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GPS in the classroom: using rubrics to increase student achievement

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ABSTRACT

Can the use of rubrics sharpen student focus and thereby increase achievement? Will the use of rubrics help students to prioritize their time, using time more efficiently when completing homework? This study examines grade differences between accounting students given a rubric to assist them in honing in on the specifics of a financial analysis project versus students who are not given the rubric. The successes and "ah ha" moments as they relate to realizations of how what changes faculty approach to communicating, teaching and grading are discussed. Suggestions of possible options for professors to adapt their grading policies to help students develop the skills necessary to be successful in the college environment are presented.

Keywords: rubric, teaching strategy, grading, communication, classroom

INTRODUCTION

College and University courses could be more beneficial if they were similar to flights in commercial aircrafts cruising at 30,000 feet. At that height, students can see the entire forest, the whole picture, and understand what the course objectives are. As the plane descends from cruising altitude, the trees come into clearer view and the students can see the details of each tree and know from the big picture view how each tree fits into the bigger picture of the forest. Unfortunately for students, there is no airplane ride the first day of class; students are dropped off right at the entrance of the forest and must find their way through the trees, with the aid of a professor tour guide. Fortunately for students, professors are armed with an extremely useful tool, a type of GPS, which will help aid students in navigating the forest and reaching the final destination. The use of rubrics in the college classroom can provide students with a valuable roadmap, a picture taken from 30,000 feet that will help break down the objectives of the course into smaller and more manageable tasks. This paper will analyze the results of student achievement between two sections of a financial accounting course in which students completed writing projects throughout the semester. One section was distributed a rubric for guidance while the other section was provided only a standard set of instructions. The research for this project was conducted at St. Norbert College. The College is a Catholic liberal arts college with

an average annual enrollment of approximately 2,000 students and is located in De Pere, Wisconsin.

A COLLEGIATE PARADIGM SHIFT

The mission statement of St. Norbert College states, in part, that its mission challenges us to educate the whole person intellectually, spiritually and personally. Further it states the goal is to promote student learning that include skill development in critical and analytical thought, quantification, synthesis, problem solving and communication. It is the college's belief that these life skills cannot be mastered through what many college classrooms have come to represent; hours of lecture followed by a scantron exam serving as the measurement tool for assessment. It is time educators recognize today's employers and, society as a whole, are demanding a more well rounded worker that not only possess the technical skills of a particular trade or craft, but also the ability to communicate that knowledge effectively with clients and coworkers. The goal is to develop students that can do more than simply memorize content for exams.

TAKING A PLAY FROM PRE-SECONDARY EDUCATION

Rubrics have been an effective assessment tool in pre-secondary (grades 6 – 12) education classrooms as a means of providing guidance to increase student achievement. Research has shown that assessment and the use of rubrics will increase learning and student achievement.

> "Can assessment raise standards? Recent research has shown that the answer to this question is an unequivocal "yes." Assessment is one of the most powerful educational tools for promoting effective learning. But it must be used in the right way. There is no evidence that increasing the amount of testing will enhance learning. Instead the focus needs to be on helping teachers use assessment, as part of teaching and learning, in ways that will raise pupils' achievement. ''[1]

Pre-secondary education classrooms have shown that rubrics, used as a method of assessing student achievement, leads to increased learning by making known to students the goals, objectives and grading criteria before the project begins. This allows students the freedom to see the whole forest before venturing into the trees.

> "Ultimately, we want students to grow to be independent. For them to do that, they have to have a sense of what the criteria [are] that make them successful. For a long time, the criteria [have] been a mystery to students.''[2]

Previously, colleges could get by without the use of rubrics because the tool was not needed in the professor's toolbox. In the past, the mid-term and final exams were a professor's only means of assessment. Today, professors need new instruments to evaluate and assess student achievement. Furthermore, a list of topics on the final exam will not increase student achievement on a research project and presentation. With a multiple choice exam, assessing student achievement is black and white, bubble the right dot or bubble the wrong dot; multiple choice does not leave an excessive amount of gray area. The same is not true in presentations and research papers, assessing student achievement lies entirely in the gray area.

Rubrics allow instructors to present to students a roadmap, which should lead them down the path of success in which the student can self assess along the way. The rubric should

encourage the student to ask the following questions, to help ensure achievement of the project and course objectives:

Where Am I Going? The rubric should provide a clear and understandable vision of the learning target. It should provide examples and models of strong and weak performances. [3]

Where Am I Now? The rubric can offer regular descriptive feedback throughout the completion of the project. It further can teach students to self-assess their project and provide a set of standards for students to set project goals. [3]

How Can I Close the Gap? The rubric can be used by professors as a design for lessons to focus on one learning aspect or quality. They can help students focused revision within their projects and further engage students in self-reflection and let them keep track of and share their learning. [3]

Rubrics can be used as a tool to help lift the fog from the student's road to success. They will help reduce the gray area in assessing student achievement in projects and presentations by clarifying the spirit of the project and the criteria for assessment. After all:

"There are no right grades, only justifiable grades.''[4]

Rubrics have been proven at pre-secondary levels of education to be an effective tool for increasing student achievement. What the project hopes to discover is whether rubrics can increase student achievement at the collegiate level.

RESEARCH RESULTS

The research project was conducted in the fall semester of 2009 at St. Norbert College within three separate sections of a Financial Accounting course. This course is primarily a sophomore level class. Two of the sections were taught by one author, while the third section was taught by another. The first author's sections consisted of 24 and 12 students respectively, while the other's section consisted of 24 students. All three sections were assigned an identical three-part analysis project due at various times throughout the semester. Students were split into groups and were required to select a publically traded corporation that would be analyzed via their respective annual report. Groups were responsible for preparing an assigned financial analysis along with a written report documenting their research. The first author's two sections (test group) were provided a rubric with specific expectations and instructions (see exhibit 1) while the other author's section (control group) was only given a standard set of instructions.

A survey was administered by instructors in all three sections following the completion of the final part of the project (see exhibit 2).

In total, 49 students completed the survey, 28 students (18 male) using the rubric, and 21 (10 male) without access to the rubric. Of those with the rubric, 12 had taken a previous accounting class, 7 were accounting majors, 0 were freshman, 20 were sophomores, 6 were juniors, and 2 were seniors. Of those without the rubric, 2 had taken a previous accounting class, 2 were accounting majors, 1 was a freshman, 9 were sophomores, 8 were juniors, and 3 were seniors.

Two-sample t-tests were conducted to test whether there was a significant difference in high school as well as college grade point average (GPA) for students in the section with a rubric compared to students without a rubric. Students with a rubric had an average high school GPA of 3.48 ($s = 0.36$) and college GPA of 3.07 ($s = 0.54$). Students without a rubric had an average high school GPA of 3.53 ($s = 0.45$) and college GPA of 3.13 ($s = 0.52$). No statistically significant differences were found at either the high school level ($t = 0.41$, $p = 0.69$) or the

college level ($t = 0.35$, $p = 0.73$), indicating that students with a rubric were not at a significant advantage compared to students without a rubric.

Students were asked a number of questions related to the clarity of the assignment, with responses ranging from '1' indicating 'Very Unclear' to '5' indicating 'Very Clear." First, students were asked "How clear was the learning objective of each assignment?" No statistically significant difference was found for those using the rubric (mean = 3.93, s=0.81) and those without the rubric (mean = 4.14, s=0.96, $t = 0.82$, $p = 0.21$).

Next, students were asked, "How clear were the writing organization (including spelling and grammar) requirements of each project part communicated by the professor?" Two sample t-tests were used to see if students with the rubric rated the communication more clearly than those without the rubric. While students with the rubric found the instructions clearer (mean = 4.143, $s = 0.848$) than those without the rubric (mean = 3.81, s = 1.12, no statistically significant differences were found ($t = -1.14$, p=0.131).

Next, students were asked, "How clearly did the professor communicate the requirements related to gathering information from a variety of relevant resources (non-financial data)?" for each of the three parts of the project. Two sample t-tests were used to see if students with the rubric rated the communication more clearly than those without the rubric. While students with the rubric averaged higher on each part (Part 1, mean=4.25, s=0.89; Part 2, mean=4.07, s=0.78; Part 3, mean=4.07, s=0.81) than those without the rubric (Part 1, mean=3.95, s=0.97; Part 2, mean=3.91, s=1.00; Part 3, mean=3.90, s=1.04), no statistically significant differences were found (Part 1, t= -0.64, p=0.14; Part 2, t= -0.64, p=0.26; Part 3, t= -0.61, p=0.27).

Students were then asked, "How clearly did the professor communicate the requirements related to the accuracy and logical presentation of financial data and ratios?" for each of the three parts of the project. Two sample t-tests were used to see if students with the rubric rated the communication more clearly than those without the rubric. As with the previous results, students with the rubric averaged the communication higher on each part (Part 1, mean=3.96, s=0.92; Part 2, mean=4.00, s=0.90; Part 3, mean=4.00, s=0.98) than those without the rubric (Part 1, mean=3.81, s=1.12; Part 2, mean=3.81, s=1.12; Part 3, mean=3.86, s=1.15), but no statistically significant differences were found (Part 1, t= -0.51, p=0.31; Part 2, t= -0.64, p=0.26; Part 3, t= -0.46, p=0.33).

Students were also asked, "How clearly did the professor communicate the requirements related to the analysis of financial data to their respective benchmarks?" for each of the three parts of the project. Two sample t-tests were used to see if students with the rubric rated the communication more clearly than those without the rubric. Once again, students with the rubric averaged higher on each part (Part 1, mean=3.93, s=0.94; Part 2, mean=4.00, s=1.02; Part 3, mean=4.07, s=1.00) than those without the rubric (Part 1, mean=3.76, s=1.18; Part 2, mean=3.67, s=1.15; Part 3, mean=3.67, s=1.24), but no statistically significant differences were found (Part 1, t= -0.53, p=0.30; Part 2, t= -1.05, p=0.15; Part 3, t= -1.12, p=0.14).

Finally, students were asked, "How clearly did the instructor communicate the requirements relating to synthesizing the financial and non financial data into a logically supported conclusion?" Two sample t-tests were used to see if students with the rubric rated the communication more clearly than those without the rubric. In this case, students without the rubric (mean=3.90, s=1.14) actually found the instructions clearer than those with the rubric (mean=3.75, s=1.17), but no statistically significant difference was found (t= 0.47, p=0.68).

It was also of interest whether students without the rubric utilized help through teacher assistants (TAs) or the professor more often than those with the rubric. Two sample tests were

used and while students without the rubric (mean=3.05, *s*=1.63) sought help from TAs more often than those with the rubric (mean=2.86, *s*=0.97), no statistically significant differences were found (*t*= 0.48, *p*=0.32). Similarly, students without the rubric (mean=3.10, *s*=1.73) sought help from the professor more often than those with the rubric (mean=2.36, *s*=1.70); however, a difference was found at the .10 level of significance (*t*= 1.49, *p*=0.07).

Students were also asked to rate their satisfaction with their team members as well as the grade they received on each of the three parts of the project, with '1' indicating 'Dissatisfied' up to '5' indicating "Satisfied." Two sample t-tests were run to see if there was a significant difference, and none was found for working with team members (*t*= -0.27, *p*=0.79). For parts 1 and 2 of the project, no significant differences in satisfaction with grade (Part 1, *t*= 0.55, *p*=0.59; Part 2, *t*= 0.82, *p*=0.42) were found for those using a rubric (Part 1, mean=3.71, *s*=1.30; Part 2, mean=4.18, *s*=1.19) compared to those without a grade (Part 1, mean=3.90, *s*=1.14; Part 2, mean=3.90, *s*=1.14). However a statistically significant difference was found for part 3 at the .05 level (*t*= 2.11, *p*=0.04), as students with the rubric (mean=4.50, *s*=0.79) were more satisfied than those without a rubric (mean=3.76, *s*=1.45).

Students were also asked to rate their effort for each part of the project, with '1' indicating 'low' effort up to '5' indicating 'high' effort. It was expected that students without the rubric would have to exert more effort than those with the rubric to guide their efforts. While students without the rubric (mean=3.9, *s*=1.14) did exert more effort on part 1 than those with the rubric (mean=3.71, *s*=1.30), no statistically significant difference was found (*t*= 0.55, *p*=0.59). However, for parts 2 and 3, significant differences were found at the .10 level (Part 2, *t*=1.49, *p*=0.07; Part 3, *t*= 1.59, *p*=0.06) as students without the rubric (Part 2, mean=4.62, *s*=0.50; Part 3, mean=4.71, *s*=0.46) exerted more effort than those with the rubric (Part 2, mean=4.36, *s*=0.73; Part 3, mean=4.46, *s*=0.64).

The last section of student input asked, "How strongly did the project enhance your understanding of the material presented throughout the semester?" with '1' indicating 'very weak" to '5' indicating 'very strong.' Two sample t-tests were conducted and there was no significant difference (*t*=0.04, *p*=0.52) between those with the rubric (mean=3.61, *s*=0.92) and those without the rubric (mean=3.62, *s*=0.97).

Finally, two sample t-tests were conducted to see if students who had the rubric performed better on each section of the project than students who did not have the rubric. Table Four highlights the results. For part 1, students scored with the rubric scored significantly higher (t-value = 3.60, p-value = .001). For part 2, there was no significant difference (t-value = 0.74, p-value = .233). For part 3, students with the rubric scored significantly higher (t-value = 2.09, p-value = .033).

CONCLUSION

Overall, sections in which students were distributed the rubric did score significantly higher on two of the three sections of the project. However, the student survey results indicated no statistical difference in their feelings about professor communication, project clarity and satisfaction with the project on the whole. While the rubric may in fact have helped students perform better, the survey indicated that students did not realize this afterwards.

As this project continues in the future, several limitations associated with our research will be eliminated. In the future, attempts to control the differences in teaching style will occur by having all instructors teach a semester without use of the rubric and then teach the following

semester with the rubric in order to control for differences in teaching styles and to collect more data overall. Further, it is difficult to make a strong case right now without a larger sample size and there is excitement to see if preliminary evidence is indicative of student achievement in future classes.

REFERENCES

1. Assessment Reform Group (1999), *Assessment for Learning: Beyond the Black Box.* Cambridge, UK: University of Cambridge School of Education, p.2
2. Tierney, Robert J., et al (1991), *Portfolio Assessment in the Reading-Writing Classroom*, Norwood, MA: Christopher-Gordon, p.4
3. Stiggins, Richard J., et al (2004), *Classroom Assessment for Student Learning: Doing It Right- Using It Well.* Portland OR: Assessment Training Institute, 231-240
4. O'Connor, Ken. (2002), *How to Grade for Learning: Linking Grades to Standards (2nd ed),* Arlington Heights, IL: Skylight, 190

Exhibit 1:
Scoring Rubric for Financial Analysis Project

Performance Levels	Writing Mechanics	Information Seeking/Selecting and Evaluating (non data information)	Accuracy and Presentation of Financial Ratios	Narrative Description (analysis/synthesis) of Financial Analysis	Summary and Conclusion
Exemplary (A)	Few or no spelling and grammar errors throughout the entire write up, organized as assigned, and with clear and logical beginning, middle, and end.	Student(s) gathered information from a variety of sources, including appropriate licensed databases (excluding company website). Sources are relevant, balanced and include critical readings relating to the question at hand. Information was carefully analyzed and drew appropriate conclusions supported by evidence.	Accurately calculates the ratios and presents them in appropriate charts or tables, and organizes them into logical categories.	Elaborates on each of the financial ratios; relates and integrates them in logical ways comparing them to relevant benchmarks.	Summarizes the discussion of ratios and their relationships clearly to logically reason to a conclusion answering the assignment question. Information is logically organized with smooth transitions.
Above Average (B)	Occasional, independent spelling and grammar errors, organized as assigned, with a discernable beginning,	Student(s) gathered information from a variety of relevant sources (excluding company website). Student(s)	Calculates most ratios accurately and displays them in charts or tables in a logical manner.	Describes the ratios clearly and relates them to some others and some relevant benchmarks.	Summarizes the discussion of the ratios and their relationships adequately and presents a

	middle, and end.	product shows good before was made in analyzing the evidence collected.			logical conclusion answering the assigned question.
Adequate (C)	Repetition of one or two types of spelling or grammar errors throughout the write up (i.e., do rather than due, there instead of their, agreement errors, etc.) with a less organized presentation .	Student(s) gathered information from a limited range of sources (including company website). and displayed minimal effort in selecting quality resources. Student(s) conclusions could be supported by stronger evidence. Level of analysis could have been deeper.	Miscalculates several ratios and presents them randomly in less clear tables and charts.	Describe ratios adequately, but is less likely to relate them to other ratios and minimally refers to any benchmarks.	Briefly summarizes the discussion about ratios and relationship s and a conclusion with little logical direction.
Below Average (D)	Wide variety of spelling and grammar errors, often repeated throughout the write up; organizatio n unclear.	Student(s) gathered information that lacked relevance, quality, depth and balance. Student(s) conclusions simply involved restating information. Conclusions were not supported by	Miscalculates many of the ratios and presents them in confusing way s without adequate charts or tables.	Describes the ratios minimally and ignores the inter-relationships among them and ignores benchmarks.	No clear, definitive summary or nor reasoned conclusion to the question assigned.

		evidence.			
Failing (F)					<14
Total Points					

Exhibit 2

BACKGROUND

1. Gender
   Male or Female (please circle one)
2. Have you had coursework in accounting previous to this course?
3. What was your GPA in high school?
4. What is your GPA at St. Norbert College?
5. Are you an accounting major? Yes or No (please circle one)
6. Please circle your current class standing.
   Freshman Sophomore Junior Senior
7. Please circle your expected grade in this course?
   A AB B BC C CD D F
8. For the following questions please use the following scale:
   1 – Very unclear
   2 – Unclear
   3 – Neither clear nor unclear
   4 – Clear
   5– Very Clear
   a. How clear was the learning objective of each assignment?
      1 2 3 4 5 (please circle one)
   b. How clear were the writing organization (including spelling and grammar) requirements of each project part communicated by the professor?
      1 2 3 4 5 (please circle one)
   c. How clearly did the professor communicate the requirements related to gathering information from a variety of relevant resources (non-financial data)?
      Part 1: 1 2 3 4 5 (please circle one)
      Part 2: 1 2 3 4 5 (please circle one)
      Part 3: 1 2 3 4 5 (please circle one)
   d. How clearly did the professor communicate the requirements related to the accuracy and logical presentation of financial data and ratios?
      Part 1: 1 2 3 4 5 (please circle one)
      Part 2: 1 2 3 4 5 (please circle one)
      Part 3: 1 2 3 4 5 (please circle one)
   e. How clearly did the professor communicate the requirements related to the analysis of financial data to their respective bench marks?

Part 1: 1 2 3 4 5 (please circle one)
Part 2: 1 2 3 4 5 (please circle one)
Part 3: 1 2 3 4 5 (please circle one)

f. How clearly did the instructor communicate the requirements relating to synthesizing the financial and non financial data into a logically supported conclusion?
1 2 3 4 5 (please circle one)

9. How many times did you seek assistance from a TA in the accounting TA office?
1 2 3 4 5 6 >7 (please circle one)
10. How many times did you seek assistance from your professor?
1 2 3 4 5 6 >7 (please circle one)
11. Rate your experience on this project with respect to the following
For the following questions use the following scale:
1 –Dissatisfied
2 – Somewhat Dissatisfied
3 – Neither Satisfied nor Dissatisfied
4 – Somewhat Satisfied
5– Satisfied

a. Working with team members:
1 2 3 4 5 (please circle one)

b. Grade you have received:
Part 1: 1 2 3 4 5 (please circle one)
Part 2: 1 2 3 4 5 (please circle one)
Part 3: 1 2 3 4 5 (please circle one)

Self- Assessment

12. Rate your effort on each part of the project.
Part 1: 1 (low) 2 3 4 5(high)
Part 2: 1 (low) 2 3 4 5(high)
Part 3: 1 (low) 2 3 4 5(high)
(Please circle one)

13. How strongly did the project enhance you understanding of the material presented throughout the semester? (please circle one)
1 (very weak) 2 (weak) 3(neither strong/weak) 4 (strong) 5(very strong)
14. Please provide any suggestions on how this project should be modified next semester

Using text data mining techniques for understanding free-style question answers in course evaluation forms

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ABSTRACT

Like many universities, University of Florida courses are evaluated by students using a standard form and set of questions including quantitative questions (rate on a scale of 1 – 5) as well as subjective short answer questions. Student answers to the short answer questions of the University of Florida standard course evaluation sheets were analyzed using text data mining techniques to identify unrevealed aspects affecting the teaching process and develop a quantification tool for these aspects. We analyzed student answers on 25 standard University of Florida (UF) course evaluations sheets representing 4 courses (5 sections – 2 instructors). The answers from these course evaluations were scored positively or negatively in two independent ways, manually using human interpretation and automatically based on keyword co-occurrence text mining algorithm. The number of positive and negative answers related to different teaching aspect categories was determined. We introduced the Teaching Evaluation Index (TEI), as an index to quantify students textual evaluations using the number of positive and negative comments interpreted from the text.

The TEI values computed using manually interpreted and computationally mined student short answers showed strong correlation (R^2=0.96). A comparison of the TEI and overall course and instructor evaluation means extracted from the quantitative student responses were analyzed. This analysis showed strong correlation between the TEI values and the overall course and instructor evaluation means (R^2=0.86 and R^2=0.92, respectively). The results of our experiment showed that text mining of student short answers, with its automation capacity, can provide efficient additional (or alternative) measure for the overall course evaluation process. More data is recommended to generalize these results.

Keywords: course evaluation, Text mining, short answer questions, teaching evaluation index, co-occurrence analysis

INTRODUCTION

Student evaluation is an integral part of the education process, but it is often viewed with differing perspectives and purposes. Some experts view evaluation as a “test of effectiveness – of materials, teaching methods. Even further evaluation gives insight on how to improve current practices (Ramsden, 2003). In essence evaluation has been viewed to have two classic purposes: audit and development also referred to as accountability and improvement (Bowden & Marton,

1998), appraisal and developmental purpose (Kember et al., 2002), judgmental and developmental purpose (Hounsell, 2003), or quality assurance and quality enhancement (Biggs, 2003). Student evaluation of faculty at the collegiate level is seen as a means of accountability and aids in the efforts to define and measure teaching effectiveness (Chen & Hoshower, 2003). Evaluation is not a perfected practice but overall student ratings have been relatively well accepted by researchers and practitioners in the field because "student ratings are the single most valid source of data on teaching effectiveness - in fact there is little support for the validity of any other source of data" (Spencer & Schmelkin, 2002; McKeachie, 1997).

Even better students consistently do not show an opposition to answering the evaluations and typically answer the questions honestly and willingly (Douglas & Carroll, 1987; Hofman & Kremer, 1980; Marsh, 1984, 1987; Tom et al., 1990). In the end, students often view the evaluation ratings as a way to improve the faculties teaching methods. Also students perceived the current system of evaluating faculty to be effective and believed that faculty valued input from the evaluations. Student evaluation can be divided into Summative and Formative (Scriven, 1967). Abbott et al., (1990) found that students often preferred the use of mid-semester formative evaluations because they could see the feedback in practice rather than at the end of the semester. Generally, both types of evaluation contain numerical (quantitative) and textual (qualitative) questions. Quantitative questions are often considered by administration for overall evaluation of the faculty, while answers to qualitative essay-style questions are left to the faculty to examine and utilize. Although human comprehension of the text information on the evaluation sheet is important and optimal, quantitative analysis of the students' narrative response can reveal hidden (or stress existing) aspects of the teaching process. Additionally, it can provide quality control measures for the evaluation sheet and another metric for the administration to assess faculty performance.

Text mining or text data mining is the process of deriving interesting information from text through discovering patterns and trends. Text mining algorithms are utilized in several applications such as summarizing and analyzing web content (Himmel, et al., 2009; Jackson & Moulinier, 2007) improving customer relations (Coussement & Vandenpoel, 2008) and managing scientific publications (Cohen & Hunter, 2008). Text mining generally starts with a text refining step, where free-style text is transformed into a structured form (e.g. relational database) (Delgado et al., 2002). Such data can be used for analysis that involves document clustering and categorization (Tan, 1999). The data can be used to deduce patterns and relationships among extracted data elements. The later analysis is domain dependent and requires conceptual knowledge about the theme of the extracted data.

In this study we compare manual interpretation of short answer student response to course evaluation sheet questions with automated analysis using text mining algorithms. This prototype study demonstrates the potential for using student responses to extract information in a quantifiable manner through text mining techniques. We consider our results a proof of concept that demonstrate the need for future analysis that utilizes larger data set and more sophisticated text mining analysis that is dedicated towards the teaching process domain.

METHODOLOGY

In this study, we analyzed student answers on 25 standard University of Florida (UF) course evaluations sheets representing 4 courses (5 sections – 2 instructors). A typical UF course evaluation sheet contains 13 questions that are quantitative using a score or 1 – 5 (poor –

excellent) at the front page of the sheet. On the other side of the evaluation sheet, 5 essay-style questions that allow the student to respond in a more qualitative open ended manner exist. Figure 1 shows the back of a standard UF course evaluation sheet.

The answers for the 5 free-style questions were analyzed using human interpretation and using text mining algorithms. As a pre-processing step, the answers were transcribed by an impartial person and checked for spelling errors. The data was organized in a database table that includes information about course number, instructor, section, number, semester, level, evaluation question, and transcribed student responses to the questions. Table 1 demonstrates few records of the used data table.

Manual interpretation of student answers was performed by identifying the five major elements (categories) of the teaching process: course; instructor; assessment; material; and delivery. Each of these categories was further broken into several subcategories to increase the analysis resolution. Each evaluation sheet was manually interpreted to identify the number of positive and negative comments for pre-identified categories (and their subcategories). For example, the number of positive and negative answers related to the course delivery method (e.g. live, video conferencing, asynchronous web-based, or synchronous via web) was determined. The numbers for these subcategories were summed together to form the number of positive and negative responses for the 'Delivery' main category.

The student response was analyzed using the Wordstat software to suggest a keywords list in addition to a list of excluded words (e.g. 'the' , 'about', 'can'). More words were manually added to the excluded words list due to their insignificant linguistic value in the data mining application. Two major groups of words indicating positive (e.g. 'good', 'amazing', and 'challenging') and negative (e.g. 'poor', 'hard', 'confusing') words were created. The remaining keywords were manually examined and inclusively divided into eight different categories pertaining to the quality of the teaching process. Most of these categories matched those identified in the manual analysis section.

Co-occurrence–based analysis was automatically performed on the data. The number of co-occurrences between positive and negative word groups and each of the teaching quality word categories in addition to other variables such as instructor number and section number within the same text unit (sentence) was automatically determined and summarized against data variables such as the instructor and course variables. Figure 2 shows a screen snapshot of the Wordstat software co-occurrence analysis. The figure shows how many co-occurrences of positive keywords (listed by sentence) with different variables (shown as columns). The figure also shows a bar chart diagram that illustrates how many co-occurrences of positive keywords and the instructor-number variable.

A newly introduced Teaching Evaluation Index (TEI) is computed based on the total positive (Pos_cnt) and negative (Neg_cnt) counts for each course section. The index can be computed for each variable (instructor, section, etc.)/teaching category (assessment, material, instructor, etc.) influencing the teaching process based on the positive and negative occurrence count. The index also has a [-1,1] bound, where the bounds indicate totally negative and positive comments, respectively.

$$TEI = \frac{Pos\_cnt \ - Neg\_cnt}{Pos\_cnt \ + Neg\_cnt} \qquad (1)$$

RESULTS

Manual mining of student answers to identify strong and week points in the teaching process was the original motivation for this research. The results of the human interpretation of student answers of individual course sections that counted the number of positive and negative response for each of five main categories affecting the teaching process is shown in table 2. The table also shows the overall Teaching Education Index for each of the analyzed course sections. The number of positive co-occurrence of negative/positive keywords with each of the 8 main categories affecting the teaching process (analyzed through the wordstat text mining software) and the computed TEI are listed in table 3 and summarized by section numbers.

ANALYSIS AND DISCUSSION

Table 2 shows that mining the free-style text at the back of the evaluation sheets revealed some aspects affecting the teaching process that were hidden in the student answers. The table shows high number of negative responses for distance courses (section 7258:1/7 and section 6241:0/5). It also shows potential difference for student evaluation standards from graduate and undergraduate students. Investigating the number of positive and negative keyword co-occurrences with the teaching process categories summarized by variables such as instructor, course or section number could reveal important information or pattern. For example, figure 3 shows the number of positive and negative keyword co-occurrences for section 7258. The figure reveals some delivery and schedule related problems associated with this section.

The results shown in figure 4 indicates a strong correlation (R^2=0.96) between TEI values computed using manual and automated (text mining) analysis considering all teaching evaluation categories combined. However, the results of individual categories did not show such correlation as shown in tables 2 and 3. This may be attributed to the accurate sentence-level comprehension of positive and negative results belonging to each category in the manual text analysis case. In contrast, in the automated text mining case, general keywords were interpreted and classified into different categories regardless of sentence semantics. Figure 5 shows that the TEI values and overall course and instructor evaluation means computed from the front page of the evaluation sheet questions are strongly correlated (R^2=0.86 and R^2=0.92, respectively). This indicates the potential of using the TEI index as an extra measure for overall course performance.

CONCLUSION

We utilized a small data set of student course evaluation answers to provide preliminarily analysis on the feasibility of text mining techniques in analyzing the students' narrative answers. Although, only small dataset was used in this study, our results proved that text mining is a promising technique to analyze short answer textual information in the students' course evaluation sheets more efficiently than by simply having to read each comment individually. By analyzing these responses and calculating the Teaching Evaluation Index (TEI) can transform qualitative responses into quantitative information so that one can gain additional insights to evaluate the value of the course from the students perspective.

Examining the TEI computed from manual interpretation of student results showed significant correlation with student answers to the overall course and instructor evaluation questions located at the front page of the sheet. This result suggests potential use of analyzed

student narrative answers as alternative (or quality control measure) to student answers of the quantitative questions at the front of the evaluation sheet. The strong correlation between TEI values computed through human text interpretation and text mining algorithm suggest the potential for automating the process, which may be necessary for large scale implementation. However, significant linguistic and psychological research is needed to fine tune keyword selection and to better understand word semantics in a teaching evaluation domain.

REFERENCES

Abbott, R.D., Wulff, D.H., Nyquist, J.D., Ropp, V.A. & Hess, C.W. (1990). Satisfaction with processes of collecting student opinions about instruction: The student perspective. Journal of Educational Psychology, 82, 201–206.

Ah-Hwee Tan, 1999. Text mining: The state of the art and the challenges. In Proceedings PAKDD'99 Workshopon Knowledge Discovery from Advanced Databases (KDAD'99), pages 71–76, 1999.

Biggs, J. (2003). Teaching for quality learning at university: What the student does. Buckingham, UK: SRHE and Open University Press.

Bowden, J., & Marton, F. (1998). The university of learning: Beyond quality and competence in higher education. London: Kogan Page.

Chen, Y., & Hoshower, L.B. (2003). Student evaluation of teaching effectiveness: An assessment of student perception and motivation. Assessment & Evaluation in Higher Education, 28(1), 71–88.

Cohen KB, Hunter L (2008) Getting started in text mining. PLoS Comput Biol 4(1): e20. doi:10. 1371/journal.pcbi.0040020

Coussement K., Vandenpoel ,D. (2008) Improving Customer Complaint Management by Automatic Email Classification Using Linguistic Style Features as Predictors, Decision Support Systems, 44(4), 870-882

Delgado, M., M.J. Martín-Bautista, D. Sánchez, M.A. Vila, "Mining Text Data: Special Features and Patterns". In Proc. of EPS Exploratory Workshop on Pattern Detection and Discovery in Data Mining, London, September 2002. Lecture Notes in Computer Science 2447, D. Hand et.al., Eds., pp. 140–153. Springer-Verlag.

Douglas, P.D., & Carroll, S.R. (1987). Faculty evaluations: Are college students influenced by differential purposes? College Student Journal, 21(4), 360–365.

Himmel W., Reincke, U., Michelmann H. W. (2009) Text mining and Natural language Processing Approaches for automatic categorization of lay requests to web-based expert forums. Journal of Medical Internet Research, 11(3):e25.

Hofman, J.E., & Kremer, L. (1980). Attitudes toward higher education and course evaluation. Journal of Educational Psychology, 72, 610–617.

Hounsell, D. (2003). The evaluation of teaching. In H. Fry, S. Ketteridge & S. Marshall (Eds.), A handbook for teaching and learning in higher education: Enhancing academic practice (pp. 200–212). London: Kogan Page.

Jackson P, Moulinier I (2007) Natural language processing for online applications: Text retrieval, extraction, and classification. 2nd edition. Herndon (Virginia): John Benjamins Publishing Company.

Kember, D., Leung, D. Y. P., & Kwan, K. P. (2002). Does the use of student feedback questionnaires improve the overall quality of teaching? Assessment and Evaluation in Higher Education, 27(5), 411–425.

Marsh, H.W. (1984). Students' evaluations of university teaching: Dimensionality, reliability, validity, potential biases and utility. Journal of Educational Psychology, 76(5), 707–754.

Marsh, H.W. (1987). Students' evaluations of university teaching: Research findings, methodological issues and directions for future research. International Journal of Educational Research, 11(2), 253–388.

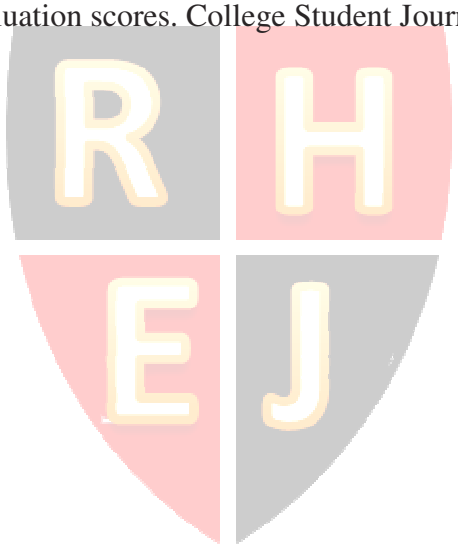
McKeachie, W.J. (1997). Student ratings the validity of use. American Psychologist, 52(11),1218–1225.

Ramsden, P. (2003). Learning to teach in higher education (2nd ed.). London: Routledge Falmer, p. 223.

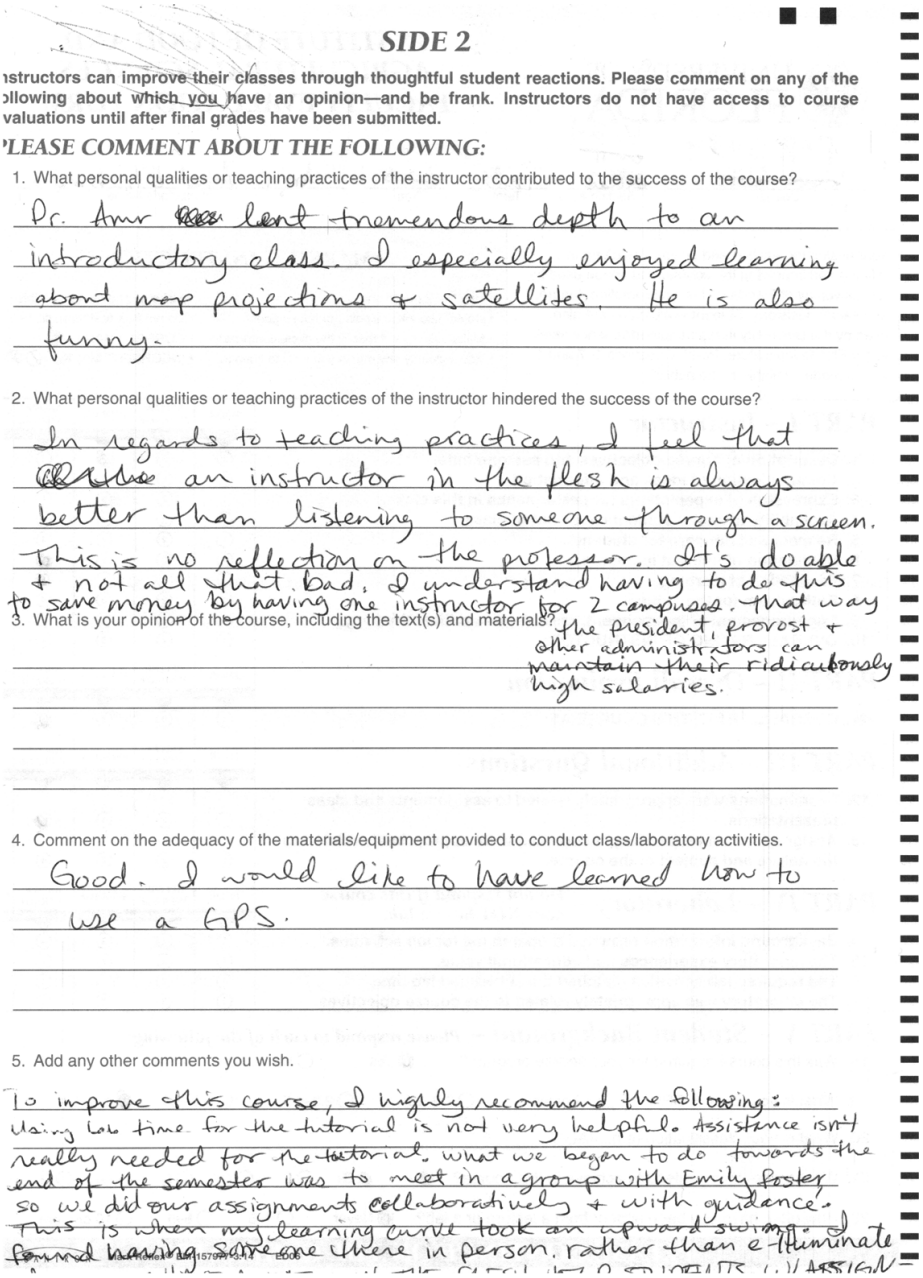
Scriven M. (1967) The methodology of evaluation. In R. W. Tyler, R. M. Gagné, & M. Scriven (Eds.), Perspectives of curriculum evaluation, 39-83. Chicago, IL: Rand McNally.

Spencer, K.J., & Schmelkin, L.P. (2002). Student perspectives on teaching and its evaluation. Assessment & Evaluation in Higher Education, 27(5), 397–409.

Tom, G., Swanson, S., & Abbott, S. (1990). The effect of student perception of instructor evaluations on faculty evaluation scores. College Student Journal, 24(3), 268–273.



APPENDIX



SIDE 2

ınstructors can improve their classes through thoughtful student reactions. Please comment on any of the ollowing about which you have an opinion—and be frank. Instructors do not have access to course valuations until after final grades have been submitted.

'LEASE COMMENT ABOUT THE FOLLOWING:

1. What personal qualities or teaching practices of the instructor contributed to the success of the course?

Dr. Amr ~~xxx~~ lent tremendous depth to an introductory class. I especially enjoyed learning about map projections & satellites. He is also funny.

2. What personal qualities or teaching practices of the instructor hindered the success of the course?

In regards to teaching practices, I feel that ~~xxx~~ an instructor in the flesh is always better than listening to someone through a screen. This is no reflection on the professor. It's doable & not all that bad. I understand having to do this to save money by having one instructor for 2 campuses. That way the president, provost & other administrators can maintain their ridiculously high salaries.

3. What is your opinion of the course, including the text(s) and materials?

4. Comment on the adequacy of the materials/equipment provided to conduct class/laboratory activities.

Good. I would like to have learned how to use a GPS.

