

**Volume 16, Number 1**

**ISSN 1948-3163**

**Allied Academies  
International Conference**

**Orlando, Florida  
April 5-9, 2011**

**Academy of Educational  
Leadership**

**PROCEEDINGS**

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# A STUDY OF THE COGNITIVE DETERMINANTS OF GENERATION Y'S ENTITLEMENT MENTALITY

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## ABSTRACT

*Entitlement, as defined by The American Heritage Dictionary (1985), is "to furnish with a right or claim to something." This study attempts to investigate the possible cognitive determinants which have led to an "entitlement" mentality found in "Generation Y" individuals ("Millennials") confronting both academicians and employers*

*This paper drew from an extensive review of relevant literature and results from focus groups used to validate the constructs leading to the development of an instrument which was utilized to measure the behavioral, cognitive and affective antecedents leading to an entitlement mentality. Hypothesis testing utilizing regression analysis produced interesting results which are detailed in this paper. The findings and implications of this research will be discussed.*

## INTRODUCTION

During the past forty (40) years, the nature of the American economy has shifted dramatically from one focused on manufacturing and heavy industry to one that is dominated by "white collar" professions and service industry jobs (Robbins, 2005). In its comprehensive survey of Millennials (Generation Y), the Pew Research Center (2010) identified four generational cohorts: The Silent generation, Baby Boomers, Generation X, and the Millennial generation.

The Silent generation consists of those born between 1928 and 1945. The current age of this group is 65+. They are the children of the Great Depression and World War II. Their dominant work values include honesty, organizational loyalty, conformity and a work ethic that incorporates hard work and moral values (Pew, 2010).

A significant demographic shift is now occurring as members of the "Baby Boomer Generation" (1946-1964) pass from the workforce into retirement. They take with them a work ethic driven by success, ambition, high achievement and a loyalty to their careers and organizations.

While "Generation X" (1965-1981), with their work values of team orientation, a work/family life balance, and loyalty to relationships, dominates the current workforce population, the Millennials, also known as "Generation Y" (1982-2009) have begun to stream into the labor market. The Millennials seem to bring with them a hedonism, narcissism, and cavalier work ethic previously unknown in the American workforce. Nonetheless, these negative traits are contradicted and counterbalanced by this same generation's loyalty to individual managers

(not corporations); a commitment to idealistic corporate visions and values; and a willingness to provide an employer with hard work, albeit in exchange for virtually immediate reward and recognition.

Most notably, the Millennials treat technology as their “sixth sense”. It is a significant characteristic and skill set that distinguishes them from members of other generations (Deal, Altmann & Rogelberg, 2010). The Internet, cell phones and online social networking were all introduced during the growth years of the Millennials. They are “natives” to the technology while members of all other generations, no matter what their individual technological proficiency may be, are seen as “immigrants” (Hershatter & Epstein, 2010).

Members of the “Baby Boomer Generation”, who are often in the upper echelon of corporate management; and the mid or lower level managers from “Generation X” are confronted, and confounded, by the ambiguous attitudes and conflicting behavior of their Millennial employees. Managers in the latter generation are particularly frustrated when they contrast their “sink or swim” entry into the workforce with the organizational “accommodations” offered to Millennials. (2010). Nonetheless, understanding and adapting to this new generation’s work ethic will be critical to the restored, continued or future success of American business and industry.

Millennials display similar attitudes and behavior toward academia. College instructors find that many possess an astonishing lack of drive, motivation and accountability. The mindset of many Millennials is that just “showing up” for all the classes merits a minimum grade of “B” (Newsweek, 2009). There is also evidence of an alarming attitude of “OK. I’m sitting here in class; entertain me.” Most disturbing is the Millennial students’ lack of concern for the accuracy and the validity of their research sources; their inclination to trust peer opinion and public consensus; and their lack of original thought (Hershatter & Epstein, 2010).

## **THEORETICAL FRAMEWORK**

Morrow (2008) has developed a theoretical framework delineating the origins of the mindset of entitlement displayed by Millennials. His research highlights the fact that members of this generation tend to have had child centered parents who exhibited a “trophy for all” attitude in what were previously competitive activities. Such parental attitudes and behaviors create unrealistic expectations by the children who are often unable to comprehend that not everyone wins and that their efforts may often result in failure.

Morrow also addresses the phenomenon of “helicopter parents”, or those parents who “hover” over their children and impede a child’s development of a good sense of independence and responsibility. This practice may have contributed to the Millennial’s risk adversity and fear of ambiguity (Hershatter & Epstein, 2010).

Jayson (2007) found that the motivational constructs behind the entitlement mindset include loyalty, getting rich, meeting family and peer expectations, a desire for fame, being the family provider and living a modest, yet comfortable, lifestyle. Nations (2007) also discovered that a desire for personal time, opportunities for advancement and personal growth, security, a

desire for intrinsic rewards, leadership opportunities and team development all served as motivators of this group.

While much of the recent research touts the Millennial worker's loyalty, teamwork and commitment to corporate mission (Hershatler & Epstein, 2010), there is substantial data to suggest that the same worker is twice as likely to leave a company within one year of hire (Ethics Resource Center, 2010). Other areas of concern center on the evidence of obesity and other unhealthy behaviors, and the absence of cultural and intellectual pursuits by Millennials (Deal, Altman & Rogelberg, 2010).

When measuring the impact of the Millennials on academia or the workforce, one need only examine their demographics: they are more than 60 million in number; are three times the size of Generation X; one third is non-Caucasian; three quarters have a working mother; and, in 2010, 37% were unemployed. Although they are computer savvy, with three quarters creating a profile on a social networking site, they suffer from computer overload. (State of Montana Journal, 2007 & Pew, 2010).

Saba (2007) finds the mentality of entitlement to consist of short term financial goals, a sense of privilege, anticipation of long-term financial gains and an effort to command, not earn, respect.

## **METHOD**

This research was conducted in three phases. The first phase of the research, which drew from an extensive review of relevant literature and the results from interviews with ten focus groups comprised of five subjects each. The focus groups were used to validate the constructs leading to the development of the instrument included in this study. That instrument attempted to measure the behavioral, cognitive and affective antecedents leading to an entitlement mentality; to provide understanding of this issue; and to confirm that the proposed conceptual framework addresses the relevant constructs.

Given the nature of the population, a convenience sample was used in this phase and was based on responses by undergraduate students who were willing to participate in the study. Standardized open-ended interviews were utilized. With this type of approach, each person was asked to provide his or her answers to the questions which were written in advance and drafted exactly the way they were to be asked in the interview. Standardized, open-ended interviews are systematic and ensure that the interviewer's and interviewee's time is used efficiently. Using standardized questions also made data analysis easier and added credibility to the responses because questions were evaluated prior to the actual interviews. However, to allow for individual circumstances that may not be addressed by standardized questions, respondents were also given the opportunity to raise additional issues that they considered to be important in relation to work experiences/behaviors that would contribute to the constructs under investigation.

The second phase, and the subject of this paper, consisted of a survey administered to a convenience sample of two hundred and seventy-two undergraduate business school students at two different institutions: a four year private college and a state sponsored university. The purpose of this phase was to generate responses to survey items generated in the interview phase

in order to test the major hypotheses developed in the first phase of this study. The purpose of the survey was to determine whether the items identified in the interview do, indeed, lead to an entitlement mindset. The survey contained fifty items measuring each of the constructs. This paper tested the significance of each of the proposed cognitive determinants. Future research will investigate the behavioral and affective determinants on an entitlement attitude.

## FINDINGS AND FUTURE DIRECTIONS

Specific cognitive influences as they affect an entitlement mentality were supported by this study. However, one might argue that a self-serving bias or demand characteristic may have affected the results of the interview as well as the completion of the survey, inasmuch as the subjects' responses may have reflected poorly on them. A possible answer to this criticism is, while this argument is probably true, phrasing the questions in the third person, e.g., "Do you feel that individuals in the 18 – 22 year old age group have parents who tend to smother them? Limit their independence? Put them at the center of the universe?" may have helped to reduce this threat.

Regardless, the personal interviews did support the theoretical framework detailed in this paper. Not surprisingly, some subjects did question the constructs dealing with the characteristics of the Millennial generation, such as lack of initiative, lack of ambition and a poor work ethic. As seen in Table 1 below, not all of the hypotheses were confirmed. Hypotheses for the following independent variables were supported: the influence of "helicopter parents"; "Trophies for all" practice; and the "nagging parents" who attempt to vicariously live through their children. However, the fact that members of this cohort group believe that they have many friends lead them to also believe that they let their friends down on a regular basis; that time to pursue personal interests is very important; they believe that others see them as leaders; that their personal goals are most important; and that when raises are given, they should always receive one. Surprisingly, hypotheses about the following independent variables were not supported: that the members of this cohort group do not live up to or exceed their friend's expectations; that they are more committed to an organization with similar values; and most surprisingly, that they should receive good grades regardless of performance.

**Table 1: Simple Linear Regression Results for Cognitive Variables**

Dependent Variable: Entitlement					
Tested Construct	Hypothesized Relationship	# of Obs.	Std. Error	Sig.	Results
Helicopter Parents	Positive	272	.014	.002	Confirm
Trophies for All	Positive	272	.025	.023	Confirm
Nagging Parents	Positive	272	.014	.000	Confirm

**Table 1: Simple Linear Regression Results for Cognitive Variables**

Dependent Variable: Entitlement					
Tested Construct	Hypothesized Relationship	# of Obs.	Std. Error	Sig.	Results
KnowAll	Positive	272	.012	.001	Confirm
Solve	Positive	272	.010	.000	Confirm
ManyFriends	Positive	272	.011	.000	Confirm
Friend's Expectations	Positive	272	.019	.120	Cannot Confirm
Let Down Friends	Positive	272	.018	.000	Confirm
Time for Self	Positive	272	.017	.000	Confirm
Others Perceive as Leader	Positive	272	.011	.001	Confirm
Personal Goals	Positive	272	.014	.000	Confirm
Org. Commitment	Positive	272	.036	.773	Cannot Confirm
Grades	Positive	272	.014	.113	Cannot Confirm
Raises	Positive	272	.016	.000	Confirm

As seen in this study, the results indicate specific areas in which academicians, supervisors, subordinates and coworkers, may better understand the motivations, thought processes and resulting behaviors of the Millennial cohort. In addition, this study may provide some food for thought for the parents of the next generation regarding ways in which to discourage and deal with this type of behavior. Although this paper is incomplete as to the predictors of or results of entitlement behavior, it can serve as a starting point for understanding the behavior of this group as it moves through college into the workforce.

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# GENDER DIFFERENCES IN SELF-PERCEPTIONS OF CONTRIBUTIONS TO GROUP PERFORMANCE

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## ABSTRACT

*It is well documented that students generally overestimate their grades in coursework, and some studies have found that male students overestimate their test scores more than females do. This study examines gender differences when self-evaluations are compared to peer-evaluations within student groups. Differences are found between male students and female students in their ability to accurately judge their own contributions in group work relative to the evaluations they receive from their peers.*

## INTRODUCTION

The assessment of student performance is a critical component of the education process. With the increased use of group projects as an integral component of higher education, there has been increased interest in both self- and peer-evaluations of student performance. In the absence of the ability of assess the quality their personal contributions, students are unable to adequately monitor their own work behaviors and may fail to obtain their individual learning objectives. Self-assessment scores of group presentations are nearly 4.5% higher than peer-assessment scores (Sherrard, Raafat, and Weaver, 1994). Likewise, students tend to overestimate their grades through the semester (Burns, 2007). Chevalier (2009) and Beyer (1999) report that students tend to overestimate their expected grades on tests with male students overestimating their scores more than their female counterparts.

