, although the student with a high need for autonomy may realize that some interaction with others is a necessary component of higher education, they still may be the most likely to resist non-traditional instructional techniques that push them to interact closely with others, such as in role-plays and small group discussion.

Given the passive nature of the student in instructor-centered strategies and the lack of social interaction in individual-learning strategies, opportunities for students to satisfy their psychological needs in these teaching environments are restricted. With the exception of the hypothesized relationships between *nAch* and perceptions of two of the individual-learning strategies (exams and term papers), we found only one additional relationship between perceptions of a traditional instructional strategy (applied lectures) and a psychological need (*nAut*). Furthermore, as discussed above, student perceptions of most of the non-traditional pedagogies were not significantly negatively related to *nAut,* and *nAut* was unrelated to traditional individual-learning strategies which typically involve less social interaction with others.

These results suggest that overall, non-traditional instructional strategies allow for need fulfillment to a greater extent than do traditional instructional strategies. Thus, traditional instructor-centered and individual-learning strategies do not have the ability to motivate students to the extent that non-traditional interactive and experiential-learning strategies do. These latter instructional strategies provide opportunities to satisfy students' needs for achievement, affiliation, and dominance, and students should therefore be motivated to engage in these learning opportunities. This is important because motivation is crucial to education. Terrel Bell, former Secretary of Education, expressed this point compellingly: "There are three things to remember about education. The first is motivation. The second is motivation. The third is motivation" (Maehr & Meyer, 1997, p. 372).

Teaching Implications

Instructors who have excelled in using traditional strategies may experience student frustration when they first attempt a non-traditional teaching strategy in the classroom. Consequently, they may be unsatisfied with their results and abandon the new approach in favor of the traditional strategies with which they feel more comfortable. This student frustration is likely due to students' inexperience and unfamiliarity with different instructional approaches. However, by making business faculty aware of the potential student responses to the more non-traditional methods, they may anticipate problems that might occur and undertake strategies to mitigate any adverse responses. Thus, the effectiveness of non-traditional instructional strategies will be improved by understanding different responses from different types of students. Accordingly, the purpose of this paper was to increase instructors' awareness and knowledge with respect to needs-based motivated behavior within educational settings so as to facilitate more successful implementation of the newer pedagogical strategies.

Needs theory provides insights into student behavior and an understanding of the need patterns among students. This knowledge may help explain dissension among students when assignments fail to address and satisfy their needs. Also, recognizing individual student needs may help educators to use a student's talents in a manner consistent with his or her underlying motives. Therefore, an instructor may wish to administer the Manifest Needs Questionnaire (Steers & Braunstein, 1976) to students in order to identify students who might likely experience difficulty with and who will most likely excel in an instructional strategy. Likewise, when a student is not performing as expected, knowledge of that student's needs should provide insight into what sort of trouble the student may be experiencing and allow the instructor to provide appropriate guidance, thereby improving the effectiveness of the instructional strategy.

For example, high *nAut* students prefer working independently and may not to work well within teams. The current study demonstrated that these students might demonstrate the most resistance to non-traditional pedagogies, which require more interaction and engagement with others, even if they have come to accept some level of interaction as necessary in higher education. For example, students with a high need for autonomy are likely to have a bias against instructional methods involving small-group discussion or role-play activities. These students are therefore more likely to disengage in situations involving others, and consequently risk being ostracized by team members. These students need to be reminded of their team responsibilities early on so as not to be blindsided with unexpected low performance ratings from team members.

Conversely, the current study suggests that high *nAff* students will likely be the most receptive to the interactive nature of non-traditional instructional methods. They are natural team players and enjoy communicating with others. Thus, these students should be provided with opportunity to interact cooperatively with others in order to satisfy this need (Keller, 1983). However, instructors will likely have to prompt these students to remain task focused when contributing their ideas and perspectives, as they tend to be more concerned with relationship-building than with task accomplishment (McClelland, 1965).

Additionally, high *nAch* students have a strong desire for responsibility and performance feedback. Thus, the instructor should put these students in situations where they can demonstrate their excellence (e.g., experiential learning activities, exams and papers, group projects and argumentative discussion). Furthermore, these students will be motivated to excel when they are kept apprised as to their performance in the course and receive feedback on specific assignments.

Finally, high *nDom* students like to direct other people and express their opinions forcefully, so the instructor might look to these students to take over leadership roles in group exercises. Additionally, an instructor who is aware that these students might exhibit frustration when they have to take a followership role in class will be able to use such situations to teach the student about the importance of collaboration with others.

In addition to facilitating and understanding classroom interactions, prior knowledge of students' need orientations may be useful in creating team diversity. Not only will students learn to work with individuals who are different from themselves, but by doing so the instructor can facilitate team performance and mitigate potential problems. For example, prior research has suggested that students with a high *nDom* make excellent team leaders, particularly if they also have a low *nAff* (McClelland & Boyatzis, 1982). Given their enjoyment of a leadership role, being able to place high *nDom* students among all teams mitigates the potential problem of leaderless teams. However, too many high *nDom* students on a team could lead to a clash among students for the leadership role and a quelling of expressions of other team members. Additionally, because of the high *nAff* student's desire to maintain friendly relationships, distributing these students among teams may facilitate the social interaction of teams. These students are effective communicators, and they want to ensure that people get along; having this presence within teams should help the social atmosphere and cohesion among teams. However, the high *nAff* student prefers to avoid controversy and may put the team's harmony and social relationships ahead of task accomplishments (McClelland, 1965). For this reason, too many high *nAff* students in a team might present problems of groupthink and lack of task focus. Having a high *nAch* student on each team is helpful in keeping students on task as these students wish to succeed. However, high *nAch* students may become too individualistic and competitive to be successful in group situations, especially if they perceive the team is not performing as it should. Finally, a team made up of many students with a high *nAut* may find it difficult to work together and communicate effectively. Distributing high *nAut* students among diverse teams may force these students to develop their teamwork skills while working with students to whom these skills come naturally, particularly the high *nAff* students.