5. Add any other comments you wish.

To improve this course, I highly recommend the following: Using lab time for the tutorial is not very helpful. Assistance isn't really needed for the tutorial. What we began to do towards the end of the semester was to meet in a group with Emily Foster so we did our assignments collaboratively & with guidance. This is when my learning curve took an upward swing. I found having someone there in person, rather than eliminate

Figure 1. The back page of the back of a standard UF College of Agricultural and Life Sciences course evaluation sheet

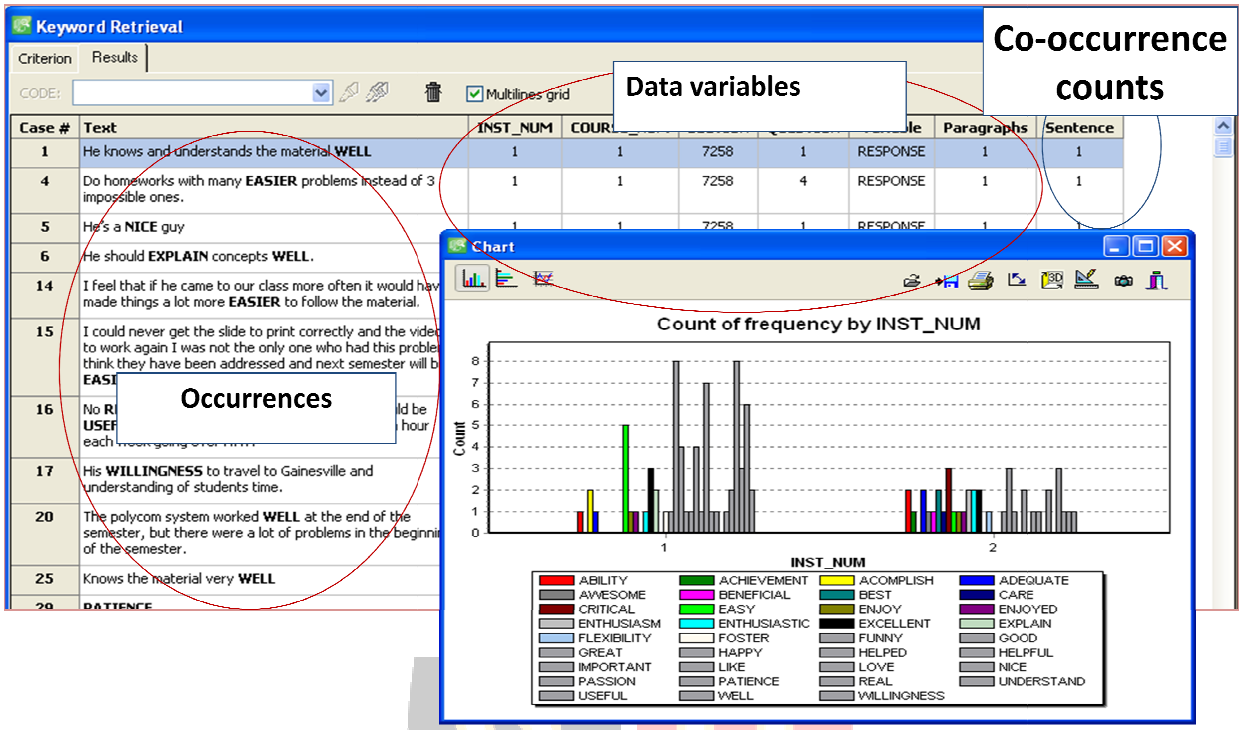


Figure 2. Screen snapshot of the Wordstat software co-occurrence analysis

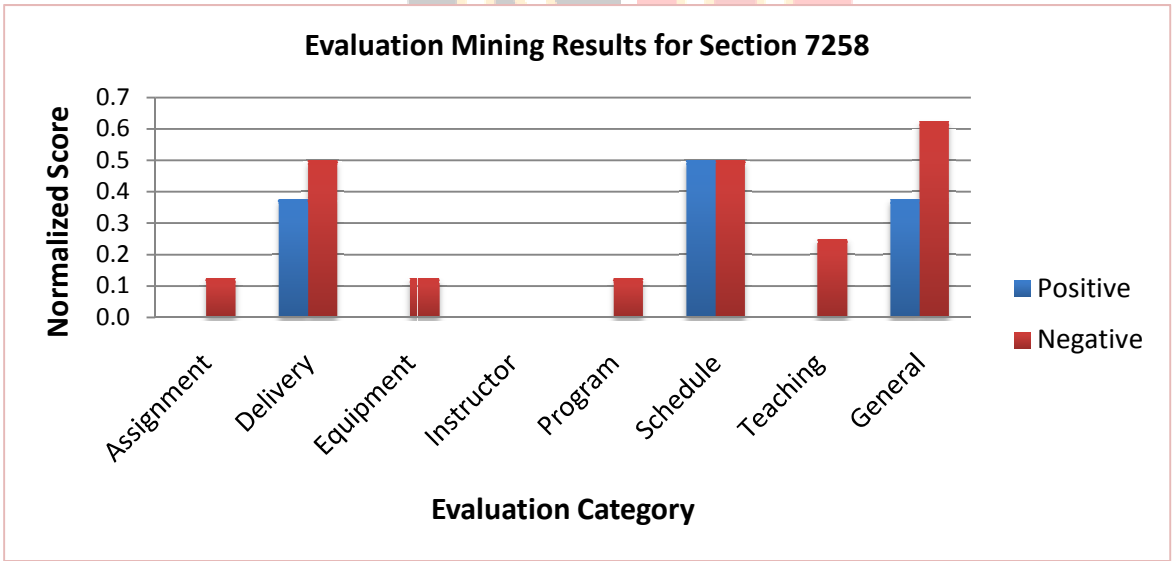


Figure 3. Number of positive and negative keyword co-occurrences with different teaching categories for section 7258

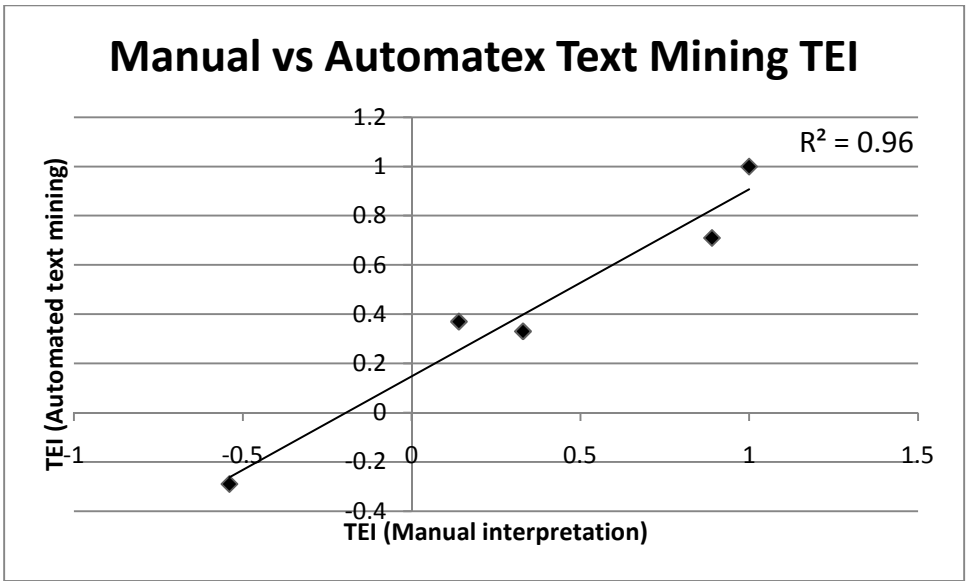


Figure 4. Plot of TEI values computed using manual interpretation and text mining techniques

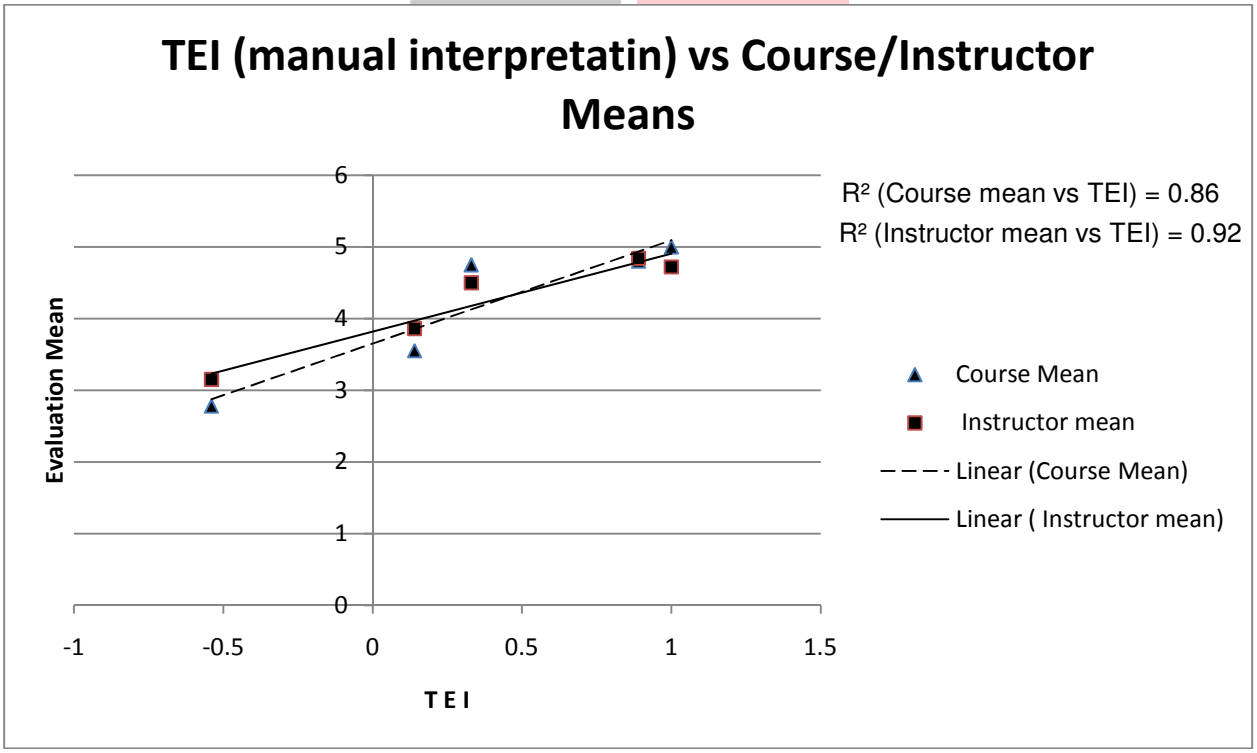


Figure 5. Plot of TEI values computed through manual interpretation and the answer to the overall course and instructor evaluation at the front of the evaluation sheet.

Table 1. Sample of database table containing course evaluation information including student textual response

ID	Instr-uctor	course	Course _Num	Semester_ Yr	level	section	Stu-dent	Quest-ion	Response*
1	1	SUR3641	1	fall2008	UG	7258	1	1	e.g. He knows and understands the material well
2	1	SUR3641	1	fall2008	UG	7258	1	2	e.g. Polycom is not the same as face-to-face
3	1	SUR3641	1	fall2008	UG	7258	1	3	e.g. 3 hr course is too long, and will be IMPOSSIBLE to maintain discipline/attention spans
4	1	SUR3641	1	fall2008	UG	7258	1	4	Response Masked
5	1	SUR3641	1	fall2008	UG	7258	2	1	Response Masked
6	1	SUR3641	1	fall2008	UG	7258	2	2	Response Masked
7	1	SUR3641	1	fall2008	UG	7258	2	3	Response Masked
8	1	SUR3641	1	fall2008	UG	7258	2	4	Response Masked

UG: undergraduate * response masked for privacy reasons

Table 2. Manual Interpretation results of student response for different teaching categories

section	7258		8546		8624		6241		7371&7362	
(partici/enrol)	(9/9)		(2/2)		(2/4)		(11/18)		(5/8)	
Delivery/level	Dist/UG		Dist/G		live/UG		Dist/UG		live/UG	
	POS	NEG	POS	NEG	POS	NEG	POS	NEG	POS	NEG
General/Course	0	1	1	0	0	0	1	0	9	0
Instructor	5	5	2	0	3	0	5	3	14	0
Assessment	0	4	0	0	0	0	0	1	0	0
Material	0	3	5	0	1	0	10	3	14	2
Delivery	1	7	0	0	0	2	0	5	0	0
sum	6	20	8	0	4	2	16	12	37	2
TEI	-0.54		1.00		0.33		0.14		0.89	

UG: ndergraduate Dist: Distance Education (videoconference) and virtual classroom

Table 3. Count of positive/negative co-occurrences for each of different teaching categories summarized by the course section variable.

section	7258		8546		8624		6241		7371&7362	
(partici/enrol)	(9/9)		(2/2)		(2/4)		(11/18)		(5/8)	
loc/level	Dist/UG		Dist/G		live/UG		Dist/UG		live/UG	
	POS	NEG	POS	NEG	POS	NEG	POS	NEG	POS	NEG
General/Course	3	5	5	0	0	0	4	4	11	3
Instructor	0	0	4	0	4	1	1	1	0	0
Assessment	0	1	0	0	0	0	0	4	0	0
Material	2	4	5	0	1	4	11	1	18	3
Delivery	3	4	0	0	0	0	5	1	4	0
Equipment	0	1	0	0	4	0	2	0	0	0
Program	0	1	2	0	4	1	2	0	1	0
Schedule	4	4	0	0	1	0	1	1	3	1
Teaching	0	2	0	0	0	1	2	1	4	0
sum	12	22	16	0	14	7	28	13	41	7
TEI	-0.29		1.00		0.33		0.37		0.71	

UG: undergraduate Dist: Distance Education (videoconference) and virtual classroom

Communication and conflict: anxiety and learning

Peter Cowden
Niagara University

Abstract

Many educators are unaware of what anxiety is and how it affects their students. Anxiety is when a student experiences excessive and uncontrollable worry about future and past events, excessive concern about performing competently and significant self-consciousness. Students with anxiety often have negative views about their ability to cope with stressful academic situations. They believe that they do not have the skills necessary to cope; therefore, they believe they don't have control or are losing control. Students with anxiety often misunderstood or exaggerated the importance of the situation. If the condition is not managed properly negative aspects can occur. There are many terms that are used to describe an experience of anxiety. This article discusses those associated with learning and ways students may be assisted in coping with this concern.

Keywords: Learning, Special Needs, Coping Skills, Education

Introduction

Anxiety is when a student experiences excessive and uncontrollable worry about future and past events, excessive concern about performing competently and significant self-consciousness. Students with anxiety often have negative views about their ability to cope with stressful academic situations. They believe that they do not have the skills necessary to cope with a particular threat (Wolfe, 2005). Therefore, they believe they don't have control or are losing control over. Students with anxiety often misunderstood or exaggerated the importance of the situation. If the condition is not managed properly (e.g. cognitive behavioral therapy), it may lead to a slippery lope of self-fulfilling prophecy (Vanin, 2008).

Anatomy of Anxiety

Everyone feels anxious at some time or another. Fear and worries are common in children, teenagers and adults. This is a normal part of development. For example, it is normal for a child to be afraid of the dark or monsters, but when the fear continues and the severity augments, there is reason for concern (Chansky, 2004).

Some people experience more anxiety than others, over events or things that may not realistically deserve an excessive amount of worrying. Anxiety is a normal reaction to stressful situation (Connolly, Simpson, & Petty, 2006). It allows people to react quickly and thus prevents people from becoming hurt in dangerous situations or perceived threats. Some people misinterpret events and tend to linger on their misinterpretation of those events, thinking them through over and over again.

In the school setting, anxiety is experienced often by students when being evaluated, such as when taking a test or giving a public performance. When test anxiety is severe, it can have significant negative effects on a student's ability to perform at an optimal level. Huberty (2009)

asserts that text anxiety overtime, tends to contribute to more pervasive underachievement. He describes the consequences of chronic test anxiety including lowered self-esteem, reduced effort, and loss of motivation for school tasks. Stowell and Bennett (2010) studied the effects of online testing on student exam performance and test anxiety, they found that students who experience high anxiety while writing tests in a classroom, were found to be less anxious when taking an exam online. Thus, online testing and examining may be a great alternative.

A typical classroom consists of students from diverse families and cultures. Each family has diverse problems and issues that they are dealing with and each student has a distinct way of dealing with stress and emotions. Many times, anxiety initiates with such situations, within the home. Families go through events that may cause children a lot of pain and uncertainty. Children may not express themselves accordingly, which is when anxiety may show its first sign and presence. Anxiety occurs amongst many, yet children have the extra burden of carrying stress and confusion and not being able to express themselves properly or not feeling as if they are able to voice their feelings.

Causes of anxiety can be a result of biological and psychological factors that are intertwined in a complex manner. Academic anxiety is also associated with other emotional or behavioral disorders (Smith, 2009). Regardless of the cause or the type, academic anxiety can be managed. Teachers must be aware of the management strategies available such as positive reinforcement, clear directions, with examples, etc. will help students with academic anxiety perform better. Academic anxiety is often learned, which means they can be "unlearned". For example, a child may learn to be afraid of something because his or her parent is afraid of that thing, thus a phobia may develop. Parents frequently pass their anxiety to their children (Weiten and McCann, 2007). Therefore, it is vital that teachers, parents, and caretakers are knowledgeable and prepared to help students with academic anxiety overcome their challenges. Interesting, academic anxiety is not just experienced by students, Tummala-Narra (2009) found that anxiety is felt both by students and instructors. To enhance learning effectiveness, teachers are encouraged to identify anxiety-provoking situations and provide a supportive learning environment so that the learners can devote their complete working memory resources to the learning tasks. Anxiety consumes the resources of working memory, thus impeding on an individual ability to perform effectively. Not a lot of clinical research on academic anxiety because many people just pass it off as something normal that students experience (Cunningham, 2008). When dealing with this concept one needs to deal with the following research questions:

1. How does a student with academic anxiety interact with others?
2. How does a student with academic anxiety operate in the classroom?
3. How does a teacher manage a student with academic anxiety?

How does a student with academic anxiety interact with others?

Children with academic anxiety often (withdrawn) choose to sit out of activities and not integrate in social activities with their classmates. They often complain of fatigue, restlessness, irritability, muscle tension, dizziness, nausea, stomachaches and headaches (somatic symptoms). They choose to avoid any form of situation where criticism may be involved and are constantly requiring reassurance (Foxman, 2004). Students who have academic anxiety also have a higher risk of developing depression, and often experience demoralization (Cunningham, 2008). Thus, academic anxiety can become extreme, and have negative effects of students' well being.

How does a student with academic anxiety operate in the classroom?

According to Cowden (2009), some students with social anxiety are afraid to speak and interact within an educational setting. Within the classroom, these students will often daydream and their thoughts will be thoughts filled with anxiousness, concern and uneasiness (Spencer-DuPont, DuPont, & DuPont, 2003). For example, these students may have a difficult time to stay focus if they heard about a catastrophic situation in the news, or if they overheard their parents or peers discussing a real-life event which may have no impact on their lives, these children tend to dwell and focus their concern on these issues. By the time they refocus and concentrate on completing their work, their minds will be filled with new worries about their academic, the quality of their work, their performance in exams, sporting or musical events.

Humans experience social anxiety to different degrees and in different areas. For example, an actor may by loud and bold on stage, but shy in an interview. Most people experience social anxiety at some point in their lives, the degree to which it occurs will vary from person to person. Social anxiety could be genetic or passed down from parents, a chemical abnormality in the brain, or it could occur after a humiliating experience. For students with disabilities, it could be a combination. According to Fisher, Allen, & Kose (1996), students with disabilities function under higher levels of anxiety than students without disabilities. Situations that students without disabilities could categorize as enjoyable or fun, students with disabilities could see as a situation that may end up becoming humiliating or awkward for them, which results in an escalation of anxiety. For example, in school when a teacher chooses to play a game where the students may have to come up in front of the rest of the class and write something on the board, or say something to their classmates, students with disabilities may view that to be an unfamiliar situation and become anxious or nervous and not want to participate. Students without learning disabilities view the situation as a chance to have fun in the classroom and get up and be able to move and have the attention on them.

Social anxiety could also come from the amount of time a student with disabilities is in the general education classroom. Some services pull out students with disabilities for only part of the day or for certain academic areas, in which they may need extra assistance and some services may pull out students with disabilities for a majority of the day or most of the academic areas. This results in students with disabilities that are only pulled out for part of the day to have a lower degree of social anxiety. The reason for that is because they are more comfortable around their peers and they are more familiar with the daily routine of the classroom, which leaves less of a chance for surprises or unexpected events that may cause the social anxiety. Students with disabilities also worry about failing in the classroom. According to Stein, & Hoover (1989), the increased demands of the general education classroom raises the opportunity for failure, which creates higher levels of anxiety. Everyone experiences social anxiety to some degree about something during their lives. Students with disabilities often experience anxiety at higher degrees due to different
situations, especially in the classroom, than students without disabilities.

Social Anxiety Disorder varies from gender to ethnic background. Research estimates that 12% of the U.S. population meets the criteria for Social Anxiety Disorder with rates in other countries varying (Lee, 1999). Women are more likely to develop the disorder than men are. In other populations; however, the anxiety may present itself differently. Americans in many ways see the pursuit of their own personal goals as a sign of good mental health. As for other cultures, group goals are more important than individual goals. In cultures where the group is seen as

more important than its individual parts, social anxiety disorders develop differently as people often become increasingly distressed about how they may affect others (Sanders, 2000).

For students with special needs it has been found that as a result of feeling social anxiety they are more likely to have more difficulty in skilled social behavior. This leads to the students not having very many friends which they feel is a result of their personality rather than of their lower self-confidence and social anxiety. The extent of this can be seen in a study conducted by Bierman & Erath (2007), children varies from age 13-19 year olds with spina bifida, 31 (53 percent) had had no social contact with a friend of their own age for at least a month prior to the interview. Also, Anderson (1982) found that just 6 percent of the able bodied group were leading limited or very restricted social lives, as against 29 percent of those with exceptionalities. Overall, due to their lower self confidence as well as the social anxiety they face, students with special needs feel as though many students do not like them when many times it could be the uneasiness brought about by their lack of social skills (Best, 2009). It is important for students with special needs to be given increased opportunities for interactions with their peers so that they are able to thrive in social situations throughout their lifetime.

Anxious children may also be very quiet, compliant and eager to please (McLoone, Hudson, and Rapee, 2006). Therefore, their difficulties may be missed. These children feel as if they need to keep their peers happy and do not want to "burden" them with their fears or issues. They try to please others to avoid conflicts and in many situations, this may result in significant stress on themselves and on their mental state. They do so by often suffering in silence.

Academic anxiety is distracting. For example, students who are preoccupying their minds with irrelevant things that do not pertain to the task at hand (Vassilaki, 2006). Thus, their energy is wasted when it could be used for task elaboration or to help improve their overall academic performance. Students with academic anxiety are self-preoccupying and lead to their own negative results.

Social anxiety continues to affect numerous special needs students throughout our educational system (Cowden, 2009). Students with learning disabilities are much more vulnerable to academic anxiety, and will increasingly be accessing generic services (Bakala and Cooray, 2005). Some subjects, such science, can be perceived by many as a difficult and challenging discipline. Students often choose to avoid science altogether or take only the bare minimum that they need to fulfill degree requirements (McCarthy and Widanski, 2009). Anxiety in language classes can also be overwhelming to some students. Research suggests that how students perceive themselves as language learners can affect both their level of anxiety in language courses and their achievement (Phillip, 2008).

How does a teacher manage a student with academic anxiety (School-based intervention)?

Social anxiety causes individuals to fear situations. Many shy people feel so anxious when they are around others, that they start going out of their way to avoid any social situation. Many shy people avoid social situations altogether so they will not feel anxious and panic. By doing this, they will not have to worry about what they say sounding stupid, or most importantly, what others are thinking of them. Overall, because of these feelings, many shy people experience a lot of feelings of shame and embarrassment and negative self criticism due to them looking down on their own social anxiety. Social anxiety can also be seen in students with special needs. They are more likely to face this social anxiety due to the low self-confidence they feel about having an exceptionality. For example, when an adolescent student with special

needs does go into a social setting in which they fear such as a party, they will usually stand off to the side to avoid conversations. The downside to doing this though, is that many people are uneasy with social anxiety in others. They perceive shy people who avoid conversations or walk away quickly from social encounters to be rude or stuck up. These feelings can clearly be observed in an article written by Alm and Frodi (2008). Similar to how many people feel uneasy, these participants explained they feel stressed out by shy people and upon meeting, the conversation is usually boring and uninteresting. The participants explained that they feel stressed because the shy people do not always contribute to what they are thinking or feeling. Consequently, these students with special needs miss out on socialization with their peers due to their own social anxiety.

Similar to fearing situations such as parties, social anxiety can be experienced in children with special needs throughout the average school day. For example, a study conducted by Younger, Schneider, and Guirguis (2008) studied 227 children from the first, third, fifth, and seventh grades what behaviors characterize shyness in their peers. The categories of behaviors most frequently described by these children included the following: doesn't talk, stays by self, walks/runs away from others, looks away/avoids eye contact, and gets mixed up when talking/stutters. Overall, similar to the students in this study these behaviors exhibited by students with special needs, result in increased loneliness. This is due to the fact that they do not have many friends due to their social anxiety and the awkwardness that others feel when around them. In the end, school may become a place of apprehension for shy children with special needs because they will have limited social interaction with other students their age. As a result of this, they believe their shyness is a negative trait which in turn lowers their self-esteem.

Children who are experiencing high levels of anxiety can be identified in the school setting. There are assessment tools such as a self-reporting questionnaire to screen which children may be at risk. These questionnaires are not to be used solely to diagnose children, but they are a good place to start. If a teacher detects that a child is over-anxious or upset, the parents should be notified and a conversation about this condition should occur. Many children who have academic anxiety tend to be very concerned about school grades and tend to express concern about every assignment and grade. Teachers may also spend time with the entire class talking about mistakes and how everyone makes them. Teachers may reassure that there will be plenty of opportunities to make up for marks and that the homework marks are not a direct reflection of the student's academic success (Iconis, 2002).

Teachers can help the students who worry about the effectiveness of their performance, or who are overwhelmed and dwell on their stress, to turn that anxiety into a positive, and make it act more like motivation (Weiten and McCann, 2007). Teachers can create a calm, comfortable test environment and to advise students if they are stuck on a question, to skip it and move on to other questions they do know, and come back to that question later, rather than waste their time. Teachers should be conscious of this susceptibility in students because tests should measure what a student has learned and should not upset students to the point that they cannot demonstrate their newly gained knowledge.

Sze (2006) suggested a few strategies a teacher can use to include students with academic anxiety include: breaking up tasks into smaller more attainable chunks, which allows more opportunity for success more often, and therefore promotes positivity and encouragement. Provides examples and specific steps to accomplish tasks; reduces assignment length so that students strive for quality rather than quantity (Sze, 2006). With practice, teachers will feel more comfortable learning about and using these techniques on a regular basis, and it will also allow

students with anxiety to overcome some of their challenges at school which hinder their best performance.

LaBillois and Lagace-Seguin(2009) examine the relationship between a child's ability to regulate their emotions and the teaching styles and anxiety of children. Preliminary evidence suggests that different teaching styles might be associated with different outcomes among children with varied regulatory characteristics. Other anxiety reducing strategies including the use of flash cards for students to synthesize information from texts and lectures and learn good study habits; and to teach test-taking skills (Lagares and Connor, 2009). Teaching students to regulate their emotions is an important life skills for students suffering with academic anxiety. Conflict management, communicating with diplomacy and tact, and active listening are just some of the skills that can be taught to use in combination to tailor solutions for individual students. Teachers can use collaborative learning more and more to promote student learning and reduce student's anxiety associated to learning and testing (Ioannou and Artino, 2010).

Decrease anxiety involves relaxation (Albano, 2004). Teachers can keep their classroom from getting too noisy or out of hand. Students who have academic anxiety will be less distracted and less likely to lose attention. Thus, they will less likely focus on irrelevant things that do not matter to the task they have to complete. According to a study conducted by Kiluk, Weden, Culotta and Vincent (2009), results suggest that active sport participation may be associated with a reduced expression of anxiety or depression symptoms in children with ADHD.

How does the family manage a child with academic anxiety?

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Parents and other family members can help in many ways as they may be educated about how to manage a child's anxiety (Chansky, 2004). The family working in collaboration with the school is a very significant factor, as both the family and the school influence the child with anxiety level. Once the child has been assessed and parents and school have had the opportunity to discuss the situation, a plan can be initiated to assist this child. The school-family team is a great support system for a child living with anxiety, as it allows for common goals and strategies to be implemented with this child. Communication between home-life and school-life is key and is a great way to ensure that the child's health is being monitored, as much as possible.

It is important that parents are positively involved in their child's treatment of academic anxiety. Research indicate that direct parental behaviors can exacerbate anxious and avoidant behaviors in children (Albano, 2004). Taking this into account, and Sze (2006) teaching strategies, parents should also reward or encourage their child in dealing with their anxiety. Parents should also be in contact with their child's teachers and keep the lines of communication open for any progress or important pieces of information about the student's psycho-social progress.

Conclusion

Academic anxiety can negatively affect the achievement and performance as well as social and psychological development among children and adults. The road to recovery is a team effort. Teachers must be aware of academic anxiety and how it may affect their students. Students can experience academic and social success, provided that good supports are in place, whether in schools or at home or both. It is absolutely crucial that teachers, parents, guardian counselors, social workers, and health professionals are knowledgeable about academic anxiety and prepared to help students who suffer from them overcome their challenges and live happy, full lives. Teachers can be part of the healing process, and students with academic anxiety can not only perform better academically but also socially, physically, and mentally.

References

Albano, e. (2004). Cognitive-Behavior Therapy with children and adolescents in Ed. Jesse H. Wright, Cognitive-Behavioral Therapy. American Psychiatric Publishing Inc. Washington: DC.

Alm, C., & Frodi, A. (2008, April). Tales from the Shy: Interviews with Self- and Peer-Rated, Shy and Non-Shy Individuals Concerning their Thoughts, Emotions, and Behaviors in Social Situations. *Qualitative Research in Psychology, 5*(2), 127-153

Bakala, A., & Cooray, S. E. (2005). Anxiety disorders in people with learning disabilities. Advances in Psychiatric Treatment, 11, 355-361.

Best, S. (2009). Teaching individuals with physical and multiple disabilities. Upper Saddle River NJ: Prentice Hall.

Bierman, K.L. & Erath, S.A. (2007). Social anxiety and peer relations in early adolescence: Behavioral and cognitive factors. *Journal of Abnormal Child Psychology, 35 (3),* 405-416.

Chansky, T. (2004). Freeing Your Child from Anxiety. New York: Broadway Books.

Connolly, S., Simpson, D., & Petty, C. (2006). Anxiety Disorders. New York: Chelsea House Publishers.

Cowden, P. (2009). Communication and conflict: Social anxiety and learning. In the proceedings of Academy of Organizational Culture: Communications and Conflict, 14(2), 16-19.

Cunningham, P. (2008). Anxiety, hopelessness and depression in adolescents: A structural equation model. Canadian Academic Child and Adolescent Psychiatry, 17(3), 137-144.

Foxman, P. (2004). The Worried Child. Alameda CA: Hunter House Publishers.

Fisher, B., & Allen, R. (1996). The relationship between anxiety and problem- solving skills in children with and without learning disabilities. *Journal of Learning Disabilities*, *29*(4), 439-446.

Gavrielle, L. (2008). A Foucaulian approach to academic anxiety. Educational Studies, 44(10, 62-76.

Huberty, T. (2009). Test and performance anxiety. Principle Leadership, 1(10), 15-19.

Iconis, R. (2002). Anxiety disorders in children. Pediatrics for Parents, 19(12), 10.

Ioannou, A., & Artino, A. (2010). Learn more, stress less: Exploring the benefits of collaborative assessment. College Student Journal, 44(1), 189-199.

Kiluk, B., Weden, S., & Culotta, V. P. (2009). Sport participation and anxiety in children with ADHD. Journal of Attention Disorders, 12(6), 499-506.

LaBillois, J., & Lagace-Seguin, D. (2009). Does a good fit matter? Exploring teaching styles, emotion regulation, and child anxiety in the classroom. Early Child Development and Care, 179(3), 303-315.

Lagares, C., & Connor, D. (2009). Help students prepare for high school examinations. Intervention in School and Clinic, 45(1), 63-67.

Lewis, A. R., Zinbarg, R.E., & Durbin, C. E. (2010). Advances, problems, and challenges in the study of emotion regulation: A commentary. Journal of Psycopathology and Behavioral Assessment, 32(10< 83-91.

McCarthy, W., & Widanski, B. (2009). Assessment of chemistry anxiety in a two-year college. Journal of Chemical Education, 86(12), 1447-1452.

McLoone, J., Hudson, J.L., & Rapee, R.M. (2006). Treating anxiety disorders in a school setting. Education and Treatment for Children, 2(29), 4.

Phillip, B. (2008). Foreign language anxiety and learning style. Foreign Language Annuals, 32(1), 63-76.

Saunders, D. (2000). Taijin Kyofusho: Social Anxiety. A Culture-Bound Syndrome. http://www.brainphysics.com/taijin-kyofusho.php

Spencer-DuPont, W., DuPont, R., & DuPont, C. (2003). The Anxiety Cure for Kids. New Jersey: John Wiley & Sons.

Smith, A. (2009). Teaching Students in Inclusive Settings. Canadian Edition. Pearson Publishing. Toronto: ON

Stein, P., & Hoover, J. (1989). Manifest anxiety in children with learning disabilities. *Journal of Learning Disabilities*, *22*(1), 66.

.Stowell, J., & Bennett, D. (2010). Effects of online testing on student exam performance and test anxiety. Journal of Educational Computing Research, 42, 161-171.

Sze, S. (2006). The Special Needs Toolbox: 300 Inclusive Strategies for Teachers. Epic Press: Belleville, Ontario

Tummala-Narra, P. (2009). Teaching on diversity: The mutual influence of students and instructors. Psychoanalytic Psychology, 26(3), 322-334.

Vanin, J. (2008). Overview of anxiety and the anxiety disorders. Anxiety Disorders: A Pocket Guide for Primary Care. Humana Press. Virginia.

Vassilaki, E. (2006). Anxiety and cognitive functioning in primary and high school students. Stress and Anxiety- Application to Health, Workplace, Community and Education. Newcastle: Cambridge Scholars Press.

Younger, A., Schneider, B., & Guirguis-Younger, M. (2008). How children describe their shy/withdrawn peers. *Infant & Child Development, 17*(5), 447-456.

Weiten, W., & McCann, D. (2007). Psychology: Themes and Variations. Nelson Publishing Inc. Toronto: ON

Wolfe, B. E. (2005). Understanding and Treating Anxiety Disorders: An Integrative Approach to Healing the Wounded Self. Washington: DC.

Fulltime faculty perceptions of leadership in adjunct faculty to maintain Franciscan identity

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ABSTRACT

The purpose of this study was to determine the perception of fulltime faculty regarding the leadership capability of adjunct faculty in institutional governance (and identity). In the current economic climate, institutions of higher education are continuing to expand the use of adjunct faculty. For private institutions, the mission identity of the institution is the distinguishing factor branded to the greater community. Assurances of mission and brand recognition must be delivered via fulltime and adjunct faculty to ensure continued viability of private colleges and universities. This paper reviews perceptions of faculty leadership to continue the brand in Franciscan institutions. A disconnect appears between the perceptions of faculty regarding adjunct faculty inclusion and perceptions of administrators regarding adjunct faculty.

Keywords: Adjunct, Faculty, Franciscan, Identity, Institutions, Leadership,

INTRODUCTION

The purpose of this study was to determine the perception of fulltime faculty regarding the leadership capability of adjunct faculty in institutional governance and identity in Franciscan colleges and universities. Franciscan colleges and universities are private institutions and therefore receive less funding from federal or state sources as a percentage of income than institutions that are state affiliated. This financial model requires Franciscan institutions to utilize faculty for administrative functions and requires a large contingent faculty to control costs and therefore keep tuition as low as possible. Couple these items with a decreasing presence of Franciscan religious employees on Association of Franciscan Colleges and Universities (AFCU) campuses and it may be apparent that the Franciscan mission on which our institutions have been built is being lost to financial efficiency.

In order to combat the possibility of mission identity loss, leadership in this area is needed from all faculty including fulltime lay faculty, adjunct faculty, and religious order employees. In order to strongly integrate the Franciscan mission, one must first understand the perceptions that fulltime faculty have about adjunct faculty. Once the perceptions are quantified, a plan can be developed to improve the perception of fulltime faculty regarding adjunct faculty leadership capabilities if necessary. Secondly, if fulltime faculty perceptions of adjunct faculty leadership capabilities improve, a protocol can be developed to include adjunct faculty in

leadership of mission integration into courses taught by adjunct faculty. Finally, mission and ministry administrators will need to support adjunct faculty and fulltime lay faculty in their capacity as mission leaders.

Ultimately, the integration of the Franciscan mission consistently throughout the curriculum at all Franciscan institutions will develop a strong brand that can be marketed universally thereby strengthening the integration of Franciscan leaders in our society.

REVIEW OF LITERATURE

Critical budget shortages and an overworked fulltime faculty have created opportunities in higher education for private citizens to function as part-time college or university instructors. Many individuals located in the professional community such as business and school districts alike, have taken advantage of this chance to enter the world of academe (Wickun & Stanley, 2000).

Adjunct faculty are becoming a larger portion of all college and university faculty, nearly 48 percent as reported in the 2005 NCES Digest of Education Statistics, their importance to the success of their institutions is evident, their plight is deplorable. This condition is outlined well in "We're So Glad You Asked: Maryland Adjuncts Speak Out on Their Status, Needs, and Opinions" by Linda Martinak, Rik Karlsson, Richard Faircloth and Pamela Witcher. "We think that with your education you will be able to understand the complexities of our sentiments – that you are completely invaluable and yet expendable. It is, after all, the human condition. And we are in the humanities" (Martinak, et al, 2006).

What has made the adjunct faculty so valuable to the institution is not only the economic savings they bring to the institution but their expertise as well. Classes are able to be covered over a wide area of subject matter and topics, at a relatively reasonable cost by individuals that bring reality and on-the-job experience to the classroom. This is a winning combination for any collegiate classroom (Martinak et al, 2006).

For the purpose of this paper adjunct faculty are defined as "faculty who are hired on a contractual basis to teach one or more classes during a given period of time and who typically do not receive a fulltime salary or benefits from the college in which they teach" (Martinak et al, 2006).

The State of Adjuncts Today

Nationwide 48% of the coursework in the first two years of college and university education is taught by adjunct faculty (Leatherman, 1997). Adjuncts have been called "The New Faculty Majority" (Gappa, 2000). In community colleges across the country more than 60% of the faculty members are adjunct instructors, with 77% of the adjuncts having jobs outside the world of academe (Gappa, 2000). There are wide differences with respect to the type of degrees held by fulltime faculty versus adjunct faculty. In a study reported by Gappa, 71% of full-time faculty held terminal degrees while only 25% of the adjuncts do so (Gappa, 2000). Faculty development activities were varied with little consensus in terms of format and value to the adjunct or their students. Although there was little that institutions had in common for faculty development activities it was universally felt that institutions needed to develop stronger programs in this area due to the ever increasing numbers of this type of an employee (Martinak, 2006).

Individual disciplines also use adjunct faculty in different proportions. The three disciplines with the largest percentage of adjunct faculty, according to Leslie (1998) are fine arts (50.9%), business (46.5%) and education (45.3%).

In addition, adjunct faculty serve in several categories of college/university personnel, such as research assistants, part-time faculty, fulltime faculty outside tenure lines, graduate assistants, and post-doctorate fellows.

The central problem of contingent academics is not the people who fill the positions, as most of these individuals come to the job as highly qualified for their positions. The problem lies in the value of adjunct work, its lack of support structures, and the constraints on academic freedom for the faculty holding such positions. According to the American Association of University Professors, because faculty tenure is the only secure protection for academic freedom in teaching, research, and service, the declining percentage of tenured faculty means that academic freedom is increasingly at risk (AAUP, 2008).

In addition, adjunct faculty does not participate, for the most part, in faculty governance, not even in basic discussions about curriculum, which clearly represents a substantial limitation on their functioning as faculty. At the same time, declining enrollments and financial considerations have caused higher education institutions to employ an ever-increasing number of adjunct faculty members (Kuchera & Miller, 2008).

With respect to adjunct faculty, they are not required to be involved in research relative to their area of subject expertise, they are not involved in advising students in any formalized manner, they are not included in faculty governance, and their continued employment is completely dependent upon student enrollment (Kamps, 1996; Wegner, MacGregor & Watson, 2003). To further aggravate the problem for private institutions, such as the Franciscan colleges and universities, adjunct faculty may offer little or nothing to enhance and celebrate the Franciscan mission of the institution other than possibly advocating for the mission by being an excellent role model in their dealings with their students.

On the other hand, adjunct professors who are perfecting their craft in their respective professions bring a rich experience to the classroom. They apply theory learned in the classroom to “real life” experiences (Beem, 2002). There is no doubt that students who are preparing for the world of work can benefit from being taught by professors who can blend well theory and practice (Beem, 2002).

Adjunct faculty teaches in colleges and universities for many reasons. Some of those reasons would include the ability to pass on their knowledge from their daytime jobs onto their students, to possibly keep busy after retirement, and still others would hope to use these positions as a stepping stone to their becoming fulltime professors (VanderMeulen, 2008).

Although adjunct faculty will continue to be a need for all colleges and universities in the future there will continue to be problems associated with their use. A few of these issues are outlined by Wickun & Stanley (2000). They include the lack of teaching experience in the classroom. It is a major weakness that must be addressed. In most instances, it takes several years for an adjunct faculty member to become proficient in teaching at the collegiate level. Secondly, the lack of departmental support is another weakness of the adjunct system, particularly at large universities. The adjunct faculty member typically has no office, no campus phone and no job description. In many instances the only contact with the institution is a mailbox and a copy of the previous syllabus for the course. Additionally, at private institutions that pride themselves in their mission and values, such as a Franciscan college or institution, there is little mention of the fact that those values are to become part of the classroom

experience. Finally, regardless of their dedication to their classes, the low salary of adjuncts can create animosity. The attitude of adjuncts can be influenced by the wide gap between their "expertise" and their low level of remuneration, especially when they consider the lack of respect they often receive from the fulltime faculty.

According to the AAUP there are several other costs associated with the increasing number of adjunct faculty in higher education institutions (2008):

> Student learning is diminished by reduced contact with tenured faculty members, whose expertise in their field and effectiveness as teachers have been validated by peer review and to whom the institution has made a long-term commitment Faculty governance is weakened by constant turnover and on many campuses by the exclusion of adjunct faculty from governance activities. Inequities and physical distance among potential colleagues undermine the collegial atmosphere of academic institutions and hamper the effectiveness of academic decision making. The integrity of faculty work is threatened as parts of the whole are divided and assigned piecemeal to instructors, lecturers, graduate students, specialists, researchers, and even administrators.

The role of adjunct faculty in higher education is continuing to evolve. Based on The Role of Adjunct Faculty in Higher Education by William G. Wickun and Rock E. Stanley, written in 2000, adjunct faculty are significant players in the delivery of instruction at many colleges and universities throughout the U.S. with more than 40% or of the credit hours earned taught by adjunct faculty. Therefore it is extremely important that institutions improve their assimilation and participation of adjunct faculty in the educational program of their institution. Adjunct faculty will continue to be hired in order to meet the needs of the current instructional and budgetary shortfalls. The current climate provides a realistic opportunity to apply an ongoing quality improvement program. There are many ways in which the use of adjunct faculty could be improved.