Gender bias in evaluations of team members has been examined in previous studies of group work. Ammons and Brooks (forthcoming) and Falchikov and Magin (1997) found that the average ratings received by students from group members who were of the opposite gender were not statistically different than ratings received by students from group members who were of the same gender. In short, these studies did not find evidence of gender bias in student peer evaluations. However, neither of these studies tested for gender differences in the extent of overestimation of self-evaluations in group work.

This study examines gender differences in self-evaluations as compared to peer evaluations of an individual's performance of group work. Specifically, the existence of gender differences in comparative evaluations (e.g., self versus peer assessments) of contributions to group work is investigated. Also, gender differences in the extent to which students overstate their contributions to their groups in examined.

## METHOD

The participants were 120 women and 210 men who were enrolled in a freshman course required of all business majors. This course used Mike's Bikes as a business simulation game to introduce the cross-functional disciplines of business and how the implementation of strategy involves the interaction of these disciplines. Each of the 12 sections of the course consisted of student groups with 4 to 7 students in each group. The course consisted of three modules: accounting, marketing, and management. Each module consisted of a major group project. At the end of each module, each student completed a self-evaluation and an evaluation of each group member.

The data for this study came from the third and last set of self- and peer-evaluations completed by students (with an equal distribution across accounting, marketing, and management modules as that third round). If the accuracy of self-perceptions increases with experience and feedback (Radhakrishnan, Arrow, and Sniezek, 1996; Shepperd, Ouellette, and Fernandez, 1996), then by using data only from the third round of the administration of these self- and peer-evaluations, we reduce the likelihood of finding a statistical difference.

Three hundred thirty students completed this final set of evaluations resulting in 330 self assessments and 1592 peer assessments (for a total of 1602 evaluations). Of the 330 respondents, 120 were female and 210 were male.

## PROCEDURE

The group projects combined to account for 31.25% of the course grade. In the accounting module, each group created a balanced scorecard strategy map for its firm in the simulation and analyzed the firm's performance in an oral presentation to the class. In the marketing module, each group designed a marketing plan for its simulation firm and presented that plan to the class. In the management module, each group designed a strategic plan and presented it to the class.

At the end of each module (at three different points during the term), students completed a peer evaluation packet. The packet consisted of a cover sheet that offered instructions on how to complete the packet and explained that the evaluations would be anonymously shared with their group members. The second page of the peer evaluation packet was an illustration of a completed feedback grid. Subsequent pages in the packet contained blank feedback grids so that the rater could complete one for each member of the team including himself/herself.

Each student completed his/her evaluation packet outside of classroom hours. Each student placed his/her evaluation packet in a sealed envelope, wrote his/her name, the course section, and the name of the team on the outside of the envelope, and gave that envelope to the module instructor after the completion of the group project and presentation. The average of the overall scores received by a student was used as a weight to determine the individual's grade on the group work. If a group earned a 90 on its project and a particular student in that group received an average evaluation from peers and self of 90 points, then that individual received an 81 as a grade on the project. In some cases, students received grades in excess of 100 points. In

addition, each group member was also rated on a scale of 1 (never) to 5 (always) to on that individual's performance in six areas (prompt attendance at group meetings, delivery of agreed upon parts of project in a complete fashion, meeting deadlines, volunteering appropriately, pulling fair share of workload, and displaying an enthusiastic and positive attitude).

### **ANALYSIS**

The overall performance ratings given by students when rating themselves (self assessments) ranged from 90 to 150. If a student wished to indicate that each person on the team contributed equally to the performance of the team, then a student would mark a 100 for each team member. Thus, a 90 indicates that the individual recognized that he/she contributed less than his/her "fair share" to the team's performance and a 150 indicates that the individual contributed far beyond others in the group. The mean self assessment score was 103.52. Since this is greater than 100, it indicates that individuals tended to think that they contributed a bit more than an equal share to the team. The mean rating that female students (103.80) gave themselves was not significantly different from the mean rating that male students (103.37) gave themselves ( $t=0.480$ ,  $p=.632$ ).

The overall mean rating of 103.80 that female students gave in their self-evaluations was statistically different ( $t=4.582$ ,  $p=0.000$ ) from the mean rating of 100.44 received by those female students from their peer group members. The mean rating of 103.37 that male students gave in their self-evaluations was statistically different ( $t=5.853$ ,  $p=0.000$ ) from the mean rating of 98.83 received by those male students from their peer group members. Both female and male students overestimate their overall contribution to their groups.

The evaluation forms also prompted raters to consider a list of individual work behaviors. Raters marked each of these criteria between 1 (never) and 5 (always) and some provided open-ended feedback on each dimension. Although scores on these individual performance criteria did not enter into the grading process, raters may have considered these marks in determining the overall performance ratings given to their team members. While self-assessment scores on these dimensions did not differ between male and female students, there were significant differences between self-assessment ratings and individuals' ratings by their peers for both females ( $t=2.291$ ,  $p=0.022$ ) and males ( $t=3.536$ ,  $p=0.000$ ) in terms of the propensity to volunteer. Both females and males rated their own likelihood to volunteer higher than did their group members.

In addition, males overestimated their contributions along the dimensions of promptly attending meetings ( $t=2.565$ ,  $p=0.010$ ), delivering work in complete fashion ( $t=3.383$ ,  $p=0.001$ ), meeting deadlines ( $t=2.316$ ,  $p=0.021$ ), pulling fair share ( $t=3.988$ ,  $p=0.000$ ), and demonstrating a positive and enthusiastic attitude ( $t=2.494$ ,  $p=0.013$ ). However, females' self-assessments of their contributions along these same five dimensions were not significantly different from their group members' assessments.

## DISCUSSION

Gender differences are apparent in our analysis. While both males and females overestimate their overall contributions to their groups, females are more accurate in evaluating their contributions along individual work behaviors. While females do overestimate their propensity to volunteer for tasks, they do not tend to overestimate their contributions along the other five work behaviors that were examined. Further, males overestimate their contribution on all dimensions of performance that were examined. This observed gender difference is consistent with what previous research as documented with regard to gender differences in the overestimation of test performance at least in some settings.

These results are from the third set of evaluations completed within the same groups decreasing the likelihood of finding a significant difference between one's self-evaluation and that individual's peer evaluation. This strengthens the conclusion that male students are not accurate in evaluating their own contributions to group projects, both overall and along the lines of individual work behaviors. However, since the results of the early evaluations were not compared to the final evaluation, it is unclear if students' accuracy in assessing their contributions improves over time. Did the female students' accuracy in evaluating their own contributions along individual work behaviors develop over the course of the three administrations of the evaluation instrument or were the female students more accurate in their self-assessments from the beginning?

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# STUDENT PERCEPTIONS OF CRITICAL THINKING INSTRUCTIONAL METHODS: FINDINGS IN A BUSINESS CURRICULUM

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## ABSTRACT

*This paper reports results of recent surveys of student perceptions of critical thinking instructional methods in a business curriculum. Three propositions tested were;*

*1.) The “Student Perceptions of Critical Thinking in Instruction Course Evaluation Form” published by the Foundation for Critical Thinking (Paul & Elder, 2007) represents a unidimensional scale for measurement; No prior published research was found to substantiate the validity and reliability of this instrument. Using factor analysis and reliability analysis this study establishes support for the use of this instrument as a unidimensional scale.*

*2.) There is a statistically significant difference in student perceptions by academic level. As students rise from freshmen to senior status, the aggregate student perception scores rise. Continuing exposure to critical thinking concepts and practices increases student awareness thereby increasing student perception scale scores. Support was found for this proposition.*

*3.) Student perceptions of critical thinking instructional methods are the same as the instructor’s perceptions of critical thinking instructional methods utilized in the course. Because there is agreement between the student’s perceptions and the instructor’s perceptions, then enhancement of student perceptions is subject to the efforts of the instructor. A level of support was found for this proposition, however mismatches between instructors and student perceptions were also identified.*

## INTRODUCTION

A number of institutions and business schools have incorporated critical thinking into their program goals. Problem-solving and decision-making skills are essential to being effective in the workplace (Snyder & Snyder, 2008). For students, preparation for participation in the workplace entails more than memorizing or accepting, without question, the content of a particular discipline. It encompasses students demonstrating abilities to analyze, synthesize, and evaluate unstructured situations to solve problems (Scriven & Paul, 2002). From an instructional standpoint, instructors need to employ different strategies and methods to teach and reinforce critical thinking skills (Brunt, 2005).

This paper examines initial results of a recent survey of college students regarding their perception of critical thinking teaching methods employed in a selected set of business courses. Survey research was conducted using the survey instrument “Student Perceptions of Critical Thinking in Instruction Course Evaluation Form” published by the Foundation for Critical

Thinking (Paul & Elder, 2007). As no previous studies were found that addressed questions of scale development or survey instrument validity and reliability, this became an integral part of the purpose of this paper.

The setting of this survey is a small private college where the four year undergraduate business program is offered in both a day and night format. Undergraduate course sections representing the core business curriculum were surveyed during three terms (Fall 09, Spring 10, Fall 10). This survey was conducted as an outgrowth of an institution-wide curriculum improvement initiative focused on critical thinking.

According to Braun (2004), instructional strategies in the business curriculum include problem-based learning, course content based embedded learning, as well as the framework of systematic critical thinking. Instructional methods that actively engage students in problem solving activities promote development of critical thinking skills.

Assessment of critical thinking instruction takes two basic forms. First is “results oriented” by assessing student skills in critical thinking on one of the standardized tests such as the Watson-Glaser Critical Thinking Appraisal (Watson & Glaser, 1980), the California Critical Thinking Skills Test (Facione, 1992), the Ennis-Weir Critical Thinking Essay Test (Ennis & Weir, 1985) or the Cornell Critical Thinking Test (Ennis, Millman & Tomko, 1985).

The second form of assessment is “process oriented” focusing on student perceptions of critical thinking instructional methods. An extensive body of research linking student performance with student course evaluations has developed both pro and con as illustrated in Cohen’s meta-analysis (1981). Questions about critical thinking processes and skills often appear on student course evaluations. However, aside from the work of the Foundation for Critical Thinking (Paul & Elder, 2007), there is not a similar body of standardized scales for measuring critical thinking instruction as there are for assessing student skills.

## **SURVEY METHODOLOGY**

The sample for analysis represents surveys conducted across three semesters (total n = 447). The semesters surveyed were Fall 2009 (n = 74), Spring 2010 (n = 81), and Fall 2010 (n = 292). Total enrollment for the surveyed courses was 504 students of which responses were obtained from 444 students for a 94% response rate. As surveys were census surveys conducted during a regular class period, the absence of response was by chance.