Thus, a prior understanding of students' needs may facilitate team diversity and help mitigate some adverse responses to non-traditional instructional strategies. Nonetheless, one must also realize that there is not a one-to-one correspondence between a student's need structure and his or her behavior. Needs are only one determinant of behavior; one's values, habits, and skills, as well as environmental opportunities, are also influential (McClelland 1985a).

Suggestions for Overcoming Resistance

When an instructor switches from traditional teaching practices to non-traditional methods, the uncertainty with regard to expectations can be unsettling for students. The challenge for the instructor is to mitigate this anxiety. Role ambiguity, a perceived lack of information about one's job or uncertainty about expectations (Breaugh & Colihan, 1994), is likely to be a particular problem when business educators start adopting more non-traditional instructional strategies. The effects of role ambiguity are increased tension, dissatisfaction with school, distrust, and poor relationships with others. Thus, some of the very skills that the new curriculum is trying to develop could be devastated for some students if appropriate actions to mitigate role ambiguity are not recognized and undertaken.

Role ambiguity has multiple facets. Work method ambiguity is uncertainty about what a person should do and how to accomplish goals (Breaugh & Colihan, 1994). This form of role ambiguity is likely to be less of a problem when using traditional instructional methods than when using non-traditional pedagogies. The traditional strategies have more precise task definition due to the narrowness of the assignments and the student's familiarity with what is required. Non-traditional techniques, on the other hand, are more vague in terms of the activities required to achieve an objective or complete a project.
Performance criteria ambiguity is uncertainty about the standards used to evaluate one's performance (Breaugh & Colihan, 1994). Non-traditional instructional strategies may engender more uncertainty on the part of the student through the use of non-traditional performance standards. Thus, when using non-traditional instructional strategies, it is to be expected that students will initially be concerned with the subjective appearance of their performance evaluation.

There are a number of strategies business instructors can undertake to reduce role ambiguity when employing non-traditional instructional methods. First, the instructor should define expected work behavior for students so they know what they should be doing. Second, the instructor has the responsibility of insuring clarity of the relationship between the goal (expected results) and the path to achieving those results (i.e., how it should be done). Third, the instructor should reach agreement with the students on how their performance is going to be measured. The instructor's challenge is in establishing the validity of the performance evaluation process. Fourth, continual feedback to the student is an integral part of becoming comfortable with non-traditional teaching methods.

Finally, it is important at the start of implementing a non-traditional instructional strategy to bring the students onboard so that they buy in to the process of change. While business instructors may come to understand that the newer instructional strategies are superior in developing professional skills, their students may not come to this understanding as readily. Therefore, business educators have a responsibility to inform their students of the importance of developing business skills. Students equipped with this realization should be more responsive to and more likely to embrace non-traditional instructional strategies. One way to impress upon students that the curriculum change is for the better might be to invite business professionals from organizations that recruit on campus to discuss the skills that they will expect students to have upon graduation.

CONCLUSION

In the current study, we aimed to advise faculty members about the potential student responses to a change in

business curricula to include more non-traditional, active learning pedagogies. Non-traditional instructional strategies require the instructor to become a learning facilitator and the student to be a more active participant in his or her learning. Although many business educators have been reluctant to move away from the more familiar traditional, instructor centered teaching strategies, AACSB and employers have begun to recognize the need to focus on developing students' professional skills as well as their technical knowledge. However, making these changes in business curricula may mean uncertainty and anxiety and therefore resistance from students. This research discussed ways in which students' motivated behavior might be affected by these non-traditional pedagogies. Therefore, the instructor's planning should consider the effects of any proposed action on the needs of the students. With the newer pedagogies the instructor must develop an appreciation for diversity. No longer can an instructor adhere to the unfounded stereotypes about the needs of the "typical" student and naive assumptions about the universality of need satisfaction, as these will surely reduce the effectiveness of implementing the newer pedagogies.

It should also be noted that, although this research has focused on the benefits that accrue to the student, non-traditional instructional strategies present opportunities for the faculty as well. Perhaps the greatest reward for faculty who use these educational methodologies is their sense of increased effectiveness and the satisfaction with their relationships with students.

Limitations and Future Research Implications

While the generalizability of the findings of this research was improved by utilizing students from multiple institutions, one limitation of this research was that student exposure to the different pedagogical strategies was not controlled either across or within institutions. The extent of students' prior experiences with different instructional techniques may be related to their preferences for varying pedagogies. Therefore, future research should control for students' prior exposure to instructional strategies.

Likewise, in this research, we did not collect demographic data (e.g., age, gender) to examine as control variables. The institutions used in the research were comprised of primarily traditional students, and thus the sample was likely homogonous with respect to age. Nonetheless, age and gender might be significantly related to psychological needs and/or preference for certain instructional strategies. Thus, future research should examine these demographic characteristics as potential control variables in the relationship between psychological needs and preference for pedagogical strategies.

Finally, future research should utilize more qualitative research methodologies to capture how the psychological needs manifest themselves in the various instructional strategies. For instance, open-ended student feedback and peer evaluation feedback surveys could be utilized to gather qualitative data on what behaviors occurred during a group exercise or what a student felt during a discussion activity. This research would provide additional information regarding team dynamics and student motivation.

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