Any steps taken to improve the quality of the instruction provided by adjunct faculty should be proactive. College and university administrators, deans, and department chairs should explore every possibility to improve the role and use of adjunct faculty.

In the coming years, higher education is more than likely to increase even further its reliance on adjunct faculty. As a result, these faculty members will have an even greater impact on student learning. It is therefore the responsibility of the institutions that employ them to insure the effectiveness of adjunct faculty in contributing to the teaching-learning process and the mission of the colleges and universities. To do otherwise is to threaten the academic vitality and the integrity of the programs of these institutions (Elman, 2003).

Currently, there is little or no research in the area of adjunct faculty at private institutions, such as the Franciscan colleges and universities with respect to how they address the mission of the institution. As a result, this was an area that needed further study and was the purpose of this paper.

METHODOLOGY

This study was design as a relationship study. The primary purpose of a relationship study is to identify the causes and effects of important phenomena. This type of research design is especially useful for exploratory studies (Borg & Gall, 1989). This design allows analysis of

relationships between several variables simultaneously. The results are reported even though there may or may not be any theoretical basis to justify their inclusion (Borg & Gall, 1989).

Institutional Review Board

The proposed research design and questionnaire was submitted to the Alvernia University Institutional Review Board on May 7, 2008 and assigned proposal number 0508-122. The board approved the project on May 7, 2008 and sent a "Notification to Investigator" of said approval.

Survey

The questionnaire was designed to solicit responses to a series of statements designed to determine the perception fulltime faculty have regarding the inclusion of adjunct faculty in institutional governance and the perceived leadership capacity of adjunct faculty in institutional governance in Franciscan colleges and universities. The survey instrument requested the participant to respond to 22 statements utilizing a 5-point Likert scale design. The instrument included three open ended questions which provided the participant an opportunity to add additional information regarding adjunct faculty participation in their institution's governance process.

For analysis purposes, the survey questionnaire, with the demographic information request form, was divided and grouped into four sections. Section one requested responses to Likert scale statements regarding the adjunct hiring process, orientation to the institution, and professional development. Section two requested responses to Likert scale statements regarding the adjunct's faculty role in governance which included familiarity with the faculty handbook and any policies relating to the inclusion of adjunct faculty in the handbook, inclusion in department and faculty meetings, the depth and breadth of inclusion in faculty meetings, compensation or rewards, and the ability to vote or to hold office on faculty committees. Section three requested responses to Likert scale statements designed to gather information about expectations of adjunct faculty to include: the ideal level of participation and interaction with fulltime tenured and tenure-track faculty, their desire and willingness to participate in the governance process. Section four requested trait and characteristic information about the respondent to include: position (primary subject area, employment status, and schedule), gender, age and highest academic achievement.

Population and Sample

The population selected to participate in the survey are employees of member institutions in the Association of Franciscan Colleges and Universities or AFCU. The 20 member institutions range in size from large and established universities, to junior colleges, to small newer colleges. The schools are dispersed from coast to coast throughout the United States. As member institutions all however, are characterized by their Franciscan values and support Catholic higher education. The mission of the AFCU is to provide a forum for dialog and to foster and facilitate collaboration among its members in which member institutions subscribe (www.franciscancollegesuniveristies.org).

Of the 20 member institutions nationwide, 14 schools were represented at the 2008 AFCU Symposium held on the campus of Alvernia University located in Reading, PA.

Institutions participating in the symposium were geographically represented with the exception of schools located along the west coast. The survey was distributed to all 200 participants; some of whom did not serve in a teaching capacity.

Reliability

A Cronbach alpha test of reliability was performed on the variables to determine the validity and reliability of the data collected for the study. Utilizing SPSS 16.0 software, the test revealed a Cronabch alpha score of .74. Typically a score of .70 or higher is acceptable for social science inquiry utilizing quasi experimental design (Nunnally 1978).

RESULTS

All data was coded and entered into a database. SPSS software provides a tool to perform statistical procedures specifically tailored to the social sciences (SPSS, 2008). Upon completion and verification of coded data, the appropriate statistical procedures were performed. The data output was then analyzed and the results are revealed within the paper. All original data and coding keys have been preserved.

The typical respondent is a female between 46 and 55 years of age and has been in higher education for 11 to 15 years. The typical respondent has a doctoral degree and is in a non-tenured position teaching undergraduate students in a traditional day program. They are not seeking a tenure track position but would like to participate in the governance process.

An evaluation of the Likert scale questions has revealed the following general beliefs regarding adjunct faculty at Franciscan universities. The ability of adjunct faculty to express their opinions is only partly true. In addition, the communication loop in keeping adjunct faculty informed is only experienced on a limited basis. These results are confirmed through the belief expressed that adjunct faculty are too busy to participate in the decision making process at their institution.

Respondents indicated that they believe adjunct faculty lack the knowledge of governance regarding their ability to participate in the process. Although attendance is sometimes requested at department meetings, decision making participation at the department level is not consistently sought. There is strong belief among respondents that their institutions have no model of inclusion for adjunct faculty in the decision making process.

Interestingly, the idea that adjunct faculty will have an opportunity for fulltime tenure track employment if they interact with tenured faculty is not widely accepted as true by adjunct faculty. Additionally, respondents believe that adjunct faculty opinions are not often sought for scheduling. Respondents also indicated that adjunct faculty is not compensated for participation at faculty meetings and they have little to no input in their schedules and they do not have voting privileges in faculty council/senate meetings. Furthermore, adjunct faculty is not encouraged by fulltime faculty or administration to participate in the governance process.

While the respondents indicated that adjunct faculty could impact the decision making process, faculty committees typically do not include adjunct faculty. Respondents indicated that perhaps they should be included. To do this would require institutions to change meeting times to accommodate adjunct work schedules, which the respondents indicated does not occur.

Respondents indicated that fulltime faculty is not willing to fully embrace adjunct faculty in the governance process.

It is partly true that respondents believe faculty leaders in governance represent the interests of all faculty including adjunct faculty. Respondents also indicated that participation of adjunct faculty will improve adjunct faculty conditions and that adjunct faculty representation could be handled through a representative group.

CONCLUSIONS

The study revealed that currently there is little encouragement from faculty or administration to include adjunct faculty in the governing process of Franciscan institutions. Meanwhile there is some support for adjunct faculty members to attend department meetings. It appears as if adjunct faculty is only consulted regarding specific curricular needs within departments.

The study revealed that adjunct faculty may have their work place concerns better addressed if they are represented at faculty council/senate meetings by a representative specific to adjunct faculty. For this process to work an attitudinal change in fulltime faculty and administration is needed.

Implications

In private Franciscan institutions adjunct faculty is a key component to financial viability. In addition adjunct faculty typically brings professional experience to the classroom that enhances the education of students. Adjunct faculty tend to be absent from student advising, academic governance and student life events.

As Franciscan colleges continue to compete in an increasingly competitive market, the Franciscan brand must be developed and implemented in all classes to ensure students understand the significance of a Franciscan education. Under current and future financial constraints, adjunct faculty will continue to play a vital role in the success of Franciscan institutions.

To ensure a growing and recognizeable brand, full-time faculty needs to embrace adjunct faculty and recognize their contributions to the institution. Furthermore, it will be necessary for fulltime faculty to help adjunct faculty understand the importance of delivering a Franciscan education. To accomplish these goals, faculty leadership must aggressively pursue appropriate mission and ministry training for adjunct faculty. In addition, the assigning of a "Franciscan" mentor to help implement the Franciscan Intellectual Tradition into each course syllabus should occur. Finally, with the importance of developing the Franciscan brand for the survival of the Franciscan colleges and universities at stake, remuneration to those involved should be provided at adequate levels.

REFERENCES

American Association of University Professors (2003). *Contingent appointments and the academic profession – A policy statement*. Retrieved July 22, 2008 from http://www.aaup.org.

Beem, K. (2002). *The adjunct experience.* School Administrator. 6-10, 12.

Borg, W.R. & Gall, M.D. (1989) Educational research: An introduction (5th ed.). White Plains, NY: Longman Publishers

Dedman, D, & Pearch, W. J. (2004). *Perspectives on adjunct and other non-tenure faculty*.The Community College Enterprise, 10 (1). Retrieved July 23, 200 from http://www.proquest.umi.com.

Elman, S. E. (2003). *A regional accreditation perspective on contingent faculty appointments.* New Directions for Higher Education, No. 123, Fall, 2003.

Fulton, R. D. (2000). *The plight of part-timers in higher education*. Change 32 (3) Retrived June 15, 2008 from file://C:DOCUME~1.htm.

Gappa, J. (2000). *The new faculty majority: Somewhat satisfied but not eligible for tenure*. New Directions for Institutional Research, 27, 77-86.

Kamps, D. (1996). *Continuous quality improvement in the employment of adjunct faculty.* Mason City, IA: North Iowa Area Community College. (ERIC Document Reproduction Service No. ED393480).

Kuchera, M.E. & Miller, S. J. (1988). *The effects of Perceptions of the academic job market on adjunct faculty: An Identity-theory analysis.* Sociology of Education, Vol. 61, No. 4, (Oct., 1988). Retrieved July 30, 2008 from http://www.jstor.org/stable/2112442?seq=2

Leslie, D. W. (1998). *Part-time, adjunct, and temporary faculty: The new majority*. A Report of the Sloan Conference: Unpublished Manuscript, 1-24.

Louziotis,Jr., D. (2000). *The role of adjuncts: Bridging the dark side and ivory tower.* Review of Business, 21 (3/4). Retrieved July 23, 2008 from http://www.proquest.umi.com.

. Martinak, M. L., Karlsson, R., Faircloth, R., & Witcher, P. (2006). We're so glad you asked: Maryland adjuncts speak out on their status, needs, and opinions. The Journal of Continuing Higher Education, 54 (3), 42-47.

Nunnally, J.C. (1978). Psychometric Theory (2nd ed.). New York: McGraw-Hill

SPSS, Inc. (2008) SPSS 16.0 Software package. Chicago, IL: SPSS, Inc.

Townsend, R. E. & Hauss, M. E. (2002). *The 2002 AHA-OAH survey of part-time and adjunct faculty*. Perspectives. Retrieved June 15, 2008 from http://www.historians.org/perspectives/issues/2002/0210/021Oaha3.cfm.

U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey (2006).

Employees in Institutions of Higher Education retrieved April 21, 2010 from http://nces.ed.gov/programs/digest/d06/tables/dt06_231.asp.

VanderMeulen, Rebecca (2008). *Adjunct instructors bring real-life experiences to students*, Reading Eagle, August 24, 2008.

Wegner, S., MacGregor, C. & Watson, R. (2003). *Best practices for the use of part-time practitioner faculty members in principal preparation programs.* Connections: Journal of Principal Development and Preparation, 5, 32-37.

Wickun, W. G. & Stanley, R. E. (2000). *The Role of Adjunct Faculty in Higher Education.* Retrieved March 12, 2009 from http://mtprof.msun.edu/WIN2000/Wickun.html.

The South Africa project, aviation educational initiative

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Abstract

In the spring of 2009, a team, led by a university in Florida, traveled to Pretoria, South Africa for the first of two trips. The first trip was a fact finding mission and the second trip was for implementation purposes. On the first trip, information was gathered to help assess and create three new concentration curriculums for Tshwane University of Technology. One of the current curriculum objectives being developed is the specialty in Aviation Management. According to Sue Geldenhuys, Travel and Tourism Head of Department at Tshwane University of Technology, it will be the first of its kind in Southern Africa.

During the first trip to South Africa, the aviation curriculum development leader met with various individuals representing a vast cross-section of the South African aviation industry. They included the following: Civil Aviation Authority, South African Airways, ICAO – International Civil Aviation Organization, Airport Company of South Africa, local airport managers, and local and regional government agencies. The overall contingency among these individuals was that there is a great need for aviation curriculum in the higher education system of South Africa. Every entity offered advice and input to the potential new curriculum and expressed immediate support of the new program.

The article examines the needs assessment for aviation curriculum in the higher educational system of South Africa. It also explores the content of this curriculum.

Rationale

Aviation management encompasses a multitude of types of aviation positions. While, the industry has delineated itself into various categories such as airline, airport, civil aviation, air traffic control, and piloting (as evident by the number of professional associations), they all represent the planning and managing of a business that brings people together with a specific mission and need to accomplish a specific organizational goal. Aviation helps contribute to growth in many other areas: tourism hinges on airports and the airlines to deliver passengers to resort locations and corporate enterprises depend on civil aviation businesses to maintain and fuel their aircraft and to take care of their flying customers. Of course none of these aviation services can be run efficiently without a strong regulatory body like the South African Civil Aviation Authority (CAA) and a strong airport management system such as Airports Company South Africa.

The current state of the South African Aviation Industry, according to the latest posted statistics on the South African Civil Aviation Authority website (www.caa.co.za/), consists of approximately 14,000 registered pilots and 4,500 registered aircraft. These pilots and aircraft are supported by an airport system of approximately 700 ICAO recognized landing facilities. Ten of these airports are managed by ACSA. The air traffic management system handles more than 400,000 total aircraft departures and arrivals a year.

The website further states: the South African Aviation Industry is a growing and prospering environment. Since the South African Civil Aviation Authority was established in

1998, the industry has made great strides to modernize and expand. According to the CAA it rightfully claimed its position as a regional leader in the aviation regulatory sector and was elected to be a member of the International Civil Aviation Organization (ICAO) Council, a move that sees the country participating at the highest forum with regards to aviation matters ("South African Aviation," 2006). The CAA has established there is a need for better trained individuals to work in this dynamic industry. In the South African Civil Aviation Authority's Strategic Plan for 2009-2012, the strategic mapping process outlines the new strategic objective to attract, develop, and retain human capital. The critical issues outlined in this process include: establishing competitive remuneration structures, favorable working environments, commitment by management to training development, creation of a management development program, and staff morale ("Strategic Plan," 2006). By covering these issues the CAA will assist in accomplishing one of its main priorities that is aviation safety, security, transformation and growth.

Needs Assessment

In the spring of 2009, a team, led by a university in Florida, traveled to Pretoria, South Africa for the first of two trips. The first trip served as a fact finding mission and the second trip was for implementation purposes. On the first trip, information was gathered to help assess and create three new concentration curriculums for Tshwane University of Technology. One of the current curriculum objectives being developed is the specialty in Aviation Management. According to Sue Geldenhuys, Travel and Tourism Head of Department at Tshwane University of Technology, there is a great need for aviation to be adopted as curriculum into South African Higher Education. She went on to state: it will be the first of its kind in Southern Africa (Geldenhuys, 2009).

During the assessment trip to South Africa, the aviation curriculum development leader met with various individuals representing a vast cross-section of the South African aviation industry. They included the following: Civil Aviation Authority, Airport Company of South Africa, South African Airways, International Civil Aviation Organization, local airport managers, and local and regional government agencies. The overall contingency among these individuals was that there is a great need for aviation curriculum in the higher education system of South Africa. Every entity offered advice and input to the potential new curriculum and expressed immediate support of the new program.

The South African CAA (Nkabiti, 2009) and ACSA (Mokhema, 2009) reported that both entities are struggling to find relevant personal with appropriate aviation qualifications to hire for entry level positions. These administrations are spending much time and money to introduce the basic knowledge of aviation to new hires. They both agree there is a need for aviation management curriculum in higher education and having a diploma being offered in aviation would help enrich the quality of future applicants.

South African Airways agreed (Bustos, 2009) with CAA and ACSA. SAA stated besides basic aviation knowledge, there is a need to find individuals with computer skills enabling them to run spread sheets for income statements and balance sheets as well as supply and demand curves (Bustos, 2009). They suggested these types of skill sets be introduced at the diploma level in the South African higher education system.

Local airport managers carried the same theme for education and the difficulty to find qualified personnel candidates. They pointed out the need for applicants to understand basic regulatory knowledge, airport services, and master planning (Sayce, 2009).

According to Khumbu Sithole, Senior Manager, Research & ICT Gauteng Tourism Authority, there is a great need to educate people about aviation in his department. He went on to outline areas of focus that his organization would benefit from having staff knowledgeable in. These areas include: aviation industry knowledge, airline impacts, and impacts of local airports on local communities (Sithole, 2009).

Wouter Koekemoer, Director, Tourism Promotion Economic Development City of Tshwane, agreed with Mr. Sithole, and pressed the issue further. He stated there is a great need in aviation education (Koekemoer, 2009). He also suggested some areas that students and potential employees should be knowledgeable in which would benefit his department which included: being able to benchmark local airports to each other, measure city level economic impacts, having a general understanding of aviation related impacts, and measuring Gross domestic Product (GDP) (Koekemoer, 2009).

To further support a need for immediate aviation education, Jossie Swiegers, ICAO Safety Expert/Lecturer, cited a recent ICAO safety conference to pinpoint current training deficiencies of airport managers in South Africa (Swiegers, 2009). The conference was given at a local airport in South Africa. The attendees from the South African airport included:

- Airport manager
- Head of the Department: Safety
- 2 Duty Managers
- 3 Senior Safety Managers
- 10 Safety Officers
- 1 Environmental Safety Officer
- A pre-test was administered to the attendees. The results of this test were astonishing. The percentage below indicates the number of attendees who did not know.
- What is an ILS? - 45%
- Instrument Landing System
- What is ICAO? - 40%
- International Civil Aviation Organization
- What is a movement area? - 70%
- Area negotiated by Air Traffic Control and Airport Management where motorized vehicles could come in contact with airplanes.
- What color are taxiway lights? - 50%
- Blue

Conclusions

The needs assessment for the aviation curriculum has proven to be vital for South Africa. There is an immediate need for aviation education, according to industry and government officials. From the information examined it is clear that a need exists to develop specialized skills for this emerging discipline. The development of an Aviation Management Qualification in higher education will satisfy this need. Aviation management is the process by which the manager plans, prepares and produces a quality product, safely and efficiently. As with any other forms of management, it encompasses the regulation, assessment, definition, acquisition,

allocation, direction, control, and analysis of time, finances, personnel, products, services and other resources to achieve objectives. The size and scope of aviation is ever changing and new programs in higher education are emerging internationally to deal with the complexities and workforce shortages of this multi-disciplinary profession. Notwithstanding the above there are currently no public higher education institutions in South Africa offering undergraduate programs in Aviation Management (Geldenhuys, 2009).

Learners with this qualification will be able to coordinate and manage the broad spectrum of aviation businesses in the aviation industry. An Aviation Manager will be able to coordinate and manage many aviation genres through all phases, research, plan, design, conduct and evaluate in different contexts. Successful aviation management requires a historical understanding of the industry, regulatory knowledge, professional skills, allied to proven experience. The aviation industry is constantly in change, and the skilled aviation professional will be able to advise on issues relating to certification, regulation, security, master planning, protocol, and corporate responsibility. The list does not end there. Airport and airline managers will be able to communicate with the public, understand their needs and deliver a product to meet these needs within budget. Professional aviation management skills are required to coordinate elements of marketing, media, sponsorship, budgets, financial management, public speaking, planning, and complying with regulatory bodies. Sophisticated IT systems are required and the skill sets to run these systems are needed for financial management, logistics, reservations, and certification. Successful learners will be equipped with the necessary aviation skills to begin work in any facet of the industry. The learners will also obtain the fundamental ground school knowledge for a Private Pilot License and potentially could transition into and begin pilot training. The labor intensive nature of the industry and the various skills levels in aviation management will provide employment opportunities for many South Africans to become managers at airports, airlines, civil aviation businesses, and in aviation related government positions. The industry contributes significantly to the GDP of the country and can play a significant role in transformation (Mekgoe, 2009).

The curriculum will be developed in accordance with the Aviation Accreditation Board International's (AABI) Accreditation Criteria Manual (AABI, 2009). AABI is the international accreditation body for aviation curriculum in higher education. The qualification's outcomes will be specific curriculum requirements outlined in this manual. These outcomes through a comparative analysis of the competency domain outlines of the aviation industry, national and international skills standards and vocational qualifications from the United States and other countries. The curricula and skills standards from several academic institutions, and the topics covered in industry-related books, research and conference proceedings on aviation management curricula will also be investigated.

References

Aviation Accreditation Board International (AABI). (2009). Accreditation Criteria Manual. Auburn, Alabama: Author.

Bustos, Josh (2009, March 11). Consulting Manager, South African Airways. Interview.

Geldenhuys, Sue (2009, March 9). Head of Department Travel and Tourism, Tshwane University of Technology. Interview.

Koekemoer, Wouter (2009, March 10). Director of Tourism Promotion Economic Development, City of Tshwane. Interview.

Mekgoe, Tebogo (2009, March 11). Assistant General Manager: Airport Operations, Airpost Company South Africa. Interview.

Mokhema, Tebello (2009, March 11). Group Manager: Training Development & Talent Management, Airports Company South Africa. Interview.

Nkabiti, Nelson (2009, March 12). Safety Expert/Lecturer, International Civil Aviation Organization. Interview.

Sithole, Khumbu (2009, March 10). Senior Manager Research and ICT, Gauteng Tourism Authority. Interview.

Sayce, Gavin (2009, March 12). Airport Manager, Lanseria International Airport. Interview.

South African Civil Aviation Authority (2006, October). South African General Aviation Statistics. Retrieved February 27, 2009 from: http://www.caa.co.za/

South African Civil Aviation Authority (2006, October). Strategic Plan. Retrieved February 27, 2009 from: http://www.caa.co.za

Swiegers, Jossie (2009, March 12). Safety Expert/Lecturer, International Civil Aviation Organization. Interview.

Scholarly activity of successful business researchers in the tertiary sector – research proposal

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ABSTRACT

There are increasing pressures on tertiary institutions and academics to produce research. In New Zealand the pressure to conduct research comes from the New Zealand Qualifications Authority (NZQA), the Performance Based Research Fund (PBRF) and other professional accreditation bodies (such as the New Zealand Institute of Chartered Accountants [NZICA]). While the pressure increases there appears to be little published discussion of the scholarly activity of researchers and what distinguishes the practices of 'successful' researchers. Previously published research available has used quantitative approaches, drawing on research output databases or surveys. This paper is a research proposal to investigate scholarly activities of 'successful' researchers using a qualitative approach. Qualitative data using interviews is proposed to be collected from tertiary academic researchers and analysed.

Keywords: scholarship, activity, research, PBRF, universities.

INTRODUCTION

There are increasing pressures on tertiary institutions and academics to produce research. In New Zealand the pressure to conduct research comes from the New Zealand Qualifications Authority (NZQA), the Performance Based Research Fund (PBRF) and other professional accreditation bodies (such as the New Zealand Institute of Chartered Accountants [NZICA]). While the pressure increases there appears to be little published discussion of the scholarly activity of researchers and what distinguishes the practices of 'successful' researchers. There are various textbooks that indicate how research should be initiated and conducted. However, little research has substantiated the claims within research textbooks. Research textbooks indicate what scholarly activity is required by researchers while little research has been published on the activities of researchers while constrained by their dichotomous role of lecturer and researcher. There appears to be little published discussion of the scholarly activity required by researchers. This research investigates what scholarly activity, to generate and produce research, is undertaken by New Zealand researchers who might be considered 'successful'. The study is intended to capture current 'best research practice', as guidance for developing researchers and those wishing to advance their research in a pressured PBRF environment.

BACKGROUND AND RELEVANT PUBLICATIONS

There is little attention in the literature regarding selection, design, and conduct of research activities. Many textbooks discuss the issues surrounding the formulation of a research project without regard for the situation of the researcher. There are also few rigorous investigations into the practice of researchers. Sadler (1999) provides a discussion of choices

that need to be made in a researchers career, but does not include the regular activities of researchers.

Blaxter, Hughes, and Tight (2001) provide a discussion of how a developing researcher should select a topic and narrow their topic selection[1]. The book also discussed what resources could be chosen for a researcher to refer to, in the event that a topic cannot be chosen or narrowed down. This is one of the few of many research textbooks that provide possible avenues for developing researchers to turn to. These processes of choosing a topic and narrowing the topic into a manageable topic and research question are almost absent from the credible journal publications.

Further, most well written academic journal articles provide background, a theoretical framework, and methodology that indicate why the research is important and significant to study. Yet, few of these articles indicate why and how the researchers chose their topics and research questions.

Mewett (2002) provides a personal account of a PhD research topic that evolved and changed from the initial question. Mewett was undertaking participant observation research and found that the reason for research subjects to conceal information became the research topic. The research topic changed while conducting the data collection rather than the literature research. The topic of the research evolved in the research process. There has been little investigation into the process of topic selection and accommodating changes in the research process.

Crick (2002) provides a personal account illustrating the effect that research results have on submitting research for publication. Due to the research results of the study giving a poor impression to the subjects and the funding organisation of the research, the research could not be published. It would be equally likely that certain topics may not be as fashionable, or contentious, and therefore may not receive the same interest from potential journal editors. Christensen, Finger, and Latham (2002) find that new scholars commonly use journals not in their specialist discipline as publication outlets. Ryan, Scarpens, and Theobald (1992) provide a list of reasons why articles submitted for journal publications are rejected, including their subject matter.

The potential to be accepted or rejected for publication can have an effect on the researcher's choice of subject matter and topic. Talib (2001) finds that the Research Assessment Exercise (RAE) in Britain has an influence on the choice of research topic and research management by academics. Similarly, it would be interesting to find out what potential effect publications and research topics have on the researcher's scholarly activity.

It appears to be a common understanding that some of the initial publications made by academics arise from their PhD thesis. Chapters from a PhD thesis could be rewritten to form journal articles in scholarly journals. Zivney, Bertin, and Gavin (1995) provide data of accounting faculty that indicates early publications result from supervised study, such as a thesis or dissertation. Early publications resulting from guidance while completing a thesis or dissertation are referred to as the dissertation effect. In addition to the dissertation effect another career stage effect is the behaviour of researchers upon reaching tenure. Research findings suggest that once academic researchers pass their probationary period and gain tenure at an institution, the amount of research output per year decreases (see Swanson, 2004; Zivney, Bertin,

[1] These authors focus on postgraduate researchers, but the same principals can be applied to researchers who are academic staff members and teachers.

Gavin, 1995; Talib, 2001; Talib, 2002). Little is known about the interrelationship of the dissertation and tenure and research.

In addition to career and extrinsic influences there are intrinsic influences on the academic researcher. Bailey (1994) writes that intrinsic motivation is more important than extrinsic rewards and that it is important how rewards are used to encourage research in universities. Institutional effects on research include resources, philosophies, and expectations.

Other, mainly undocumented, influences on researchers include the unique and personal skills, experiences, and characteristics of the individual researcher and the practice, habits, and daily routines. Those influences and activities that are documented are typically descriptions of individual research papers or projects. De Lange (2005) documents the publication process with a research paper as an example to illustrate barriers and requirements of gaining journal publication. See also Perry (2002); Frost & Stablein (1992).

This review has revealed that a number of issues about how researchers select, design, conduct and publish their research are given only limited attention in the existing literature. Also much of this prior research has used quantitative approaches from research output databases or surveys. There exists little research documenting successful researchers' own descriptions of, and reflections on, the scholarly activities they undertake. This research will address this gap.

RESEARCH PROPOSAL AIMS AND OBJECTIVES

This proposal aims to qualitatively investigate the scholarly activities of researchers and document those activities. The leading aim of the research is to investigate: what activities of academic researchers contribute to generating and producing successful researchers?

This research addresses the lack of research on the practice of generating successful research and thereby provides guidance for developing researchers who are themselves seeking to become successful.

This study will aims to provide more our understanding of the practices and activity required for successful research. The understanding and framework can then be practically used within tertiary institutions to improve the research activity and output of novice and successful researchers

CONDUCT OF DATA COLLECTION

The research outlined above indicates that researchers are influenced by daily activities, personal characteristics, career stages, professional associations, and institutional environments. As few studies have investigated the scholarly activities of academic researchers, there are few hypotheses and results to generalise. The author proposes an investigation into scholarly activities of researchers, using a qualitative approach, to identify best practice to provide guidance for developing researchers. Academic researchers will be directly spoken to in an interview and asked to describe and reflect on their research practices and the extent to which they have contributed to their success as a researcher.

Most academic researchers are presumed to be busy with teaching duties during the academic semester, so it is envisaged to interview people during the teaching recess. The interviews will be conducted at the interviewee's office, which provides a quiet, comfortable, and familiar environment for the interviewee. The interviews will be recorded using tape recorders.

POTENTIAL INTERVIEWEES

Subjects are those who could be considered successful researchers but not necessary the most successful. Promotion of academic staff members in tertiary institutes is often obtained through a reasonable amount of research so those who have reached the status of professor or associate professor provide initial selection.

To be successful, a reasonable number of significant research projects would have been completed, so participants must have completed a minimum of four research papers in the last five years.

The selection criteria, of professor and four research papers, could lead to members that are chosen due to the tertiary institutions they belong to providing plentiful research time and resources compared to other institutions. As universities are considered to require lecturers to teach less than in polytechnics and technology institutes, the chosen subjects are likely to be from universities. A limitation of this study is therefore the narrow generalisation of selecting only university researchers. Results may differ with a different definition of "successful".

Most academic researchers are presumed to be busy with teaching duties during the academic semester, so it is envisaged to interview people during the teaching recess. The interviews will be conducted at the interviewee's office, which provides a quiet, comfortable, and familiar environment for the interviewee. The interviews will be recorded using tape recorders.

An interview guide for semi-structured interviews is attached. Academic researchers will be directly spoken to in an interview. A face-to-face interview will be conducted with a minimum of eleven interviewees. Interviews will be conducted in a face-to-face setting to obtain recorded transcription. Other interview methods of phone and video conferencing will be used for any further additional interviewees or follow up interviews. Email and letter gathering methods will be used for later projects to generalise the findings from this qualitative research.

CONCLUSION

The increasing pressures to research exist in New Zealand and elsewhere with little published or substantiated best practice for new, emerging, or experienced researchers to draw upon. As few studies have investigated the scholarly activities of academic researchers, there are few hypotheses and results to generalise. Researchers may be influenced by daily activities, personal characteristics, career stages, professional associations, and institutional environments. The author proposes to investigate the scholarly activities in a qualitative approach to identify best practice to provide guidance for developing researchers. Academic researchers will be directly spoken to in an interview and asked to describe and reflect on their research practices and the extent to which those practices have contributed to their success as a researcher.

DRAFT INTERVIEW GUIDE:

Theme one – Publications

1. What are five significant research outputs you have attained to date?
2. Could you take one of your first published studies and share the process that you went through in arriving at and developing this idea.

3. What changes did you have to make to your initial research to get it published?

Theme two – Person characteristics

4. What qualifications & experience did you have prior to the first publications?
5. What have you considered important for you to produce successful research?
6. What are your priorities of work?
7. How do you organise your time to do research?
8. How important do you believe your research to be as part of your job?

Theme three – Scholarly environment

9. Describe your work day yesterday.
10. Describe a typical research day or block of research time.
11. What affiliations do you belong to and how have they provided research benefits?
12. Explain the rewards you receive from research.
13. Explain the philosophical position of your department.
14. What literature do you choose to keep up with and how much time is spent on reading literature?

Theme three – Conceptual reasoning

15. What does it take to produce research that is considered memorable or significant by your peers?
16. What differences do you think exist between research when you began your career and research today?
17. What has made you a successful researcher while others struggle?
18. What advice do you have for someone beginning an academic research role?

REFERENCES

Bailey, J. G. (1994). Influences on researchers' commitment. *Higher Education Management, 6* (2), 23-35.

Blaxter, L., Hughes, C., & Tight, M. (2001). *How to research.* (2nd ed.). Buckingham: Open University Press.

Christensen, A. L., Finger, C. A., & Latham, C. K. (2002). New accounting scholars' publications in accounting and non-accounting journals. *Issues in Accounting Education, 17*, 3, 233-251.

Crick, M. (2002). Shifting identities in the research process: an essay in personal anthropology. In *Doing fieldwork: Eight personal accounts of social research*. Perry, J (Eds.). Sydney: University of New South Wales Press Ltd.

De Lange, P. A. (2005). The long road to publishing: A user-friendly expose. *Accounting Education, 14* (2), 133-168.

Frost, P. J., & Stablein, R. E. (1992). *Doing exemplary research.* Newbury Park: Sage.

Mewett, P. (2002). Making a research topic: A continuing process. In: *Doing fieldwork: Eight personal accounts of social research.* Perry, J. (Eds.). Sydney: University of New South Wales Press Ltd.

Perry, J. (2002). *Doing fieldwork: Eight personal accounts of social research*. Sydney: University of New South Wales Press Ltd.

Ryan, B., Scarpens, R. W., & Theobald, M. (1992). *Research method and methodology in finance and accounting.* London: Academic Press Ltd.

Sadler, D. R. (1999). *Managing your academic career: Strategies for successful research career.* Sydney: Allen & Unwin.

Swanson, E. P. (2004). Publishing in the majors: A comparison of accounting, finance, management, and marketing. *Contemporary Accounting Research, 21* (1), 223-252.

Talib, A. A. (2001). The continuing behavioural modification of academics since the 1992 Research Assessment Exercise. *Higher Education Review, 33* (3), 30-46.

Talib, A. A. (2002). The Research Assessment Exercise and motivation: A note on the difference in the impact on the active researchers and the non-active. *Higher Education Review, 34* (2), 51-59.

Zivney, T. L., Bertin, W. J., & Gavin, T. A. (1995*).* A comprehensive examination of accounting faculty publishing. *Issues in Accounting Education, 10,* 1, 1-9.

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The effects of emotional intelligence, age, work experience, and academic performance

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ABSTRACT

In recent years, emotional intelligence (EI) has been a popular topic of debate in the field of management. It has been praised as a successful predictor of job performance and leadership ability. Authors have also claimed that emotional intelligence predicts success at school. However, little empirical research has been conducted to test this assertion. In this study, the relationship between emotional intelligence, as measured by the Trait Emotional Intelligence Questionnaire Short Form (TEIQue SF) and academic performance were examined in a sample of undergraduate business students (N=193). Emotional intelligence was found to be positively associated with work experience. Despite this finding, emotional intelligence was not significantly associated with age. Global trait emotional intelligence was not significantly associated with academic achievement, however, students in the mid-range GPA had a significantly higher mean "well-being" factor score than students in the lower and higher-range GPA. Implications and recommendations for developing emotional intelligence in students are discussed.

Keywords: trait emotional intelligence, academic performance, age, work experience

INTRODUCTION

Academic articles exploring the concept of emotional intelligence began to appear in the early 1990s. Little was known about the concept in the general public or academia until it was popularized in 1995 by Daniel Goleman's book, *Emotional Intelligence: Why it can matter more the IQ*. The book captured the attention of the general public, media, and researchers by claiming that emotional intelligence can be "as powerful, and at times more powerful, than IQ" in predicting how successful one is in life (Goleman, 1995, p. 34).

Goleman (1998) asserts that emotional intelligence, not IQ, predicts workplace success and who transpires as a leader. In a study of Harvard graduates in the fields of law, medicine, teaching, and business, scores on entrance exams had zero or negative correlation with their eventual career success (Goleman, 1998). In *Working with Emotional Intelligence,* Goleman quoted Lyle Spencer Jr., president of Spencer Research & Technology and co-founder of Competency International, as saying:

> What you learned in school distinguishes superior performers in only a handful of the five or six hundred jobs for which we've done competence studies. It's just a threshold

> competence; you need it to get in the field, but it does not make you a star. It's the emotional intelligence abilities that matter more for superior performance (1998, p. 19).

A multitude of studies suggest that EI is a strong predictor of job performance. In a study that examined workers in a cigarette factory in China, EI was found to predict employee performance (Law, Wong, & Song, 2004). Another study found that partners in a multinational consulting firm who scored higher than the median on an EI measure produced $1.2 million more in business than the other partners did (Cherniss).

Greenstein (2001) conducted a study that looked at the successes and failures of eleven American presidents. They were assessed on six qualities: organization, communication, vision, political skill, cognitive style, and emotional intelligence. The results showed that emotional intelligence was the key quality that distinguished the successful (e.g., Roosevelt) from the unsuccessful (e.g., Carter). In a study by Elfenbein and Ambady (2002), the ability to perceive emotions in others' facial expressions and pick up subtle signals about people's emotions predicted peer ratings of how valuable these people were to their organization. Lastly, a neta-analysis of 59 studies by Van Rooy and Viswesvaran (2004) found that emotional intelligence correlated moderately with job performance.

In addition, research suggests that emotional intelligence abilities lead to superior performance even in the most intellectual careers. In a study begun in the 1950s at the University of California at Berkeley, eighty Ph.D. students in science completed a series of IQ tests, personality tests, and extensive interviews with psychologists who assessed them on such qualities as emotional balance and maturity, integrity, and interpersonal effectiveness (Goleman, 1998). Forty years later, a follow-up study was conducted using the same former students. Each person's career success was evaluated by resumes, evaluations by experts in their respective field, and sources such as *American Men and Women of Science*. "The result: Emotional intelligence abilities were four times more important than IQ in determining professional success and prestige—even for these scientists" (Goleman, 1998, p. 45).

While some research has found emotional intelligence is positively correlated with academic performance the results have been mixed. In addition, it has been suggested that emotional intelligence can increase as experience increases for a "maturity" effect (Goleman, 1995). The primary purpose of the research is to empirically examine emotional intelligence as it relates to work experience and academic performance. First, we define emotional intelligence and briefly review Trait EI versus Ability EI. Then, literature relating to emotional intelligence to work experience and academic performance is reviewed for the development of our hypotheses. After reporting the results of our study, our paper concludes with a discussion of the implications of this research and directions for future research.

Definition of Emotional Intelligence

Critics of emotional intelligence claim that it is too vague a concept, it cannot be measured, and the validity of it is suspect (Robbins & Judge, 2009). Some researchers argue that the concept of EI is unclear and achieving a definition of it is very difficult because different researchers focus on different skills. One researcher may focus on self-control, while another may study empathy. Some critics question whether EI can be properly measured. They argue that if EI is in fact a form of intelligence, then EI tests must have right and wrong answers. Although there are EI tests that have right and wrong answers, critics still question the validity of these

tests. Finally, some researchers contest the validity of emotional intelligence on a basis of it being so closely related to intelligence and personality (Robbins & Judge, 2009).

Despite these criticisms of emotional intelligence, there is research that suggests it is a valid concept and plays an important role in the workplace. Emotional intelligence can be described as having four branches: the ability to accurately perceive and express emotion, assimilate emotion into thought, understand emotion, and regulate emotions in the self and others (Mayer & Salovey, 1997). Perceiving emotion is the ability to identify emotion in the self and others. Facilitating emotion is the ability to use information that explains felt emotions in order to prioritize and direct thinking. Understanding emotion is the ability to understand relationships among emotions and how emotions transition from one state to another. Regulating, or managing, emotion is the ability to regulate emotion in oneself and others (Mayer & Salovey, 1997). These four branches are arranged in order from more basic psychological processes to more complex psychological processes. For example, the lowest level branch involves the relatively simple task of recognizing and expressing emotion. On the contrary, the highest level branch involves the conscious regulation of emotions to enhance emotional and intellectual growth (Mayer & Salovey, 1997).

Petrides and Furnham (2001) claimed that there is a fundamental difference in the measurement of EI constructs. Consequently, the authors proposed a differentiation between *ability EI* and *trait EI.* Ability EI involves actual abilities and should be measured with "maximum-performance" tests, and is directly applicable to cognitive ability (Petrides & Furnham, 2001, p. 426). Trait EI is comprised of "behavioral dispositions and self-perceived abilities" and should be measured through self-report questionnaires, and is related to the study of personality (Petrides & Furnham, 2001, p. 426). From the distinction between ability EI and trait EI, the theory of trait intelligence surfaced. According to Petrides and Furnham (2001), trait emotional intelligence is a constellation of emotion-related dispositions and self-perceptions situated at the lower levels of personality hierarchies. For our study, we will be using Petrides and Furnham's (2001) trait EI definition.

HYPOTHESES

Emotional Intelligence and Work Experience

In *Working with Emotional Intelligence,* Daniel Goleman writes:

> Our level of emotional intelligence is not fixed genetically, nor does it develop only in early childhood. Unlike IQ, which changes little after our teen years, emotional intelligence seems to be largely learned, and it continues to develop as we go through life and learn from our experiences—our competence in it can keep growing. In fact, studies that have tracked people's level of emotional intelligence through the years show that people get better and better in these capabilities as they grow more adept at handling their emotions and impulses, at motivating themselves, and at honing their empathy and social adroitness. There is an old fashion word for this growth in emotional intelligence: *maturity* (1998, p. 7).

In agreement with Goleman's assertion about the relationship between emotional intelligence and experience, there is research that suggests that there is a positive relationship between emotional intelligence and age and work experience. Mayer, Caruso, and Salovey

(1999) asserted that in order for emotional intelligence to be considered a standard intelligence, it should increase with age and experience. The authors compared adolescents' and adults' performance on the Multifactor Emotional Intelligence Scale. Results showed that the adult group functioned at a significantly higher level of emotional intelligence than the adolescent group.

In a study conducted by Day and Carroll (2004), experience was positively correlated with three of the four emotional intelligence scales, as measured by the Mayer-Salovey-Caruso Emotional Intelligence Test. Van Rooy, Alonso, and Viswesvaran (2005) examined the relationship between emotional intelligence and age using the 33-item Emotional Intelligence Scale. There was a significant positive correlation between emotional intelligence and age.

Despite these findings, there is a limited amount of research that has examined the relationship between emotional intelligence and work experience. Intuitively, one might assume that emotional intelligence will increase as work experience increases. However, empirical research is needed to test this hypothesis.