Much debate surrounds the adequacy of a sample size to support principal component or exploratory factor analysis. While some may argue that the sample size can be as small as fifty (50), Costello and Osborne (2005) reported a macro-analysis of two years of recently published studies where 78.6% of the samples supporting principal components or exploratory factor analysis were less than 20 observations for each variable. The sample for this study (447 observations, 20 items) represents a subjects-to-variables (STV) ratio of 22.35 meeting the most stringent rule of thumb of STV of 20.00 or twenty observations for every variable (Hair, Black, Babin, & Anderson, 2010). It also exceeds quantity based “rules of thumb” such as the rule of 400 (Garson, 2008).

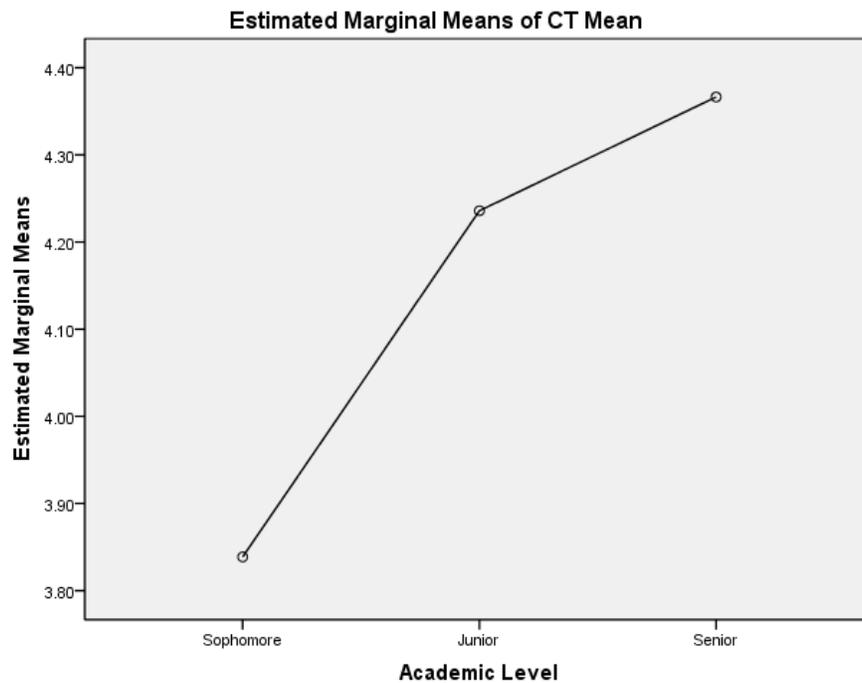
Exploratory factor analysis determined the 20 items of the Student Perceptions of Critical Thinking in Instruction Evaluation Form loaded on a single principal component. Sixteen of the 447 responses were excluded from the analysis due to missing data on one or more of the variables. All but one of the items loaded with a communality value of .780 or higher. The exception was Q4 – Make Clear the Reason (.450). A review of item descriptive statistics revealed that Q4 also had the highest standard deviation (1.703).

Chronbach's Alpha based on standardized items was .973 indicated a high level of reliability for the scale. Item – total analysis indicated that deletion of any but one of the items would reduce the Alpha value. Only deletion of Q4 would increase the value (.975).

In summary, support was found for the first proposition that the twenty survey items contained in the “Student Perceptions of Critical Thinking in Instruction Course Evaluation Form” (Paul & Elder, 2007) represents a valid and reliable unidimensional scale for measurement of the construct.

### **STUDENT PERCEPTIONS BY ACADEMIC LEVEL**

There is a general consensus that students gain skills and maturity over a four year period. Thus, students who are exposed to and apply critical thinking concepts as an integral part of their educational process will become more aware of critical thinking instructional methods. Results of a one-way ANOVA where student perception scores were tested based on academic level indicate a statistically significant difference between groups ( $n = 430$ ,  $F=20.075$ ,  $p = .000$ ). Three academic levels were assigned by course id; sophomore (200 level courses), junior (300 level courses), and seniors (400 level courses). The author recognizes that it is probable that while some students were mislabeled the distortions should be minimal. A plot of the estimated marginal means indicates a continuous non-linear relationship of the academic level's effects on student perceptions of critical thinking instruction (see Figure 1).

**Figure 1 Effects of Academic Level on Critical Thinking Mean Scores**

In summary, support was found for the proposition that there is a statistically significant difference in student perceptions by academic level. As students rise from freshmen to senior status, the aggregate student perception scores rise. As the scores rise on a broad basis instead of selected individual courses, one can infer that continuing exposure to critical thinking concepts and practices increases student awareness thereby increasing student perception scale scores.

### **RELATIONSHIP OF INSTRUCTOR AND STUDENT PERCEPTIONS**

While the preceding proposition suggests that academic level has an influence on the resulting student perceptions of critical thinking instruction, this outcome may be equally influenced by the focus and efforts of instructors to engage students in critical thinking concepts, activities, and assignments within the course content and delivery. Thus, our third proposition; student perceptions of critical thinking instructional methods are the same as the instructor's perceptions of critical thinking instructional methods utilized in the course.

In order to make a comparison, instructors were surveyed using a slightly modified version of the "Student Perceptions of Critical Thinking Instruction" instrument. Each item was recast in the voice of the instructor instead of the student. All 20 items were retained in the same order. Instructor survey results were available for 18 courses offered during the Fall 10 term.

Summarized course level mean scores for 18 courses as well as the item level mean scores between students and instructors were analyzed utilizing analysis of variance (ANOVA). When comparing course level mean scores at an aggregate level, there is no statistically significant difference in the summarized mean scores between students and instructors ( $F=1.81$ ,

$p=.184$ ). However, when examined on a question by question basis, results for six of the twenty questions indicate a statistically significant difference between the means scores for students and instructors.

	F	sig	Students	Instructor
Q1: Think to understand	5.359	.027	3.90	4.44
Q3:Encourage critical thinking	4.607	.039	4.12	4.50
Q12: Ask questions that experts in the subject routinely ask	13.486	.001	3.94	3.22
Q14: Think more accurately	4.555	.040	3.92	3.50
Q17:Think more fairly	5.811	.021	3.95	3.39
Q20: Encourage you to think for yourself	9.025	.005	4.16	3.50

Interestingly, the mean of student scores for questions 1 and 2 were lower than instructor scores while scores for questions 12, 14, 17, and 20 were higher than instructor scores. This suggests that students are not getting the message associated with explicit expressions of critical thinking instruction. However, while instructors may not believe they are addressing the implicit requirements for questions 12, 14, 17, and 20, their behaviors and instructional methods are rated higher by students.

## SUMMARY AND CONCLUSIONS

Support was found for each of the three propositions set forth in this paper. First was the confirmation that the “Student Perceptions of Critical Thinking in Instruction Course Evaluation Form” (Paul & Elder,2007) represents a unidimensional scale for measurement. Secondly, there is a statistically significant difference in student perceptions by academic level. Thirdly, at an aggregate level, there is no statistically significant difference in student perceptions of critical thinking instructional methods and the instructor’s perceptions of critical thinking instructional methods utilized in the course.

These findings suggest that as students rise from freshmen to senior status, the aggregate student perception scores rise. Continuing exposure to critical thinking concepts and practices increases student awareness thereby increasing student perception scale scores. Future research will attempt to tie in concepts of student engagement as a variable influencing student perception scores. Additional research will also focus on the relationship of student perceptions to other measurements of student critical thinking skills.

Because there is general agreement between the student’s perceptions and the instructor’s perceptions, then enhancement of student perceptions is subject to the efforts of the instructor. Further research will attempt to address questions related to the mismatch of student and instructor perceptions both in terms of direct and indirect teaching activities that promote development of critical thinking skills.

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# **RAISING THE BAR: DOES INCREASING GRADE EXPECTATIONS IMPROVE STUDENT PERFORMANCE?**

**Michael J. Daniels, Columbus State University**

## **ABSTRACT**

*Employers place importance on the academic performance of students, as measured by their grade point average, when making hiring decisions. Educational leaders, administrators, and instructors are faced with the questions as to how to best motivate students. Numerous studies have been done analyzing the motivational aspect of grading policies.*

*The purpose of this study is to analyze the impact of increasing grade expectations on performance of business students from multiple business disciplines. Business students' performance is compared to other college students' performance when the only difference is the required grade to receive course credit. The results of this analysis support the earlier research in this area. Students who take a course with a higher grade requirement for credit show higher performance levels when compared to students facing lower grade expectations. As demonstrated in this study students facing higher expectations do better than those not facing the same expectations and this difference is (measured in overall course performance) is statistically different.*

## **INTRODUCTION**

The demographic profile of students attending colleges and universities has changed significantly over the last forty years. This period has been marked by increased participation by females and minorities. In 1970 the population of students attending colleges and universities was 58% male. By 2007 the student population was 57% female. In 1970 the college/university student population was 82% white. In 2007 this percentage had dropped significantly to 64.4% as the percentage of all classifications of minorities based on race has increased. While the student body has changed, one thing seems to have remained constant. Employers appear to still place importance on the academic performance of students, as measured by their grade point average, when making hiring decisions (National Association of Colleges and Employers, 2006).

Educational leaders, administrators, and instructors are faced with the questions as to how to best motivate students. Numerous studies have been done analyzing the motivational aspect of grading policies. While the majority of these studies have been done in the fields of education and psychology, a recent analysis focused on student performance in accounting (Elikai and Schuhmann, 2010). Elikai and Schuhmann's analysis focused on student performance as a result of changing the grading scale such that higher scores were required to earn various grade levels.

The purpose of this study is to analyze the impact of increasing grade expectations on performance of business students from multiple business disciplines. Business students' performance is compared to other college students' performance when the only difference is the required grade to receive course credit. Statistical analysis is performed to determine if changes in student performance are significantly different.

## **INSTITUTIONAL INFORMATION**

Students in this study are enrolled in the Turner College of Business and Computer Science at Columbus State University. The university is a Board of Regents System institution in the state of Georgia. Columbus State's business programs are AACSB accredited.

The business curriculum (BBA) is very traditional with all business students required to take a series of courses regardless of their choice of major. These required courses are divided into sophomore level foundations courses (Accounting Principles, Economics Principles, Environment of Business, and Technical Applications in Business) and a junior/senior level business core (Management Principles, Marketing Principles, Corporate Finance, Quantitative Methods, Principles of Management Information Systems, International Business, Organizational Communications, and Strategy). Students select a major from accounting, finance, management, management information systems, marketing, or general business.

Prior to the fall of 2006 students were required to earn a "C" average (2.0 on a 4 point scale) in the sophomore foundations courses, a "C" average in the junior/senior business core, and a C or better in their major courses. Institutional analysis demonstrated that students were working harder to earn higher grades in the sophomore foundation courses that were perceived to be easier (Environment of Business and Technical Applications in Business) and using these higher grades to offset poorer performance in more difficult courses like accounting and economic principles.

Since accounting and economics are key components to the college's assessment program and for many students these sophomore courses are their only exposure to these subjects there was a need to increase students' efforts in these courses. As an effort to improve student performance two changes were made to the requirements for the sophomore foundations courses. In the fall of 2006 students were required to earn a "C" or better to receive credit for a course. In the fall of 2009 students were also required to earn a 2.5 GPA. Due to institutional policies students enrolled in the college prior to these policies being implemented were not held subject to the changes.