Hypothesis 1: Emotional intelligence is positively associated with work experience.

Emotional Intelligence and Academic Performance

Studies exploring the relationship between emotional intelligence and academic performance have produced mixed results. A study by Schutte et al. (1998) found that scores on a self-report measure of emotional intelligence completed at the beginning of the academic year significantly predicted grade point average at the end of the year. In a study by Rozell, Pettijohn, & Parker (2002), there was a small, but significant relationship between academic success, as measured by grade point average, and three out of the five factors within the utilized emotional intelligence scale utilizing the Goleman (1995, 1998) scale.

Petrides, Frederickson, and Furnham (2004) looked at the relationships between trait emotional intelligence, academic performance, and cognitive ability in a sample of 650 British secondary education students (Grade 11). They found that emotional intelligence moderated the relationship between academic performance and cognitive ability.

In a study conducted by Parker et al. (2004), various dimensions of emotional intelligence were found to be predictors of academic success. At the beginning of the semester, 372 first-year full-time students completed the short form of the Emotional Quotient Inventory (EQ-i:Short) at a small Ontario university. At the end of the academic year, data from this inventory was matched with the students' academic records and two levels of very different academic success were identified: highly successful students who achieved a first-year university grade point average of 80% or better and relatively unsuccessful students who received a first-year grade point average of 59% or less. The results showed that the highly successful students scored higher than the unsuccessful group on three out of the four subsets (intrapersonal ability, stress management, and adaptability) of emotional intelligence as defined by the EQ-i:Short. The two groups did not score significantly different on interpersonal ability (Parker et al., 2004).

In a study conducted by Rode, Mooney, Arthaud-Day, Near, Baldwin, Rubin & Bommer, (2007), it was predicted that emotional intelligence was related to academic performance for two reasons. First, academic performance involves a great deal of ambiguity (Astin, 1993), which has been shown to cause felt stress (Jex, 1998). Students are required to manage numerous assignments, adapt to the differing teaching styles and expectations of instructors, work

independently toward objectives, and manage conflicting academic and non-academic schedules. In addition, some aspects of academic work may be considered highly stressful, such as taking exams (Rode et at., 2007).

Second, the majority of academic work is self-directed, requiring high levels of self-management (Rode et at., 2007). Understanding the causes and effects of various emotions is an important element of emotional intelligence. Rode et al. (2007) continued by including the research of Mayer and Salovey (1997): individuals with a high level of emotional intelligence are able to direct positive emotions to uphold the energy needed for high performance over long periods of time and to redirect negative emotions into productive behaviors. Thus, Rode et al. (2007) reasoned that individuals with high emotional intelligence would perform better academically. Despite their prediction, emotional intelligence was not significantly associated with grade point average, however, they did find an interaction of emotional intelligence with conscientiousness explained unique variance in academic performance (cumulative GPA), as well as public speaking and group behavior effectiveness.

A number of other studies did not find significant relationships between emotional intelligence and academic success. Newsome, Day, and Catano (2000) investigated the relationship of emotional intelligence, cognitive ability, and personality with academic achievement. Emotional intelligence was measured using the Emotional Quotient Inventory (EQ-i), including the total EQ-i score and five EQ-i composite factor scores. None of the EQ-i factor scores, nor the total EQ-i score, was significantly related to academic achievement. A study by O'Connor and Little (2003) assessed the relationship between emotional intelligence and academic achievement, as measured by grade point average, in college students, using both self-report and ability-based measures of emotional intelligence. The results showed that emotional intelligence was not a strong predictor of academic achievement regardless of the type of instrument used to measure it.

Bastian, Burns, and Nettelbeck (2005) examined the relationships between emotional intelligence and a number of life skills (academic achievement, life satisfaction, anxiety, problem-solving, and coping ability). The participants consisted of 246 predominantly first-year tertiary students from a university in Australia. Participants completed three measures assessing emotional intelligence that were widely used and suitable for an Australian sample: Trait Meta Mood Scale, Assessing Emotions Scale, and the Mayer, Salovey, and Caruso Emotional Intelligence Test. Correlations between emotional intelligence and academic achievement were not statistically significant.

Considering the mixed nature of literature on the relationship between emotional intelligence and academic performance, the concept warrants further research. Perhaps the studies that did not find a significant relationship between emotional intelligence and academic performance did not examine the subfactors of emotional intelligence or perhaps it was due to the scale that was utilized. Based on all the theoretical literature on emotional intelligence, we would expect the following:

Hypothesis 2: Emotional intelligence is positively associated with academic performance, as measured by student GPA.

METHODOLOGY

Procedure

A survey was created and administered to 193 College of Business students at a southeastern university. The surveys were administered in individual College of Business classrooms during class time by the respective instructor. All instructors read the same script prior to passing out the surveys. The survey instrument consisted of 30 content questions, one question asking students how concerned they were with truthful answers, and six demographic questions. The survey instrument is displayed in Appendix A. The first part of the survey consisted of 30 content questions in a seven-point Likert-type scale that measured trait emotional intelligence using the TEIQue model. After the content questions, there was a question that asked students how concerned they were with giving truthful answers on the survey. Nine percent of students indicated that they were "Not very concerned," 4% were "Somewhat concerned," 14% were "Moderately concerned," 43% were "Considerably concerned," 26% were "Very concerned," and 3% of students did not answer the question.

Participants

The final section of the survey instrument recorded demographics of the participants, which had questions on age, work experience (part-time and full-time), ethnicity, gender, major, and self-reported GPA. The sample was composed of 51% male and 48% female students. Of the sample, 58% of the students were between the ages of 19 and 24 years old, 23% were between 25 and 29 years old, and the remaining 18% ranged in age from 30 to 57 years old. Seventy-eight percent were Caucasian, 5% African American, 7% Hispanic, 4% Asian, and 5% were classified as other. Of the students surveyed, 10% were majoring in General Business, 26% Management, 15% Marketing, 16% Accounting, 17% Finance, 3% Management Information Systems, and 12% were classified as other. Sixty-nine percent of students indicated that they had full-time (40 or more hours per week) work experience and 31% of students had part-time work experience (39 or less hours per week). All of the students surveyed had a GPA that was higher than a 2.0. Twenty-eight percent of students had a GPA of 2.1 to 2.9, 46% had a GPA of 3.0 to 3.4, 21% had a GPA of 3.5 to 3.9, and 5% of students did not report their GPA.

Measures

Trait Emotional Intelligence Questionnaire (TEIQue)

The TEIQue was developed by K. V. Petrides and is a scientific instrument used to measure trait emotional intelligence (Petrides, 2001). The TEIQue is composed of fifteen facets that were derived from a comprehensive content analysis of prominent EI literature: adaptability, assertiveness, emotion appraisal (self and others), emotion expression, emotion management (others), emotion regulation, impulsiveness (low), relationship skills, self-esteem, self-motivation, social competence, stress management, trait empathy, trait happiness, and trait optimism (Petrides & Furnham, 2001). In Conte (2005) reviewed and critiqued various EI measures. While, he did not specifically examine the TEIQue measure, he did find that most of

the EI measures have sufficient internal reliability. However, some ability-based EI subscales have marginally acceptable internal consistency and test–retest reliability.

The instrument we chose to measure trait emotional intelligence in this study was the Trait Emotional Intelligence Questionnaire—Short Form (TEIQue-SF) (Petrides & Furnham, 2006). The thirty question TEIQue-SF is based on the long form of the TEIQue and is designed to measure global trait intelligence (Petrides, 2001). Two questions from each of the fifteen subscales of the TEIQue were included in the short form, which were chosen based on their "correlations with the corresponding total subscale scores" (Petrides & Furnham, 2006). These fifteen subscales were used to provide scores on four broader factors: well-being, self-control, emotionality, and sociability (Petrides, 2001).

A high well-being score indicates an overall sense of well-being. In general, individuals with a high score on this factor are fulfilled and satisfied with life. On the other hand, low scores represent individuals that have poor self-esteem and are not satisfied with life at the present time.

The self-control factor refers to one's degree of control over their urges and desires. Individuals with a high self-control score have the ability to manage and regulate external pressures. However, individuals with a low score tend to display impulsive behaviors and are unable to properly manage stress.

Individuals with a high emotionality score possess a wide array of emotion-related skills: recognizing internal emotions, perceiving emotions, and expressing emotions. In turn, these skills are often used to form and nurture close relationships with family and friends. On the contrary, individuals with a low emotionality score have difficulty recognizing their own emotions and conveying their feelings to others. In turn, these individuals generally experience less gratifying personal relationships with others.

The sociability factor focuses on one's social relationships and social influence. This factor differs from the emotionality factor in that it evaluates one's influence in a variety of social contexts, rather than just in personal relationships with family and friends. Individuals with a high sociability score are good listeners and effective communicators. Individuals with a low score are not as effective at social interaction. They appear unsure of themselves in social interactions and are unable to affect others' emotions (Petrides, 2001).

Academic performance

Academic performance was measured by self-reported overall college grade point average (GPA). Since the surveys were administered to students in the College of Business, at least four semesters of academic performance was reflected in the reported GPA scores. Rode et al. (2007) assessed the reliability of using self-reported GPA. In their study, Rode et al. (2007) obtained a random subsample of 100 respondents, and compared the self-reported GPA scores with that of the university records. The two sources of GPA proved to be highly correlated. The average difference was less than 0.04, signifying that self-reported GPA is a reliable source of information.

Work experience

As previously mentioned, 69% of students indicated that they had full-time (40 or more hours per week) work experience and 31% of students had part-time work experience (39 or less hours per week). For purposes of analyzing the data, work experience was made into two

categories: students that had full-time work experience and those that did not have full-time work experience. Students were considered to have full-time work experience if they worked 40 or more hours per week for at least one year.

RESULTS

Hypothesis 1

In order to determine if emotional intelligence was positively associated with work experience, we performed a simple linear regression. Descriptive statistics and correlations are displayed in Table 1 and Table 2, respectively. In agreement with our prediction in Hypothesis 2, at a significance level of .05, emotional intelligence was significantly associated with work experience (see Table 3).

To further analyze the data, we performed a one-way ANOVA. Descriptive statistics of this information is presented in Table 4. Results of the one-way ANOVA are displayed in Table - 5. The results show that there was a significant difference between the average total emotional intelligence scores among students that had full-time work experience and those that did not have full-time work experience.

The average total emotional intelligence score of students that had full-time work experience was 161.3, compared to a 154.4 average emotional intelligence score among students that did not have full-time work experience (see Figure 1). Therefore, students that had full-time work experience had a significantly higher mean total emotional intelligence score than students that did not have full-time work experience.

Hypothesis 2

In order to determine if emotional intelligence was positively associated with academic performance, as measured by grade point average, we performed a multiple linear regression, utilizing the four subsets of emotional intelligence (well-being, self-control, emotionality, and sociability) as independent variables. Descriptive statistics and correlations are given in Table 6 and Table 7, respectively. Contrary to our prediction in Hypothesis 1, emotional intelligence was not significantly associated with GPA (see Table 8).

In order to further analysis the data, GPA was made into a categorical variable. Category 1 represented grade point averages from 3.5 to 4.0, Category 2 represented GPA's from 3.0 to 3.4, and Category 3 represented GPA's from 2.0 to 2.9. Descriptive statistics of this information is presented in Table 9. Results of the one-way ANOVA are presented in Table 10. The results show that there was a significant difference between at least one of the average "well-being" scores among the three categories of GPA.

Performing post hoc tests (see Table 11) showed that there was a significant difference in the average well-being scores between Category 2 and Category 3. Category 2 had a mean well-being score of 36.2 and Category 3 had a mean score of 33.7. Thus, on average, students with a GPA from 3.0 to 3.4 (Category 2) had a significantly higher mean well-being score than students with a GPA from 2.0 to 2.9 (Category 3). This finding is illustrated in Figure 2.

DISCUSSION

Our study had a number of important findings. First, our study confirmed that emotional intelligence was positively associated with work experience. Second, our study suggests that certain subfactors of emotional intelligence are related to academic performance as measured by GPA. While global emotional intelligence was not significantly associated with academic performance, there was a significant association between the emotional intelligence subset of well-being and GPA. When GPA was made into a categorical variable, our data showed that students with a GPA from 3.0 to 3.4 had a significantly higher mean well-being score than students with a GPA from 2.0 to 2.9.

One possible explanation of this finding could be that students with a mid-range GPA (3.0-3.4) have needed to develop EI skills to a greater extent than students at the lower and higher ends of the spectrum. At the low end (GPA from 2.0-2.9), students may not have learned specific EI skills such as self-control, which would have helped these students prioritize the time needed for studying as opposed to other activities. At the high end (GPA from 3.5-4.0), students may not have needed to develop specific EI skills in order to reach a high level of academic achievement. Instead, they may have relied solely on intellectual ability. This has implications for high academic achievers upon entering the workplace, in that they may not have developed the political and negotiating skills needed to flourish.

Age was not positively correlated with emotional intelligence. On explanation for this finding is that perhaps the non-traditional or older students who were sampled differed in some significant way than students who attend university at a more traditional age. And, our results may have been stronger if our sample was not limited to College of Business students in an undergraduate program. Thus, the generalizability of our sample may be limited. The majority (81%) of students that participated in the study were between the ages of 19 and 29 years old. To further examine the relationship between emotional intelligence and work experience, a broader range of ages and years of work experience should be examined in future research.

Further studies are needed to expand upon the relationship between emotional intelligence and age. One such study that took into account a broad range of ages found an interesting relationship between emotional intelligence and age (Derksen, Kramer, & Katzko, 2002). The authors examined the relationship between emotional intelligence and age using a sample of 873 subjects ranging in age from 19 to 84 years old, with a mean age of 50.74 years old. The study found that emotional intelligence peaked in the 35-44 age interval, and then decreased in older age (i.e., an inverted-U relationship). In our study, the relationship between emotional intelligence and age appeared to follow an inverted-U curve. However, there was an insufficient number of data in each age interval for us to support or refute this claim. Gaining further insight into this relationship may pinpoint certain age intervals in which individuals' peak in their emotional intelligence abilities. On the contrary, it may pinpoint age intervals in which developing and increasing emotional intelligence abilities should take precedence. This information would be valuable to managers in the hiring process, as well as in employee development and training programs.

Overall, future research needs to examine the relationship between emotional intelligence, work experience, and other individual level variables such as conscientiousness that might have an important effect. Further research should examine emotional intelligence and work experience using subjects from a variety of different fields of work. Certain career fields may place a higher emphasize on emotional intelligence abilities than others. And considering

that emotional intelligence is key in predicting star performance in the workplace, future research should expand upon this finding. Namely, future research should strive to find a specific emotional intelligence construct that successfully predicts job performance.

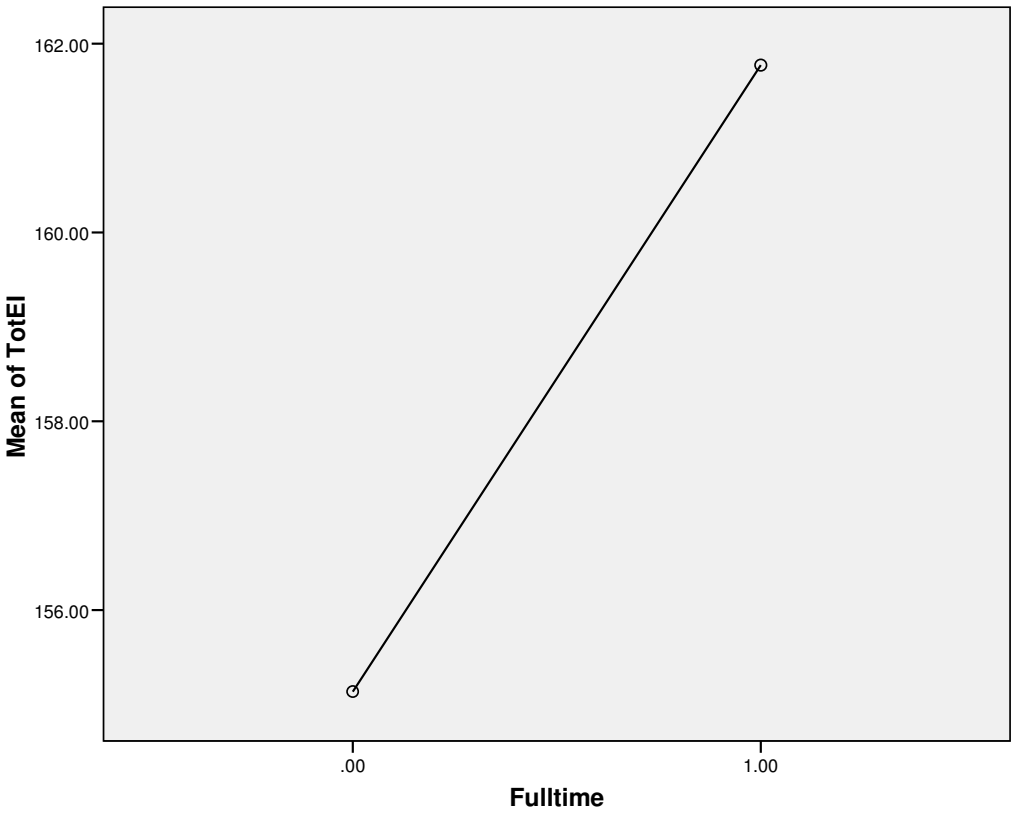
Our study used self-reported GPA as the measure of academic success, although research has questioned the validity of self-report GPA. However, research has shown that self-report GPA is highly correlated with actual GPA. It is also worth mentioning that we did not use longitudinal data in our analyses of academic performance. So, further research should employ longitudinal data in the analyses of academic performance to see if these results would vary. With longitudinal data, you could track students in the workplace to see if emotional intelligence is, in fact, a stronger predictor of performance than GPA.

Research has typically focused on *ability* measures of emotional intelligence. Yet, research has suggested that there is a fundamental difference in the measurement of different constructs of EI. This has divided research on emotional intelligence into two distinct paths: ability EI and trait EI. Our study utilized a trait emotional intelligence construct, which concerns emotion-related self-perceived abilities; whereas previous research has focused on ability measures of EI that utilize maximum-performance tests. Future research should expand upon some of the existing research (e.g. Conte, 2005), in order to examine in more detail the differences between ability constructs and trait constructs.

If subfactors of emotional intelligence, consistently predict academic performance, then this finding has interesting implications. It is an accepted finding that emotional intelligence is a strong predictor of job performance. Yet, schools and admission tests continue to put a significant emphasis on cognitive ability, when it explains very little of achievement in the workplace or in life. In graduate programs and cognitively demanding careers, such as engineering, the selection process focuses primarily on intellectual abilities, while emotional intelligence bears much more weight in predicting success and who emerges as a leader (Goleman, 1998). Therefore, graduate programs and competitive companies could consider incorporating such an emotional intelligence construct in the selection process.

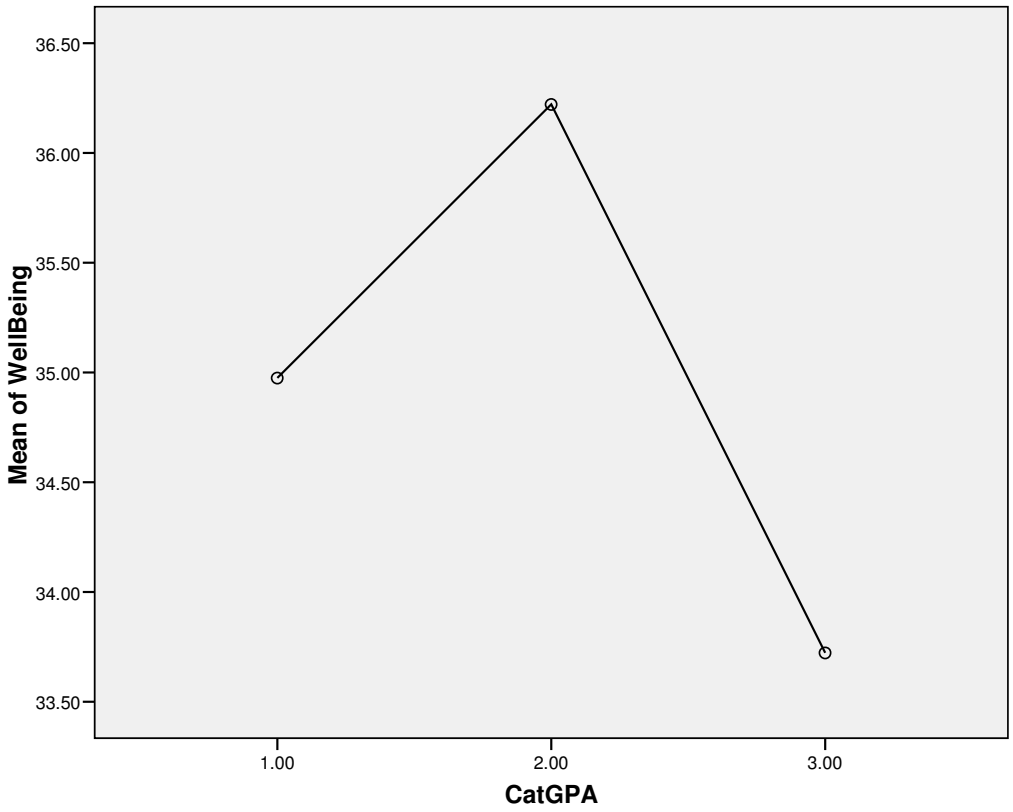
And, we recommend that business schools consider adding practical courses that would help students function at a higher level of emotional intelligence and which would ultimately improve employee performance and interactions in the workplace. A specific Emotional Intelligence Course could include instruction and actual practice in some of the following areas related to emotional intelligence(Goleman, 1998; Petrides & Furnham, 2006): assertiveness; adaptability; emotion expression, emotion regulation, emotion management (others), emotion perception (self and others), impulsiveness, relationships, self-esteem, self-motivation, social awareness, stress management, trait optimism, trait happiness, trait empathy, networking, organizational citizenship behavior, sensing/reading subtle social cues, inspiring/influencing others, managing time and priorities, negotiating, managing conflict, and recognizing personality traits in others.

Figure 1. Mean Plots of Global Trait EI for Full-time Experience Versus No Full-time Experience



*0 = No full-time work experience, 1 = Full-time work experience

Figure 2. Mean Plots of Well-being for Categorical GPA



*1.0 = Students with a GPA from 3.4 to 4.0, 2.0 = GPA from 3.0 to 3.4, 3.0 = GPA from 2.0 to 2.9

Table 1. Descriptive Statistics of Variables (Total Emotional Intelligence and Work Experience)

	Mean	Std. Deviation	N
TotalEI	159.1709	19.11520	158
Fulltime	.6962	.46136	158

Table 2. Correlations among Variables (Total Emotional Intelligence and Work Experience)

		TotalEI	Fulltime
Pearson Correlation	TotalEI	1.000	.166
	Fulltime	.166	1.000
Sig. (1-tailed)	TotalEI	.	.018
	Fulltime	.018	.
N	TotalEI	158	158
	Fulltime	158	158

Table 3. ANOVA (Total Emotional Intelligence and Work Experience)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1585.782	1	1585.782	4.435	.037(a)
	Residual	55780.605	156	357.568		
	Total	57366.386	157			

a Predictors: (Constant), Fulltime
b Dependent Variable: TotalEI

Table 4. Descriptive Statistics of Variables (Total Emotional Intelligence and Work Experience)

TotalEI

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound	Lower Bound	Upper Bound
.00	48	154.3750	17.66187	2.54927	149.2465	159.5035	124.00	192.00
1.00	110	161.2636	19.42271	1.85188	157.5933	164.9340	92.00	202.00
Total	158	159.1709	19.11520	1.52072	156.1672	162.1746	92.00	202.00

Table 5. One-Way ANOVA (Total Emotional Intelligence and Work Experience)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1585.782	1	1585.782	4.435	.037
Within Groups	55780.605	156	357.568		
Total	57366.386	157			

Table 6. Descriptive Statistics of Variables (Subsets of EI and GPA)

	Mean	Std. Deviation	N
GPA	3.3284024	1.04324262	169
WellBeing	35.4497	4.97603	169
SelfControl	29.3669	5.26515	169
Emotionality	41.7041	6.83966	169
Sociability	31.4024	4.88599	169

Table 7. Correlations among Variables (Subsets of EI and GPA)

		GPA	WellBeing	SelfControl	Emotionality	Sociability
Pearson Correlation	GPA	1.000	.093	.040	.078	.096
	WellBeing	.093	1.000	.356	.491	.497
	SelfControl	.040	.356	1.000	.361	.392
	Emotionality	.078	.491	.361	1.000	.426
	Sociability	.096	.497	.392	.426	1.000
Sig. (1-tailed)	GPA	.	.116	.304	.156	.107
	WellBeing	.116	.	.000	.000	.000
	SelfControl	.304	.000	.	.000	.000
	Emotionality	.156	.000	.000	.	.000
	Sociability	.107	.000	.000	.000	.
N	GPA	169	169	169	169	169
	WellBeing	169	169	169	169	169
	SelfControl	169	169	169	169	169
	Emotionality	169	169	169	169	169
	Sociability	169	169	169	169	169

Table 8. ANOVA (Subsets of EI and GPA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.318	4	.579	.526	.717(a)
	Residual	180.526	164	1.101		
	Total	182.844	168			

Table 9. Descriptive Statistics of Variables (Subsets of EI and Categorical GPA)

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
WellBeing	1.00	39	34.9744	6.54735	1.04841	32.8520	37.0968	12.00	42.00
	2.00	86	36.2209	3.83299	.41332	35.3991	37.0427	26.00	42.00
	3.00	54	33.7222	5.28942	.71980	32.2785	35.1660	21.00	42.00
	Total	179	35.1955	5.06705	.37873	34.4482	35.9429	12.00	42.00
SelfControl	1.00	40	29.3500	5.91630	.93545	27.4579	31.2421	17.00	40.00
	2.00	86	29.4884	5.16719	.55719	28.3805	30.5962	17.00	40.00
	3.00	53	28.2736	4.62909	.63586	26.9976	29.5495	17.00	37.00
	Total	179	29.0978	5.19320	.38816	28.3318	29.8637	17.00	40.00
Emotionality	1.00	39	41.5897	7.44707	1.19249	39.1757	44.0038	27.00	54.00
	2.00	85	41.7294	6.30644	.68403	40.3691	43.0897	30.00	55.00
	3.00	51	41.0196	6.96417	.97518	39.0609	42.9783	24.00	56.00
	Total	175	41.4914	6.73374	.50902	40.4868	42.4961	24.00	56.00
Sociability	1.00	40	30.4500	5.62481	.88936	28.6511	32.2489	15.00	41.00
	2.00	87	31.5402	4.67254	.50095	30.5444	32.5361	21.00	42.00
	3.00	51	30.4902	4.92493	.68963	29.1050	31.8754	20.00	42.00
	Total	178	30.9944	4.97167	.37264	30.2590	31.7298	15.00	42.00

Table 10. One-Way ANOVA (Subsets of EI and Categorical GPA)

		Sum of Squares	df	Mean Square	F	Sig.
WellBeing	Between Groups	209.546	2	104.773	4.229	.016
	Within Groups	4360.610	176	24.776		
	Total	4570.156	178			
SelfControl	Between Groups	51.668	2	25.834	.957	.386
	Within Groups	4748.871	176	26.982		
	Total	4800.539	178			
Emotionality	Between Groups	16.544	2	8.272	.181	.835
	Within Groups	7873.193	172	45.774		
	Total	7889.737	174			
Sociability	Between Groups	50.740	2	25.370	1.027	.360
	Within Groups	4324.254	175	24.710		
	Total	4374.994	177			

Table 11. Post Hoc Tests: Multiple Comparisons (Subsets of EI and Categorical GPA)

Dependent Variable		(I) CatGPA	(J) CatGPA	Mean Difference (I-J) Lower Bound	Std. Error Upper Bound	Sig. Lower Bound	95% Confidence Interval Upper Bound	Lower Bound
WellBeing	LSD	1.00	2.00	-1.24657	.96093	.196	-3.1430	.6499
			3.00	1.25214	1.04599	.233	-.8122	3.3164
		2.00	1.00	1.24657	.96093	.196	-.6499	3.1430
			3.00	2.49871(*)	.86424	.004	.7931	4.2043
		3.00	1.00	-1.25214	1.04599	.233	-3.3164	.8122
			2.00	-2.49871(*)	.86424	.004	-4.2043	-.7931

APPENDIX A

Questionnaire and Scoring Key-Instructions: Please answer each statement below by putting a circle around the number that best reflects your degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statements. Work quickly and try to answer as accurately as possible. There are no right or wrong answers. There are seven possible responses to each statement ranging from 'Completely Disagree' (number 1) to 'Completely Agree' (number 7).

	Agree						Disagree
1. Expressing my emotions with words is not a problem	1	2	3	4	5	6	7
2. I often find it difficult to see things from another	1	2	3	4	5	6	7
3. On the whole, I'm a highly motivated person.	1	2	3	4	5	6	7
4. I usually find it difficult to regulate my emotions.	1	2	3	4	5	6	7
5. I generally don't find life enjoyable.	1	2	3	4	5	6	7
6. I can deal effectively with people.	1	2	3	4	5	6	7
7. I tend to change my mind frequently.	1	2	3	4	5	6	7
8. Many times, I can't figure out what emotion I'm	1	2	3	4	5	6	7
9. I feel that I have a number of good qualities.	1	2	3	4	5	6	7
10. I often find it difficult to stand up for my rights.	1	2	3	4	5	6	7
11. I'm usually able to influence the way other people	1	2	3	4	5	6	7
12. On the whole, I have a gloomy perspective on most	1	2	3	4	5	6	7
13. Those close to me often complain that I don't treat	1	2	3	4	5	6	7
14. I often find it difficult to adjust my life according to	1	2	3	4	5	6	7
15. On the whole, I'm able to deal with stress.	1	2	3	4	5	6	7
16. I often find it difficult to show my affection to those	1	2	3	4	5	6	7
17. I'm normally able to "get into someone's shoes" and	1	2	3	4	5	6	7
18. I normally find it difficult to keep myself motivated.	1	2	3	4	5	6	7
19. I'm usually able to find ways to control my emotions	1	2	3	4	5	6	7
20. On the whole, I'm pleased with my life.	1	2	3	4	5	6	7
21. I would describe myself as a good negotiator.	1	2	3	4	5	6	7
22. I tend to get involved in things I later wish I could	1	2	3	4	5	6	7
23. I often pause and think about my feelings.	1	2	3	4	5	6	7
24. I believe I'm full of personal strengths.	1	2	3	4	5	6	7
25. I tend to "back down" even if I know I'm right.	1	2	3	4	5	6	7

26. I don't seem to have any power at all over other	1	2	3	4	5	6	7
27. I generally believe that things will work out fine in	1	2	3	4	5	6	7
28. I find it difficult to bond well even with those close	1	2	3	4	5	6	7
29. Generally, I'm able to adapt to new environments.	1	2	3	4	5	6	7
30. Others admire me for being relaxed.	1	2	3	4	5	6	7

Questions 1-30 measure trait emotional intelligence using the Trait Emotional Intelligence Questionnaire—Short Form (TEIQue-SF) (Petrides & Furnham, 2006). Questions 1-30 provide scores for four factors: Well-being, self-control, emotionality, and sociability. Well-being is comprised of questions 5, 20, 9, 24, 12, and 27. Self-control is comprised of questions 4, 19, 7, 22, 15, and 30. Emotionality is comprised of questions 1, 16, 2, 17, 8, 23, 13, and 28. Sociability is comprised of 6, 21, 10, 25, 11, and 26. Questions 2, 4, 5, 7, 8, 10, 12, 13, 14, 16, 18, 22, 25, 26, and 28 are reverse-coded. Questions 3, 14, 18, and 29 contribute only to the global trait EI score.

REFERENCES

Astin, A.W. (1993). *What matters in college: Four critical years revisited.* San Francisco, CA: Jossey-Bass.

Bastian, V.A., Burns, N.R., & Nettelbeck T. (2005). Emotional intelligence predicts life skills, but not as well as personality and cognitive abilities. *Personality and Individual Differences,* 39, 1135-1145.

Cherniss, C. The business case for emotional intelligence. Consortium for Research on Emotional Intelligence in Organizations. Retrieved December 7, 2008, from http://www.eiconsortium.org/research/business_case_for_ei.pdf.

Conte, J.M. (2005). A review and critique of emotional intelligence measures. *Journal of Organizational Behavior*, 26, 433–440.

Day, A.L. & Carroll, S.A. (2004). Using an ability-based measure of emotional intelligence to predict individual performance, group performance, and group citizenship behaviours. *Personality and Individual Differences,* 36, 1443-1458.

Derksen, J., Kramer, I., & Katzko, M. (2002). Does a self-report measure for emotional intelligence assess something different than general intelligence? *Personality and Individual Differences,* 32, 37-48.

Elfenbein, H.A. & Ambady, N. (2002). Predicting workplace outcomes from the ability to eavesdrop on feelings. *Journal of Applied Psychology*, 87, 963-971.

Goleman, D. (1995). *Emotional intelligence.* New York: Bantam Books.

Goleman, D. (1998). *Working with emotional intelligence.* New York: Bantam Books.

Greenstein, F.I. (2001). *The Presidential Difference: Leadership Style from FDR to Clinton.* Princeton, NJ: Princeton University Press.

Jex, S.M., (1998). *Stress and job performance*. Thousand Oaks, CA: Sage.

Law, K.S., Wong, C., & Song, L.J. (2004). The construct and criterion validity of emotional intelligence and its potential utility for management studies. *Journal of Applied Psychology*, 89, 483-496.

Mayer, J.D. & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (eds.), *Emotional development and emotional intelligence: Educational implications.* (pp. 3-31). New York: Basic Books.

Mayer, J.D., Caruso, D.R., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, 27, 267-298.

Newsome, S., Day, A.L., & Catano, V.M. (2000). Assessing the predictive validity of emotional intelligence. *Personality and Individual Differences,* 29, 1005-1016.

O'Connor, R.M. and Little, I.S. (2003). Revisiting the predictive validity of emotional intelligence: Self-report versus ability-based measures. *Personality and Individual Differences,* 35, 1893-1902.

Parker, J.D.A., Summerfeldt, L.J., Hogan, M.J., & Majeski, S. (2004). Emotional intelligence and academic success: Examining the transition from high school to university. *Personality and Individual Differences*, 36, 163-172.

Petrides, K.V. (2001). *A psychometric investigation into the construct of emotional intelligence.* Unpublished doctoral dissertation, University College London.

Petrides, K.V. & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality,* 15, 425-448.

Petrides, K.V., Frederickson, N., & Furnham, A. (2004). The role of trait emotional intelligence in academic performance and deviant behavior at school. *Personality and Individual Differences*, 36, 277-293.

Petrides, K.V. & Furnham, A. (2006). The role of trait emotional intelligence in a gender-specific model of organizational variables. *Journal of Applied Social Psychology*, 36, 552-569.

Robbins, S.P. & Judge, T.A. (2009). *Organizational Behavior*. Upper Saddle River, NJ: Prentice Hall.

Rode, J., Mooney, C., Arthaud-Day, M., Near, J., Baldwin, T., Rubin, R., & Bommer, W. (2007). Emotional intelligence and individual performance: Evidence of direct and moderated effects. *Journal of Organizational Behavior,* 28, 399-421.

Rozell, E.J., Pettijohn, C.E., & Parker, R.S. (2002). An empirical evaluation of emotional intelligence: The impact on management development. *Journal of Management Development,* 21, 272-289.

Schutte, N.S., Malouff, J.M., Hall, L.E., Haggerty, D.J., Cooper, J.T., Golden, C.J., & Dorheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences,* 25, 167-177.

Van Rooy, D.L., Alonso, A., & Viswesvaran, C. (2005). Group differences in emotional intelligence scores: Theoretical and practical implications. *Personality and Individual Differences,* 38, 689-700.

Van Rooy, D.L. & Viswesvaran, C. (2004). Emotion intelligence: A meta-analytic investigation of predictive validity and nomological net. Journal of Vocational Behavior, 65, 71-95.

Surprises learned from course evaluations

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ABSTRACT

Course evaluations are widely integrated into faculty and course assessments in higher education. Evaluations provide student-evaluated quality information and are used for tenure, promotion and salary adjustment decisions. In this study, a simple instrument for student instructor rating was used to collect evaluation data from January through December 2009. The evaluations were voluntarily submitted by 758 students. A statistical control chart was used to monitor the longitudinal performance of instructors and provide feedback to the administration regarding whether or not short-term or long-term attention and guidance are needed. Instructor's performance, as affected by both class size and the level of difficulty of the courses, was evaluated through various regression techniques. The results of this study indicated that multiple factors, principally increased course-load levels and motivational variations resulting from delivering the same course several times in a year, can lower the performance of instructors over time. Also, different types of pedagogies may also influence the outcome of the evaluations. On the other hand, larger class size does not necessary reduce the instructor's performance.

Keywords: Course evaluations, students rating of instructors, class size, statistical control chart, evaluation instrument.

INTRODUCTION

The significant increase in the number of higher education institutions over the past few decades has created an environment of active competition among education providers. Students have many options when they are identifying and selecting a quality program from a reputable college or university. Therefore, it is important to ensure that the quality of programs are maintained and accredited by the relevant qualification agencies or associations. One way of assessing the quality of the program is via student ratings of instructors (SRIs). Students are asked to evaluate their instructor on how he/she "perform" throughout the course (Goldstein & Benassi, 2006). The SRIs can also have an indirect influence on the tenure promotion and salary adjustment for instructors (McKeachie, 1979; Theall & Franklin, 1990; Yao, Weissinger & Grady, 2003).

Although there are various types of valid instruments developed for SRIs, different institutions apply different format to address the teaching and instructor. It is difficult to deny the fact that evaluating student satisfaction of teaching remains controversial and problematic (Richardson, 2005; Wiser-Jensen, Stensaker & Grogaard, 2003; Baxter Magolda, 1992). Numerous factors, such as cultural background and gender of the student, year of which the student is into his/her study, types of courses, class size, when the courses are offered, are found

to be associated with the course evaluations (Davis, Hirschberg, Lye, Johnston & McDonald, 2007).

Generally, no in-depth analyses are performed on the collected evaluation data. Therefore, most of the time, the instructors only receive a brief summary report on their performance. This is because evaluation data are not easy to analyze due to its ordinal nature and usually little guidance are received in analyzing and interpreting the analyses results. In additions, the degree to which the administration incorporates this information into an overall performance appraisal of staff is often vague (Millman & Darling-Hammond, 1990; Scriven, 1995; Theall, Franklin & Ludlow, 1990; Wachtel, 1998). On the other hand, one should be cautious in reading the summary report generated from evaluation data because if students know instructors are giving them easy grades, then, they will normally give excellent evaluations in return. In some occasions, students maybe too afraid to rate their instructor according to the truth because they are worried this might jeopardize their grades. Students' narratives, if provided, are another source of performance feedbacks for instructors.

In terms of tenure promotion and salary adjustment, the summary report from evaluation data can be used as part of the supporting documents. These reports will act as quantitative evidence on whether or not the relevant instructor deserves to be promoted or for salary adjustment.

This retrospective study aims to employ a statistical control chart approach in analyzing the evaluation data. Techniques like this not only provide good quantitative evidence to the head of department on how his/her staff perform throughout the year, but also provide a good indication to the head of department on when faculty should be advised and monitored. It is also interesting to observe the various longitudinal trends of the instructor's performance versus the class size as well as the level of difficulty of the course, for example, freshman, sophomore, junior or senior level of courses.

INSTRUMENT

This is a generic instrument only meant for course evaluations. It comprises 11 simple questions which are designed to evaluate the instructor's ability to explain, fairness in grading, degree of preparation for classes, ability to stimulate interest, enthusiasm for the course, helpfulness and availability outside classroom, receptiveness to questions asked in class, effectiveness as an instructor, quality of teaching, and ability to present material effectively. Unfortunately, no information about the students' background are collected. In this instrument, students ought to spend approximately 15 minutes to rate their instructor on a scale of 1 (far below average) to 5 (well above average). The total score, which ranges from 11 to 55, will then be calculated as the summation of the rating for each question. In general, a higher total score indicates the instructor is well received by students. A remark column is provided at the end of the instrument for students to document their comments or suggestions.

DATA

American Degree Program students from freshman to senior level in psychology, communication, English, humanity and social science related courses were selected to participate in this study. This is a franchised program where students will spend 4 years of their study in an accredited college in Malaysia, then, students will receive their Bachelor of Science degree from

a reputable American university upon completion of their study. The courses mentioned earlier were selected because they were offered in this program during the period of data collection and only complete evaluation data were included. The data were collected from a total of 35 course evaluations from 5 different terms offered between January and December 2009. These 35 courses were taught by 5 full-time instructors in the program. All these instructors posses a master qualification in their relevant field of study, majority of them have less than 2 years of teaching experience, only one instructor has more than 2 years of teaching experience. Overall, the data contained the evaluations voluntarily submitted by 758 students.

ANALYSIS

A statistical control chart known as the mean or alternatively the x-bar control chart along with its lower control limit (LCL) and upper control limit (UCL) were used to evaluate the collected data. This technique will not only provide a detail control chart which is used to monitor the instructors' performance over time, but also indicate when extra guidance and support ought to be provided. This is important especially for new instructor who may need thorough guidance and close monitoring from time to time. Besides, various types of regression techniques were applied to investigate the relationship between evaluation score versus both class size and level of difficulty for courses offered.

RESULTS

Table 1 summarized the level of difficulty for courses along with the class sizes that were included in this study. Majority of the courses offered were at freshman level with class sizes ranged from 14 to 57 students. Generally, class size decreased as the level of difficulty increased.

Figure 1 presented the evaluation results for 5 instructors in the program throughout the year of 2009. It was interesting to note the excellent improvement in lecturing for instructor 1 over time. This particular instructor started with course evaluations worse than the segregated average, but tremendous improvements were observed at the end of year 2009. On the other hand, the rest of the instructors showed a slight drop in their in-class performances, but a significant drop was observed for instructor 4, who has more than two years of teaching experience. Overall, majority of the instructors' performances were consistently above the segregated average except for instructors 1, 3 and 4.

The influence of class size on course evaluations was showed in Figure 2. It was interesting to note the in-class performance of instructors generally dropped slightly with increasing class sizes. This was the case for all instructors except for instructor 3.

A polynomial model mentioned below was developed to investigate the influence of class size on course evaluations. Figure 3 clearly showed the data were fitted using a U-shape model. This model presented the finding that course evaluations decreased slightly when class size increased to approximately 30 students, then, class size of 25 to 35 students produced the lowest evaluations, and the evaluations peaked again at class size of 30 students and beyond.

$$Evaluation\ score = 0.0111\ \times\ (class\ size)^2 - 0.6415 \times (class\ size) +\ 50.461$$

Figure 4 presented course evaluations by level of difficulty for courses offered. Again, a polynomial model was used to fit the data. Generally, this figure indicated higher level of

courses did not necessary produce lower course evaluations. On average, the evaluation scores for junior level courses were slightly higher compared to freshman level courses. Below you will find the details of the model that was used to fit the data.

$$Evaluation\ score = 0.528 \times (level\ of\ difficulty\ for\ classes\ offered)^2 - 2.0437 \times (level\ of\ difficulty\ for\ classes\ offered) + 45.655$$

According to Figure 5, it was surprising to observe the course evaluations for freshman level courses did not influence by the increasing class size. In fact, some freshman level courses produced better course evaluations with larger size. As for sophomore level courses, the course evaluations dropped when class size was larger than 35 students. Good course evaluations for junior level classes were observed when class size was less than 10 students. Again, a polynomial model mentioned below was used to fit data for each level of courses offered.

For Freshman classes:

$$Evaluation\ score = 0.0055 \times (class\ size)^2 - 0.2691 \times (class\ size) + 46.704$$

For Sophomore classes:

$$Evaluation\ score = -0.113 \times (class\ size)^2 + 7.5031 \times (class\ size) - 82.246$$

For Junior classes:

$$Evaluation\ score = -0.1544 \times (class\ size)^2 + 2.1636 \times (class\ size) + 42.93$$

DISCUSSION

Since all instructors do not possess a broad experience in teaching, it is possible for their performance to drop slightly over time. Few factors, including increase of course loads and motivation, could contribute significantly to this finding.

Besides, the instructor's style of teaching is also an important factor to consider. A conventional teacher-centered pedagogy, where students are expected to blindly accept the information that the instructor provided in class without given a chance to ask questions (Stofflett, 1998), is no longer found to be effective (Lord, Travis, Magill & King, 2009). Instead, instructors should start exploring the use of student-centered pedagogy, where students' learning is the focus of the class and students are also encouraged to interact regularly with their instructors as well as to hold small group discussions among them (Yager, 1991). The use of these strategies can have a direct effect not only on students' learning and course evaluations, but also the tenure and promotion decisions (Hara, 2009).

Although class size is found to have only a slight impact on the course evaluations, this finding is not unusual because the same finding has also been observed in a past study (Marsh, Overall, & Kesler, 1979). This finding has indirectly challenged the widely held speculation that effectiveness of instruction necessary suffers in classes with larger size. Polynomial model as shown in Figure 3 has also supported the finding that performance of an instructor can be maintained or even better for courses with larger class sizes. In this study, freshman level courses are generally with larger class sizes. This could be due to the fact that freshman courses are easier and students tend to enjoy the role plays and activities that are incorporated into the courses. On the other hand, an opposite outcome is observed for higher level courses. This could

due to the fact that these higher level courses are tougher and students prefer to have a smaller learning environment.

This study is limited with only one year of complete course evaluations data because no complete data are available prior to year 2009 for this program. Therefore, further studies to include more data are suggested to support the findings of this study. Since the chosen program is relatively young in terms of offering courses, therefore, it would be beneficial to include more senior level courses into future studies to allow for a regression model development.

Table 1. Types of courses included.

Level of difficulty	Types of courses	Number of courses offered	Class size	
			Minimum	Maximum
Freshman	Humanity and Social Science	7	14	57
	English	5		
	Psychology	3		
	Communication	4		
	Total	*19*		
Sophomore	Communication	1	29	41
	Humanity	2		
	Total	*3*		
Junior	Psychology	5	2	18
	Communication	1		
	Humanity	5		
	Total	*11*		
Senior	Communication	1	4	
	Total	*1*		

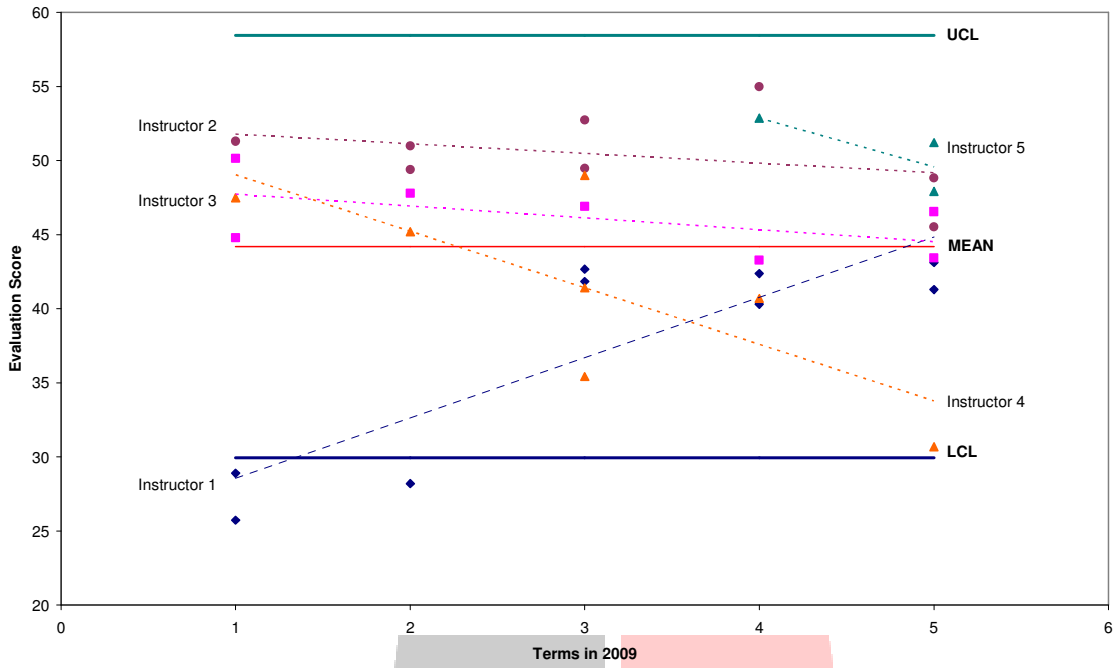

Figure 1. Evaluation scores for each instructor by term in year 2009

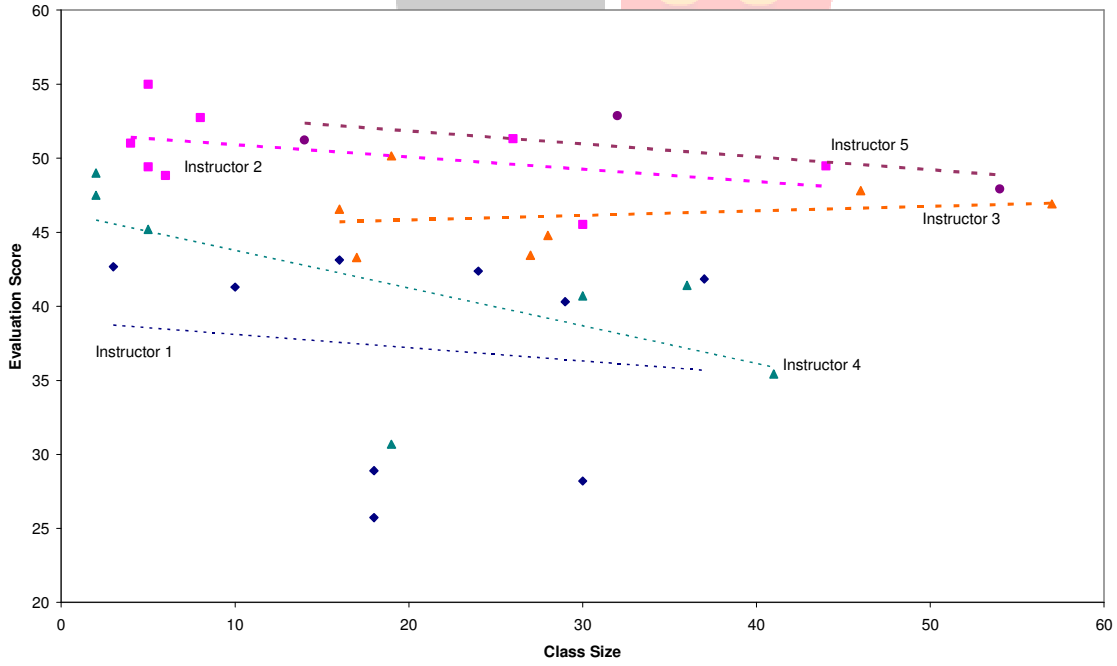

Figure 2. Evaluation scores for each instructor by class size in year 2009

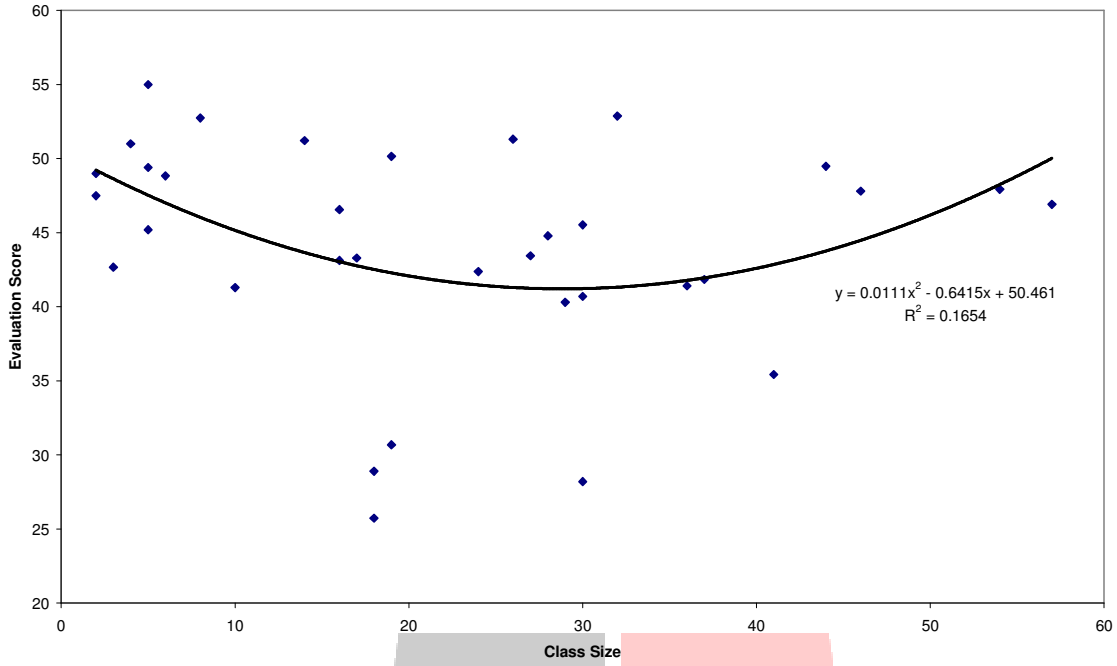

Figure 3. Modeling of evaluation scores by class size in year 2009

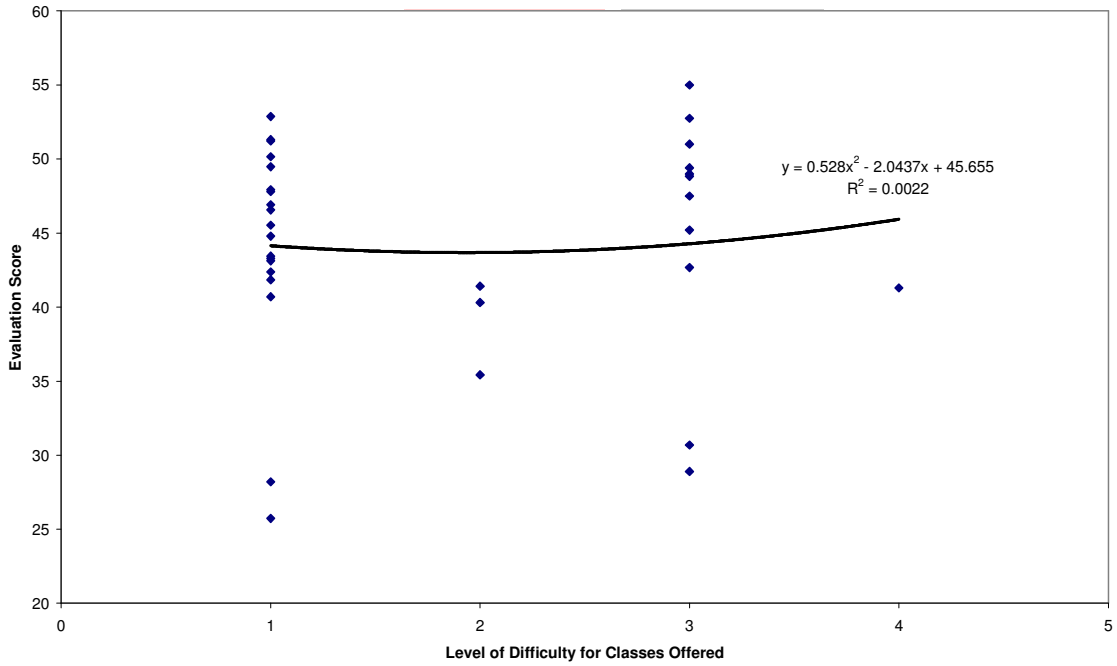

Figure 4. Modeling of evaluation scores by term in year 2009

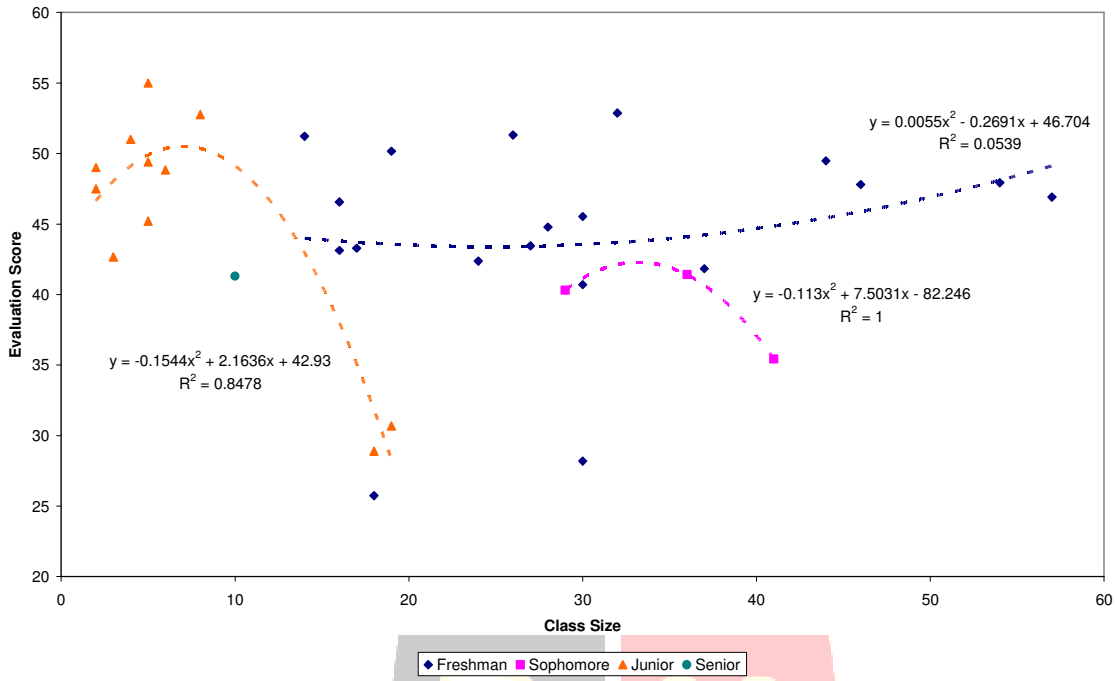

Figure 5. Modeling of evaluation scores by class size and level of difficulty for courses offered in year 2009

REFERENCES

Baxter Magolda, M.B. (1992). Knowing and reasoning in college: gender-related patterns in students' intellectual development. San Francisco: Jossey-Bass.

Davis, M., Hirschberg, J., Lye, L., Johnston, C. & McDonald, I. (2007). Systematic influences on teaching evaluations: the case for caution. Australian Economic Papers, march, 18-38.

Goldstein, G.S. & Benassi, V.A. (2006). Students' and instructors' beliefs about excellent lecturers and discussion leaders. Research in Higher Education, 47(6), 685-707.

Hara, B. (2009). Teacher-centered vs. student-centered pedagogy. Retrieved on September 18, 2009 from http://www.profhacker.com/2009/09/18/teaching-centered-vs-student-centered-pedagogy/.

Lord, T., Travis, H., Magill, B. & King, L. (2002, April). Comparing student-centered and teacher-centered instruction in college biology labs. Paper presented at Pathways to Change: An International Conference on Transforming Math and Science Education in the K16 continuum. Arlington VA: Crystal City.

Marsh, H.W., Overall, J.U. & Kesler, S.P. (1979). Class size, students' evaluations, and instructional effectiveness. American Educational Research Journal, 16(1), 57-69.

Mckeachie, W.J. (1979). Student ratings of faculty; A reprise. Academic Bulletin of the AAUP, 65(6), 384-397.

Millman, J. & Darling-Hammond, L. (1990) (Editors). The new handbook of teacher evaluation. SAGE: Newbury Park.

Richardson, J.T.E. (2005). Instruments for obtaining student feedback: a review of the literature. Assessment and Evaluation in Higher Education, 30(4), 387-415.

Scriven, M. (1995). Student ratings offer useful input to teacher evaluations. Practical Assessment, Research & Evaluation, 4(7).

Stofflett, Rene T. (1998). Putting Constructivist Teaching into Practice in Undergraduate Introductory Science. Electronic Journal of Science Education, Vol. 3, No. 2. Retrieved December 31, 2001 from http://unr.edu/homepage/jcannon/ejse/stofflett.html.

Theall, M. & Franklin, J. (1990) (Editors). Student Ratings of Instruction: Issue for Improving Practice. San Francisco, CA: Jossey-Bass.

Wachtel, H.K. (1998). Student evaluation of college teaching effectiveness: A brief review. Assessment and Evaluation in Higher Education, 23, 191-210.

Wiers-Jensen, J., Stensaker, B. & Grogaard, J.B. (2003). Student satisfaction: towards an empirical deconstruction of the concept. Quality in Higher Education, 8, 183-195.

Yager, Robert E. (1991). The Constructivist Learning Model. The Science Teacher. Vol. 58, No. 6:53-57.

Yao, Y., Weissinger, E. & Grady, M. (2003). Faculty use of student evaluation feedback. Practical Assessment Research & Evaluation, 8(21).

Campus perceptions of fair use violations: implications for university policy development

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ABSTRACT

Over the past decade, numerous incidents of students illegally downloading files and software have occurred (Tenant, 2008). While the Recording Industry Association of America (RIAA) has made it a point to seek out and prosecute people who practice illegal downloading of copyrighted content, it recently announced that it would focus less on lawsuits and more on prevention and education (Slattery, 2008; Vijayan, 2008). Furthermore, a new law recently passed by Congress also places part of the burden on universities, as this is where a great deal of the copyright infringement activity has occurred in the past. The proverbial clock has begun ticking.

Keywords - music download, Higher Education Opportunity Act, Fair Use Policy, copyright infringement

H.R. 4137

The Higher Education Opportunity Act (H.R. 4137), written to amend and extend the Higher Education Act of 1965, was introduced in Congress on November 9, 2007 and signed into law by President Bush on August 14, 2008, becoming Public Law No. 110-315. It is composed of eleven sections and is 431 pages long. What makes this legislation so important is the content of sections 488 and 493 which mandate that institutions of higher education (IHEs) develop plans to combat illegal downloading and peer-to-peer distribution of intellectual property as well as policies and sanctions related to copyright infringement. Many IHEs have largely ignored this issue in the past. While they have known that such student behavior has occurred, many institutions have largely taken a laissez-faire approach to enforcement. This is about to change as the amendments to this act take effect for academic year 2011-12 (Memorandum, 2008).

Section 488 delineates that IHEs development policies and sanctions related to copyright infringement:

> ‘‘(P) institutional policies and sanctions related to copyright infringement, including—

> ‘‘(i) an annual disclosure that explicitly informs students that unauthorized distribution of copyrighted material, including unauthorized peer-to-peer file sharing, may subject the students to civil and criminal liabilities;
> ‘‘(ii) a summary of the penalties for violation of Federal copyright laws; and
> ‘‘(iii) a description of the institution’s policies with respect to unauthorized peer-to-peer file sharing, including disciplinary actions that are taken against students who engage in unauthorized distribution of copyrighted materials using the institution’s information technology system (H.R. 4137, 2010).

Section 493 stipulates that IHEs will develop plans and offer alternatives to illegal downloading:

> ‘‘(29) The institution certifies that the institution—
> ‘‘(A) has developed plans to effectively combat the unauthorized distribution of copyrighted material, including through the use of a variety of technology-based deterrents; and
> ‘‘(B) will, to the extent practicable, offer alternatives to illegal downloading or peer-to-peer distribution of intellectual property, as determined by the institution in consultation with the chief technology officer or other designated officer of the institution.’’ (H.R. 4137, 2010).

Several IHEs have already begun to develop policies and websites to inform students about copyright infringement. Among these are Yale University (P2P: Free legal alternatives to file sharing, 2010), the University of Michigan (File sharing, 2010), the University of Toledo (The University of Toledo: Legal Alternatives to Peer-to-Peer File Sharing, 2010), and Oregon State University (File Sharing @ OSU (2010). While each one has basic information about file sharing and copyright infringement, the University of Michigan site has specific sections for content creators, instructors and students. It also spells out responsibilities for both users and the university. Oregon State University has included an on-line tutorial on copyrights complete with a quiz allowing its students and faculty to test their knowledge.

For those institutions that need to develop a policy, these examples can serve as guidelines and a starting point. Each institution has its own unique circumstances and needs and any such policy should be a cooperative effort between administrators, faculty, staff and even students. Many administrators and staff may not be aware of the myriad of methods and programs that students are using to download and/or share files illegally.

What is the Fair Use Policy?

The urgency to meet the requirements of H.R. 4137 aside, a discussion on Fair Use is in order. The Fair Use Policy is defined in section 107 of the U.S. copyright law and states that, “reproduction of a particular work may be considered “fair,” such as criticism, comment, news reporting, teaching, scholarship, and research” (U.S. Copyright Office – Fair Use, 2006). The U.S. Copyright office also provides four factors to judge if the usage of a copyrighted piece of work is “fair” and these factors are the following:

1. The purpose and character of the use, including whether such use is of commercial nature or is for nonprofit educational purposes
2. The nature of the copyrighted work

3. Amount and substantiality of the portion used in relation to the copyrighted work as a whole
4. The effect of the use upon the potential market for or value of the copyrighted work

Why are Universities Concerned with Fair Use?

Some colleges and universities currently have policies and procedures regarding copyright and "Fair Use" but others still do not have any policies in place. It is important for colleges and universities to implement policies and procedures regarding copyright and "Fair Use" for a several reasons. First, the federal government passed the Higher Education Opportunity Act in August of 2008, which requires universities and colleges to have a plan to prevent copyright infringement and to inform students of the copyright laws and "Fair Use" by July 2010. This law also requires them to inform the students of legal alternatives for downloading and sharing digital files (Greenwood, 2009).

Second, copyright violations could cause severe financial implications for the University as well as ruin the University's reputation. There have been many incidents and lawsuits of copyright infringements in Universities across the country. These incidents include the University of South Florida, University of California, Georgia State, and Cornell University, among others.

Guidelines for "Fair Use" were added to the Copyright act of 1976 but they are very vague. Because "Fair Use" can be interpreted differently depending on the circumstances, it tends to cause a great deal of confusion for students as well as for the faculty. Students who have grown up with downloading music and media digital files may have a different point of view on the copyright laws and "Fair Use" as it pertains to the digital world. These students have become so accustomed to downloading files from the Internet that it is like second nature for them. For instance, 13 Students at the University of Florida were sued by the RIAA for downloading music. There are many more students at other Universities who were also sued. Since then The University of Florida has implemented software to detect illegal file downloading and is holding the students accountable by forcing them to accept USF's policy on a redirected web page (Emerson, 2008).

Students need to be more aware and have a better understanding of the copyright laws and "Fair Use." Students are also now conducting most of their research online and using electronic books instead of hardcover textbooks. Students may not realize that downloading an image for a class presentation or making copies of their electronic textbooks is a violation of the copyright law. They also need to be aware that in some cases digital images, text, media might be acceptable to copy or download providing they meet the "Fair Use" guidelines.

Professors as well as university administration also could use additional clarity on the issue because of new technology and the increased use of electronic reserves. The professors may not be aware of the guidelines pertaining to electronic reserves, which if violated could cause legal issues for the university or college. For example, recently Georgia State University was sued because of the way they used "E-Reserves" and other "electronic course content" (Alganese, 2008, 16). Georgia State was illegally posting and sending copies of its "electronic course content" via its "Blackboard/WebCT electronic course management system" (Alganese, 2008; Howard, 2008).

Crafting a Policy

The University of Tampa is a private university in West Central Florida with approximately 6,000 undergraduate and graduate students. The University of Tampa does have a 1996 policy in place for guidelines on copyright and intellectual property as it relates to software and digital files, but it is very vague and does not mention copyright issues related to electronic books, electronic reserves, or "Fair Use." Because of the federal requirement for all universities to have a stated Fair Use policy by 2010, a committee of faculty, library and information technology administrators, and students sought to investigate the current situation of Fair Use policies in place at other universities as well as study the student body about their perceptions of Fair Use to see what types of intervention, education, or solutions could be offered.

Fair Use Policies at Other Universities

Some of University of Tampa's local direct competitors do have policies and procedures in place regarding copyright and "Fair Use" for both its students and faculty. Eckerd College has a copyright and "Fair use" policy located on the Electronic Reserves web page specifically for Electronic Reserves. The policy goes into detail on how Electronic Reserves should be used. They also require students to read and accept a copyright notice before allowing them to view the Electronic Reserves. Copyright and "Fair Use" is also noted in Eckerd's Information Technology Services policy. Both the copyright and "Fair Use" is fully explained and specific examples of "Fair Use" are given (Eckerd College Copyright Policy, 2010).

Hillsborough Community College has a copyright and "Fair Use" policy included in its Acceptable Use Policy on the Office of Information Technology web page. There is just a short paragraph with a brief description of the copyright law infringements and "Fair Use" (Hillsborough Community College Acceptable Use Policy, 2010).

National Louis University has detailed guidelines for copyright and "Fair Use." They have a link for Copyright Compliance Guidelines that has a separate link for their Electronic Reserves policy and a link for their Copyright and "Fair Use" policies. Their copyright and "Fair Use" policy has a definition of copyright and "Fair Use" as well as a description and example of each "Fair Use" guideline (National Louis University – Copyright Compliance Guidelines, 2010).

The University of South Florida has copyright and "Fair Use" policies and procedures documented in their Policies and Procedures manual. USF had detailed definitions and descriptions and they had the best examples of each "Fair Use" guideline. They gave a description of each guideline and then followed up with an example of "what would be considered fair use" (usfweb2.usf.edu/us/usfgc/gc_pp/GENADM/Gc105.htm). USF also has links about copyright information on its Information Technology web page (University of South Florida Copyright Information, 2010).

In addition to the local competitors, other universities have also implemented their own unique policies and procedures. One university in particular has been well ahead of complying with the Higher Education Opportunity Act in August of 2008. The Brigham Young University created a Copyright Licensing Office in 1999 to address these issues:

- "Copyright education, training and policy advice"
- "Assure effective and appropriate licensing practices"
- "Manage licensing /rights information in a centrally accessible database"

- "Access copyright policy and legal developments"

(Quarterley, 2009, 94).

Brigham Young University's success rate has been very high with implementing the Copyright Office and with creating awareness. Students and faculty are well informed and knowledgeable on copyright and "Fair Use" issues. They no longer ask about the basic questions but focus on issues related to a specific area or related to a new technology.

Research Study

In order to provide a foundation for establishing the 2010 University of Tampa Fair Use Policy, the graduate and undergraduate students at the university were studied to better understand their perceptions and practices with regard to Fair Use. The study took place in two formats: qualitative research in the form of focus groups and depth interviews, and quantitative research in the form of an online survey.

Qualitative Research.

Graduate and undergraduate students were asked a series of discussion questions, either in 4 or 5-person focus groups, or via depth interviews. 45 students were studied (15 graduate and 30 undergraduate). In general, students understood the concept of plagiarism, but not the concept of Fair Use. Additionally, respondents had a much better understanding of correct use of traditional, printed materials than they did of proper use of digital, electronic materials. Downloading music illegally was considered a "social norm" and most students had never considered that taking an image/photograph from the internet might have copyright issues. Some of the following quotes exemplify common student attitudes:

- "If I can Google it, it must be public information that anyone can use however they want."
- "Anything online is in the public domain, which means the public can use it."
- "If I paid for a song, then it is mine, and I should be able to copy it or give it away as I choose."
- "I pay a lot of tuition here, so nobody should be monitoring or restricting my use of the campus network."

Quantitative Research.

All students registered at the University of Tampa (population census) were contacted via email to respond to a web-based survey. Survey questions were divided into attitudes and beliefs, actual practices, and demographics. Although response rates were at 9% overall, the number of students responding made the sample statistically valid at a 95% confidence interval and with the ability to project the results to the overall student population at +/- 5 percent error rate. The survey was implemented on SurveyMonkey™ software during the Spring 2009 semester.

Summary Results

Interestingly, the majority of students (68%) reported they were familiar with the University's Fair Use Policy, although one did not exist. When surveyed about the details of what Fair Use constituted, most were confused, although overall, graduate students had more correct perceptions than undergraduate students did.

As in the qualitative research, students are more cognizant of "traditional" policies dealing with plagiarism, "sharing" other student work, photocopying textbooks, or copyright issues with traditional print materials such as books, magazine articles, or printed photographs. However, when dealing with digital/electronic sources of information, students were unaware or unsure of copyright issues. They also were completely unaware of Fair Use issues in the classroom, assuming if an instructor emailed them something or posted an item on Blackboard, the item must have already been "checked out" as permissible. The concept of "harm" to others owning the copyrights were also interesting, with many students believing that once they paid for an item (via subscription, tuition, one-time purchase, etc.) they had free license to do with that item what they wanted (such as sharing an e-textbook or making copies of a music file). Many felt that if they perceived the copyright holder had already made sufficient profit on the item, or the item was "old" that no fees or permissions were necessary.

In general, all students agreed that any policy enforced on a university campus should be clearly communicated to the student and available in a number of venues (online on Blackboard, on the University website, in the printed student conduct brochure, noted in syllabi, and covered in orientation). The students were adamant that the policy would not invade their privacy, such as with a monitored network, but that they understood that access would need to be blocked to illegal sites, such as for downloading music. However, students also wanted alternatives to illegal sites, and preferred that the university provide them with databases, libraries of digital images, and available music. Such items are already available and have been implemented at other universities.

Conclusion

Universities that have not yet constructed their Fair Use Policy will need to consider legal situations that have already occurred at other universities, other existing policies, as well as current student perceptions at their own university. Clearly communicated policies, to both students and faculty, will help prevent legal implications when the 2010 requirement goes into effect. The clock is ticking.

REFERENCES

Alganese, Andrew (2008). "Georgia State Sued Over E-Reserves." Library Journal 133.9 (15 May 2008), 16-17.

Eckerd College Copyright Policy (2010). Retrieved June 1, 2010 from www.eckerd.edu/its/policies/copyright.php

Emerson, Adam (2008). "USF Keeps Watch on Students' Music." *The Tampa Tribune*. 20 March.

File Sharing (2010). Retrieved June 1, 2010 from http://www.lib.umich.edu/copyright/file-sharing

File Sharing @ OSU (2010). Retrieved June 1, 2010 from http://oregonstate.edu/filesharing/

Greenwood, Bill (2009). "Campus Crackdown: Law Targets Music Pirates." *Information Today,* 26 (2), 1-46.

Hillsborough Community College Acceptable Use Policy (2010). Retrieved June 1, 2010 from www.hccfl.edu/media/64675/acceptable%20use%20policy_revised%2011-08.pdf.

Howard, Jennifer (2008). Publishers Sue Georgia State U. for Copyright Infringement. *The Chronicle Of Higher Education*. April 18, 2008. Retrieved June 1, 2010 from http://chronicle.com/news/article/4319/publishers-sue-georgia-state-u-for-copyright-infringement.

H.R. 4137 (2010). Retrieved June 1, 2010 from http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:h4137enr.txt.pdf

Memorandum (2008). HEOA Requirements and Next Steps Related to Peer-to-Peer (P2P) FileSharing on College and University Networks. Retrieved June 1, 2010 from http://counsel.cua.edu/fedlaw/P2P.pdf

National Louis University – Copyright Compliance Guidelines (2010). Retrieved June 1, 2010 from www.nl.edu/copyrightpermissions/electronic-reserves-policy.cfm.

P2P: Free Legal Alternatives to File Sharing (2010). Retrieved June 1, 2010 fromhttp://www.yale.edu/its/secure-computing/privacy/p2p/alternatives.html

Quarterly, Susie (2009). "Developing a Campus copyright Education Program: Conquering the Challenge." *Journal of Interlibrary Loan*, Document Delivery & Electronic Reserves 18 (1), (December 2007).

Slattery, Brennon (2008). RIAA Stops Suing Individuals: Are We Home Free? PC World. December 19, 2008. Retrieved June 1, 2010 from http://www.pcworld.com/article/155769/riaa_stops_suing_individuals_are_we_home_free.html?tk=rel_news

Tenant, Don (2008). The untold story of illegal peer-to-peer network activity on campus. Computerworld. May 1, 2008. Retrieved June 1, 2010 from http://blogs.computerworld.com/node/7854/.

The University Of Tampa (2010). Software Policy. May 16, 2006. Retrieved June 1, 2010 from http://www.ut.edu/uploadedfiles/information_technology/software_policy.pdf.

The University of Toledo: Legal Alternatives to Peer-to-Peer File Sharing (2010). Retrieved June 1, 2010 from http://www.utoledo.edu/it/NS/Security/Awareness/P2P-Alternatives.html

University of South Florida – Copyright Information (2010). Retrieved June 1, 2010 from http://www.it.usf.edu/standards/security/copyright.

U.S. Copyright Office – Copyright Law of the United States (2009). Retrieved June 1, 2010 from http://www.copyright.gov/title17/.

U.S. Copyright Office – Fair Use (2006). Retrieved June 1, 2010 from http://www.copyright.gov/fls/fl102.html.

Vijayan, Jaikumar (2008). RIAA shifts gears on music piracy, says it won't file more suits. Computerworld. December 19, 2008. Retrieved June 1, 2010 from http://www.computerworld.com/s/article/9124097/RIAA_shifts_gears_on_music_piracy_says_it_won_t_file_more_suits?intsrc=news_ts_head

The importance of university web pages in selecting a higher education institution.

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Abstract

The purpose of this paper was to explore the role the internet and University webpages play in student decisions to consider and attend any specific university. The findings from this study support previous research on the increased use of the internet in the decision-making process and selection of universities by potential students. It emphasizes the need for universities to have attractive and clearly understood webpages with readily navigable information on such characteristics as programs, course offerings, location, and relevant accreditations. This is critically important as visiting the website and what was found there was a precursor to a decision to visit the campus. Finally, the demographics on age indicate that utilization of the internet is more important to the younger generation than older students. This trend is expected to continue and will become more of a factor as our Generation X and Y become parents.

Keywords: internet, webpages, decision-making, university, selection

Introduction

Every year thousands of students make a decision that will have a significant impact on the rest of their lives. They choose what college or university to attend. This decision will affect their career, earnings, and professional development. This decision is equally important to the institutions that depend upon students' tuition revenue to operate. In 2005, private colleges spent an average of $2,073 to recruit each new student, making efficiency in communicating and recruiting a major goal for colleges and universities.

Where are prospective students going for information about universities? They are examining university websites. In our study, 94 percent of the student respondents indicated a positive response to the statement "Prior to considering a school I examine its website". The purpose of this paper is to examine how students are using these websites and what particular

information they are gathering from the school's website. We then provide recommendations for universities to assist them in making their websites better tools for "selling" their institutions.

LITERATURE REVIEW

College Selection

The selection of an institution of higher education can be categorized as the purchase of a high involvement, credence type of service. The choice is high involvement since it involves a great deal of financial risk, psychological risk and social risk. Higher education is a credence service since it is difficult for the consumer to evaluate the service even after some trial has occurred (Zeithaml 1981). For this type of purchase we can expect a greater information search prior to purchase and the internet is a primary tool for the information search (Benjaman and Lee, 2005).

A recent study by Tucciarone (2009) found that students rely on information from college websites in evaluating the institution. The most common information sought by the students was majors, cost, ranking of school, size and location. Some colleges are utilizing specialized recruitment software which uses instant messaging type software to engage visitors who visit their website to increase recruiting opportunities and the interactivity of the website itself (Benjaman and Lee, 2005).

Gender Differences on the web

Previous research has found that gender differences exist regarding online activities and attitudes. For instance, Toe (2001), found females were more likely to engage in messaging activities online while males were more likely to use the internet for downloading files and making purchases. Heavy and medium internet users were more likely to be male (Koragaonkar and Wolin 2002). Ono and Zavodny (2003) reported no difference in internet access based on gender, however differences existed in frequency and intensity of internet use. They found males tended to be online more frequently and for longer periods of time.

In terms of internet shopping, gender has been related to attitudinal differences, with women having more favorable attitudes toward online shopping and also employing value optimizing strategies more frequently than men (Alreck and Settle 2001). Girard, Korgaonkar and Silverblattt (2003) found that men were convenience shoppers online. In other examinations of gender differences in online buyer behavior, men were more likely to actually purchase online (Van Slyke Comunale and Gelanger, 2002 and Sin and Tse, 2002). These findings lead to the first research proposition.

> R1 - The importance of websites in the selection of a higher education institution will vary by gender.

Experience

Consumer research has included prior experience as a key variable that influences the consumer's search criteria and decision process in off-line consumer behavior (Biehal 1983). The role of experience is supported by research on online behavior as well. Experience with

internet auctions lead to greater success by participants in internet auctions. Burroghs and Sabherwal (2002) found that prior experience in online shopping and online prior experience in online information searches were both predictors of online purchasing. Similar findings have been reported with prior experience with internet use being a predictor of purchase intention on the internet (Monsuwe, Dellaert and Ruyter 2004; and Yoh, Damhorst, Sapp and Laczniak, 2003). This leads to the following research proposition.

R2 - Those with prior experience in using the internet will utilize the institution's web page differently than those with less experience.

Frequency of Use

Prior research examining the role of frequency of internet use has yielded mixed results. In one study, more frequent search behavior was found to be a predictor of online purchasing behavior (Burroghs and Sabherwal, 2002). However, Goldsmith (2002) found the amount of internet use (frequency) was not found to be related to purchasing online. Goldsmith (202) notes that position of use in the model for internet buyer behavior may not have been accurate, that is to say that online shopping may result in more internet use, not that more internet use results in more online shopping. We contend that internet use is related to internet experience, and therefore this connection leads to the following research proposition.

R3 - Those consumers who go online more frequently will place a greater weight on a school's website than those who go online less frequently.

Age

Although internet access and use has become the norm, there are differences in online behavior that are related to age. Young adults use the internet more frequently and for longer periods of time (Lyons 2004). Age has also been found to be significantly related to online information gathering and shopping behavior. Those who are 26-45 years old were more likely to go online for information for travel and tourism and also to make travel arrangements online than other age groups (Weber and Roehl, 1999). Chen and Hitt (2002) found that age and education are related to surfing (switching) behavior online.

Regarding university selection, Schimmel, Eschenfelder, Marco, and Racic (2009) examined the differences between traditional, adult continuing education students and graduate students. They found that age was a significant factor with adult continuing education students and graduate students utilizing similar selection criteria. Traditional undergraduate students, however, differed from both the adult continuing education and graduate students in their selection criteria. This results in the fourth research proposition.

R4 Older respondents will place less importance on an institution's website than younger consumers.

Graduate or Undergraduate Student

Graduate and undergraduate students differ. Graduate students tend to be more competitive than undergraduate students. They tend to be older, have more life experience and more technologically savvy. These differences among graduate and undergraduate students also lead to differences in online behavior. Some research indicates that graduate students and undergraduates differ in online educational environments as well (Alstete and Beutell 2004). Graduate student and undergraduates also have been found to differ on the perceptions of internet data quality (Klein 2002). This leads to research proposition 5.