## **STUDY DESIGN**

In an effort to determine if increasing grade expectations motivates students to improve their performance, two sections of the Micro Principles of Economics taught in fall 2010 were selected. These sections presented an unusual opportunity in that one section was made up of only business majors and the other section was populated with computer science majors. These sections were restricted to first semester freshmen. Students in these sections would satisfy a

requirement of their respective degree programs by successfully completing the course. Business majors, as indicated above, would have to earn a “C” or better to receive credit for the course. Computer science majors, as non-business students, only have to earn a “D” to receive credit. Both sections required students to take the same tests (3 regular exams and a comprehensive final exam) and homework assignments. To determine if there was a difference in student performance, each requirement of the course was analyzed to determine if differences between the two sections existed. Mean test and homework scores and final averages were estimated and a difference in means test performed to determine if significant differences existed.

The course section of business students met on a Tuesday/Thursday morning schedule. There were nineteen students in the course. The average SAT verbal score for these students was 484 and the average SAT math score was 495. Similarly, the course section of computer science majors met on a Tuesday/Thursday morning schedule. There were 42 students in this section. The average SAT verbal score for these students was 536 and the average SAT math score was 524. A statistical comparison of these student groups, based on their SAT scores, showed a statistically significant difference (at the 95% level) between their respective SAT verbal scores and no significant difference in the SAT math scores.

The average age of the students in the business section was 18.6 years. The average age of students in the computer science section was 18.7. There were 9 males and 10 females in the business section and 34 males and 8 females in the computer science section.

## STUDY RESULTS

Table 1 shows the average test and homework scores and final averages for each section. The t-score for testing the difference in means is also shown for each component of the class. Each component was equally weighted in the determination of a student’s final average for the course.

As indicated in Table 1 the students in the course section made up of business students scored higher on average four of the five components of the course when compared to the course section with computer science students. Students’ final grades were also higher, on average for the business students. When testing was performed to determine if these differences were statistically significant, differences were significant for 3 of the 6 components of this analysis.

Section	Test 1	Test 2	Test 3	Homework	Final Exam	Final Grade
Business	74.52	56.00	71.29	81.78	66.52	71.48
Computer Science	61.00	58.00	65.22	70.88	49.15	60.87
t-score	4.05*	-0.51	1.43	1.66	4.37*	3.14*
* Significant at the 95% level.						

## CONCLUSIONS

Past research has shown that course grades do serve as a motivational tool in the encouragement of student performance. Limited research has been done on whether business students can be motivated by increasing grading requirements. Elikai and Schuhmann (2010) demonstrated that increasing the rigor of the grading scale in cost accounting resulted in higher performance by students.

The results of this analysis, though involving a different method of measurement, support the earlier research. Students who take a course with a higher grade requirement for credit show higher performance levels when compared to students facing lower grade expectations. As demonstrated in this study students facing higher expectations do better than those not facing the same expectations and this difference is (measured in overall course performance) is statistically different.

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# **PARTNERSHIP OF INFORMATION TECHNOLOGY IN UGANDAN ACADEMIA AND ENTREPRENEURSHIP: A FULBRIGHT SCHOLAR'S EXPERIENCE**

**Doris G. Duncan, California State University, East Bay**

## **ABSTRACT**

*The Fulbright program is an international exchange program for educators that is sponsored by the Bureau of Education and Cultural Affairs and is administered by the Council for the International Exchange of Scholars in over 155 countries. This paper describes the process of obtaining and performing a Fulbright Senior Specialist grant project. The primary activities of the grant period are summarized and include conducting a needs assessment, evaluating curricula, conducting seminars and preparing a final report for faculty at the host institution in Uganda and their business partner, Logel Project.*

## **BACKGROUND**

The Fulbright program is an international exchange for educators that is sponsored by the Bureau of Education and Cultural Affairs of the United States Department of State and is administered by the Council for the International Exchange of Scholars (CIES) in over 155 countries. Several Fulbright programs range in length from two weeks to a year. A Fulbright grant is a gratifying way to gain experience in grant writing and international education. The experience also provides a means to establish collaborative projects with the host institution.

The Fulbright Senior Specialists program provides short term grant opportunities that range in length from two to six weeks for U.S. faculty and professionals. Typically the Fulbright Senior Specialists collaborate with their international counterparts on scholarly activities such as curriculum and faculty development, institutional planning and giving lectures. Many academic disciplines are available and range from information technology and business to archaeology. When a person applies and is selected, his/her name goes on a roster for up to five years and then the Fulbright staff tries to match the person with an overseas host institution. Some scholars are selected from the roster once or even twice while others may not be selected at all. It is beneficial for the applicant, or "candidate," to have contacts in the country of interest. A candidate can serve for a maximum of two times during a five-year period, with at least two years in between.

After returning from a Fulbright assignment, the grantee must complete an expense report and file a final report. Later the grantee receives a Certificate of Completion and becomes a member of the Fulbright alumni organization. The specialists are also encouraged to help publicize the program through conferences and journals. This paper describes the process of

acquiring a Fulbright Senior Specialist grant and the primary activities performed, which included conducting a needs assessment, evaluating curricula and conducting seminars.

### **AUTHOR AND HOST APPLY FOR FULBRIGHT SENIOR SPECIALIST PROGRAM**

About three years prior and unbeknown to the Ugandan hosts, the author applied for the Fulbright Senior Specialist program; recently “Senior” has been dropped from the name. The lengthy application process consists of completing the on-line application, preparing a five page curriculum vita and obtaining at least three letters of recommendation. There are several rolling deadlines throughout the year. The review process can take up to a year before applicants are notified whether or not they have been accepted for the Fulbright Specialist roster. Once an applicant is accepted for the roster, s/he becomes a “candidate” for a Fulbright scholarship and remains on the list for five years. When an opportunity arises in the candidate’s field – information technology in the case of the author – the candidate applies for that specific opportunity. Typically a few candidates are notified of the opportunity and then if interested need to develop a proposal, or application, for the specific opportunity. In this case, a CIES representative notified the author of the opportunity in Uganda and suggested developing a proposal. Three proposals from Fulbright Specialist candidates were submitted and the Ugandan host institutions, in conjunction with the Ugandan Fulbright Office, selected the winner.

Once the author’s proposal was selected, the representatives at the host institutions, Kyambogo University and Logel Project, wanted to get going on the project as soon as possible. The author departed for Uganda in June, 2009, approximately three months after being selected and soon after the end of the academic year. There were additional forms to complete, including the grant acceptance, the project scope and the travel budget which had to be approved. Arrangements for a passport, visa, immunizations and malaria medication also had to be made. Initially the author’s visit was to be six weeks, but due to budget constraints it was reduced to three weeks. It is customary for the host country to pay for lodging, meals and local transportation. Ugandan funds were extremely limited. The Fulbright program/CIES normally pays for air fare, the daily honorarium of \$200, and sometimes incidental expenses.

In 2008, a faculty member in the Department of Electrical and Electronics Engineering (DEE) at Kyambogo University (KYU), and the head of Logel Project, jointly prepared a proposal requesting a Fulbright Specialist to help them transform Information Communication Technology (ICT) research into consumable products and services and commercialization and to enhance human resource skills. KYU DEE and Logel established a linkage when the Logel head was an Electrical Engineering student at KYU during the early 2000s. Since graduating, he has founded Logel Project and has maintained an active linkage with KYU by providing intern positions for DEE ICT students during the industrial training phase of their education.

KYU is an institution of higher education in Kampala, Uganda, with a strong background in the teaching and research and development of technologies. The University was founded in 2003 when three smaller institutions merged. Logel Project, founded in 2001, is a small company which produces and markets technology products on a small scale in Uganda. Logel Project is also located in Kampala, Uganda, the nation’s capital. KYU and Logel share a common vision

of enhancing academic skills and promoting technological research for socio-economic transformation and development in Uganda and beyond. The author's Fulbright Specialist proposal proved to be a good fit.

## **REVIEW OF LITERATURE**

The literature review consists of links to web sites containing information about 1) the Fulbright programs in general (<http://www.cies.org>), 2) Specific information about the Fulbright Senior Specialist program (<http://www.ceis.org/specialists>), 3) Kyambogo University (<http://www.kyu.ac.ug>), 4) Logel Project (<http://www.logelproject.com>), and 5) the author's home institution with respect to Fulbright information and publicity.

## **SYNOPSIS OF FINDINGS AND RECOMMENDATIONS**

What follows is a summary of the author's needs assessment and activities during a three-week visit to Uganda. Assessments of both KYU and Logel are presented and then recommendations for future improvements are made. Some of this information was included in the final report to the host institutions and to CIES.

Assessment of Kyambogo University Technology programs in relation to Logel, Linkages

Kyambogo University is located on Kyambogo Hill in Kampala, Uganda; it was established in 2003 when three educational institutions were merged. About 14,000 students are enrolled at KYU, of which about 400 major in Electronics and Electrical Engineering programs. KYU seeks to excel in the area of technology. There appears to be good will between KYU, the private sector, government and nongovernment organizations. KYU has also collaborated with many international universities and organizations and seeks to elevate its international visibility.

KYU seeks to produce quality graduates with a positive attitude, "hands on" experience (practical orientation), resilience and ability to adapt to the demands and needs of a dynamic society. Working with Logel Project Ltd and other partners is consistent with KYU objectives. Partners of the KYU Department of Electronics and Electrical Engineering (DEE) include the telecommunications company, MTN, and the electric utility, UMEME.

According to the KYU Prospectus [catalog] for 2005-06, the most recent edition available, the Faculty of Engineering offers at least 22 engineering programs. New programs under development include biomedical engineering, electrical power engineering and electromechanical engineering. The author specifically evaluated two new programs: 1) the Bachelor of Engineering-Telecommunications Engineering and 2) the proposed Bachelor of Engineering in Biomedical Engineering.

### **Strengths and weaknesses of KYU Department of Electrical Engineering/Technology**

Three major strengths identified are: 1) KYU is fortunate to have a staff of committed lecturers in the Department of Electrical Engineering/Technology; 2) KYU DEE offers a "hands

on” education which includes industrial training for students; 3) KYU DEE has formed strong linkages with some companies. These firms include Logel Project Ltd, MTN and UMEME and are among the firms where engineering students complete their industrial training.

The four major weaknesses identified are: 1) Resources for faculty are very limited. Internet access for DEE faculty is very limited at best. The departmental modem is in need of repair or replacement. It is common for faculty to bring their personal computers and modems from home to use at work. Even then, Internet access is available only at dialup speed. 2) Physical facilities for faculty are inadequate. Four faculty members typically share an office with four old desks and chairs, two file cabinets and two bookshelves. 3) Faculty staffing in DEE is grossly inadequate. There are 12 lecturers and two visiting professors in DEE. There is not a single tenure track faculty member and none of the lecturers holds a PhD. 4) Security is weak for computers and networks. One of the reasons that departmental printers are not available is volume of viruses clogging the local network.

### **Recommendations for Kyambogo University—several involve linkages with Logel Project**

Improve campus infrastructure, especially Internet, network and computing technologies.

Improve physical facilities, especially for faculty members.

Consider offering incentives to lecturers without PhD degrees to obtain one.

Improve security for technology, e.g., make use of current anti-virus software.

Improve external linkages by providing faculty with funding to attend a major conference.

Form a DEE advisory board. Invite members of the business and industry communities.

Start a student chapter of IEEE at KYU. This would be the first chapter in Uganda.