R5 - Graduate students will place a different level of importance on the information on university websites than undergraduates.-

METHODOLOGY

Sample Methods (tools used)

Data was collected using an online survey tool. Incoming students were sent an email asking for their participation. Of the incoming class of 683 students, we got 257 responses for a response rate of 37.6 percent. The demographics of the respondents are located in table one. See Table One in the Appendix.

Measures

The dependent variables, use and impact of the internet, were assessed by 12 items using a six point likert scale anchored by completely disagree and completely agree. The items were: I used the internet to….. identify schools; explore program offerings; identify school locations; determine a school's accreditations; examine the times courses were offered; find out about a schools faculty; obtain a campus map; get a feel for the campus. Four other items in this section were: Prior to visiting a school, I visited the school's website; The school's website was the primary source of information for my decision; my opinion of the school was shaped to a large degree by the school's website; and Websites are the best source of information about a school.

The demographic independent variables are assessed in the following manner. Age was coded with 17-22 being group one (traditional students) 23-30 and 30 and over. Information on gender and graduate or undergraduate student was also collected.

Internet use was coded as 1-7 year being the first group and 8 or more being the second. This split roughly divided the sample evenly. To divide the sample evenly experience on the internet is coded as 10 or less times a week and more than 10 as the second grouping.

Statistical Methodology

Multivariate analysis of variance (Manova) was used to test the research questions. Manova is an extension of Anova to accommodate more than one metric dependent variable simultaneously. Manova is used to test for mean differences between groups.

FINDINGS

The respondents indicated that the University's website was important in their decision process to select which university they would attend. All of the items received mean ratings on the "important" side of the scale. The top items based on mean responses were all related to getting information about the university itself such as location, schools, programs, course times and accreditations.

The items that received the lowest mean ratings were the items that dealt with the development of the university's brand image. These items were: I used the internet to get a feel for the campus (3.96) and that the respondents' opinion of the school was largely shaped from the schools website (3.89) Is this out of 4, 5 or 6? See Table Two in the Appendix.

Gender

Research Question one was not supported. Unlike previous research, our findings suggest that gender does not play a critical role in the utilization of the website to select a university. There were no significant mean differences identified between the groups based on the Manova Results. See Table Three in the Appendix.

Experience

Research question two was supported, there are mean differences based on the Manova results presented in table four. The tests reveal that those with more years of internet experience had a consistently greater mean score than those with less internet experience. The differences were statistically different on the following variables: I used the internet to explore programs/offerings (sig..004); I used the internet to identify locations (sig. .035); I used the internet to determine a school's accreditations (sig. .000); I used the internet to examine the times courses were offered (sig. .000); I used the internet to find out about the school's faculty (sig. .023); I used the internet to get a campus map (sig. .022); Prior to considering a school, I visited the school's website (sig. .000); The school's website was a primary source of information for my decision (sig. .001); My opinion of a school was shaped to a large degree from the school's web-page (sig. .012); Websites are the best source of information about a school (sig. .002). See Table Four in the Appendix.

Frequency of Use

Research question three was supported, there are mean differences based on the Manova results presented in table five.

I used the internet to identify schools (sig. .049); I used the internet to Identify locations (sig. .001); I used the internet to determine a school's accreditations (sig. .000); I used the internet to examine the times courses were offered (sig. .005); I used the internet to find out about the school's faculty (sig. .002); I used the internet to get a campus map (sig. .002); I used the internet to get a feel for a campus (sig. .002); Prior to considering a school, I visited the school's website (sig. .009); The school's website was a primary source of information for my decision (sig. .036). See Table Five in the Appendix.

Age

Research question four was supported, there are mean differences based on the Manova results presented in table six.
The school's website was a primary source of information for the purchase decision (sig .002); Websites are the best source of information about a school (sig. .009); I used the internet to identify schools (sig. .001); I used the internet to explore programs/offerings (sig. .037); I used the internet to determine a school's accreditations (sig. .018); I used the internet to examine the times courses were offered (sig. ..000); I used the internet to find out about a school's faculty (sig. .004). See Table Six in the Appendix.

Type of Student

There was support for research question five that graduate and undergraduate students would place different levels of importance on attributes of the university's webpage. The manova test for research question five is presented in table seven. The undergraduates placed more importance on the website than the graduate students. The Manova was significant at the .000 level and the univariate tests of mean differences resulted in eight variables having significant differences between the groups.

There were also differences when the attributes were ranked based on their ratings, of the top five three were different. In all instances the undergraduate students indicated a higher level of agreement with the statements: Prior to considering a school, I visited the schools website, (sig 009); The school's website was a primary source of information for the purchase decision (sig .002); My opinion of a school was shaped to a large degree from their web-page (sig.036); Websites are the best source of information about a school (sig. .001); I used the internet to explore program offerings (sig. .008); I used the internet to determine a school's accreditations (sig. .041); I used the internet to examine the times courses were offered (sig. ..000); I used the internet to find out about the school's faculty (sig. .004). See Table Seven in the Appendix.

IMPLICATIONS

The university website is an important tool in consumers' decision processes to select a university to attend. The respondents indicated they first visited the website prior to actually visiting the campus. The web is being used as a shopping tool to evaluate attributes such as programs, course offerings, location and accreditations. In this manner the university's website is being used to develop and refine the consumers' evoked set.

Navigation on the first pages should provide clear links to the information the potential consumers want to see. Location, programs, course offerings, and the campus map should all be linked to the first page.

The differences that existed between age and type of student indicate opportunities for targeting via layout. Schools can determine, apriori, what segment they are interested in based on age and type of student and target them by providing the information the preferred customers want. When ranking the variables based on ratings, the top two ratings were consistently agreed upon, but the third, fourth and fifth most important ratings varied in their ranking.

The consumer behavior shopping/purchasing patterns of online purchases and the needs skill for online decision making have influenced higher education. With the rise of the

"information age" consumers are looking to higher education websites to assist them in the decision making process. Our study showed 94 percent of the participants viewing the university's website for information.

The gender differences between males and females found in previous studies was not supported in this study. The differences did not extend to the purchase of credence products such as higher education.

The online behavior related to age support the findings that young adults use the internet more frequently and for longer periods than other groups (Lyons 2004). This supports the findings of this study that potential students used the website primarily for identifying schools, exploring program offerings prior to a visit to the school, identifying school location, and determining the school's accreditations as major focal points of their internet search of university websites. The study found that undergraduate students placed more importance on website than graduate students.

CONCLUSION

A university's website now is an important tool in the information gathering stage in the consumer decision making process. Potential students' first impressions are influenced electronically via the website. A university's web presence is extremely important because visiting the website first is found to be a precursor to visiting the campus. The need to enhance the shopping tool for better navigation on the first page and the overall visual appeal is paramount in website design. Respondents indicated that the most important aspects of the website evaluation process are: programs, course offering, location, and accreditations. These should all be accessible on the first page of the website.

This paper highlights the increasing importance of the university webpage in the selection process of by prospective students. As the use of technology by the current and next generation of students as well as their parents continues to grow, universities will need to utilize better and more easily navigable websites. The webpage is the gateway to all other forms of communication and a primary medium through which undergraduate students choose their institution.

References

Alstete, Jeffery and Nicholas J. Beutell (2004). Performance indicators in online distance learning courses: a study of management education. Quality Assurance in Education (12) (1) 6 .

Benjamin, Blair; Lee, Jay (2005). Enhancing Your Web Site as a Recruitment Tool by Implementing Chat Technology. Association of Small Computer Users in Education (ASCUE), 38th, Myrtle Beach, SC, June 12-16, 2005. 9 pp.

Biehal, Gabriel, J., (1983). Consumer's Prior Experiences and Perceptions in Auto Repair Choice, Journal of Marketing (47) (3): 82-92.

Burroughs, Richard and Rajiv Sabherwal (2002). Determinants of retail electronic purchasing: A Multi-period investigation INFOR 40 (1): 35-55.

Emmanouilides, Christos and Hammond, Kathy (2000). Internet Usage: Predictors of active users and frequency of use Journal of Interactive Marketing (14) (2) 17-27.

Gefen, David; Elena Karahanna and Detmar W. Straub (2003). Inexperience and experience with online stores: The importance of TAM and Trust IEEE Transactions on Engineering Management (50) (3) 307.

Goldsmith, Ronald E. (2002) Explaining and predicting consumer intention to purchase over the internet" Journal of Marketing Theory and Practice 10 (2): 22-28.

Lyons, Linda (2004). Internet use What's Age got to do with it? The Gallop Poll, Tuesday Briefing, March 78.

Klein, Barbara (2002). Internet Data Quality: Perceptions of Graduate and Undergraduate Business Students Journal of Business and Management (8) (4): 425- 432.

Korgaonkar, Pradeep and Wolin, Lori. (2002). Web usage, advertising, and shopping: relationship patterns. Internet Research 12 (2): 191- 204.

Monsuwe, Tonita Perea; Benedict G.C. Dellaert; and Ko deRuyter (2004). What drives consumers to shop online? A literature review International Journal of Service Industry Management (15) (1): 102-110.

Ono, Hiroshi and Zavodny, Madeline (2003). Gender and the Internet. Social Science Quarterly (84) (1): 111-122.

Rainey, Amy. (2006). Private Colleges Spend Most on Recruitment.
The Chronicle of Higher Education. Washington: Mar 17, 2006. 52 (28): A.49

Schimmel, K., Eschenfelder, M., Clark, J, Marco, G and Racic, S. (2009). "Differences in Selection Criteria Among Traditional Students, Adult Continuing Education Students and Graduate Students," American Journal of Business Education 2 (5): 15-23.

Teo, T. and Thompson, S.H. (2001). "Demographic and motivation variables associated with internet usage activities." Internet Research 11 (2): 125 -140

Tucciarone, Krista M. (2009). Speaking the Same Language: Information College Seekers Look for on a College Web Site. College & University, 84 (4): 22-31.

Van Slyke, C., Communale, C. and Belanger , F.(2002); Gender Differences in Perceptions of Web-based Shopping. Association for Computing Machinery. Communications of the ACM. (45) (8): 82.

Webber, K. and Roehl, W.S. (1999). Profiling People Searching for and Purchasing Travel Products on the World Wide Web. Journal of Travel Research 34 Feb: 291-298.

Wilcox, Ronald (2000). Experts and Amateurs: The Role of Experience in Internet Auctions. Marketing Letters 11 (4): 363.

Yoh, E., Damhorst, M., Sapp, S., and Laczniak, R. (2003). Consumer Adoption of the Internet: The Case of Apparel Shopping (20) (12): 1095.

Zeithaml, Valerie A. (1981). How consumer evaluation processes differ between goods and services. In Marketing of Services, James H. Donnelly and William R. George eds. Chicago American Marketing Association 186-189.

APPENDIX

Table One - Demographic Breakdown of Respondents

Variable	Frequency	Percent
Student Status		
Traditional	99	38.5
Graduate	108	42.0
Adult Continuing Ed.	50	19.5
Gender		
Male	108	42.2
Female	148	57.8
Household Income		
Under $20,000	31	13.1
20-40,000	72	30.4
40-60	65	27.4
60-80	40	15.6
80-100	18	7.6
100 and up	11	4.6
Ethnicity		
Caucasian	235	92.9
African American	15	5.9
Asian	2	.8
Hispanic	1	.4
Other		

Table Two - Descriptive Statistics

Questions	N	Mean	Std. Deviation
Prior to considering a school, I visited the school's website	256	5.23	1.154
I used the internet to explore program offerings	255	5.12	1.005
I used the internet to identify school locations	255	4.84	1.248
I used the internet to identify schools	257	4.84	1.269
I used the internet to examine the times courses were offered	257	4.58	1.467
I used the internet to determine a school's accreditations	255	4.51	1.334
I used the internet to obtain a campus map	255	4.39	1.635
The school's website was a primary source of information for my decision	256	4.34	1.460
I used the internet to find out about the school's faculty	257	4.21	1.439
Websites are the best source of information about a school	257	4.02	1.445
I used the internet to get a feel for the campus	256	3.86	1.626
My opinion of a school was shaped to a large degree from the school's website	256	3.83	1.448

Table Three - **Manova Table for Gender**

	Male	Female	Wilks' Lambda	F	df1	df2	Sig.
I used the internet to identify schools	4.94	4.82	.998	.538	1	243	.464
I used the internet to explore program offerings	5.17	5.10	.999	.337	1	243	.562
I used the internet to identify school locations	4.83	4.92	.999	.262	1	243	.609
I used the internet to determine a school's accreditations	4.54	4.54	1.000	.003	1	243	.960
I used the internet to examine the times courses were offered	4.61	4.57	1.000	.046	1	243	.830
I used the internet to find out about the school's faculty	4.09	4.30-	.995	1.251	1	243	.265
I used the internet to obtain a campus map	4.42	4.39	1.000	.020	1	243	.887
I used the internet to get a feel for the campus	3.73	3.96	.995	1.283	1	243	.258
Prior to considering a school, I visited the school's website	5.27	5.23	1.000	.095	1	243	.759
The school's website was a primary source of information for my decision	4.37	4.34	1.000	.026	1	243	.871
My opinion of a school was shaped to a large degree from the school's website	3.89	3.82	.999	.166	1	243	.684
Websites are the best source of information about a school	4.05	4.04	1.000	.005	1	243	.943

Wilks' Lambda

Wilks' Lambda	Chi-square	df	Sig.
.967	7.899	12	.793

Table Four - **Manova Table for Frequency of Use**

	Under 10	Over 10	Wilks' Lambda	F	df1	df2	Sig.
I used the internet to identify schools	4.72	5.03	.984	3.916	1	243	.049
I used the internet to explore program offerings	5.04	5.23	.991	2.114	1	243	.147
I used the internet to identify school locations	4.63	5.16	.953	12.003	1	243	.001
I used the internet to determine a school's accreditations	4.22	4.90	.931	17.929	1	243	.000
I used the internet to examine the times courses were offered	4.34	4.86	.969	7.890	1	243	.005
I used the internet to find out about the school's faculty	3.94	4.50	.962	9.506	1	243	.002
I used the internet to obtain a campus map	4.09	4.74	.960	10.021	1	243	.002
I used the internet to get a feel for the campus	3.57	4.19	.963	9.412	1	243	.002
Prior to considering a school, I visited the school's website	5.05	5.44	.972	6.969	1	243	.009
The school's website was a primary source of information for my decision	4.15	4.55	.982	4.466	1	243	.036
My opinion of a school was shaped to a large degree from the school's website	3.70	3.99	.990	2.515	1	243	.114
Websites are the best source of information about a school	3.92	4.16	.993	1.720	1	243	.191

Wilks' Lambda

Wilks' Lambda	Chi-square	df	Sig.
.892	27.087	12	.008

Table Five - **Manova Table for Internet Experience**

	Less than 7	8 or more	Wilks' Lambda	F	df1	df2	Sig.
I used the internet to identify schools	4.71	4.99	.987	3.111	1	243	.079
I used the internet to explore program offerings	4.92	5.29	.966	8.592	1	243	.004
I used the internet to identify school locations	4.69	5.02	.982	4.472	1	243	.035
I used the internet to determine a school's accreditations	4.18	4.82	.940	15.646	1	243	.000
I used the internet to examine the times courses were offered	4.19	4.89	.945	14.213	1	243	.000
I used the internet to find out about the school's faculty	3.97	4.39	.979	5.271	1	243	.023
I used the internet to obtain a campus map	4.13	4.61	.979	5.275	1	243	.022
I used the internet to get a feel for the campus	3.72	3.97	.994	1.440	1	243	.231
Prior to considering a school, I visited the school's website	4.93	5.48	.944	14.457	1	243	.000
The school's website was a primary source of information for my decision	3.98	4.62	.953	11.977	1	243	.001
My opinion of a school was shaped to a large degree from the school's website	3.58	4.05	.974	6.462	1	243	.012
Websites are the best source of information about a school	3.71	4.29	.960	10.073	1	243	.002

Wilks' Lambda

Wilks' Lambda	Chi-square	df	Sig.
.869	33.275	12	.001

Table six - **Manova Table for Age**

	17-22	23-30	31and up	Wilks' Lambda	F	df1	df2	Sig.
Prior to considering a school, I visited the school's website	5.14	5.51	5.10	.977	2.868	2	242	.059
The school's website was a primary source of information for my decision	3.97	4.75	4.44	.949	6.489	2	242	.002
My opinion of a school was shaped to a large degree from the school's website	3.66	4.08	3.84	.985	1.825	2	242	.163
Websites are the best source of information about a school	3.73	4.40	4.10	.961	4.855	2	242	.009
I used the internet to identify schools	4.91	5.21	4.46	.944	7.151	2	242	.001
I used the internet to explore program offerings	5.06	5.37	4.97	.973	3.330	2	242	.037
I used the internet to identify school locations	5.00	5.05	4.53	.966	4.299	2	242	.015
I used the internet to determine a school's accreditations	4.48	4.87	4.27	.968	4.063	2	242	.018
I used the internet to examine the times courses were offered	3.86	5.09	5.10	.830	24.848	2	242	.000
I used the internet to find out about the school's faculty	3.86	4.45	4.46	.958	5.241	2	242	.006
I used the internet to obtain a campus map	4.45	4.48	4.27	.997	.352	2	242	.704
I used the internet to get a feel for the campus	3.98	3.93	3.6	.993	.895	2	242	.410

Wilks' Lambda

Wilks' Lambda	Chi-square	df	Sig.
.689	88.162	24	.000

Table Seven

Manova Table for Student Type

	Graduate mean	Undergrad mean.	Wilks' Lambda	F	df1	df2	Sig.
Prior to considering a school, I visited the school's website	5.07	5.47	.972	7.030	1	243	.009
The school's website was a primary source of information for my decision	4.10	4.67	.963	9.369	1	243	.002
My opinion of a school was shaped to a large degree from the school's website	3.68	4.07	.982	4.459	1	243	.036
Websites are the best source of information about a school	3.77	4.40	.953	11.913	1	243	.001
I used the internet to explore program offerings	4.99	5.33	.972	7.079	1	243	.008
I used the internet to identify school locations	4.86	4.91	1.000	.115	1	243	.734
I used the internet to determine a school's accreditations	4.39	4.74	.983	4.218	1	243	.041
I used the internet to examine the times courses were offered	4.17	5.17	.889	30.482	1	243	.000
I used the internet to find out about the school's faculty	3.98	4.51	.966	8.519	1	243	.004
I used the internet to obtain a campus map	4.35	4.47	.999	.291	1	243	.590
I used the internet to get a feel for the campus	3.82	3.93	.999	.302	1	243	.583
I used the internet to identify schools	4.76	5.03	.989	2.822	1	243	.094

Wilks' Lambda

Wilks' Lambda	Chi-square	df	Sig.
.843	40.585	12	.000

Developing a web explicit research strategy theory in African universities: a cross-comparison of specific regional efforts through an analysis of research web-pages

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ABSTRACT

The research is an analysis of web explicit research strategies of specific African universities. The sampling was purposive. The African continent was sub-divided into four distinct cardinal regions in order to get a general overview of the whole continent. A further selective sampling was done according to international rankings, as a method for deciding which universities will be mapped. The rankings identified were: Webometrics, Academic Rankings of World Universities and Times Higher Education. Much contemporary analytical work is based on the examination of Internet data, like Google analytics. Premised on this assumption, the research resorted to analyze information available on different research web-pages. The aim was to conceptualize research strategies currently in place (in the Internet), the respective internal and external factors which influence such strategies, and the corresponding issues that result from it. The model developed can be used by African universities in the development of their own context specific research strategies.

Keywords: Research; Strategy, African, Universities, Explicit & Tacit

1.0 INTRODUCTION

A University can be defined as a community of scholars and masters, not excluding other stakeholders, who work together to achieve certain goals [research, community service, teaching and learning]. University education must carry out a higher mission of providing an integral training for the complete human being (Campos & Sotelo, 2001, p. 183). Huisman (2000, p. 2) & Trow (1995) explain that universities differ in terms of their operation, sustainability, mission and environment. Martin & Etzkowitz (2000, p. 13) elaborate that a university, in addition to possessing the two traditional roles of teaching and research, has a third mission- contribution to the economy. Research is therefore a substantive feature of a university, especially those which regard themselves as research universities.

Research is the creative work of a trained and energetic mind, stimulated by curiosity about a problem. In general, research is all effort directed towards increased knowledge, natural phenomena, environment and problems in all fields of science. Research aims to be self correcting (Walliman & Baiche, 2001, p. 10). Research refers to all creative activities in the fields of science, engineering and art. A research culture is the intellectual seed-bed required for sustainable and productive research activity (Hazelkorn, 2005, pp. 62-63). The actions necessary, and appropriate, to create, develop, rescue, recreate or to sustain research culture are different in different institutions, and at various levels in any one institution. The role to be played by a single lecturer inside a department is very different from that of her professorial department

chair, or her vice-chancellor (Delamont & Atkinson, 2004, p. 19). A research strategy is drawn from research platforms that are realised in a number of focal areas as the basis of actual prioritization of research efforts and allocation of resources (Hazelkorn, 2005, p. 176).
A statement of a research strategy, in a university or a department, could generally refer to: business needs that will be addressed by the university or appropriate department, industry or organizations. Researchers will look for problems to solve and opportunities to validate their models and theories including methods and instruments used to provide answers (Vlad, Morel, & Bourcerie, 2003, p. 133). Another definition is a model of research activity, with its respective mission, objectives, structures and processes, which highlights how an institution will carry out its research.

Objectives of institutional research strategy are three-fold. The first objective is to grow research activity in terms of increase in the number of research and research students, grow recruit research active members, expand research activity, and promote international partnerships/ collaboration. The second objective is in terms of organisation and management, through increase in research funding, allocating resources to facilitate research productivity and excellence in establishing centres of excellence. The last broad objective is institutional status and mission. Its sub-components include: enhancing institutional profile, fostering innovation and entrepreneurship and ensuring a strong research and teaching nexus (Hazelkorn, 2005 p. 58).

1.1 BACKGROUND AND CONTEXT

Research is the search for knowledge. It is a scientific and systematic search for pertinent information on a specific topic (Kothari, 2007). In game theory, strategy is the set of rules that governs all moves – a plan to achieve specific aims. Research strategies are general orientations on 'how' to conduct research. The end product of research is knowledge either in tangible or intangible form, explicit or implicit. Knowledge can be an end in itself (Newman 1907, p. 99) or a means to an end [i.e. the knowledge industry concerned with its production, distribution and consumption of knowledge] (Kerr, 2001, p. 66).

The conceptualisation of university knowledge according to different perspectives lends itself to the development of a number of thinking modes. Mode 1 thinking (traditional research based) is a situation where knowledge is characterised by the hegemony of theoretical or, at any rate, experimental science; by an internally-driven taxonomy of disciplines and by the autonomy of scientists with their host institutions. Mode 2 thinking views knowledge as having a trans-disciplinary nature, socially distributed, application oriented and subject to multiple accountabilities (Gibbons, Scott, & Nowotny, 2003, p. 179).

Higher education institutions have experienced a number of different teaching-research scenarios. Hazelkorn (2008, p. 156) explains four different types of teaching-research institutions. Type 1 is the traditional model, wherein faculty have both teaching and research responsibilities; tenure/promotional opportunities are usually awarded on the basis of research activity and perhaps a teaching portfolio, albeit evidence suggests that increasing emphasis is being placed on the former rather than the latter. Type 2 sees research activity expand and external pressures increase; the needs of the research team and the strategic needs of the institution begin to favour a more formalized structure for research. Different terms, such as unit, laboratory, or centre, are used to give formal recognition to this stage of development. Initially, faculty may move seamlessly between teaching and departmental commitments and the centre, but there may be efforts to second or buy-out research-active faculty to work for a greater part of

their time in the centre. Type 3 occurs as the centre becomes more financially self-sufficient. Many faculty members may continue to teach on a reduced workload supervising postgraduate students but others may not. Depending on how the relationship is maintained, the nexus may weaken further. The wholly autonomous or independent research centres or institutes, represented by Type 4, are not yet a common feature of most HE regimes. In such circumstances, there is usually a clear separation between teaching and research, albeit some support postgraduate students—a form of teaching—and many offer post-doctoral opportunities.
In the post war era, research evolved into a separate and autonomous role, a change from the previous conception of its link with the basic teaching mission. During the golden age of research universities in the 1960s, the research universities, staid and conservative in their role as guardians of academic standards, were in the forefront of some of the most dramatic changes in America. The first tier universities were involved in expanding departments, facilities and graduate programs. The second tier universities established doctoral programs and attracted funds for research. Research universities are identified with the level of research expenditures, the quality of faculty in the eyes of their peers and size of doctoral programs (Geiger 1993, pp. 58, 203), notwithstanding their teaching function.

Keller (1983, p. 140) mentions that university research will become more vital to a nation's success public health, economic growth, security and quality of life. This has led to development of strategic planning within the field of research. Strategic plans have five parts: the statement of mission, a background analysis, statement of objectives, a definition of strategies, and an assessment of the organisational structure and information system (Doyle & Lynch, 1979, p. 603).

Strategic planning deals with a new array of factors: the changing external environment, competitive conditions, the strengths and the weaknesses of an organisation, and opportunities for growth. It involves continuous adjustments to shifting conditions, with a central strategy in mind. These adjustments lead to the development of four activists, ''the defenders", these leaders fight for stability, quality, order and continuity; the "analyzers" who are anxious to keep up with changes but are cautious; the "prospectors", who aggressively seek to find and exploit new services and markets; the "reactors" who are non strategists and are always putting out fires (Keller, 1983, p. 140). The research will bring to light the general positioning of the African universities according to these four categories.

Developing a university research strategy involves the input from, and negotiation with, several institutional levels, usually repeated several times, in a dialogue which is not only limited to the institution itself but involves many partners (Reichert, 2006, p. 25). There are a number of research strategies, amongst these include: the open innovation paradigm which is understood as the antithesis of the traditional vertical integration model where internal research and development activities lead to internally developed products that are then distributed by the firm. It assumes that firms can and should use external ideas as well as internal ideas, internal paths and external paths to market as they look to advance their technology (internal technology base; external technology base; technology spin offs; technology outsourcing & licensing)(Vanhaverbeke & West, 2006, p. 2);

Other research strategies are: student research placements to undertake company research projects as part of a degree together with strong praxis element; continuing education programmes aimed at senior practicing managers and professionals based on updating latest research, conducted by Faculties or by Professional Training Centres; direct communication between individual faculties and particular companies for specific projects; designated university

research and development centres which are outside the faculty structures with their own locations and staff budgets (these are normally multidisciplinary, interface strongly with communities, attract considerable income and encourage spin-off companies); incubator organisations, which may either be for spin-off companies from university faculties or for individuals in society with bright scientific ideals; joint venture companies who are science intensive , where university and company have complementary roles and parallel stakes; more complex science and technology parks, which involve real estate, a whole supportive infrastructure, and normally encompasses incubator organisations(Davies, 1998).

Universities have different research strategies in line with their mission and vision. From a global perspective, and in particular the United Kingdom and New Zealand, there has been the emergence of new research institutions which were initially vocationally-oriented. This led to a restructuring of these institutions to accommodate the new modus operandi. The quality and quantity of higher education research determined the status and prestige of these new institutions. In New-Zealand, the government separated higher education funding from teaching and research, with the latter being contested by institutions that conduct research (Billot, 2008, p. 2).
Public support for higher education in Africa has grown, but is still at very low levels by international standards. Most institutions are still comparatively young-many having developed in the post-independence period beginning in the early 1960s; and have less developed scholastic traditions with limited numbers and generally less qualified personnel to staff them vis-à-vis universities in Europe. The need to place universities in the broader context of each country's higher-education sector and to compare them with relevant regional and global developments is helpful (Beintema, Pardey, & Roseboom, 1998, pp. 2-3). Some non-governmental organisations like SIDA have tried to champion for African universities to take bold steps in setting priorities and managing research as well as encouraging these institutions to provide co-financing of research, directly from own sources or by lobbying their governments to provide funds (Hydén, 2006, p. 4).

Africa's universities continue to provide the vast bulk of its research and train virtually all its researchers. Alternate sites for the generation and adaptation of knowledge are emerging and assuming prominence: public research institutes, private research centers, firm-based research units, regional and sub-regional centers, nongovernmental organizations, and so forth. But the trend is only beginning and has yet to pose any kind of threat to the dominance of the university as the core of the knowledge generation, reproduction, and dissemination systems in Africa.

1.2 PROBLEM OF STUDY

A number of countries and in particular, African universities, have identified the need to boost their research capacity. Nevertheless, some universities are still pre-disposed and engage in teaching as a core function, excluding research and community service. The aim of this research is to offer an 'eye-opener' to the various possibilities which universities can engage in. It will provide an indicator to other potentialities which universities can harness in order to ensure socio-economic sustainability intra-specific to different disciplines, inter-disciplinary and trans-disciplinary. At the end, the researcher will develop a generalised model which African universities can adopt and adapt to suite their divergent needs. A generic model is developed after mapping research strategies, based on web-exposure and web-information utilized in few African Universities. The research followed a geographical distribution of universities.

1.3 RESEARCH QUESTIONS

i. Which external factors are explicit and which additional factors should be made explicit in a research strategy within the African context?
ii. Which internal factors are explicit and which additional factors should be made explicit in a research strategy within the African context?

1.4 METHODOLOGY

The research utilized different research and project documents produced within the different African settings and available in the Information Superhighway in the months of December 2009 and January 2010. A grounded theory developed using critical analysis of textual information and conceptual maps will be incorporated with the various discourses that have been occurring through time. University research ratings were also included [i.e. Webometrics, Academic Rankings of World Universities and Times Higher Education].

1.5 SCOPE

The general scope was the African continent; sub-divided using the geographical perspective into the four regions: West Africa; East Africa; North Africa; South Africa. Leading universities were identified in each region and a forensic research analysis done based on the methodology identified in 1.4. Three (3) West African universities were sampled: University of Ougadougou, University of Dakar, Kwame Nkurumah University. Six (6) universities were sampled from Eastern Africa: Makerere University; University of Nairobi; University of Dar-es-Salaam University; Strathmore University; University of Addis Ababa; and University of Khartoum. North African universities were five (5): Ain Shams University; Al Akhawyn University; America University in Cairo; Cairo University; and University Cadi Ayyad. From the southern region of Africa, five (5) universities were selected: University of Cape Town; University of KwaZulu Natal; University of Pretoria; University of Stellenbosch; and University of Witwatersrand. The researchers noticed that South African, North African and East African Universities were better ranked than West African universities. This meant that fewer West African universities could be selected, hence the sample of three (3) universities in that region. Since the researchers were from different East African countries, they, in addition, felt the need to include one more university in order to better inform the conclusions about their region.

1.6 SIGNIFICANCE

The research will provide a generic model which can complement other existing models developed by other global research strategy authorities. It will in addition, provide an African perspective of what universities ought to do and how to do it in order to be competitive in the global research arena.

1.7 ANALYSIS

The researchers coded web-data according to emerging concepts present on web-pages. Theoretical codes and selective codes were developed which later informed the emergent theory and model.

1.8 LIMITATIONS

The study limited itself to content available in the Internet. Data available on organisational intranets and documents were not sampled. Hence, the theory generated at the end of this research paper was deemed 'explicit' to the extent that specific information on research strategy was available and communicated to all internal and external stakeholders through the World-Wide Web. The extent of tacitness was not dealt with, since even intra-institutionally, certain people are privy to certain information while others are not.

2.0 LITERATURE REVIEW

Organs responsible for directing research in different universities vary from institution to institution. Factors which influence institutional research strategy can be grouped into two major categories: external and internal factors. External factors include: political-economic aspects [globalisation, knowledge economy, a national research strategy]; financial factors [external funding mechanisms and policy instruments, international/supra national research programmes and benchmarking] and institutional position [socio-economic status of region, demands from industry/ government, presence of other institutions, consultancy and entrepreneurial activities]. Internal factors include: mission and strategy [requirement of funding body, change of status and self perception]; human resource and institutional structure [availability of competence, funding opportunities, recruitment/retention of students]; structural or research profile [aspiration to develop profile status, research teaching nexus and relationship with industry] (Hazelkorn 2005, p. 57).

Research can be approached in terms of models of university-industry co-operation. The methods available of technology transfer include training of students, publication of research results, faculty consulting, sponsored research, collaborative research, consortia, technology licensing, start-up companies and exchange of research materials. The models available for university-industry collaboration include: technology licensing (at individual, school/departmental and institutional level), start-up companies, sponsored research agreements, consortia, high-level research alliances, high-level technology alliances and experiments. Competing factors include economic development, industry segments and critics (Severson, 2004, pp. 1-6).

Contract research can be considered in four ways and using two variables (institutional and individual). The four different types of contract research are between individual-individual [peer to peer contacts, conference visits, guest lectures and committees], individual-institution [students, post-docs, industrial sabbaticals and advisors], institution-individual [part-time professors, academic sabbaticals, secondments, governing boards] and institution-institution [industrial affiliation, strategic consortia, joint programs with public co-funding](EUA, 2009, p. 7).

A number of approaches to strategy definition include: where a central institutional core plays the most important role in strategic development; when a central institutional strategy/ strategic action prioritizes particular areas; a central institutional strategic action developed for mainly new initiatives; a central institutional level changes previous resource allocation; a central academic body (the Senate/Research Council / Research Committee) has a central role to play in the strategy definition; Faculties and Schools playing the most important role in defining research strategies; Research institutes below the level of faculties playing the most important role in defining research strategies (Reichert, 2006, p. 27).

The financial aspect of a research strategy can be approached in two ways: through the use of discretionary funds or to provide assistance to researchers in less fashionable fields in their bid to attract external funding bodies. Financial aspects of a research strategy have led to the disproportionate favouring of fields of research with perceived strategic importance for economic growth and with useful-commercially significant- application. This has led to the emergence of performance based funding by external agencies to build and maintain a research culture. Consequently, a decision on how to apportion research grants has become a complex phenomenon. Some institutions are increasingly moving to a merit and seeding approach to investment; others generate their own research funds from commercial developments; few accept the principle of soft monies and others share resources and facilities, not just research strength but also economies of scale (Connell, 2004, p.40).

A structural and research profile is anchored in teaching-research nexus with an emphasis on research-based learning or research-based teaching. Through research, the professor teaches and, simultaneously, the student studies and learns. This is especially common in advanced higher education where teachers clearly teach by means of research activities, and students are engaged in the educational process via those activities and learn throughout the engagement to an extent that research, teaching and study activities are completely juxtaposed (Clark, 1997, p. 243-244). The student therefore participates in multiple groups. Research groups offer the mentor-apprentice relationship that acts as a vehicle of transmission of tacit knowledge also a teaching group responsible for training and certification of advanced students. Knowledge generated may later trickle to the rest of the organisation. For organisational learning to occur, the knowledge acquired through research must be: communicated to other organisational members; stored in organisational memory in the form of written documents, computer files and embedded procedures and technology; available for shared interpretation by others and regularly updated to influence teaching activities and industry (Cyert & Goodman, 1997, p. 51).

The research human resource strategy can be four-fold. Recruitment of experienced researchers, post-doctoral or other senior professorial posts, sometimes on contract and accompanied by relatively generous support funds and salaries; re-invigorating and recognizing research performance via promotion, salary and other benefits, including career stream choices and new academic contracts which include research or research only positions; training through faculty development strategies or plans; re-orientation through encouraging a multi-disciplinary and inter-disciplinary approach; enabling strategies which aim to meet different abilities and capabilities over a faculty member's career, sabbatical leave, research scholarships and fellowships, and gender specific initiatives (Hazelkorn, 2008, p. 164). In some universities, the role of the research manager with adequate strategic thinking, entrepreneurship, administrative, networking, communication and resourcefulness skills becomes an important linchpin for a research strategy (Connell, 2004, pp. 31-43).

Political-economic aspects and in particular globalisation, has influenced university research. Gibbons (1994, p. 70) stressed that research in universities in mode 2 are related to the process of massification of higher education and are an outgrowth of it. They involve close working relationships between people in different institutions, and typically include business people, patent lawyers, production engineers and others located outside the university. It also necessitates different pattern of funding from traditional discipline based research. In the wake of these developments, a host of new institutional arrangements emerges linking government, industry, universities and private consultancy groups in different ways. University based research is threatened by the encroachment of industry and the profit making mentality. Linkages can extend from being within a specific locality to collaborations or linkages which spans international boundaries.

Regarding institutional positioning, Gibbons (1994, pp. 76-80) noted ten shifts accompanying the current massification of higher education: diversification of functions (importance has been given to part-time study with universities engaging in abstract to utilitarian research together with the blurring of periphery and core activities); the student population is drawn from a broader social base with a recent growth in feminism which consequently leads to the reshaping of intellectual contours of many subjects; shift from liberal education to professional training; tensions between teaching and research with more emphasis being placed on scientific publications and technological devices rather than in the form of young trained minds; growth of problem-oriented research rather than curiosity driven research with specific institutions funding university research; decline of primary knowledge production to their configuration in novel patterns and dissemination to different contexts; broadening of research accountability with an inclusion of professional groups and market; through technology, there will be a separation of teaching and research with each taking place in different locations; multiple sources of research funding in higher education with emphasis shifting to mission-oriented research; a change in efficiency and bureaucratic ethos shown through the real academic unit being the course or research team and the abandonment of cultural claims transcending the accumulation of intellectual and professional expertise.

3.0 DATA PRESENTATION

Data are presented according to geographic distribution.

3.1 WEST AFRICA

The following data presents the existing grounded research strategy and environment in three West African universities with corresponding frequencies [i.e. between 1 and 3].

External environment

There was no explicit external factor identified in the sampled universities.

Internal environment

Intra-university but external to research strategy

One university, University of Dakar, identified the importance of explicitly stating the role of faculties and departments in its research strategy.

Research strategy

The following dimensions were identified as critical in a research strategy: Post-Doctoral fellowships (1); explicit list of completed research projects (1); explicit research advisory council (1); explicit research funding (1); explicit research centre (1) [Research centre sub-categories: informative role (1); multi-disciplinary and interdisciplinary research (1); post-graduate degree offers (1)]; existence of research groups (1); research group members and resources are known (1); research publications(2). University of Dakar had more explicit elements in their research strategy while the least was Kwame Nkurumah University.

Web-page

Two universities had some research web pages presented data not in English [University of Dakar and University of Ouagadougou]. The research web-pages were used as: a lecturer profiling tool (one university-University of Ouagadougou); an assessment tool (1 university-University of Dakar); human resource tool (one university- University of Ouagadougou); link to other research centres (two universities-Universities of Dakar and Ouagadougou).

3.2 EAST AFRICA

The following information presents grounded web research strategy and environment as observed within six East African universities. The frequency range is one (1) to six (6).

External environment

The most critical factors which influenced research strategy include: contribution to economic development (4) [Strathmore University; University of Dar-es-Salaam; Makerere University; University of Nairobi]; contribution to historical development (3) [University of Addis Ababa; Makerere University; University of Nairobi]; contribution to social development (5) [Strathmore University; University of Addis Ababa; University of Dar-es-Salaam; Makerere University; University of Nairobi].

Internal environment Intra-university but external to research strategy

The amalgamation of faculties and departments within the research strategy was considered vital within an institution.

Research strategy

The following categories of a research strategy were important within the region: explicit mission and vision of research strategy (2) [Strathmore University and Makerere University]; research strategy is explicit and available (1) [University of Dar-es-Salaam]; clear ethical regulations (2) [University of Addis Ababa and University of Dar-es-Salaam]; clear research

rules and regulations (4)[Strathmore University; University of Addis Ababa; University of Dar-es-Salaam; University of Khartoum]; entrepreneurial spirit (3) [Strathmore University; University of Dar-es-Salaam; University of Nairobi]; explicit intellectual property policy (2) [Strathmore University; University of Addis Ababa]; explicit list of completed research projects (1) [University of Nairobi]; explicit list of ongoing research projects (5)[Strathmore University; University of Addis Ababa; University of Dar-es-Salaam; Makerere University; University of Nairobi]; explicit research advisory council (2) [Strathmore University and University of Dar-es-Salaam]; explicit research funding (3)[Strathmore University; University of Dar-es-Salaam; Makerere University]; research funds from government (1) [Makerere University]; research funds from partnership (2) [University of Addis Ababa and Makerere University]; research funds from student fees (2)[University of Addis Ababa and Makerere University]; research incentives given (1) [University of Addis-Ababa]; explicit research management and co-ordination system (3)[University of Dar-es-Salaam; Makerere University; University of Nairobi]; explicit e-book and journal repository (3) [Makerere University; University of Nairobi; University of Khartoum]; explicit research database (1)[Makerere University]; explicit research print collections (1); explicit research special collections (1) [Makerere University]; explicit research publication policies (3)[University of Dar-es-Salaam; University of Nairobi; University of Khartoum]; integration of information technology into research (3)[Strathmore University; University of Dar-es-Salaam; Makerere University]; involvement of external stakeholders (4) [Strathmore University; University of Dar-es-Salaam; Makerere University; University of Nairobi]; collaboration with other universities (3) [Strathmore University; Makerere University; University of Nairobi]; involvement of external research institutes (2) [Makerere University; University of Nairobi]; involvement of nongovernmental organizations-NGOs (4) [Strathmore University; University of Addis Ababa; Makerere University; University of Nairobi]; involvement of public authorities (3) [Strathmore University; Makerere University; University of Nairobi]; involvement of United Nations funded bodies (3)[University of Addis Ababa; Makerere University; University of Nairobi]; research centre (3)[University of Addis Ababa; University of Dar-es-Salaam; Makerere University]; explicit research centre mission (1)[University of Addis Ababa]; research centre involved in outreach activities (2)[University of Dar-es-Salaam; Makerere University]; research centre adopts an inter-disciplinary and multi-disciplinary approach (2)[University of Addis Ababa and Makerere University]; research centre offers post-graduate degrees (1)[Makerere University]; research collaborative degrees (1)[Makerere University]; research group members and resources are known (1) [University of Addis Ababa]; research conferences and workshops are explicit(2) [Strathmore University and Makerere University]; research incubator (1) [Makerere University]; research infrastructure support programmes (1) [Strathmore University]; research peer review panel is explicit (1) [University of Addis Ababa]; research profile of lecturers (1) [Makerere University]; research support offices are explicit (2) [Strathmore University and University of Addis Ababa]; faculty or institute senior research coordinator (2) [Strathmore University and University of Addis Ababa]; Office of graduate studies is explicit (1) [University of Addis Ababa]; Office of institutional research (1); Office of institutional research has supportive role (1)[Strathmore University]; institutional Research Office offers consultancy services (1)[Strathmore University].