Offer student project competitions. This could be organized through the IEEE chapter.

Identify the best student projects for commercial application.

Form an Institute of Electrical Engineering Entrepreneurship at KYU.

Start a seminar program that brings a new topic to faculty members at least once a month.

DEE faculty submit manuscripts to the Journal of Engineering Innovations and Research.

Invite the US Embassy staff in Kampala to work with DEE to organize a seminar social.

### **Assessment of Logel Project Ltd**

The company is briefly described as it exists currently. Recommendations for improvement follow.

### **Visit to Logel Project**

Based on the visit the author made to Logel Project Ltd, Logel offers IT services and has developed at least seven prototype products for potential mass production and sale. These products are: 1) A solar charger, which is their best seller, but out of stock when visited; 2) Inverter circuit, designed to extend battery life; 3) Phone charger, charges 10 cell phones at a

time, useful in communities with limited or no electricity; 4) Level detector, useful for diagnostics; 5) Pulse detector, useful for diagnostics; 6) PA system (public address) to filter out noise; 7) Brain box, a game intended to elevate children's interest in science and technology.

These seven products were featured during the visit to Logel. IT services such as web page design, graphics and software were only mentioned in passing. A potential outsourcing business was also barely mentioned. Apparently Logel has accepted business from other companies to perform services such as data entry, software development, engineering design, circuit board design and document editing.

Many of the seven products were conceived by students at Kyambogo University under the supervision of DEE faculty. Some of these are interesting ideas worth commercializing on a grand scale. First, however, they need to be formally assessed, perhaps by a review board. Issues to be considered include the market potential, uniqueness of the product, quality of design and Logel's ability to launch the product or service commercially.

### **Strengths and weaknesses of Logel Project**

Logel Project Ltd is an innovative organization with a strong engineering team and a commitment to promoting interest in science and technology among children. Management participates actively in conferences and networking opportunities and has formed several linkages with other organizations in addition to Kyambogo University. Management has drafted a business plan and a core area of focus and intends to refine and update the plan periodically.

Logel would benefit from defining clear areas of responsibility in the firm that cover the areas of leadership, sales and marketing, finance and administration and operations. Questions to address include who is in charge when the Director is away from the office. Logel lacks the financial resources needed to achieve many of the things that management desires.

### **Recommendations for Logel Project**

Following are the recommendations for Logel Project. Several of them involve linkages with the Department of Electrical Engineering/Technology at Kyambogo University.

- Establish clear areas of responsibility and hire staff as financial resources permit.
- Identify sources of funding. This could be private investment or venture capital companies or potential business partners such as Broadened Horizons.
- Choose a product/service area on which to focus, for example, solar chargers.
- Conduct market research on existing products before committing major resources to any one.
- Identify electronics manufacturing firms with whom to partner.
- Identify trade journals and publications to submit articles about Logel products.
- Continue working with KYU and other universities to hire student interns.

Additional recommendations are not explained fully here due to space limitations; they include: update the business plan, update the web site frequently, hire additional student interns, form a board of directors, clarify the for-profit and not-for-profit arms of the business, and get involved with professional societies.

The author hopes the preceding recommendations will benefit both Kyambogo University and Logel Project Ltd. As the DEE program offerings grow and strengthen, so can the graduates become even more productive members of the Ugandan society. As Logel Project grows and thrives, the firm will need to hire additional personnel and thus create more jobs for graduates of KYU and other universities.

## CONCLUSION

As part of this needs assessment, the author has made a total of 15 recommendations for Logel Project and 14 recommendations for Kyambogo University. There is ample opportunity for KYU and Logel to synergize their strengths in several endeavors, which ultimately will benefit Logel Project, Kyambogo University, its students and the Ugandan society.

In addition to the original needs assessment project, the author conducted two seminars for KYU faculty, evaluated the Bachelors of Engineering in Telecommunications Engineering program and the proposed Bachelors of Engineering in Biomedical Engineering program.

This paper has been submitted to the Allied Academies conference in hopes that it will inspire the readers to consider applying for a Fulbright scholar program or a comparable program to facilitate educational improvements and collaborations with colleagues in other countries. The Fulbright program is an unusual and rewarding way to gain experience in grant writing and international education. It enables the Fulbright scholar to develop a deeper appreciation of the working conditions and hardships in other countries and feel better prepared to work in a highly diverse environment. What a great way to serve as a catalyst for achieving world peace and economic growth one person at a time!

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# **THE IMPACT OF MOTIVATIONAL ORIENTATION ON ADULT NONTRADITIONAL STUDENTS AND MASTERS DEGREE CHOICE**

**Bradford Frazier, Pfeiffer University  
Carlton Young, Mississippi State University – Meridian  
Edward Fuller, Pfeiffer University**

## **ABSTRACT**

*The present study examines nontraditional, adult graduate students' motivational orientation to determine if internal or external motivational factors are a strong predictor of the program of study pursued. We survey 407 students enrolled in either a master of business administration, master of healthcare administration, master of science in leadership or a combination program (consisting of two of the above programs) offered by a Southern university over multiple campuses. The findings in our study are consistent with previous findings from research in the discipline, indicating that the majority of adult graduate students are extrinsically motivated in all programs of study. In addition, analysis of the data using multinomial logistic regression indicates that motivational orientation is not a strong predictor of the type of masters program of study chosen. Our findings are useful to academicians and educational professionals who are interested in understanding what drives students' enrollment and participation in higher education as an adult and how to develop, implement and improve curricula to appeal to students with these motivational orientations.*



# TRACKING STUDENT OUT-OF-CLASS EXPERIENCES TO ENCOURAGE AND RECOGNIZE THE ACQUISITION OF TRANSFERRABLE SKILLS

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## ABSTRACT

*Many college students participate in out-of-class experiences that help them acquire skills that can be transferred to full-time employment after graduation. However, students often do not recognize these transferrable skills and, therefore, fail to promote them to potential employers. Truman State University (designated by the Missouri Legislature as the Liberal Arts and Science University for the State of Missouri) has coupled a co-curricular record with a co-curricular planning map to assist students as they participate in and plan for out-of-class experiences and to promote the transferrable skills acquired in such activities to potential employers. Examples of categories of out-of-class experiences would be athletics, employment, internships, leadership, presentations, research, service, etc.*

*The Co-Curricular Planning Map is the heart of this process. It consists of the following four quadrants (based upon values and principles espoused in the Truman State University Mission and desired learning outcomes): Quadrant 1—Cultural Exploration & Community Engagement; Quadrant 2—Intellectual Competence and Reflective Judgment; Quadrant 3—Healthy Habits and Balanced Living; Quadrant 4—Effective Leadership and Responsible Citizenship. Each quadrant contains examples of transferrable skills a student might acquire while participating in activities that fit that quadrant. This planning map can help students make informed and intentional decisions about their out-of-class experiences and become aware of skills they might acquire in the process. These experiences and outcomes are recorded in the student's co-curricular record (a co-curricular transcript) that can be made available to employers and/or graduate schools along with their academic transcripts.*



# **APPLIED PROJECT LEARNING OUTCOMES: A COMPARISON BETWEEN MALE AND FEMALE STUDENTS**

**Robert D. Green, Lynn University**  
**Farideh A. Farazmand, Lynn University**

## **ABSTRACT**

*A teaching pedagogy to improve learning (knowledge and skills development) is applied projects, or active learning. This study examines the comparison between male and female students' project learning outcomes. Particular differences for their learning outcomes were identified that could improve learning and better employment opportunities and professional careers.*

## **INTRODUCTION**

Experiential projects increases learning outcomes for not only content (knowledge) but also skill development, e.g., critical thinking, interpersonal communications (St. Clair & Tschirhart, 2002). Active learning, or experiential learning projects provide students an experience “to retain information for longer periods of time and apply information to new situations” (Hamer, 2000, p. 26), e.g., for future career employment. Furthermore, businesses are hiring more women (Bradshaw, 2007) who are having successful careers, and are experiencing that firms with higher percentage of female managers have been more profitable during the 2008-2009 recession (Ferrary, 2009). As a result, business schools are actively recruiting and attracting more female students. Moreover, females have a different attitude toward learning and learning style (Gilligan, 1982/1993; Kaenzig, Hyatt, & Anderson, 2007). Therefore, there is a research need to “investigate the relationship between student characteristics and the use of semistructured activities” (Hamer, 2000, p. 33) in business education, e.g., male/female students and applied learning projects. Hence, this study focuses on, are there significant differences between male and female students applied project learning outcomes?

## **REVIEW OF THE LITERATURE**

Gender specific learning outcomes studies do not indicate major differences between males and females (Hyde, 2005). However, minor gender specific learning differences have been found in certain fields. Logan and Johnston (2010) state that gender differences in reading attainment have been always in favor of girls. In mathematics area results are generally in favor of boys (Hanna, 2000). Males traditionally outperform females in science (Sanchez & Wiley,

2010). Khairulanuar, Nazre, Jamilah, Sairabanu and Norasikin (2010) in their experiential research show that the boys received a higher rating than the girls in understanding of geometry subject.

Some authors point to the cultural context and stereotypical labeling for specific differences in learning and pupils interest (Steele, 1997). Biology and language, for instance, are regarded as girls' subject (Gardner, 1998). On the other hand, physics is considered boys subject and interest area (Gardner, 1998). Dar-Nimrod & Heine (2006) in their study state that the gender specific learning outcomes differences could be the result of reaction to the expected cultural stereotypical behavior.

Business schools, particularly marketing discipline have been integrating applied experiential projects to their curricula in recent years to enhance learning outcomes of the programs. Titus and Petrosius (1993) discuss the beneficial impacts of adding an experiential project to an undergraduate consumer behavior course. Both students and instructor's evaluations of the learning outcomes of the course and implications of the project reveal several benefits to students learning, including, hands-on experience, analytical skill in the market place, synthesizing theory and practice and relating marketing concepts to real world application, design and execution of a marketing project, and appreciation for marketing research.

Geringer, Stratemeyer and Canton (2009) integrate a service project for a non-profit organization to thirty-eight sections of marketing concept course. Geringer et al. (2009) state that the service project learning outcomes showed enhancement and development in students' academics knowledge, skills, attitudes, career development and civic responsibilities. Awareness, civic responsibilities and commitment to volunteering of students were impacted the most and career development was impacted to some degree (Geringer et al., 2009). Geringer et al. recommend further research on "how the diverse student populations perform in service learning assignment" (2009, p. 9).

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

However, there has not been any study on differences and influences on male and female applied project learning outcomes. This paper aims to examine the gender specific learning outcomes of an applied project in seven sections of four marketing courses.

## METHODOLOGY AND RESULTS

Lynn University and its College of Business and Management (CBM) have a mission to being “innovative, international, and individualized,” offering “applied learning” experiences and “providing timely career-based skills and knowledge” (Lynn University, 2008, p. 17). Since 2000, the College of Business and Management (CBM) has had a relationship with SCORE, a partner of the U.S. Small Business Administration, to provide “real world” learning opportunities for CBM students. During the Fall 2009 and Spring 2010 semesters, a highly successful businessperson in manufacturing who is a Counselor for SCORE provided the business projects for and worked with 116 traditional undergraduate students.