Web-page

All universities sampled provided information in English. In one university the research web-page was used as a lecturer profiling tool [University of Nairobi], three(3) universities used the it as a way of providing critical research statistics [University of Dar-es-Salaam; University of Nairobi; University of Khartoum] and three(3) linked these web-pages to other research centres[Strathmore University; University of Nairobi; University of Khartoum].

3.3 NORTH AFRICA

The following data portrays the existing grounded research strategy and environment in five North African universities with corresponding frequencies [i.e. between 1 and 5].

External environment

Three aspects of macro-development were considered critical in universities' research. These aspects include: contribution of research strategy to economic development (3) [American University; Cairo University; University Cadi Ayyad]; contribution to historical development (1) [American University]; contribution to social development (2) [American University and Cairo University]; government research regulations (1) [American University].

Internal environment - Research strategy

The following factors of research strategy were important: explicit research strategy mission and vision (1)[American University]; clear ethical regulations (1) [American University]; clear rules and regulations (1)[American University]; entrepreneurial spirit (2)[Al Akhawayn and American University]; explicit list of completed research projects (1)[Cairo University]; explicit list of ongoing research projects (1)[Cairo University]; explicit research advisory council (1) [American University]; explicit research reports (2) [American University and Cairo University]; explicit research paper series (1) [Al Akhawayn]; explicit integration of information technology into research (1) [Al Akhawayn]; collaboration with other universities (2) [Al Akhawayn and Cairo University]; involvement with external research institutes (2) [Al Akhawayn and Cairo University]; involvement of NGOs (1) [Cairo University]; involvement of public authorities (3) [Al Akhawayn, Cairo University, University Cadi Ayyad]; involvement of United Nations funded bodies (1) [Al Akhawayn]; research centres (3) [Al Akhawayn; American University; Cairo University]; Research centre acts like information centre (1) [American University]; research centre has explicit mission and vision (2) [Al Akhawayn and Cairo University]; research centre involved in outreach activities (1) [American University]; multi-disciplinary and inter-disciplinary research approach (2)[American University and Cairo University]; research centre offers post-graduate degrees (2)[American University and Cairo University]; research group members and resources are known (2) [Al Akhawayn and Cairo University]; research competitions and awards (3) [Al Akhawayn; American University; Cairo University]; research conferences and workshops (3) [Ain Shams University; Al Akhawayn; University Cadi Ayyad]; research incubator (1) [Al-Akhawayn]; research profile of lecturers (1)[Al Akhawayn]; explicit research publications (2) [Al Akhawayn and University Cadi Ayyad]; Office of Graduate Studies (1) [American University]; Office of Institutional Research

(1) [American University]; explicit Office of Institutional Research Mission (1) [American University]; Office of Institutional Research has supportive role (1) [American University]; Office of Institutional Research offers consultancy services (2) [American University and Cairo University]; provides accreditation services (1) [American University]; Office of sponsored programs (1) [American University]; researchers have own web-pages (1) [Al Akhawayn]].

Web-page

There were three web-pages that provided information in Arabic. The research pages were mainly used as a lecturer profiling tool (1) [American University] and assessment tool (1) [American University].

4.4 SOUTHERN AFRICA

The southern part of Africa availed favourable research results. The five (5) top universities were sampled. The external and internal environmental research strategy factors were identified.

External environment

The important effect of alumni on research was identified as a critical factor in two (2) universities [University of Cape Town and Stellenbosch University]]. Other external environmental factors were: contribution of research strategy to economic development (5)[University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; contribution to historical development (3))[University of KwaZulu Natal; Stellenbosch University; University of Witwatersrand]; contribution to social development (5))[University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; business enterprise offices (2) [University of Pretoria].

Internal environment

Four (4) universities juxtaposed the existence of faculties and departments within their own research policies)[University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; human resource strategy was explicitly correlated with research strategy (3) [University of KwaZulu Natal; University of Pretoria; University of Witwatersrand]; existence and function of library in research was critical (2))[University of Pretoria and University of Witwatersrand]; interface of teaching function with research function (3))[University of Cape Town; University of KwaZulu Natal; University of Witwatersrand]; clarification of the role of Finance Office in research (1) University of Pretoria]; inclusion of government research regulations in university research (2) [University of KwaZulu Natal and University of Pretoria].

Research strategy

The facets which were important in a research strategy were: explicit mission and vision of research strategy (4))[University of Cape Town; University of KwaZulu Natal; University of Pretoria; University of Witwatersrand]; explicit ethical regulations (5))[University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; Ethics online courses (1))[University of KwaZulu Natal]; research ethics and quality reviews (2) [University of KwaZulu Natal and University of Witwatersrand]; clear post-doctoral fellowships (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; clear doctoral funding guidelines (4) [University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand];known Post-Doctoral fellowships (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; explicit research rules and regulations (4) [University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; entrepreneurial spirit (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; explicit intellectual property policy (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; explicit list of completed research projects (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; explicit list of ongoing research projects (4) [University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; explicit research advisory council (4) [University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; explicit research funding (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; research funds from govt (3) [University of KwaZulu Natal; Stellenbosch University; University of Witwatersrand]; research funds from partnership (4) [University of Cape Town; University of KwaZulu Natal; Stellenbosch University; University of Witwatersrand]; research funds from student fees (2) [University of KwaZulu Natal and University of Witwatersrand]; research incentives given (3) [University of KwaZulu Natal; Stellenbosch University; University of Witwatersrand]; explicit research management and co-ordination system (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; explicit e-book and journal repository (4) [University of Cape Town; University of KwaZulu Natal; Stellenbosch University; University of Witwatersrand]; explicit research databases (3) [University of Cape Town; Stellenbosch University; University of Witwatersrand]; explicit research special collections(3) [University of Cape Town; Stellenbosch University; University of Witwatersrand]; explicit research publication policies (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; explicit research reports (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; explicit gender and affirmative action policy in research (3) [University of Cape Town; Stellenbosch University; University of Witwatersrand]; clear integration of information technology in research (3) [University of Cape Town; University of KwaZulu Natal; University of Witwatersrand]; explicit invitation of external academics (3) [University of Cape Town; University of KwaZulu Natal; Stellenbosch University]; general procedure for invitation of academics known (2) [University of KwaZulu

Natal; Stellenbosch University]; involvement of external stakeholders (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand] [collaboration with other universities (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; involvement of external research institutes (4) [University of Cape Town; University of KwaZulu Natal; Stellenbosch University; University of Witwatersrand]; involvement of NGOs (3) [University of KwaZulu Natal; Stellenbosch University; University of Witwatersrand]; involvement of Public authorities (3) [University of KwaZulu Natal; Stellenbosch University; University of Witwatersrand]; involvement of United Nations funded bodies (1) [University of KwaZulu Natal]]; knowledge fields development programs (4) [University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; Blue sky research program (3) [University of KwaZulu Natal; Stellenbosch University; University of Witwatersrand]; knowledge fields research grant (3) [University of KwaZulu Natal; Stellenbosch University; University of Witwatersrand]; involvement of Professors Emeriti (1) [University of KwaZulu Natal]; research centres (4) [University of Cape Town; University of KwaZulu Natal; Stellenbosch University; University of Witwatersrand] [research centre acts like an information centre (3); research centre has explicit mission and vision (3) [University of Cape Town; University of KwaZulu Natal; University of Witwatersrand]; research centre involved in outreach activities (3) [University of Cape Town; University of KwaZulu Natal; University of Witwatersrand]; research centre involved in multi-disciplinary approach (3) [University of Cape Town; University of KwaZulu Natal; University of Witwatersrand]; research centre offers post-graduate degrees (1) [University of Cape Town]; research centre offers collaborative degrees (1) [University of Cape Town]; research centre performs quality reviews (3) [University of KwaZulu Natal; University of Pretoria; University of Witwatersrand]]; research group members and resources are known (3) [University of Cape Town; University of KwaZulu Natal; University of Witwatersrand]; research group quality reviews (1) [University of KwaZulu Natal]; strategic research initiatives (1); strategic research initiative committees (1) [University of KwaZulu Natal]; research competition and awards (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; research conferences and workshops (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; research groups (3) [University of Cape Town; University of KwaZulu Natal; University of Witwatersrand]; students involved in research groups (3) [University of Cape Town; University of KwaZulu Natal; University of Witwatersrand]; existing research incubators (3) [University of Cape Town; University of KwaZulu Natal; Stellenbosch University]; research infrastructure support programs (2) [University of KwaZulu Natal and University of Witwatersrand]; explicit research mentors (3) [University of KwaZulu Natal; University of Pretoria; University of Witwatersrand]; provision of lecturers' research profile (4) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University]; provision of lecturers' research ratings (4) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University]; research publications (5) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; explicit research support offices (4) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; University of Witwatersrand]; explicitness of researchers' sabbaticals (1) [University of KwaZulu Natal]; seminars and retreats organised for Doctoral students(2) [University of Cape Town and University of KwaZulu Natal].

Web-page

All universities had web-pages dedicated to research. Three (3) universities used research pages as a lecturer profiling tool [University of Cape Town; University of Pretoria; University of Witwatersrand]; four (4) used it as a research assessment tool [University of Cape Town; University of KwaZulu Natal; Stellenbosch University; University of Witwatersrand]; all universities (5) used the research pages to provide core research statistics[University of Cape Town; University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand]; four (4) [University of Cape Town; University of KwaZulu Natal; University of Pretoria; University of Witwatersrand] used the pages to source qualified research personnel; all sampled South African universities had direct links to research centres. The main web communication language was English, though extra links were provided for native languages.

4.0 AN EMERGENT AFRICAN RESEARCH STRATEGY MODEL

After combination of the various facets, an emergent conceptual diagram which integrates the various research strategy dimensions from all sampled universities is as shown in Figure 1: An emergent African Research Strategy Model (last page).

4.0 ANALYSIS

4.1 WEST AFRICA

From the analysis of explicit information available on the research web-pages of the most prolific West-African universities, it appears that these institutions are Type 1 institutions wherein faculty have both teaching and research responsibility with a greater emphasis on the teaching portfolio [one university with known post-doctoral fellowship; one university with clear research groups; two universities whose faculty have produced publications and zero infrastructure support programs] (Hazelkorn, 2008, p.156). It was not clear which category of research activists the organisations are under. In order to encourage internal and external participation, there was need for these universities to make explicit and include the following facets into their research strategy: role of alumni in research (0); role of external business enterprise office (0); the role of research outputs in economic, social, historical development (0). In order to bridge funding opportunities with research activity, there was need to explicate the role of the finance office (0); role of NGOs (0); development of a clear research mentorship system (0); role of partnerships and collaborations (if any) in research (0). Other salient features are: role of libraries in promoting research (0); inclusion of government regulations into research regulations (0); development of explicit human resource strategy that promotes and advocates for research (0); explicitness of research strategy mission and vision (0); developing a clear documented and available research strategy and availed in the Information Superhighway (0); deployment of research ethics regulations in the intranet and Internet (0); creation of an explicit intellectual property policy (0); developing an explicit research management and coordination system with access to the latest research databases (0); invitation and involvement of external research scholars to grow research (Hazelkorn, 2005, p.58). The involvement of external researchers may create stronger international and regional research links which can cultivate the apparent nascent research culture within these universities.

4.2 EAST AFRICA

East Africa presented more favourable research results. There was a clear inclusion of local developmental efforts within research policies of the different universities. These institutions presented a greater tendency towards type 2 research, since research activities were more, and there were more occurrences of formalizing the different research structures (Hazelkorn, 2008, p.156). Though the taxonomic classification leans more towards Mode 1 thinking, with a greater prevalence of hegemony of theoretical and experimental science [explicit list of completed research projects (1-University of Nairobi) ; explicit research funding (3)[Strathmore University; University of Dar-es-Salaam; Makerere University]; explicit research centres (1-Makerere University); multi-disciplinary and inter-disciplinary approach to research (2-University of Addis Ababa and Makerere University); research centres offers post-graduate degrees (1-Makerere University); research incubators (1-Makerere University); research support programmes (1-Strathmore University); explicit Office of Graduate Studies (1-University of Addis Ababa); involvement of external stakeholders in different research funding mechanisms (4)] (Gibbons, Scott, & Nowotny, 2003, p.179). In order for these universities to shift from Mode 1 thinking to Mode 2, and for research activities, study and teaching activities to be completely juxtaposed (Clark, 1997, pp. 243-244), the following issues need to be made more explicit to all stakeholders in a research strategy: role of alumni in research (0-all East African universities); role of external and internal business enterprise office (all East African universities); departmental and faculty role in promoting research (especially within these universities: University of Addis Ababa; University of Dar-es-Salaam; Makerere University; University of Khartoum); role of government research regulations-if any (0-all East African universities); role of library in promoting research; clarification of the research-teaching nexus (0-all East African universities); presenting a clear documented research strategy (Strathmore University; University of Addis Ababa; Makerere University; University of Nairobi; University of Khartoum); role of research ethics committees (0-al East African Universities); conducting research ethics reviews (0-all East African universities); explicit post-doctoral fellowships developed within research centres (Strathmore University; University of Addis Ababa; University of Dar-es-Salaam; University of Nairobi; University of Khartoum) and research support offices; an explicit intellectual property policy (University of Dar-es-Salaam; Makerere University; University of Nairobi; University of Khartoum); availing a list of completed and ongoing research projects(Strathmore University; University of Addis Ababa; University of Dar-es-Salaam; Makerere University; University of Khartoum); role of external research funding bodies with elaborate rules of different types of collaboration (University of Addis Ababa and University of Khartoum); provision of research incentives (Strathmore University; University of Dar-es-Salaam; Makerere University; University of Nairobi; University of Khartoum); development of research competitions and awards (0-all East African universities); development of explicit research reports (0-all East African universities) and research paper series (0-all East African universities); development of Blue-sky research programs (0-all East African universities); involvement of professors emeriti (0-all East African universities); development of research collaborative degrees (Strathmore University; University of Addis Ababa; University of Dar-es-Salaam; University of Nairobi; University of Khartoum); development of research centre quality reviews (0-all East African Universities); explicitly involving students (0-all East African universities) in research groups; development of research incubators (Strathmore University; University of Addis Ababa; University of Dar-es-Salaam; University of Nairobi; University of

Khartoum); development of a clear research mentorship system (0-all East African universities);formation of research peer-review panels ((Strathmore University; Makerere University; University of Dar-es-Salaam; University of Nairobi; University of Khartoum)); profiling (1) and rating researchers (0-all East African universities); inclusion of research publications in research policies; development of offices of institutional research (Makerere University; University of Addis Ababa; University of Dar-es-Salaam; University of Nairobi; University of Khartoum) with corresponding faculty and departmental representatives with adequate strategic thinking, entrepreneurship, administrative, networking, communication and resourcefulness skills (Connell, 2004, pp. 31-43). From the data, already it presented a worthy cause for regional university collaborations with many of these universities developing and evolving similar research strategy aspects. Knowledge sharing amongst these universities, which have similar features, will foster economic, social and political development and regional self-sustainability.

4.3 NORTH AFRICA

Similar data were presented in North Africa. There were more external environmental features included in research policies. The three developmental aspects [social, historical and economic] were deemed important with the extra addition of the role of government research regulations. There were similar models of university-industry collaboration (Severson, 2004, pp. 1-6): collaboration with other universities (Al Akhawayn and Cairo University only); involvement with external research institutes (Al Akhawayn and Cairo University only); involvement of nongovernmental organisations in research; formation of research centres (Cairo University only); development of post-graduate degrees through research centres (American University and Cairo University only). Issues which need to be clarified in an explicit manner in research policies include: the role of alumni (0-all North African universities) and business enterprise offices in research (0-all North African universities); departmental and faculty role in research (0-all North African universities); interface between an institutional human resource strategy and research strategy (0-all North African universities); role of the finance office (0-all North African universities) and library (0-all North African universities) in research; explicit ethical regulations (0-all North African universities); research ethics training courses (0-all North African universities); research ethics policies quality reviews (0-all North African universities); doctoral funding guidelines (0-all North African universities); intellectual property policy (0-all North African universities); list of completed and ongoing research projects (Ain Shams, Al Akhawayn, American and Cadi Ayyad University); research advisory councils (Ain Shams, Al Akhawayn, Cairo and Cadi Ayyad University); source of funding [i.e. from government(0-all North African universities), from partnership (0-all North African universities), from student fees (0-all North African universities)]; research incentives given (0-all North African universities); research management and co-ordination system [i.e. e-book and journal repository (0-all North African universities), research databases (0-all North African universities), research print collections (0-all North African universities)]; research publication policies (0-all North African universities)); gender involvement and affirmative action (0-all North African universities); rules and regulations for invitations of external research scholars (0-all North African universities); knowledge fields development program (0-all North African universities); Blue-sky research program (0-all North African universities); knowledge field research grant (0-all North African universities). The observation made by Hazelkorn (2008, p. 164) on linking the personnel

function with research was not clear, since the relation between the human resource strategy and research strategy was not explicit.

4.5 SOUTHERN AFRICA

South African universities adopted Mode 2 type of research thinking. Knowledge was viewed to have a multi-disciplinary, inter-disciplinary and trans-disciplinary nature (Gibbons, Scott, & Nowotny, 2003, p.179), socially distributed, application oriented and subject to multiple accountabilities [research centre involved in outreach activities (University of Cape Town, University of KwaZulu Natal and University of Witwatersrand); research centres adopting an inter-disciplinary approach (University of Cape Town, University of KwaZulu Natal and University of Witwatersrand); entrepreneurial spirit of research activity (all South African universities); involvement of external stakeholders (all South African universities); research funds from partnership (only exception in terms of explicitness was University of Pretoria)]. Observations made by Gibbons (1994, p. 70) were also observed: close working relationships between people in different institutions (all South African universities), and typically include business people, patent lawyers, production engineers and others located outside the university (only exception in terms of explicitness was University of Pretoria). It also necessitated different pattern of funding from traditional discipline based research with the creation of post-doctoral fellowships (all South African universities) with research funds from government (University of KwaZulu Natal, Stellenbosch University and University of Witwatersrand), from partnership (all universities except University of Pretoria) and student fees (University of KwaZulu Natal and University of Witwatersrand). New institutional arrangements emerged linking government, industry, universities and private consultancy groups in different ways. University based research was encroached by industry (except University of Cape Town in terms of explicitness).
Though South Africa showed positive research attributes, a number of other areas need to be improved: involvement of alumni in research (University of KwaZulu Natal, University of Pretoria and University of Witwatersrand); role of library in research (University of Cape Town, University of KwaZulu Natal and Stellenbosch University); development of ethical regulatory committees (University of Cape Town; University of Pretoria; Stellenbosch University); explicit research paper series (all universities); explicit general procedure for invitation of external academics (University of Pretoria and University of Witwatersrand); procedures for invitation of professors emeriti (all universities); post-graduate degrees offered through research centres (University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand); explicit development of research collaborative degrees (University of KwaZulu Natal; University of Pretoria; Stellenbosch University; University of Witwatersrand); formation of strategic research initiatives with their corresponding committees (University of Cape Town; University of Pretoria; Stellenbosch University; University of Witwatersrand); development of research infrastructure support programs; making explicit office of graduate studies and institutional research (all universities); explicit research sabbatical programs.
South Africa appears to have a stronger research culture for sustainable and productive research, with the elite universities having more established research strategy frameworks (Hazelkorn, 2005, pp. 62-63). Research has been realised in a number of focal areas in these most prestigious universities with an explicit method of allocation of resources. Knowledge generated through research in these universities has been used as a means [i.e. distribution and generation of

knowledge according to industrial needs] (Kerr, 2001, p. 66) and an end [Blue-sky research (3)] Newman (1907, p. 99).

The South African region seems to be the only region whose universities are characterised typically under Mode 2 thinking. The other regions (East, South and West Africa) are either at the early or later stages of Mode 1 thinking.'

5.0 CONCLUSION AND RECOMMENDATION

5.1 CONCLUSION

i. Which external factors are explicit and which additional factors should be made explicit in a research strategy within the African context?

The external factors which were explicit were the role of research on economic, social and historical aspects of development. The role of alumni in supporting research was only identified in two universities; namely Stellenbosch University and University of Cape Town (South Africa). Business enterprise offices domiciled within or without university boundary can improve university research if these parties can identify issues of mutual concern and benefit. Other possible factors which can be included are the explicit role of globalisation, knowledge economy and role of a national research strategy (Hazelkorn, 2005, p. 57) on an institutional research strategy. African countries, using collaborative regional ventures, can ensure that global knowledge is made locally relevant (Glocalisation) through tri-partite and block agreements.

ii. Which internal factors are explicit and which additional factors should be made explicit in a research strategy within the African context?

Internal factors identified after grounding web-data and that were explicit but exist independently of a university's research strategy include: faculty (7) and departmental (6) roles; library function; teaching function and human resource strategy. Other factors which are in the same category include: governing boards and peer contacts. These factors were highly prevalent in South African universities followed by East African universities.

A research strategy, identified through 'grounded' data, should as much as possible and explicitly, include these elements: explicit mission and vision; clear ethical regulations; framework for training researchers on ethical regulations; research ethics quality reviews; post-doctoral fellowships; doctoral and post-doctoral funding guidelines; clear research strategy, rules and regulations (Reichert, 2006, p. 27) entrepreneurial spirit of research; intellectual property policy; list and format of completed and ongoing research projects; research advisory councils with criteria for membership; research funding strategy [sub-categories could include-criteria for research funds from government, criteria for research funds from partnership and criteria for research funds from student fees]; research incentives; research management and co-ordination system integrated into information communication technologies [sub-categories are: e-book and e-journal repository, research databases, research print collections and research special collection]; research publication policies; research report criteria; gender involvement and affirmative action in research; criteria for research paper series; rules for invitation of external research scholars; criteria for collaboration [sub-issues include- standard for inter and intra-university collaboration, criteria for involvement of external research institutes, standard for

involvement of nongovernmental organisations, standard for involvement of public authorities, criteria for involvement of United Nations funded bodies]; knowledge fields development programs [i.e. Blue-sky research programs and knowledge fields research grant]; norm for involvement of external academics; setting and managing research centres with its respective roles [i.e. informative role, outreach activities, multi-disciplinary and inter-disciplinary approach, formation and offers of research collaborative degrees, research quality reviews] ; standards for research groups; norms for research group members and resources; standards on research competitions and awards; regularity of research conferences and workshops; criteria for student involvement in research groups; criteria for research mentors; guidelines for research incubators; guidelines for research peer-review; standards for rating and profiling researchers; guidelines for formation of research support offices [i.e. role of Office of Graduate Studies, Office of Institutional Research]; criteria for researcher sabbaticals. An internal factor which may be added is the role of research centres of excellence.

Research web-pages can be utilized more as a way to link university researchers, inter alia, to research centres and external stakeholders. It can provide a means to assess research output. Some universities have used their research web-pages to source qualified research personnel (professor emeriti, visiting scholars and post-graduate fellows) and invite scholars to various research activities. The language of communication thus becomes a vital asset to an institution. As much as possible, universities should translate their research information into English to make information accessible to the global community. Regular updates and submission of research statistics on web-pages can be used to attract and foster research efforts.

5.2 RECOMMENDATION

In general, there is need to create stronger regional collaborations, which can be used to form intra and inter-regional research groupings. Universities within the different regions have evolved differently due to different foundational principles and environmental factors. In East and Southern Africa there are private and public universities. Nevertheless, there is some commonality in aspects of research policies. It might be appropriate for African states, *ceteris paribus*, to learn from each other and forge stronger collaborative links taking advantage of their geographic and socio-economic strengths, notwithstanding weaknesses like lack of funds. Regional blocks for instance the East African Community (EAC), South African Development Community (SADC) and the Economic Community of West African States (ECOWAS) may be used as vehicles to achieve this end. It is critical for all stakeholders, governments, universities, private and public sector to finance the basic infrastructure and staffing of their higher education and research sectors (British Academy, 2009). A starting point could be to build an *explicit* web research strategy framework which can be used to inform, communicate and build research networks within Africa. Parameters suggested in the grounded model can be used as sign-posts to develop a realistic and contextual relevant research policies and strategies.

REFERENCES

Beintema, N., M., Pardey, P., G., & Roseboom, J. (1998). Educating agricultural researchers: a review of the role of African Universities (Publication. Retrieved 25th May, 2009, from International Food Policy Research Institute: http://www.ifpri.org/divs/eptd/dp/papers/eptdp36.pdf

Billot, J. (2008). Research in progress: Mapping the terrain of two applied institutional research cultures [Electronic Version].

British Academy (2009). *The Nairobi Report: frameworks for Africa-UK Research Collaboration in the Social Sciences and Humanities*. London.

Campos, P., & Sotelo, C. (2001). The architecture of higher education. University spatial models at the start of the twenty first century. *Higher Education Policy, 14*, 183-196.

Clark, B. (1997). The modern integration of research activities with teaching and learning. *Journal of Higher Education*, 68(3), 241-255.

Connell, H. (2004). *University Research Management: meeting the institutional challenge* (9 ed.). Paris, France: OECD Publishing.

Cyert, R., & Goodman, P. (1997). Creating effective university-industry alliances: an organisational learning perspective. *Organizational Dynamics, 25*(4), 45-57.

Davies, J., L. (1998). The dialogue of universities with their stakeholders : comparisons between different regions of Europe - Analysis of case studies.

Doyle, P., & Lynch, J. (1979). A Strategic Model for University Planning. *The Journal of the Operational Research Society*, 30(7), 603-609.

EUA. (2009*). Responsible partnering*. Brussels & Paris: Responsible partnering.

Geiger, R. (1993). Research and relevant knowledge. Oxford: Oxford University Press.

Gibbons, M. (1994). *The new production of knowledge: the dynamics of science and research in contemporary societies. The new production of knowledge.* Stockholm: SAGE.

Gibbons, M., Scott, P., & Nowotny, H. (2003). 'Mode 2' Revisited: The New Production of Knowledge. *Minerva*, 41, 197-194.

Hazelkorn, E. (2005). *University Research Management: Developing research in new institutions*. Paris: OECD.

Hazelkorn, E. (2008). Motivating Individuals: Growing research from a "fragile base". *Tertiary Education and Management*.

Huisman, J. (2000). Higher education institutions: as different as chalk and cheese? *Higher Education Policy, 13*, 41-53.

Hydén, G. (2006). *University and Faculty Research Funds at Universities in Mozambique, Tanzania and Uganda.* Stockholm: Swedish International Development Cooperation agency.

Keller, G. (1983). *Academic strategy: the management revolution in American higher education Academic Strategy.* Baltimore: Johns Hopkins University Press.

Kerr, C. (2001*). The uses of a university* (5 ed.). Massachusetts: Harvard University Press.

Kothari, C., R. (2007). *Research methodology: methods and techniques*. Delhi: New Age International Publishers.

Martin, B., R., & Etzkowitz, H. (2000). The Origin and Evolution of the University. *vest-journal, 11*(3-4), 9-34.

Newman , J. (1907). *Idea of a university*. London: Longmans, Green and Co.

Reichert, S. (2006). *Research strategy development and management at European Universities*. Brussels: European University Association.

Severson, J., A. (2004). models of university-industry cooperation [Electronic Version]. *Journal of Industry Academia Government Collaboration*, 1, 1-6. Retrieved 27/10/09 from http://sangakukan.jp/journal/main/200502/002-06/002-06_e.pdf.

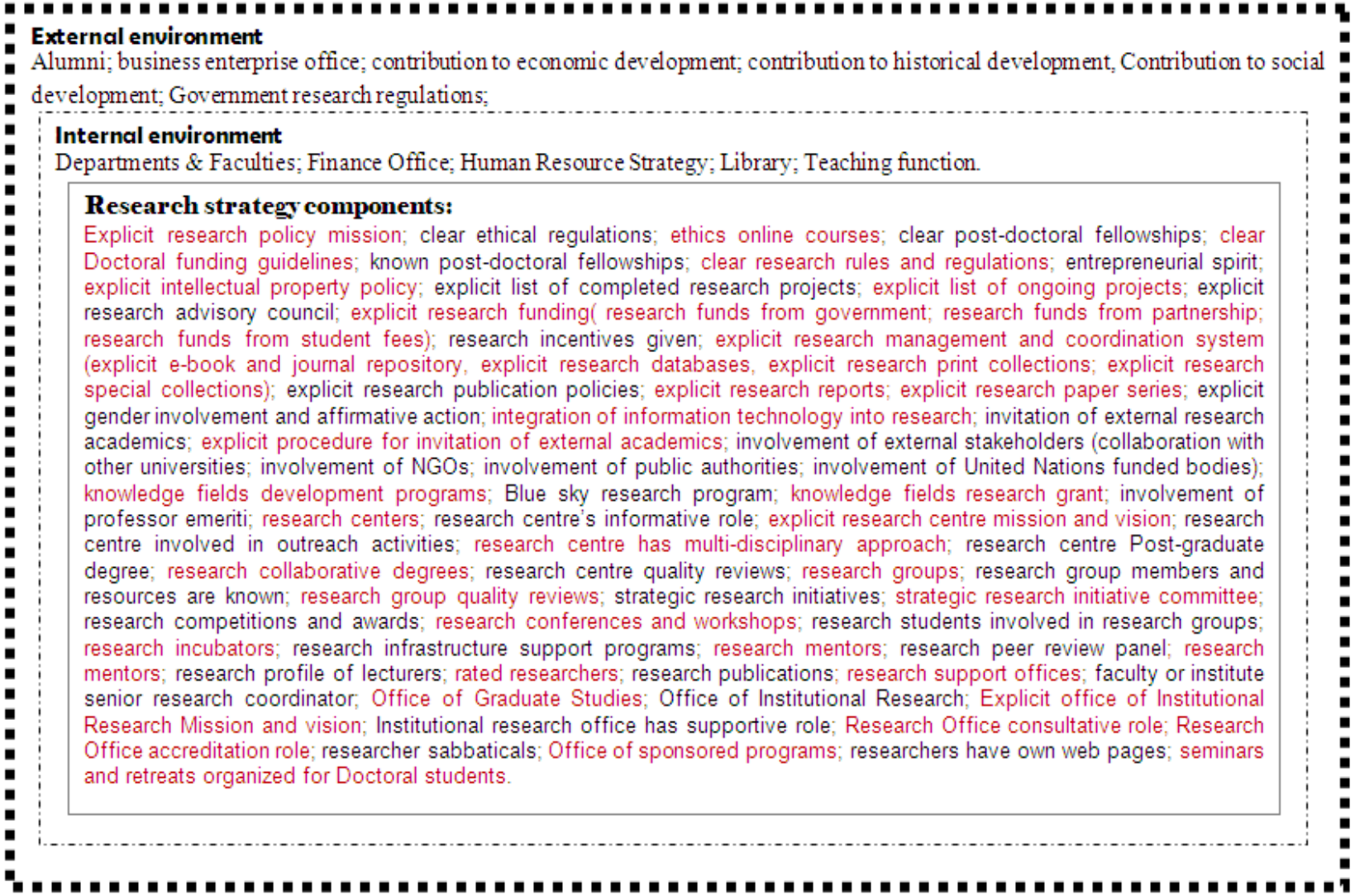
Trow, M. (1995). *Diversity in higher education in the United States of America*. Paper presented at the CVCP Seminar on Diversity in Higher Education.

Vanhaverbeke, W., & West, J. (Eds.). (2006). *Open innovation: researching a new paradigm*. New York: Oxford University Press.

Vlad, R., C., Morel, J., Y., & Bourcerie, M. (2003). Research Strategy as the main catalyst for organizational development. [Electronic Version]. *IEEExplore*, 131-135.

Walliman, N., & Baiche, B. (2001). *Your research project: a step by step guide for the first-time researcher*: SAGE.

Figure 1: An emergent African Research Strategy Model



Centering the business capstone course on the banking crisis: concrete integrated pedagogy

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Abstract

The recent financial crisis offers instructors rich material for business programs regarding the relations between accounting, business law, economics, and finance, as well as ethical issues. This paper offers a concrete approach to developing a business capstone course built around the financial crisis and the lessons it offers business students. Complete pedagogical modules are offered for each discipline, including suggestions for specific assignments in each discipline.

Key Words: Capstone Course, Banking Crisis, Pedagogy

INTRODUCTION

A capstone course is essential in the business school curriculum. It provides each student the time to refresh their grasp of and to hone their ability to apply the principles, tools, and methods of the fields comprising the business curriculum. Further, it gives students the opportunity to integrate the insights of the various fields. The effectiveness of the capstone course can be enhanced by centering the capstone course on the 2008 financial crisis. All students share the common experience of the 2008 crisis's violent shaking of the economy. It immediately affected each of their pocketbooks and continues to do so today, as well as their expectations for their futures. This common experience with the financial crisis provides a rich context for framing the illustrations of the principles and the applications of the tools and methods of the various business disciplines. It also makes the course's questions, tasks, exercises, and assignments immediately relevant and important in the students' eyes.

Razaki et al [2010] provided the general conceptual framework for such a capstone course suggesting teaching modules in the disciplines of economics, finance, and accounting. This paper extends that pedagogical work in two ways. First, it adds a fourth discipline to the course, business law. This demonstrates the ability to broaden the reach of this approach to the capstone course. Second, it takes the framework from a general, conceptual level to the specific, practical level by proposing concrete exercises/assignments.

Following the lead of Razaki et al [2010], this paper sharpens the focus of the capstone course further by centering it on one of the financial crisis's key contributors, the banking crisis. Focusing on banking taps the understanding and experience of students' daily life. And it does

more. This familiarity provides the point of departure for exploring the causes of banking gone wild. As the analysis of Alonzi et al [2010] points out, agency issues rooted in asymmetric information and its consequent problems of moral hazard were major contributors to the banking crisis. Essentially, loan officers exploited their informational advantage in the near term by continually lowering credit underwriting standards. Specifically, the stylized story recounts the short term gain for loan officers and long term pain for their employer and others, and proceeds along the following lines. Those on the front line making the lending decisions, the loan officers, had the credit application files of the would-be borrowers containing (or lacking) credit bureau reports detailing credit history, the borrower pay stubs and job verification reports, the appraisers' evaluations of the properties, and more. Having studied the data in these credit files, the loan officers possessed an informational advantage. They knew better (asymmetric information) the quality of their would-be borrowers than did either the owners of the firms employing the loan officers or the buyers of the loan paper (via Mortgage Backed Securities or Collateralized Debt Obligations) in the secondary market for existing loan paper. Those loan officers exploited (i.e. the agency issue) this informational advantage by making ever riskier loans (i.e. a moral hazard). These loans looked fine in the near term and so earned the loan officers bigger pay checks/bonuses. But, ultimately, the riskier credit quality of the borrowers emerged resulting in more defaults in the longer term. This increased level of defaults left their employers or those buying the loans from their employers holding the bag of record losses due to record loan defaults.

This nexus of asymmetric information, agency issue, and moral hazard provides a rich vein for student investigations that challenges the student to use the principles and tools of Business Law, Economics, Finance, and Accounting. And, it encourages students to integrate the discipline insights to see clearly the interconnected nature of the banking crisis. The Business Law module in this paper challenges the student to realize the degree to which monitoring and enforcement of the law, or the lack thereof, contributes to reducing or encouraging agency problems harmful to society. The Economics module turns the student's focus to the conditions needed for markets to deliver the benefits of Adam Smith's Invisible hand revealing that asymmetric information robs the invisible hand of its benefits. The Finance module sharpens the focus of the Economic module to four banking- specific agency problems relating them to the Volcker rule and methods used to align managers' interests with owners'. The Accounting module drives the student's conception of accounting from blind application of rules to accounting's crucial role as information guardian that ascertains and disseminates relevant information that levels the unlevel informational playing field inherent in the presence of asymmetric information.

SECTION TWO: INTRODUCTION TO THE MODULES AND METHODS

The discipline of Business Law deals with the context within which humans interact. The Business Law module has the student refresh his/her understanding that the law sets the general context for human interaction and the boundaries of acceptable behavior. It also emphasizes that the application of the law requires judgment because it is evolving and admits to gray and nebulous areas. The section on Business Law challenges the student through exercises to realize how important the monitoring and enforcement of the law are in discouraging or encouraging malfeasance of bank management by exploiting information asymmetry.

Specifically, the students are challenged to investigate whether the lack of monitoring and enforcement of the specific laws contributed to the severity of the 2008 banking crisis.

The banking crisis revealed that financial markets and, in particular, the market for bank loan paper seized up. In the Economics module the focus is on what made these markets ineffective. Adam Smith [Smith, 1991, p 399] claimed that markets coordinating individual self-interested voluntary decisions are "led by an invisible hand to promote an end which was no part of his intention…by pursuing his own interest he frequently promotes that of society more effectually than when he really intends to promote it" (i.e. the public good). Students are led to consider the foundations of competitive markets, the infrastructure needed for effective markets including the role of government in a market system, the design of compensation systems minimizing agency problems to promote competitive markets, and the impact and implications of asymmetric information for those foundations, the infrastructure, and compensation systems.

The Finance module introduces four specific agency issues in banking and provides current news reports illustrating each. It then presents questions and challenges to students. In one challenge, the students focus on the Volcker Rule preparing for and then debating the implications of the rule for banks and banking. The second reinforces the importance and implications of the design of compensation systems by directing them to research the methods currently used to align managers' interests with those of owners' in preparation for classroom discussion. This second exercise integrates well with the Economics module's compensation system design task. The two can be combined into one assignment or be pursued sequentially as the instructor wishes.

The Accounting module leads the student to see accounting as the informational antidote to the problems arising from asymmetric information. Accounting, done properly, ascertains and disseminates information and levels the unlevel informational playing field inherent in asymmetric information. Given accounting's crucial informational role, the students are asked to review the FASB's conceptual framework of financial accounting to address the general question: why do we (accountants) do what we do? From this general question, the focus narrows to two specific practices figuring prominently in the banking crisis: accrual accounting and mark-to-market valuation. Lastly, the section considers the auditor's duty to detect and report threats lurking in the financial data of a company.

To treat the topics, issues, and questions mentioned above, this paper employs the pedagogical methods of the trio (presentation, paper, discussion), think-pair-share, and the debate. The trio method provides the student the opportunity for developing oral and written communication skills as well as developing effective discussion etiquette. In the trio method, a topic is broken into several parts with each part assigned to a group of students. Each student group prepares a three to five page paper on its part, gives a brief twenty minute oral report to the class, and finally gives each classmate a copy of their paper. After all the reports on the topic are given, the next class session (or two or more) are devoted to a classroom discussion of the topic. A second method is the think-pair-share method. This method encourages students to study a topic in steps leading to effective communication in group situations. The professor poses a question and the students are asked to "think" in silence about the question (either right on the spot or between class sessions) and jot down her/his response. Then the students are "paired" up to compare and discuss their responses. Essentially, they are testing their ideas out in a limited, less public venue. Lastly, each pair "shares" its thoughts with the whole class. With the pump primed in the think and pair stages, a shared discussion can ensue. A third method is the debate. After posing the issue, the class is divided in half with each half an advocate for one side of the

issue. On debate day, two representatives are drawn at random from each side to present their side's case. After the presentations, each side can ask questions of the other. The question session is followed by a general classroom discussion. In one variant of the debate, all students are required to prepare both sides of the issue and on the day of the debate the professor randomly chooses the students who will engage in the debate.

SECTION THREE: BUSINESS LAW AND REGULATORY AGENCIES

It is now universally recognized that the failure of regulatory agencies to prevent financial fraud, nonfeasance, and incompetence by lenders was a major cause of the 2008 global economic crisis. This is evidenced by the recent passage of the 2010 Dodd-Frank Wall Street Reform and Consumer Act. This section will elucidate the current structure, responsibilities, and failures of the various regulatory agencies in the economic upheaval with special emphasis on the role of banks.

There are no fewer than five and as many as eight federal agencies responsible for regulating the banking industry. Some of the crucial regulators include the Federal Reserve Board (FRB), the Office of the Controller of the Currency (OCC), the Office of Thrift Supervision, and the Federal Trade Commission (FTC). In addition, while the Securities and Exchange Commission (SEC) does not regulate banking activities per se, it does regulate "securities," which may be offered by banks, including investment banks.

One critical question to be asked is: With the number of federal regulatory agencies responsible for oversight and monitoring of the banking industry, how could such a monumental collapse of the home mortgage lending industry occur? To find an answer, students in a capstone course will find it instructive to examine relevant legislation as a foundation for understanding the regulatory scheme under which the banking industry operates.