From the 2009-2010 academic year, seven sections for four marketing courses (Marketing Communications, Global Marketing, Marketing Research, Business Marketing Management) are included in this study. Both semester’s courses were structured exactly the same with the exception of different businesses for each semester. Examinations were approximately 30% of the course grade, 40% course project, and 30% other.

The first part of the semester was focused on the textbook (readings and examinations), and the last part was only related to the applications of the text (research and project development). While the same semester courses had the common team-based project concept, they had very different project assignments, e.g., integrated marketing communications plan (Marketing Communications), international marketing plan (Global Marketing), research proposal and a market research study (Marketing Research), business marketing plan (Business Marketing Management).

A total of 116 students participated during the academic year of which 69 were males and 47 were females. The vast majority was CBM students (94.8%), and only six students (5.2%) were from another academic unit (College of International Communications). The students tended to be juniors in academic level (62.4% of the males and 53.2% of the females). While there was a large representation of international students (39.7%), U.S. students were the majority (58.0% male and 63.8% female). Male students lived off-campus (82.6%) and female on-campus (53.2%). A slight majority of the male students (50.7%) had completed the University required internship but only 34.0% of the females had completed the internship. About seven out of ten male students (71.1%) did not belong or were associated with a University organization, e.g., student government, fraternity or sorority, athletic team, but females did (68.1%).

Students were given three surveys during each semester. First, at the beginning of the semester (pre-test) they provided demographic information (e.g., gender, citizenship), campus experiences (e.g., student activities), educational experiences (e.g., credits earned, internship completion), and their perception of examinations and applied projects with six 5-point Likert-type scale items. Second, another survey was completed before beginning the project (mid-term test) in which the six items (5-point Likert scale) were asked gain. Third, at the end of the semester (post-test) the six items were asked but the verb tense was changed from future tense to past tense. See Table 1, Panel A for the post-test items. As shown in the table, these items were developed measuring students’ applied project perceptions and experiences as (1) knowledge, (2)

skills, (3) personal development, or (4) both knowledge and skills. Additional data were included as to the teams' ranking of each member with no two students in the team having the same ranking and was used to compute individual student's applied project score. Furthermore, other data provided for the study were from the instructor or the University, e.g., examination and applied project scores, cumulative grade point average.

For the purpose of this study, learning outcomes are determined by two measures – the students and the instructor. In Table 1, Panel A, the male and female students' post-test results are compared using the t-Test method in which the items were measured by a 5-point Likert type scale (1 = strongly agree to 5 = strongly disagree). Only one item, "Looking forward to working in a team in the future" (skills item) shows any significant difference (moderately at  $p < 0.10$ ). Males were much more willing than females in the future to work in a team. Three items (knowledge, skills, personal development) have similarities ( $p > 0.70$ ) between the two groups. Two learning items (knowledge and skills) show no differences or similarities. Moreover, in four of the six items male students were more favorable (lower mean scores) towards applied projects. However, for all items male and female students felt favorable (below 3.00, neither agree nor disagree) toward the applied learning experience. In Table 1, Panel B the project grade

**Table 1: Project Score Related Results Comparison between Male and Female Students**

Panel A: Student-Reported (Post-test)			
Item	Male Students Mean	Female Students Mean	Mean Difference
Learned more about Marketing in this course than a Marketing course without a service (applied) learning project. ( <i>Knowledge</i> )	1.72	1.74	-0.02***
Developed better or new skills in this course than a Marketing course without a service (applied) learning project. ( <i>Skills</i> )	1.78	1.77	0.01***
Look forward to doing another service (applied) learning course project in the future. ( <i>Personal Development</i> )	2.12	2.13	-0.01***
Look forward to working in a team in the future. ( <i>Skills</i> )	2.16	2.53	-0.37**
Did better in this course that had <u>both</u> examinations and a service (applied) learning course project than without such as project. ( <i>Knowledge and Skills</i> )	2.06	2.17	-0.11
A service (applied) learning project has benefited me more in meeting my career goals than a course without such a project. ( <i>Knowledge and Skills</i> )	2.00	1.88	0.12
Panel B: Instructor-Reported			
Project grade	2.42	1.62	0.80*

Note: \* ( $p < 0.001$ ) and \*\* ( $p < 0.10$ ) indicate significant difference and \*\*\* ( $p > 0.70$ ) significant similarity. results are significantly different ( $p < 0.001$ ) between the two groups in which female students achieved better scores (1 = A to 5 = F).

In summary, this study has found significant differences in male and female students' applied project learning. Using comparative analysis (t-Test), male students experienced the perceived team assignment benefits of having greater value than females. Yet, females performed better based on project grades.

## CONCLUSIONS

The purpose of this study was to identify differences between genders and determine the influences on each gender's applied project learning outcomes. In the male-female comparisons, females did not look forward as much as males to working in a team in the future. While this is somewhat inconsistent with some research (Gilligan, 1982/1993), others (Kaenzig, et al., 2007) support it. Gilligan (1982/1993) found that men were individualistic, and females more caring and having greater connectiveness with others, indicating the personal interaction of teams. On the other hand, Kaenzig, et al. (2007) found similar results as this study that might have been the result of the females' role in and the group dynamics of the teams. This study has certain limitations. For example, it was at one university, with one instructor, and only undergraduate students. Future research is needed to examine such comparisons of and influences on male and female students applied learning outcomes in other academic areas, at different universities and with graduate students. Further research also is needed to better understand female students' needs and learning styles in applied projects, particularly team-based assignments to better prepare them for successful business careers.

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# ENHANCING COLLEGIALITY: ORGANIZATIONAL PRACTICES TO IMPROVE THIS IMPORTANT WORKPLACE FACTOR

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## ABSTRACT

*There is a new emphasis on collegiality in organizations. Working with good colleagues is an important intangible which can make complex workplaces more attractive and livable. Defining collegiality is important to those organizations who are intentional about improve this social aspect of the workplace. Prior research has identified three behavioral dimensions of collegiality: a) conflict management, b) communication, and c) organizational citizenship behaviors. While there are many informal approaches, leaders and managers might profit from examining more structured and formal approaches to enhance collegiality. Leaders may be able to add “enhancing collegiality” into managerial plans and goals. Collegiality may also be considered a supporting goal in a complex organizational environment. For instance, collegiality may be observed as a secondary benefit flowing from success on primary goals, such as increased innovation, skill acquisition, employee socialization, or general performance improvement.*

*This paper offers specific structured and formal techniques for enhancing each of the three dimensions of collegiality previously identified. These approaches are drawn from the organizational literature of practices in North America. Diversity on both definitions and enhancement techniques based upon international culture can be also discussed at the conference.*



# LINKING THE CLASSROOM TO THE LIVING ROOM: LEARNING THROUGH LAUGHTER WITH THE OFFICE

Ashley Kilburn, University of Tennessee at Martin  
Brandon Kilburn, University of Tennessee at Martin

## ABSTRACT

*Business class should be fun, right? Documented humor success stories have been found in law (Binder, 2010), english literature and composition (Maddox, 2011), social work (Moran and Hughes, 2006), as well as organizational behavior (Dent, 2001) classes. The use of humor in the classroom tout openness and respect (Kher, Molstad and Donahue, 1999), lower levels of stress, improved learning speed (Gorham and Christophel, 1990), increased student attention and decreased anxiety (Torok, McMorris and Lin, 2004).*

*What better way to illustrate central business concepts than through comedic sitcoms? And what could be more comedic than the sitcom The Office? A matrix is provided linking both management and marketing topics to specific episodes of The Office. In addition, a sample of episodes and potential student assignments for each are discussed to highlight their respective pedagogical relevance. Both open-ended and empirical student feedback is provided from an upper-division marketing class. Results suggest that students prefer television sitcoms like The Office to other classroom supplements such as newspapers and magazines to increase their awareness of business concepts. Results show that television sitcoms received an average rating of 9.28 (on a 10-point scale), whereas news magazines received an average score of 7.0, and finally, newspapers received an average of 6.67. Implications of the use of the sitcom for business pedagogy are offered.*



# **THE TEAM VS. THE INDIVIDUAL: LOGIN ACTIVITY AS A PREDICTOR OF WEB-BASED SIMULATION TEAM SUCCESS**

**Brandon R. Kilburn, PhD, University of Tennessee Martin**

**Ashley Kilburn, PhD, University of Tennessee Martin**

## **ABSTRACT**

*The investigation into the student group dynamic provides insight into pedagogical strategy of utilizing groups in the classroom. Student groups have been found to be more productive than the individual in their ability to introduce diversity in thought and understanding of material (Umble, Umble & Artz, 2008). Further, the use of simulations in the classroom have also proved positive: learning reinforcement (Dweck, 1986), exposure to real-world decision-making scenarios, increased decision-making speed, and extended information retention times (Bolt, 1993). Empirical analysis examining student activity via the number of online simulation log-ins is used to examine the relationship between both the group's average number of log-ins as well as the individual log-in activity of overachieving group members and overall group success in the simulation. Thus, allowing us to assess the utility of the login variable as a predictor of team performance at the group and individual level. Findings from a sample of 10 different simulations comprised of over 250 students across 54 groups (approximately 5 students per group) suggest that individual log-ins within teams may be better predictors of performance than group-based measures. Thus, based on this observation, the individual may have more impact on team success than the group as a whole. Pedagogical implications are provided to highlight the possible use of activity level (e.g., number of log-ins for computer simulations) as a predictor of overall group performance.*



# FORMULA CONFUSION AND NAMING CONFUSION IN FINANCIAL RATIO EDUCATION

**Jeffrey A. Mankin, Lipscomb University**

**Jeffrey J. Jewell, Lipscomb University**

## ABSTRACT

*This proceedings paper examines a large sample of accounting, finance, management, marketing, and financial statement analysis texts. The “Top 20” ratios in business textbooks are identified and discussed. The paper finds two major problems with ratio presentation in business textbooks: formula confusion and naming confusion. Many ratios bearing the same name are presented with different mathematical formulas. Only four of the Top 20 ratios have 100% consensus on the formula. Many ratios also have several commonly used “aliases” or alternate names. These two issues may cause considerable difficulty for both students and practitioners.*

## INTRODUCTION

A basic understanding of financial ratios and financial analysis is considered by most professors to be a fundamental component of business literacy. This is demonstrated, in part, by the inclusion of financial ratios in a wide variety of business textbooks, including those for financial and managerial accounting, corporate finance, investments, business strategy, marketing research, and financial statement analysis. Business students typically encounter ratios for the first time in an introductory accounting class. They are then periodically re-exposed to them throughout their academic careers, culminating in what is probably a heavy dose of ratios and financial analysis in a capstone business policy or strategy class. Accounting and finance majors probably receive more instruction on ratios than other business students, but all business majors are probably exposed to ratios in at least three classes: accounting, finance, and business policy.

One of the great strengths of ratio analysis is its flexibility. Since there is no governing body in charge of ratios, users of ratios are free to customize or create their own ratios to address their particular analytical needs. This, of course, leads to the existence of many different ratios that each addresses a different issue.

Though flexibility is a strength of ratio analysis, unlimited flexibility has the potential danger of resulting in chaos. Users of financial ratios should have some expectation of consistency in ratio names and calculations. It is reasonable to assume that once a student learns a particular ratio that knowledge can be applied in a variety of situations with little potential for error or confusion. The data, however, show that that is probably not the case. There is little consistency in ratio names or formulas among the business textbooks in the sample. It appears

that the textbook authors' choices to exercise their flexibility have resulted in a bewildering array of minor variations in ratio formulas and names.

We have long been aware of anecdotal evidence, primarily in the form of student complaints, that ratios are presented quite differently in different textbooks and classes. Many students have complained about different classes emphasizing completely different sets of ratios. To some extent this is to be expected, as different business disciplines will find different ratios more useful. So this complaint may have little merit. More importantly, many students have complained about two specific problems they have experienced. First, ratio formulas are inconsistent. Many ratios with the same name have different formulas in other textbooks. Second, ratio names are inconsistent. Many ratios with the same formulas have different names in other textbooks.

Financial ratio calculations need to be precise so they have precise meanings to users, consistency between years and comparability among firms. Students, professors, and professionals naturally expect the ratios to have a high level of precision. However, the ratio formulas in the sample suffer from a lack of standardization and precision. Two of the primary student complaints about ratio instruction appear to have some merit. There are many "competing" mathematical formulas for ratios with the same name. Likewise many ratios with identical mathematical formulas have different names. This "formula confusion" and "naming confusion" creates a lack of consistency in financial ratio formulas and in financial ratio terminology that likely creates a lack of precision in financial analysis.

Checking several textbooks from different classes is enough to confirm the basic truth of the student complaints. However, a casual review is insufficient to assess the magnitude of the ratio problem. A certain amount of inconsistency in ratio names and formulas must be expected, due to the flexibility discussed above. However, it is difficult, without a thorough understanding of the issue, to know when we have crossed the line from a reasonable amount of inconsistency into the area of "chaos." Because of the same complaints year after year, we decided that a more thorough study of these issues was appropriate.

One way to illustrate the problem of formula confusion is to compare ratios from a variety of popular investment websites. Many of these websites provide financial ratios of publicly traded companies. However, these websites frequently "disagree" on the values of various ratios. To illustrate this problem, an online search was performed to compare Return on Assets (ROA) numbers for the Coca-Cola Company. We chose ROA because it is a very common ratio that has many different formulas. These ROA numbers for Coca-Cola are shown on Exhibit 1.

<b>EXHIBIT 1</b>	
<b>RETURN ON ASSETS</b>	
<b>COCA-COLA COMPANY</b>	
<b>2/23/2011</b>	
<b>Website</b>	<b>Return on Assets</b>
Daily Finance	19.86%
Google Finance	19.51%
MSN Money	19.50%
Morningstar	14.98%
Yahoo Finance	9.60%

These ROA numbers were taken from these popular sites on the same day. The results ranged from 9.60% to 19.86%. The most common formula for ROA is Net Income / Assets [see Table 8]. However, there are several ways to calculate ROA that can give dramatically different results. The websites do not have to provide the formulas used in calculating the ratios, but Yahoo does provide a glossary for its key ratios. Yahoo calculates ROA as Earnings from Continuing Operations / Average Total Assets, which is a “non-standard” version of ROA. This simple example using a common ratio for a widely followed company shows the real problem of formula confusion.

Because of these problems with inconsistent ratio names and formulas, this paper will attempt to answer the following questions:

What ratios are most commonly being taught to business students?

How consistently are these ratios being taught, in terms of both formulas and names?

To what extent is inconsistency in ratio presentation explained by the business discipline? (Do accounting professors teach ratios differently from finance professors?)

### THE SAMPLE

This study used a sample of business textbooks to evaluate the state of financial ratio education. The following process was used to accept textbooks and ratios into the sample:

The text had to be a current edition available for sale by the publisher.

Authors were permitted to have more than one textbook in the sample as long as the texts were for different courses or different audiences. For example, Needles & Powers (2009) *Financial Accounting, 10th ed.* and Needles, Powers, & Crosson (2011) *Principles of Accounting, 11th ed.* are both included in the sample because these books are different versions and not simply different editions of the same text.

Generally speaking, electronic copies of the texts had to be available at CourseSmart.Com. A few texts were obtained in hardcopy form from the publisher.

The text had to have a clearly defined chapter, section, or appendix on financial ratios. The sections were typically called “Financial Analysis,” “Performance Measurement” or some similar name.

Many texts have a chapter or section on financial ratios but then also have various other ratios scattered through other chapters. Only ratios appearing in the main chapter, section, or appendix were included in the sample.

Ratios or calculations containing any math more sophisticated than simple arithmetic were omitted. Therefore, measures like alpha, beta, and correlation were not defined as ratios for the purposes of this study.

Differences in ratio formula format or terminology that did not result in mathematical differences in the ratio were standardized away.

Different formulas with the same ratio name were recorded as different “versions” of a ratio. For example, there are four mathematically different versions of the Quick Ratio in the sample.

Identical formulas with different names were logged as the same ratio, but the “aliases” were recorded.

The sample included 77 textbooks containing a total of 1427 ratios, an average of 18.53 ratios per textbook. There are 129 unique ratios in the sample. For these purposes, a unique ratio has a unique name and a formula that is mathematically different from all other ratios in the sample. Different versions of the same ratio are not counted as unique. For example, the four different versions of the Quick Ratio only count as one unique ratio since they are all called “Quick Ratio.”

Accounting textbooks are the most common in the sample, representing 31 books. There are 27 finance textbooks in the sample. For the sake of comparisons the 13 management and marketing books were combined into one group. Since financial statement analysis courses are frequently taught as a hybrid of finance and accounting, the 6 textbooks for these courses were also placed in a separate category. A complete breakdown of the sample by business discipline can be found below in Table 1.

	ACCOUNTING	FINANCE	MGT/MKT	FSA	TOTAL
TEXTBOOKS	31	27	13	6	77
TEXTBOOK %	40.3%	35.1%	16.9%	7.8%	100.00%
TOTAL RATIOS	573	485	196	173	1427
MEAN	18.48	17.96	15.08	28.83	18.53
MINIMUM	13	11	4	15	4
MAXIMUM	26	28	27	37	37

Rank	Ratio Name	Frequency	Percent Of Books
1	Current Ratio	74	96.10%
2	Inventory Turnover	72	93.51%
3	Return on Assets (ROA)	70	90.91%
4	Quick Ratio	69	89.61%
5	Times Interest Earned	68	88.31%

Rank	Ratio Name	Frequency	Percent Of Books
6	Net Profit Margin (Return on Sales)	66	85.71%
7	Days Sales Outstanding (DSO)	62	80.52%
8	PE Ratio	61	79.22%
9	Total Asset Turnover	60	77.92%
	Return on Equity (ROE)	60	77.92%
11	Receivables Turnover	51	66.23%
	Debt Ratio	51	66.23%
13	Debt to Equity	49	63.64%
14	EPS	42	54.55%
15	Days Sales in Inventory (DSI)	37	48.05%
	Gross Profit Margin	37	48.05%
17	Dividend Payout	32	41.56%
18	Dividend Yield	31	40.26%
	Fixed Asset Turnover	31	40.26%
20	Market to Book	28	36.36%
	<b>Total Ratios</b>	<b>1,051</b>	

## RESULTS

We hoped to find exactly what ratios were being covered most frequently in the classroom. As previously mentioned, we found a total of 129 unique ratios in the sample. However, these ratios were not all present with the same frequency. In fact some ratios were present in almost all of the textbooks, while many show up in only a very small handful of books. Table 2 shows the Top 20 ratios ranked by the frequency with which they appear in the sample.

## CONCLUSION AND RECOMMENDATION

Professionals and business students use financial ratios extensively. Professors and employers expect students to learn to use and interpret financial ratios in their business courses and throughout their careers. However, there is currently a barrier to learning financial ratios caused by the use of different names and different formulas for the same ratio. An experienced professional may already have a preferred set of standardized ratios or may easily adjust to

differences in names or formulas. However, this may not be the case with business students moving through a typical business curriculum. For these students subtle changes in names or formulas may be a source of frustration and an impediment to learning.

There is a certain amount of tension in the world of ratios between the flexibility analysts and authors have in creating their own ratios and the potential for confusion that a myriad of different ratio names and formulas can cause. It is difficult to fully assess the true costs and benefits of flexibility in ratio construction. This study attempts to illustrate some of the costs of unconstrained flexibility, or the lack of ratio standardization, by highlighting the two issues of naming confusion and formula confusion in financial ratio education. These issues are a problem because financial ratios need to be precise and consistent in order to avoid confusion and improve understanding of financial results.

The solution to the problems of naming confusion and formula confusion is quite simple in theory, but quite complex in practice. Both problems could be largely eliminated by simply having analysts and authors agree on more descriptive names for the various ratios. No actual flexibility would be lost; authors would simply have to use unique names for mathematically different ratios, rather than recycling existing ratio names. For example the ratio Net Income / Total Assets would retain the name Return on Assets, but the ratio Net Income / Average Total Assets could be named Return on Average Assets and the ratio EACS / Total Assets could be named Common Shareholders' Return on Assets. Similar "common sense" naming systems could in theory be devised for all of the ratios with competing formulas and names. Of course the practical impediment to this solution is that there is no simple way to achieve consensus on the best name for each ratio formula. Even if a set of descriptive and less confusing ratio names could be devised there is no easy way to insure compliance with the naming system. The solution described above is not likely to happen anytime soon. In the mean time professors should take whatever steps they can in the classroom to make ratio education less confusing for students.

# A REFLECTIVE NOTE ON EVALUATION METHODS IN MANAGEMENT DISTANCE LEARNING COURSES

**Songtao Mo, Purdue University Calumet**  
**Lin Zhao, Purdue University Calumet**

## ABSTRACT

*This study provides insights into the effect of evaluation methods in management distance learning courses. The evaluation methods included in grading structure have been one of the motivation tools intending to encourage better performance in higher education. The strategy of designing a performance evaluation structure is essential for effective learning.*

*Previous literature has extensively investigated the impact of various grading policies on student performance. The empirical work is rather limited concerning the effect of grading structure in distance learning courses, where the evaluation of student activities plays a critical role in facilitating the instructor-student communication. The study explores the interrelationships among course performance, formative assessment and summative assessment instruments. And the study provides an exploratory analysis on how to increase the effectiveness of engaging students, and enhance learning in management distance learning courses.*



# **USING TRACKING DATA FOR CONTINUOUS MONITORING IN MANAGEMENT DISTANCE LEARNING COURSES**

**Songtao Mo, Purdue University Calumet**  
**Lin Zhao, Purdue University Calumet**

## **ABSTRACT**

*The increasing popularity of distance learning courses attracts academic attention to investigate education quality and instructional techniques of online courses. In absence of face-to-face interactions, instructors of distance learning courses should consider utilizing techniques to continuously monitor student performance. The utilization of continuous monitoring provides instructors information of student progress for short-term and immediate adjustments. This study provides an exploratory analysis on the application of tracking mechanism offered by Blackboard. The data used in the study represent measures of objectivity that capture the features in need of immediate attention. The empirical results indicate that tracking data can serve as an instrument for online instructors to closely monitor student activities and make necessary adjustments in on-going courses.*