Beginning in the 1980's, Congress and the bank regulators, most noticeably the FRB, the OCC and the OTC, began loosening statutory requirements for federally chartered banks and thrifts [Di Lorenzo, 2009, p 155]. In addition, Congress allowed non-federally chartered lenders to offer non-traditional, alternative borrowing instruments such as Adjustable Rate Mortgages (ARM's) to consumers. The net result was a proactive government policy of lifting strict statutory constraints on mortgage lending in favor of transferring decisions on lending policies and products to bank management [Ibid. p 156]. Unfortunately, this was akin to allowing the fox to watch the henhouse, which contributed to the moral hazard. The purported rationale for this uncharacteristic *laissez-faire* government policy was to increase rates of home ownership, especially for low income and minority borrowers, a distinct societal benefit.

At the same time that federal agencies were adopting a policy of deferring to bankers/lenders loan acceptance standards, lenders were introducing innovative, but risky loan products like ARM's and Mortgage Backed Securities (MBS's). Regulatory standards such as loan-to-value ratios were replaced with "guidance." The bank lenders were left with a vague mandate "to avoid unsafe and unsound mortgage products and practices." Given the potential for substantial profits, the prevalent "no risk" lending environment and little or no accountability for bad loans, the mandate to avoid unsafe and unsound loans was often ignored by loan originators [Di Lorenzo, p 178].

As if the "hands-off" approach by federal regulators charged with monitoring the soundness of the banking industry was not enough, Cox has pointed out that the federal government was proactive in interfering with and obstructing investigations of unsafe lending

practices by various state attorneys general. The OCC, in particular, actively promulgated rules claiming for itself the exclusive right "to investigate and enforce violations of state consumer protection laws. This usurpation effectively preempted state laws that limited unfair mortgage loan terms for homeowners [Cox, p 279]. A perfect storm was thus created when the two primary bank regulators, the FRB and the OCC, took no action to control subprime mortgage lending abuses. The net result of the suppression of state enforcement actions, in combination with lax or non-existent federal oversight, was an environment rife for abuse by lenders [Ibid.300]. To make an already risky situation worse, in the 1990's, there was a proliferation of non-bank lenders. There was no federal regulator supervising these entities and, therefore, very limited federal oversight [Ibid. 292].

BUSINESS LAW PEDAGOGICAL MODULE

Business Law Project I: There are several federal regulatory agencies whose responsibilities include oversight of the banking industry. Students should understand the role of these various agencies in order to gauge their effectiveness during the mortgage lending meltdown.

Project description: Research the following federal agencies which are responsible for oversight and monitoring of the mortgage lending industry: the FRB, the OCC and the OTC. Prepare an outline which summarizes each agency's respective regulatory power. Specific attention should be paid to the supervisory and monitoring functions of each agency, e.g. their rulemaking, audit, and compliance authority. Determine whether each agency failed in its mandate to regulate the lending business, thereby being guilty of a "nonfeasance." Solomon [2008] has defined "nonfeasance" as the "failure to do an action that is required to be performed, i.e. when an official fails to perform his official duty" [p 215].

Lending Laws and Regulations

There are myriad laws which lenders must comply with in providing loans to prospective homeowners. Some of the more notable laws include: The Truth in Lending Act (TILA); the Home Ownership and Equity Protection Act (HOEPA); the Fair Credit Reporting Act (FCRA); the Equal Credit Opportunity Act (ECOA); the Real Estate Settlement Procedures Act (RESPA); the Gramm-Leach-Bliley Act (GLBA); and the Federal Trade Commission Act (FTC Act). As summarized by Cox [2009], these laws were primarily consumer protection laws governing mortgage loan origination and were grouped into the following categories:

(1) Disclosure requirements: Lenders are required to disclose relevant and material information to borrowers concerning their loans. Some examples of these disclosures are information concerning the total cost of the credit in the form of an annual percentage rate, the total of payments, whether the loan contains a prepayment penalty. Other provisions include "good faith disclosure" which requires listing the costs incurred by the borrower in taking out the mortgage [Cox, p 285]. TILA is the most notable of the disclosure laws, in particular Regulation Z of that Act. But TILA was only enacted as a consumer cost disclosure act and, therefore, was primarily focused on content, quantity and quality of information given to consumers rather than focused on imposing substantive prohibitions on lending practices harmful to consumers [Maman, 2008, p 215].

(2) Restrictions on the Terms of Mortgage Loans: Substantive restrictions on the costs and terms of residential loans were less prominent in the mortgage lending regulatory scheme [Cox, p 286]. This lack of regulatory oversight fostered lending practices that in hindsight contributed to the moral hazard. Mortgage products and practices which emerged included
   (a) adjustable rate mortgages (ARM's), which featured low initial rates;
   (b) payment options plans in which the borrower could choose an amount to pay, including the possibility of a minimum payment that did not include accrued interest;
   (c) loans made without regard to the borrower's ability to repay, including limited documentation or no documentation ("stated income"); and
   (d) loans made requiring very little or no borrower equity [Di Lorenzo, p 165].

Cox has reported "A striking feature of the growth in subprime mortgage origination was the rise of lending channels outside the depository institutions (banks) called 'non-bank lenders.' Up to now, there was very limited oversight of these non-bank lenders" [Cox, p 292]. Because of this glaring lapse in the regulatory scheme, abuses by profit-motivated, and in some cases "unscrupulous" lenders became more than a distinct possibility.

Business Law Project II: There are many federal laws and regulations which were intended to regulate bank lending practices. In order for students to understand how the regulatory environment may have contributed to the collapse of the home loan industry, students will need to research the applicable and relevant laws and regulations to determine if specific laws were violated, or simply ignored.

Project description: Research the relevant provisions of the following laws and regulations: TILA specifically Regulation Z; FCRA; GLBA; and FTC Act. Prepare an outline summarizing the lending provisions of each law/regulation. Students should determine whether any of these laws and regulations were violated, and if so, how.

Legislation

As previously discussed, lenders introduced a number of products and lending practices which, on the surface, provided otherwise unqualified borrowers with the opportunity to own a piece of the American dream---home ownership. ARM's promised borrowers a low initial rate, "teaser rates," on home loans [Di Lorenzo, p 165]. These rates were later adjusted upward increasing monthly payments by as much as 50% in some cases [Ibid. 166]. Lenders also engaged in practices in which little or no documentation was required of prospective borrowers concerning borrower assets or income level. Lenders would accept whatever income level the prospective borrower indicated ("stated income"). As lending practices became more and more lax, lenders eventually would not even bother inquiring about a borrower's income or assets, a practice known as "no income, no assets."

In addition to writing loans in which borrowers had little equity in the home they were purchasing, lenders were also underwriting loans without regard to a prospective borrower's ability to repay the loan. The FRB corrected this unsafe practice by issuing regulations in 2009 pursuant to the Home Ownership and Equity Protection Act ("HOEPA"). HOEPA and the FRB regulations thereunder prohibit loans made without regard to the borrower's ability to repay the loan. However, as pointed out by Di Lorenzo, these regulations apply only to "high-priced

mortgage loans." In addition, there was no clear standard that defined a borrower's ability to repay [Ibid. 179]. While government agencies issued "guidance" that "prudent underwriting standards 'should include an evaluation of a borrower's ability to repay the … loan,' the guidance did not prohibit stated income or reduced documentation loans" [Ibid. 161].

Business Law Project III: The literature on the lending crisis is replete with suggestions and recommendations concerning steps that have been taken, or should be taken to prevent a similar crisis from occurring in the future. In 2009, Congress passed an amendment to TILA, "HOEPA," to address some of egregious lending abuses. On July 21, 2010, President Obama signed into law the Dodd-Frank Wall Street Reform and Consumer Act, a massive piece of legislation which purports to overhaul the financial banking industry.

Project Description: After researching the literature, write a 3-5 paper analyzing recent legislation adopted to correct the various abuses and deficiencies in the banking regulatory system which contributed to the financial crisis. A minimum requirement for this project should be an analysis of the salient features of the Dodd-Frank legislation and HOEPA as they relate to home loan mortgages. Students should specifically address the following questions:

1. What do HOEPA and Dodd-Frank specifically prohibit concerning the various abuses discussed in this paper?
2. Do these laws address those abuses adequately? Why or why not?
3. Is further legislation necessary to cover abuses not specifically addressed in the current legislation? If so, what additional prohibitions, restrictions might be considered.

SECTION FOUR: ECONOMICS PEDAGOGICAL MODULE

The seizing up of the financial markets, in particular the market for loan paper, provides the springboard for a close examination of the essential factors contributing to well functioning markets. Essentially the competition necessary for effective markets was absent. In large part, the culprit was the presence of the asymmetric information leading to myopic, poor lending decisions discussed in the introduction. In this context it is important for students to review the ivory-tower assumptions underlying competitive markets. Further, students need to appreciate the essential infrastructure needed to bring competitive markets to life in the real world. Lastly, students need to grapple with the challenges of designing managerial compensation systems that promote competitive markets by eliminating asymmetry of information. To accomplish these pedagogical goals and extend the work of Razaki et al. [2010], three concrete activities are presented that help students solidify their understanding and appreciation for competitive markets.

Economics Project I. Review of what economists mean by competitive markets by investigating and listing the requisite basic assumptions.

Project Description: To understand the fundamental assumptions that underlie a competitive market, students should list the competitive market assumptions found in several principles of microeconomics textbooks. The work of leading authors to check includes but is not limited to: Baumol & Blinder [2001], Case, Fair, and Oster [2009], Frank, Bernanke, and Johnston [20009], Krugman and Wells [2009], Lipsey, Ragan, and Storer [2007], McConnell and Brue [2008], Mankiw [2009], Parkin [2000]. (Even a chapter in Thomas Hieronymous' [1977] The Economics of Futures Trading or the first two chapters of Milton Friedman's [1962] Capitalism and Freedom can be consulted by the truly industrious student). When the students

come to class with their written lists, have them contribute factors while you list them on the board. With the list compiled, put the students in groups of three and have them write an example for as many assumptions as they can in 5 minutes. Next have them repeat this listing but this time listing counter examples for as many assumptions as they can in 5 minutes. Then have each group report. The discussion naturally turns to the questions "How competitive is our market system?"

In the remaining time in the class period help the students recall the implication of "competitive" applied to a market. Truly competitive markets mean that each buyer and each seller is a price taker, not a price maker. Alternately this means each market participant is as small as an ant next to the elephant of the market. Each participant is powerless over price and only chooses whether and how much quantity to do in that market. Stress that it is this competitive assumption which leads to the efficacy of price and profit signals that, in turn, lead to an efficient allocation of resources, or more colloquially, "the right amount of each item at least cost."

We believe the students will find that "competitive" is an adjective that takes markets into a rarified environment indeed. Our list includes nine key assumptions or pillars: large number of buyers and sellers; independent action of buyers and of sellers; knowledgeable buyers and seller; easy entry and exit, property rights are well defined and enforceable; able adults in action (making the decisions); transactions costs are zero; homogeneous product; and given the current distribution of $ income and wealth. Our acronym is LIKE PATH$. Undoubtedly, some would add or delete from this list.

Economics Project II. The importance of proper Infrastructure and Microstructure for effective markets.

Project Description: This project requires students to look into the real world at an actual market's microstructure to see the infrastructure necessary for an effective market. That is, to go beyond the price-signal-tip of the market iceberg to the under-water-bulk of its microstructure. The Chicago futures markets found at the CMEgroup provide easy access via the web to the infrastructure of a market place. A brief introduction to these markets is helpful and is presented concisely in (less than 1300 words) "Chicago Board of Trade" in History of World Trade since 1450 [Alonzi in McKusker, 2006]. With this brief introduction in hand, direct the students to examine and understand the CBOT rule book found at the CME group website (URL given below). Essentially, this rule book is the collective, cumulative wisdom and practices gained by traders from their trading experiences since 1843. While "buying low and selling high", or vice versa, is the highlighted principle that everyone focuses upon, the purpose of this exercise is to stress that it is the market infrastructure which facilitates and permits this trading activity by ensuring that markets are effective. It was this infrastructure institutionalized in the CMEgroup rule book that enabled the effective, continuous functioning of the CME group throughout the financial crisis and enables it to this day.

Direct the students to examine three particular parts of the rulebook:

1. the webpage itself: estimate the number of pages in the rule book http://www.cmegroup.com/rulebook/CBOT/index.html
2. Chapter 5 on acceptable trading practices http://www.cmegroup.com/rulebook/CBOT/I/5/
3. Chapter 10 on Corn http://www.cmegroup.com/rulebook/CBOT/II/10/

Give them the following tasks:

1. Estimate the number of pages contained in the rule book,

2. Write a one page summary listing trading infractions, prohibited trading activities, and the responsibilities of a trader,
3. Answer the seven questions given below about the corn (or contract chosen by the instructor) contract.

The webpage itself reveals the scope and extent of the microstructure required for a market to function effectively and deliver the efficiency promised by economists from Adam Smith to the present. Require the students to tool around the links on the page to the various chapters. Assign them the task of estimating the number of pages contained in the rule book.

Chapter 5 on acceptable trading practices is an eye opener. "Free market" does not mean "anything goes". This chapter of the rulebook details what it means to trade in an acceptable and effective manner. Assign the student the task of writing a one page summary listing trading infractions, prohibited trading activities, and the responsibilities of trading.

Trading infractions are indicated in rule 514 and include:
1. a bid or offer out of line with the market;
2. a bid or offer which tends to confuse the other traders;
3. a trade through the existing bid or offer;
4. failure to confirm a transaction;
5. failure of a buyer and seller to properly notify the pit reporter of transaction prices in accordance with Rule 528 and/or failure to ascertain that such prices are properly recorded;
6. use of profane, obscene or unbusinesslike language on the trading floor;
7. use of undue force while on, entering or leaving the trading floor;
8. conduct which tends to confuse, distract, abuse or intimidate any Exchange employee;
9. conduct of an unbusinesslike nature;
10. failure to defer to a member who has clearly turned the market;
11. failure to indicate a quantity on a bid or offer; and
12. disseminating false, misleading or inaccurate quotes.

Prohibited trading activities such as withholding orders are covered in rule 529, trading against customer orders (531), disclosing orders (532), and prearranged trades (539) just to list a few. Positive requirements include recordkeeping (536), responsibility for customer orders (540), and reports of large positions (561) to list just a few. By reviewing chapter 5, students gain an appreciation and understanding that the infrastructure and microstructure required for an efficient "free market" is large, specific, and detailed. Lastly, have the students look at a chapter covering one specific futures contract. We would select corn for three reasons (though the instructor can use any of the many futures contracts): to be specific, to focus the investigation as all futures share common features, and to use an item most students think they know. Upon inspection most students will find that they know less about corn than they thought, unless they are from farm communities in the I states (Iowa, Illinois, Indiana as well as their neighboring states). The corn contract at the Chicago Board of Trade (CBOT) calls for delivery of number 2 yellow corn. This is the corn that cattle are fed to fatten them. It is neither sweet corn nor popcorn that humans consume directly. This differentiation of the types of corn reveals to the student the complexity and specificity required of doing business in the real world.

Direct the students to examine rule 10101 "Contract Specifications" and 10102 "Trading Specifications" and have them answer the following questions (answers given in parenthesis are good as of June 30, 2010):
1. How many bushels in a corn contract? (Answer: 5,000 bushels)

2. What is the allowed price differential between number 1 and number 3 yellow corn? (Answer: 2.5 cents)
3. What are the contract months for corn? (Answer: September, December, March, May, July)
4. What is the regular daily price limit for the change in the price of corn? (Answer: 30 cents per bushel)
5. In a regular day what is the maximum range of movement for the price of corn? (Answer: 60 cents per bushel, if corn goes up 30 cents from the prior close it can fall to 30 cents below the prior close for a range of 60 cents from +30 to -30 cents)
6a. What is the minimum price increment in the price of corn? (Answer: ¼ of one cent)
6b. How much is this price increment worth? Show your computation of this amount.
(Answer: $12.50/contract = $0.0025/bushel x 5,000 bushels/contract)
7. What is the position limit on corn? (Answer: 600 net long or short in spot month, 13,500 futures-equivalent net long or short in a month excluding the spot month, 22,500 futures-equivalent net long or short all months combine. All this subject to exemptions for bona fide hedging, risk management, arbitrage, or spreading as set forth in rule 559.)

This notion of market infrastructure leads directly to consideration of the appropriate role of collective action in general (the futures exchanges were designated self regulatory organizations in the 1800s and have functioned in this quasi government agency form ever since) and, in particular, of government in the competitive market place. While the preceding investigation of the CMEgroup rulebook leans toward supporting the efficacy of collective action, the financial debacle of 2008 provides the students with a laboratory view of what government action does that is counterproductive. In particular, direct the students to examine the effects of four areas of government action (notably this examination reinforces the theme of the Business Law Module):
1. Central bank monetary policy (the John Taylor "too loose" policy view vs. the Greenspan/Bernanke view of excess saving) pushing interest rates below equilibrium.
2. Government designated/approved credit rating agencies (Moody's, Standard and Poor, and Fitch).
3. Government guarantees of Federal National Mortgage Association (Fannie Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac) which are hybrid corporations with publicly traded stock but implicit government guarantees.
4. Congress and HUD setting affordable housing lending targets for Fannie Mae and Freddie Mac lending activity.

Assign each small group one of the four areas of government action to investigate. Have them prepare a one page summary of their findings and have them present their findings. The discussion can then be focused on the proper role of government action in a competitive market place. The discussion will combine the effectiveness of collective action found through the examination of the CMEgroup rule book and the ineffectiveness of collective action found through the examination of the four areas of government action cited above. The upshot is that, as in most issues concerning economics, the answer is: "it depends". A further point can be made that an informed citizenry is essential for the vitality and health of our democracy.
Economics Project III. Solving the Asymmetric Information Problem: Design a Compensation Plan.

Project Description: The third project focuses on the asymmetry of information. The papers by Razaki et al [2010] and Alonzi et al [2010] stress that the mismatch between compensation incentives based on short-term measures and profits for the corporations in the long-term profits can breed lender myopia. This myopia results in lending decisions that are beneficial to manager compensation in the short term but are detrimental to corporate profits and so owner equity in the long run. Give the students a challenge. Put them in groups of three students and have each group design an incentive system that eliminates asymmetric information and, thereby, promotes well functioning markets. For background, have them read The Big Short by Michael Lewis or for something shorter "The Making of a Fine Financial Stew" by Alonzi [2010] at http://www.financialdecisionsonline.org/current/AlonziSummer2010.pdf . Have the student groups prepare a one page bullet point presentation of their incentive plan and a short (five minute) presentation to the board of directors of the hypothetical financial firm they are supposed to be working for. Have each group make its presentation. Then, open the class to a general discussion of compensation.

The design of incentives is difficult. The grappling with the issue is the real intended payoff of this exercise. Suggestions of capping pay leads directly to discussions of price controls and the proper role of government. Suggestions of deferring pay leads to considerations of credibility. Do the decision makers believe that the promise to pay bonuses 15 or 30 years from now, when the mortgages made today are paid, is credible? Do they believe that other events outside their control would prevent the firm from honoring its deferred compensation promises? Some student may choose to examine how the sports industry has handled the issue of compensation (NFL, NBA, NHL, MLB) with caps and luxury taxes and the consequences on performance and the maintenance of a team. This third Economics project relates closely to the second challenge presented in the Finance module. The instructor could assign each of these sequentially to emphasize different aspects of contract design. Or the instructor could combine the Economic and Finance compensation design projects to stress the integral nature of the business disciplines.

The role of asymmetric information in the financial crisis of 2008 produced a powerful shock to the world economy and its effects are still being felt today. Thus, this crisis provides the motivation and spring board for reconsidering what "competitive" means in competitive markets, what infrastructure is needed for competitive markets, and what compensation system could promote competitive markets by overcoming the asymmetric information of the compensation plans in place pre-2008. In this Economics Pedagogical Module, three projects have been developed and presented providing the motivation for each task, the statement of each task, and suggested responses to each task. The instructor could use one, two, or all three tasks depending on her/his intent and time constraints. The outcome of these activities is that the student learns through hands on activities, receives a practical review of basic economic concepts, and develops her/his life-long grasp of what it takes to make a "free market" function efficiently.

SECTION FIVE: FINANCE PEDAGOGICAL MODULE

Examples of Moral Hazard and the Principal-Agent Problem: Recent financial news continues to report the devastating aftershocks of the 2008 financial crisis. From these reported aftershocks interesting questions concerning moral hazard continue to present themselves as challenges for students in the capstone course to tackle. First we review four areas of moral

hazard prevalent in the banking industry noted in the literature, then we provide a recent news report involving each of the specific areas, and then tasks/questions are presented for the professor to draw from for class assignments. For the sake of brevity, only the most noteworthy examples are mentioned.

Razaki et al. [2010] outlined the four areas of moral hazard in the banking industry currently recognized in the literature. They are:

1. Between the bank and the bank's loan customers;
2. Between the bank and the deposit insurer;
3. Between the bank's managers and the bank's owners, and
4. Between the bank and the buyers of mortgage-backed securities.

A detailed discussion of these areas of moral hazard follows.

1. Between the bank and the bank's loan customers. The clearest example of this form of moral hazard is the subprime mortgage debacle. The initial selling point for these high-risk loans was that they would offer families the opportunity they might not have otherwise to purchase a home. Mortgage brokers would target customers with questionable or even poor credit and entice them with the American dream of home ownership. The tool that created the largest increase in defaults (and subsequent foreclosures) was the adjustable-rate mortgage (ARM) [Bernanke, 2007]. ARMs offer a fixed rate at a lower level than the customer's credit score would normally qualify, with that fixed rate good for a limited time (typically 3 or 5 years), after which the rate would become adjustable (and would also increase, thus increasing the customer's mortgage payment immediately). The selling point was that the customers could use the fixed rate period to consolidate their finances and increase their credit score, so that they could refinance the loans prior to the end of the fixed rate period. The banks' willingness to underwrite these loans was offered as proof to the customers that the dream was within their reach.

   The reality was that without a significant increase in income, the customers (who likely were just scraping by with the payments during the fixed rate period) would be unable to make the increased payments when the adjustable rate kicked in, and thus would quickly get behind in their payments and eventually face foreclosure. This was not an issue for the banks, since shortly after the paperwork was filled out, the banks sold the mortgages, keeping the transaction fees as riskless profit and transferring the risk to the new buyers of the subprime mortgages. This form of underwriting is known as the originate-to-distribute model [Bernanke, 2007]. Thus the banks began a relationship with the customers that they had no intention of maintaining any longer than it took for the ink to dry on the contracts.

2. Between the bank and the deposit insurer. Again, the subprime mortgage debacle offers a clear example of this type of moral hazard. As described in Razaki et al. [2010], knowing that their deposits are insured, depositors carelessly ignore the quality of loan decisions made by their bank. The banks' managers may take advantage of the opportunity this lax oversight provides. They can increase their income from lending fees by lowering their credit standards. The lower credit standards lead to an increase in the riskiness of the bank’s portfolio of assets, thus making the initial insurance premium set by the insurer inadequate. The consequence of this moral hazard is that the insurer would be unaware of this until the associated risks came to light. Ben Bernanke noted this in his address to the US House of

Representatives in 2007: "When an originator sells a mortgage and its servicing rights, depending on the terms of the sale, much or all of the risks are passed on to the loan purchaser. Thus, originators who sell loans may have less incentive to undertake careful underwriting than if they kept the loans." [Bernanke, 2007]. When addressing possible legislative responses to the subprime mortgage debacle, Mr. Bernanke issued these words of warning: "The risk of moral hazard must be considered in designing government-backed programs; such programs should not bail out failed investors, as doing so would only encourage excessive risk-taking." [Bernanke, 2007].

3. Between the bank's managers and the bank's owners. The issues discussed in 1 and 2 above negatively impact the bank's owners by increasing the long-term risk of the loan portfolio in order to record short-term profits, which the bank's managers are motivated to do because those short-term profits have a big impact on their annual bonuses.

   While this issue illuminates the consistency of the moral hazards associated with predatory lending, there is another example in the news that is even more blatant in highlighting bank's managers' disregard for the owners. In May of 2010, a series of lawsuits were filed against Goldman Sachs Group Inc. by shareholders in response to the SEC filing fraud charges against the bank in April. The SEC charges relate to a transaction entered into by the hedge fund Paulson & Co., which is outlined in detail below in number 4. The transaction is one of several that are referred to as "Abacus" transactions [O'Connell, 2010]. The SEC issued a Wells notice to Goldman in 2009, asking for an explanation and stating that they intended to recommend enforcement action if their explanation were found to be inadequate.

   One of the suits alleged that Goldman management chose not to reveal that the bank had received the Wells notice: "Goldman chose not to issue a Form 8-K alerting investors to this event and later even omitted this information from its Form 10-Qs, while updating 'Legal Proceedings' as to other cases ... As a result, investors were unaware that the SEC was even investigating ABACUS 2007-AC1." [O'Connell, 2010]. Such actions, if true, reveal a clear moral hazard perpetrated by Goldman's managers on the bank's shareholders.

4. Between the bank and the buyers of mortgage-backed securities. Once again, the issues highlighted in 1 and 2 above can be shown to create a moral hazard for the buyers of the securities created by bundling the subprime mortgages underwritten by predatory lenders. However, the particulars of the fraud charges filed by the SEC against Goldman Sachs indicate an even more egregious moral hazard.

   The SEC charges allege that Goldman allowed the hedge fund Paulson & Co. to help design a structured financial product known as a collateralized debt obligation (CDO), which was built from subprime mortgages that were known to be risky. The primary moral hazard stems from the fact that the CDO was constructed from risky assets, but the true risk of those assets was not revealed to the buyers of the CDOs. The moral hazard was then amplified when Paulson & Co. later allegedly engaged in a transaction that bet against the performance of that CDO [Zuckerman et al, 2010], based on their understanding of the true risk level of the asset. The SEC alleges that investors were told neither of Paulson & Co.'s part in designing

the CDO nor in the subsequent transaction Paulson entered into to profit from the CDO's eventual failure.

Notably in each instance above, the bank's managers had information that the other parties involved did not have (asymmetric information), and that they used that information to create a moral hazard that resulted in their financial benefit. Also, in each instance, while the actions resulting in the moral hazard benefited the managers, the long-term results of the actions were to the detriment of the bank's shareholders. Thus the principal-agent problem facilitated the managers' actions.

Class Projects: The issues of moral hazard and the principal-agent problem lend themselves well to class discussion topics. Students who read the newspapers and blogs will have strong opinions on the behavior of those under scrutiny, while students who are not in touch with the latest news will offer questions that stimulate further discussion. To initiate discussion, the class can divide into groups, with each group putting together a position paper on one of the following questions:

1. When a bank agrees to lend money to a customer for a mortgage, what responsibilities do the bank's managers have to the banks owners, and how should those responsibilities be accounted for in the contract?
2. When a bank agrees to lend money to a customer for a mortgage, what responsibilities do the bank's managers have to the customer, and how should those responsibilities be accounted for in the contract?
3. Is it wrong for the bank to sell a mortgage shortly after entering into the contract? Does doing so conflict with the responsibilities the bank has to the customer?
4. If the bank does sell the mortgage shortly after entering into the contract, what responsibilities does the bank have to the purchaser of the mortgage, and how should those responsibilities be accounted for in the contract?

Each group can then present its position paper as the starting point for class discussion. The instructor acting as a moderator for the discussion will help guide the students toward the common ethical principles underlying each of the different questions under consideration. The Volcker Rule (proposed by Paul Volcker, former chairman of the Federal Reserve and chairman of the president's Economic Recovery Advisory Board) is intended to restrict U.S. banks from speculating in derivatives and OTC markets and operating or investing in hedge funds or private equity funds (known as proprietary trading). This controversial rule, part of the Dodd-Frank financial reform bill passed in July 2010, was a point of contention for the Congressional conference committee responsible for shaping the final draft of the bill. This could form the basis of a debate, wherein students are selected to take opposite sides of the rule, research the details of the rule, and then argue the pros and cons of the final draft of the rule as it was included in the bill.

One of the most difficult issues facing business owners is how to align managers' interests with their own (the agency issue). Any efforts to affect managers' behavior will incur expenses for the shareholders, so shareholders must balance the costs of agency control against the potential benefits for each action under consideration. Students can research the methods currently used by large corporations to control agency costs (granting stock options, the use of dividends or high debt levels, etc.), argue the benefits and limitations of each method, and attempt to create new ways for firms to align managers' interests with those of the shareholders

and other stakeholders. As discussed above in the Economics module, there is a natural integration of Economics and Finance in this task of aligning manager and owner interests that the instructor could choose to reflect by combining this second Finance module challenge and the third Economic module project.

SECTION SIX: ACCOUNTING/AUDITING PEDAGOGICAL MODULE

Razaki et al [2010] have stressed the importance of students in a business capstone course relearning the fundamental philosophical reasons for the existence of financial accounting rules, their users and uses, and the role of auditing in society. This module will enable students to fully comprehend the vital importance of accounting/auditing in the proper functioning of effective and efficient securities markets, especially in the amelioration of problems arising from information asymmetry and moral hazard. Students will perform three activities. The Accounting/Auditing Module is designed as a three part project.

Project I - The Conceptual Framework of Financial Accounting and Generally Accepted Accounting Principles (GAAP).

Project Description: Prepare a 2-4 page paper after studying, researching, and analyzing the FASB's Conceptual Framework of Financial Accounting.

The global economic crisis that manifested itself starting in 2008 clearly showed the inadequacies not only in monetary policy, financial markets and banking regulation, and ratings agency reliability, but also accounting standards and auditing practices. This project requires students to study and analyze the Financial Accounting Standards Board's (FASB) Conceptual Framework of Financial Accounting (circa 1976) that was developed to overcome the logical inconsistencies previously existing in Generally Accepted Accounting Principles (GAAP). Until then, accounting principles and procedures had been developed in an ad hoc fashion as the need arose because of changing business conditions and/or practices. The Framework was to provide a logically consistent and user focused approach that would enable accounting principles and practices to change as the business environment changed. For this project, students will have to analyze the following issues: (a) Who are users of financial accounting and why are they important? (b) What are the goals of financial accounting? (c) Why is financial accounting important to an economy? (d) What potentially crucial business problems does financial accounting help in ameliorating, with a special emphasis on efficient markets and information asymmetry? (e) Why is the need for effective auditing a necessary condition for the effective and efficient functioning of security markets? It is imperative that business students realize that the accounting discipline is more than mere journalizing of debits and credits.

Project II.

Razaki et al [2010] had stressed the importance of students in a business capstone course relearning the fundamental philosophical reasons for the existence of financial accounting rules, their users and uses, and the role of auditing in society.
Project Description: Prepare a 3-5 page paper that summarizes the FASB's major accounting rules related to the treatment of debt security valuation and hedging. The students are divided

into teams of three and each team is required to locate, study, and analyze one Statement of Financial accounting Standards (SFAS) related to debt securities. Six of the most relevant FASs are listed below. Alonzi et al [2010] listed monetary authorities, financial markets regulators, rating agencies, bank regulators, bank managers, public accountants, and for purposes of this module, financial accounting standard setters and regulators as being major contributors to the global economic crisis including the banking crisis. There were a number of ways in which financial accounting standards and practices fell short in assuring that the securities markets performed effectively and efficiently. These standards and practices did not ameliorate the negative aspects of information asymmetry. Further they did not prevent cataclysmic falls in the stock market, the debt market, and wild gyrations in the basically opaque market dealing with novel financial instruments and hedge funds.

For the sake of brevity, just two instances of accounting rules are cited that had a negative long-term impact on bank performance and that provide two excellent questions for class discussion. The first issue concerns the appropriate use of accrual accounting. Accrual accounting is the preferred standard for most industries and firms because it better captures certain economic realities. But is accrual accounting appropriate for banks? For banks, the application of accrual accounting results in anomalous treatment between expenses and revenues, and between two types of bank revenues. First, bank origination revenues are recognized in the period that the loan is originated whereas the potentially greatest expense/loss (loan default) is not recognized until much later when it actually occurs. Second, both origination fees and interest revenue increase profits, but the former is recorded immediately while the latter is recorded over the life of the loan. It is argued that these anomalous treatments are justified due to the uncertainties regarding collection of interest revenue and the risk of default in the future. This argument is increasingly less convincing because of improved predictive models and the plethora of financial information now available about loan applicants. These anomalies enable bank managers to exploit asymmetric information leading to morally hazardous personal gain.

The second issue concerns the suitability of mark-to-market valuation of securities. This rule requires that certain securities be shown at market value regardless of the impact on net income. In some cases the impact on short-term income can be huge because security values can gyrate rapidly. It is important to determine if mark-to-market accounting for mortgage loan valuation is suitable. Alonzi [2009] has posited that the nature of the financial instrument highly influences whether utilizing mark-to-market is suitable. If mortgagees are making their requisite payments, the writing down of a mortgage to current mark-to-market value could substantially understate the value of a mortgage in a declining market. Alonzi [2009] further states that following chain of events could result: greatly reduced value of bank mortgage assets leading to substantially reduced net worth resulting in inadequate bank capital positions which could dramatically constrain bank lending to consumers and businesses. Utilizing the trio method, capstone course students should briefly study, research, and analyze at least the following SFASs:

SFAS 105 Disclosure of Information about Financial Instruments
SFAS 119 Disclosure about Derivative Financial Instruments and Fair Value of Financial Instruments
SFAS 133 Accounting for Derivative Instruments and Hedging Activities
SFAS 157 Fair Value Measurements
SFAS 166 Accounting for Transfers of Financial Assets
SFAS 167 Consolidation of Variable Interest Entities

Project III. The fundamental responsibility for the fairness of a corporate entity's financial statements lies with top corporate management. There is an incentive for management to misstate, manipulate, or massage reported accounting numbers for personal gain. This situation is further exacerbated due to the inherent existence of information asymmetry and moral hazard. External auditors have a crucial role in protecting the interests of all non-management stakeholders in the firm. The failure of external auditors in the performance of their duties can cause massive economic loss for all these other stakeholders.
Project Description: Prepare a 3-5 page paper on the importance of external auditing of corporate entities, the duties and responsibilities of external auditors, and the failure of auditing firms to detect and report upon the perilous risks to which bank managements exposed their banks resulting in catastrophic losses leading to their demise and massive taxpayer bailouts.

The Sarbanes-Oxley Act (SOX) was signed into law in 2002 after the financial world was rocked by almost daily revelations of then unimaginable corporate scandals. It represented a broad overhaul of fraud, accounting and securities laws. It aimed at reigning in Wall Street malfeasance by creating a regulatory board to oversee the accounting industry. It also included measures to punish corrupt auditors and impose new standards to prosecute corporate financial misconduct. SOX created the Company Accounting Oversight Board (CAOB) whose five members are appointed by the S.E.C. They are mandated with overseeing the auditing of public companies that are subject to securities laws. The responsibility of the CAOB is to protect investors by ensuring that publicly held companies were subjected to accurate and independent auditing. The board's duties include establishing quality control and ethics standards for audit reports; inspecting public accounting firms; and investigating and imposing sanctions on firms when required [Norris, 2010].

The fundamental responsibility for the fairness of a corporate entity's financial statements lies with top corporate management. This responsibility was highlighted by the mandate in the Sarbanes-Oxley Act (SOX) of 2002 that the CEO and CFO personally sign the annual reports and bear severe consequences in the case of material misstatements. Independent external auditing of a firm's financial statements was required by the Securities and Exchange Commission (SEC) from as far back as 1933 to ameliorate the inherent conflict of interest that corporate management suffers from in the development of fair financial reports. SOX further mandated rules to ensure that auditors remained independent of firm management by requiring that the selection of auditors is made exclusively by the audit committee of the corporation which includes only outside directors. It tried to strengthen the independence of external auditors by limiting the scope of the consulting relationship that auditing firms can have with their clients and imposed very strict guidelines. The primary function of external audits is to protect the interests of all parties (stockholders being the primary beneficiaries) by providing an independent opinion on the corporation's financial position, performance, and risk profile. Auditors are bound to disclose management's material sins of commission or omission in financial reporting if they detect any during the course of an audit. The scope and extent of the audit procedures, in turn, is determined by the levels of various business risk exposures of the firm. In analyzing the causes of bank failures and bank managements' self-serving decisions, some blame must be assigned to the highly inadequate performance of bank auditors. The majority of bank external auditors failed to detect and/or disclose the correct risk profile and the deteriorating economic positions of the audited banks.

It is possible that these audit failures were due to an inherent conflict of interest in the auditing engagement, that is, the external auditor's duty is to protect the interests of non-management stakeholders, yet for all practical purposes, they are basically selected and paid by firm management. The project paper should discuss: (a) What are the primary responsibilities and duties of external auditors? (b) What are the inherent conflicts of interest faced by auditors? (c) What audit failures led to the banking crisis of 2008? (d) What financial and professional consequences should bank external auditors face? (e) Recommendations for remedying this situation in the future.

CONCLUSION

Centering the capstone course on the financial crisis offers students real world examples for the concepts taught in business courses, and makes it more relevant to them than a simulation. Students get to see how critical business issues impact each of the disciplines, and how ethical issues arise in the banking industry. By constructing the course around issues that the students have seen first-hand, the material is alive and significant to them, and they have a full stake in attempts to resolve the issues.

REFERENCES

Alonzi, L.P. (2006), "Chicago Board of Trade" in History of World Trade since 1450, McCusker, John, J (ed. in chief), Detroit, Michigan: Macmillan Reference USA.

Alonzi, L.P. (Summer, 2010), "The Making of a Fine Financial Stew", *Financial Decisions*, Vol 22, #1.

Alonzi, L.P., Irons,R. and Razaki,K.A. (Winter, 2010), "Asymmetric Information, Moral Hazard, & Agency Problems in Bank Lending", Forthcoming, *Financial Decisions*, Vol 22, #2.

Baumol, W. and Blinder. A.S. (2001), Economics: Principles and Policy, 8th ed., Harcourt College Publishers.

Bernanke, B. S. (2007), "Subprime Mortgage Lending and Mitigating Foreclosures", Testimony before the Committee on Financial Services, U.S. House of Representatives. http://www.federalreserve.gov/newsevents/testimony/bernanke20070920a.htm.

Case, K. E., Fair, R.C. and Oster. S.M. (2009), Principles of Microeconomics, 9th ed., Prentice Hall.

CMEgroup. (2010), Cmegroup rulebook: cbot rulebook, Retrieved from http://www.cmegroup.com/rulebook/CBOT/index.html.

Cox, P. (2009), "A New Horizon: Legal Reforms, New Regulatory Models, Predictions: The Importance of Deceptive Practice Enforcement on Financial Institution Regulation", 30 *Pace Law Review* 279, (Fall).

Di Lorenzo, V. (2009), "Effects on the Ground: Social Upheaval or Net Societal Benefits? Unsafe Loans in a Deregulated U.S. Mortgage Market", 30 *Pace Law Review* 154, (Fall).

Financial Accounting Standards Board. (1976), Conceptual Framework for Financial accounting and Reporting: Elements of Financial statements and Their Measurement, *FASB Discussion memorandum,* available at www.fasb.org.

Financial Accounting Standards Board. (March, 1990), Statement of Financial Accounting Standard No. 105, *Disclosure of Information about Financial Instruments*, available at www.fasb.org

Financial Accounting Standards Board. (October, 1994), Statement of Financial Accounting Standard No. 119, *Disclosure about Derivative Financial Instruments and Fair Value of Financial Instruments*, available at www.fasb.org.

Financial Accounting Standards Board. (1998), Statement of Financial Accounting Standard No. 133, *Accounting for Derivative Instruments and Hedging Activities*, available at www.fasb.org.

Financial Accounting Standards Board. (September, 2006), Statement of Financial Accounting Standard No. 157, *Fair Value Measurements*, available at www.fasb.org.

Financial Accounting Standards Board. (June, 2009), Statement of Financial Accounting Standard No. 166, *Accounting for Transfers of Financial Assets* , available at www.fasb.org.

Financial Accounting Standards Board. (June, 2009). Statement of Financial Accounting Standard No. 167, *Consolidation of Variable Interest Entities*, available at www.fasb.org

Frank, R.H., Bernanke, B.S. and Johnston, L.D. (2009), Principles of Microeconomics, 4th ed., McGraw-Hill Irwin.

Friedman, M. (1962), Capitalism and Freedom, The University of Chicago Press.

Hieronymus, T. A. (1977), Economics of Futures Trading, Commodity Research Bureau Inc, New York, New York, 95-106.

Krugman, P. and Wells, R. (2009), Economics, 2nd ed., Worth Publishers.

Lewis, M. (2010), The Big Short, W.W. Norton & Company.

Lipsey, R. G., Ragan, C.T. and Storer, P.A. (2007), Economics, 13th ed., Addison Wesley.

Maman, S. (2008), "New Tools for Combating Unfair, Deceptive and Abusive Mortgage Practices: New Amendments to Regulation Z, 21 Loy", *Consumer Law Review* 194.

McConnell, C.R. and Brue, S.L. (2008), Economics: Principles, Problems, and Policies, 17th ed., McGraw-Hill.

Mankiw, G. N. (2009), Essentials of Economics, 5th ed., South-Western Cengage Learning.

Norris, F. (2010), "Justices Uphold Sarbanes-Oxley Act", New York Times, June 28..

O'Connell, V. (2010), "Suit Claims Goldman Failed to Disclose Probe", The Wall Street Journal, April 26.

Parkin, M. (2000), Economics, 5th ed., Addison-Wesley.

Razaki, K.A., Alonzi, L.P. and Irons,R. (Spring, 2010), "The Global Economic Crisis and Interdisciplinary Education", *Journal of Business and Behavioral Sciences*, Vol 21 #2.

Smith, A. (1991), The Wealth of Nations, New York: Everyman's Library.

Taylor, J.B. (2009), Getting Off Track: How Government Actions and Interventions Caused, Prolonged, and Worsened the Financial Crisis, Stanford, California: Hoover Institution Press.