## **COURSE SELECTION: STUDENT PREFERENCES FOR INSTRUCTOR PRACTICES**

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### **ABSTRACT**

*When students select courses and choose from multiple class sections, their preferences serve as criteria for comparisons during the selection process. The primary purpose of this study is to determine preferences, so information related to salient attributes may be provided before course selection. An understanding of preferences also helps instructors design their courses, form accurate student expectations, and obtain higher student ratings. Preferences were identified from focus group research and compared to the extant literature to select ones for evaluation that could be met by instructor actions. A survey then obtained students' ratings of preferences for instructor practices, including assessment approaches and use of learning resources. The study revealed that students have a strong preference for classes that are: taught by instructors they know, have acceptable testing formats, and include extra credit activities. In terms of learning resources, they prefer classes with lecture notes provided before class and the availability of previous exams for review.*



# STUDENT COMMUNICATION PREFERENCES FOR WORK/SCHOOL AND SOCIAL PURPOSES

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## ABSTRACT

*University students and other members of the Net Generation are clearly involved with using technology to communicate and stay connected with friends. Cell phones and smart phones are used to send text messages as well as for talking, while online communication methods such as email, chat and social networking provide additional methods to keep in touch. However, students do not necessarily wish to communicate for work and school purposes in the same ways they communicate socially. In fact, once institutions and parents adopt a media popular with students, they often move on to new ways of interacting. This study examines the preferred communication methods for work/school and social purposes of university students. The results show that, despite the popularity of technology, these students expressed a preference for face to face communication over all other methods for both work/school and social communication.*

## INTRODUCTION

University students and other members of the Net Generation are clearly involved with using technology to communicate and stay connected with friends. Cell phones and smart phones are used to send text messages as well as for talking, while online communication methods such as email, chat and social networking provide additional ways to keep in touch. Stories of people sitting next to each other and texting are pervasive. However, students do not necessarily wish to use the same methods to communicate for work and school purposes as they do for social communication. In fact, once institutions and parents adopt a media popular with students, they often move on to new ways of interacting. This study examines university students' preferred communication methods for work/school and social purposes. The following section presents a brief background on student use of media. The results of a survey asking students about their preferred communication methods are analyzed.

## TECHNOLOGY AND COMMUNICATION

Students of the Net Generation take technology as a given; staying connected is a central part of their lives (Frاند, 2000). The "need for speed" is clear, as "a faster approach is often perceived as a better approach" (Johnson, Levine, Smith & Stone, 2010, p. 4). Data from a 2009 EDUCAUSE study showed that a little over half of students had internet-capable mobile devices and almost 12% reported that they planned to buy such a device within the next year (Smith, Salaway & Caruso, 2009). Regular cell phones were, of course, ubiquitous. Email, and

presumably sms texts, show aspects of both oral and written communication, which is not surprising given that a study on teens showing that email and sms texts are not viewed as writing (Lenhart, Arafeh, Smith & Macgill, 2008).

At the Ohio State University, students were asked how they would like the school to communicate with them about their accounts, academic schedules, etc. (Ohio State University Office of Student Life, 2010). Email was selected by 82% followed by the website (17.8%), with Twitter, sms, phone, and Facebook chosen by fewer than 10%. For general updates, 68.9% chose email and 33.7% chose the web, with the other modes of communication again being chosen by fewer than 10% of the students. Similar results were found in regard to events and activities except that Facebook increased to 14.3%. These results differ significantly from those of the College of the Sequoias study. A major difference is that the Ohio State University study pertained to the school communicating with students, whereas the College of the Sequoias study was more general. This suggests that students prefer different methods for work/school and social communication purposes.

In the College of the Sequoias study, sms texting and telephone were the most preferred methods of communication, both of which involve the use of a mobile device (cell phone or smart phone). The Pew Internet and American Life Project (Lenhart, Ling, Campbell & Purcell, 2010) found that 95% of teens use sms text to say hello and chat, while 70% use it to manage school work. Calling (73%) was a little more popular for managing work than texting (70%) and used by a slightly smaller group (90% vs. 95%) for saying hello and chatting. The mobility of cell phones, which provides greater access to communication methods, was appreciated by 92% of teens because, as one teen reported, phones make it possible to “keep in touch no matter where I am” (Lenhart et al., 2010, p. 66).

The MAT2R model depicts communication methods as being influenced by mobility, access and a form of immediacy deemed “perceived time to response” (Robinson, 2011). This model suggests that increased use of mobile devices such as smart phones lead to increased access to electronic modes of communication (such as sms texting and Facebook), which in turn alters people’s perceptions of time to response (feedback) in communication. That is, the perceived time from sending a message until feedback is received is reduced, altering the perception of whether asynchronous or synchronous communication is occurring.

In the past, face to face and telephone conversations were the primary means for synchronous communication. Written communication such as email, online discussion boards, online postings, and “old-fashioned” writing on paper were viewed as asynchronous. However, with the advent and widespread adoption of mobile devices that allow people to be connected to their modes of communication almost constantly, the perception of asynchronous and synchronous communication has been altered. There is now a middle ground that “feels” like synchronous communication but is not technically synchronous communication in which the message is received at the same time it is sent. For example, two people might have a “conversation” via sms texting or email sent to a smart phone. Although a couple minutes may go by between the time a message is sent and receives a reply, the interaction may be perceived as a conversation even though it takes a certain amount of time to read the message and respond. This cannot be truly considered synchronous because the message is not sent and received

simultaneously, but “feels” synchronous due to a low perceived time to response. This is “kind of” synchronous or in Norwegian “kan bli som” (can be as) synchronous and therefore is dubbed k-synchronous (rhyming with asynchronous). How long the delay between messages can be before k-synchronous communication becomes asynchronous communication is up to the individual’s perception of time to response, which is likely to be based on the situation. In some situations, a 5 minute time lag may still feel k-synchronous, where as in other situations, a 2 minute lag may feel asynchronous.

Students are accustomed to and want to be connected to their social networks almost constantly. Several studies have examined the frequency with which young people use various media to communicate, although few (e.g. Ohio State University Office of Student Life, 2010) have specifically examined which modes of communication are most preferred in different situations. This study examines the communication preferences of university students in regard to work/school and social communication.

### METHODOLOGY, RESULTS AND ANALYSIS

This study examines the preferred communication methods of university students. A total of 71 business students participated, including 30 students at a Norwegian college and 41 at an American public university. The participants included students from at least six different countries and although participants were not asked their national origin, they were asked to indicate whether English was their native language. However, analysis showed that neither native language nor school was related to preferred communication methods.

These students were asked to complete a survey in which they ranked a list of communication methods (face to face, telephone, paper, email, online chat, sms texting, Facebook and “other”) according to their preference for using them, with 1 being the most preferred channel and 8 being the least preferred. Because “other” was the least preferred by the vast majority of students, this study focuses on the 7 other communication methods.

Given that people could have different preferences in different situations, participants ranked the same list of communication methods for two different purposes: work/school and social communication. As shown in Table 1, there were both similarities and differences in preferences for communication based on these different purposes.

Rank	Work/school communication	Social communication
1	Face to face	Face to face
2	Email	Telephone
3	Telephone	Sms texting
4	Chat	Facebook

<b>TABLE 1: PREFERRED COMMUNICATION METHODS</b>		
Rank	Work/school communication	Social communication
5	Sms texting	Chat
6	Paper	Email
7	Facebook	Paper

Face to face communication, the most media rich of all communication methods, was the most preferred method for both work/school and social communication. The other synchronous method of communication, telephone, also ranked high on both lists, suggesting that students value the benefits of synchronous communication in which messages are sent and received simultaneously. This concept is also supported by the low rank received by paper, which is an asynchronous method. For social purposes, paper was the least preferred, but paper rose to 6<sup>th</sup> place for work/school communication as Facebook was the least preferred method. Although reasons for preferences were not included in this study, it is possible that students view Facebook (and other social networking sites) as a method that they prefer to reserve for social purposes. Anecdotal evidence suggests that students like to reserve some methods for social communication and keep them “off limits” to other purposes.

Email was also viewed in very different lights for work/school and social communication. For social purposes, email is preferable only in comparison to paper, suggesting students view email similarly to paper in this respect. Email, however, is viewed more positively for work/school communication, possibly because of its practical use in sharing files necessary for completing assignments. Another possibility is that students prefer email because it allows students and instructors to communicate without infringing on communication methods more preferred for social purposes.

The communication methods ranked in the middle (chat and sms texting) are both methods that are often k-synchronous. For social communication, these two methods are in close ranks with Facebook, which can also be k-synchronous. Therefore, the rankings for social communication tend to follow the continuum from synchronous to k-synchronous to asynchronous communication methods. This would appear to be a logical result given students’ desires to be connected to others, and shows they are adept in using technology to communicate with others. As advances in mobile devices such as smart phones become even more widespread, this trend is likely to continue. In fact, email may see a resurgence as smart phone are capable of offering the same k-synchronous benefits as sms texting, but can also easily handle attached files.

In contrast, preferred communication methods for work/school purposes show more of a blend of synchronous, k-synchronous and asynchronous methods. In working together on projects, face to face would be the most immediate and media rich. Students working physically together in groups can talk, look at documents together, etc. Via email, they can send each other documents they are working on, and they can receive messages from teachers without imposing

on social communication methods such as Facebook. Talking on the telephone provides a synchronous method of communication, while chat and sms texting can provide k-synchronous methods. Even when asynchronous, chat and sms texting are likely to receive faster replies than paper.

## CONCLUSIONS

The overall results generally confirm those of the study by EDUCAUSE Center for Applied Research study (Rishi, 2007) in that students prefer different communication methods for work/school and social purposes. However, the first place ranking for face to face for both purposes is an important indicator that technology is not an end in itself and that technology-mediated communication is indeed prevalent and desirable, but not necessarily always the top choice. It should be noted that preference for a mode and the frequency with which a mode is used are not necessarily the same. While students may prefer to communicate face to face, this is obviously not possible in the majority of situations.

Following the MAT2R model (Robinson, 2011) for analysis, the methods that were most preferred were those with the lowest perceived time to response. Face to face communication, the top ranked method for both work/school and social communication is the most media rich synchronous medium available. Asynchronous paper was at or near the bottom of the list for both purposes.

The communication methods ranked in the middle (chat and sms texting) for both work/school and social communication are methods that are often k-synchronous. In fact, for social communication, the rankings were almost indistinguishable between using a telephone for talking and for texting. Because students almost always have their phones with them, it is likely they view sms texts as k-synchronous communication. For social communication, these two methods are in close ranks with Facebook, which can also be k-synchronous, especially when a person has increased access through a mobile device with a Facebook app. Therefore, the rankings for social communication tend to follow the continuum from synchronous to k-synchronous to asynchronous communication methods. This would appear to be a logical result given students' desires to be connected to others, and shows they are adept in using technology to mediate their communication with others. As advances in mobile devices such as smart phones become even more widespread (Smith et al., 2009), this trend is likely to continue. In fact, email may see a resurgence because smart phones are capable of offering the same k-synchronous benefits as sms texting, but can also easily handle larger messages and attached files. Following the MAT2R model (Robinson, 2011), increased mobility would increase access, which would lead to decreased time to response.

In contrast to preferred methods for social communication, preferred communication methods for work/school purposes show more of a blend of synchronous, k-synchronous and asynchronous methods. In working together on projects, students apparently find face to face the most media rich method with the advantage of synchronous communication (the ultimate reduction in time to response). Students working physically together in groups can talk, look at documents together, etc. Via email, they can send each other documents on which they are

working and they can receive messages from teachers without imposing on social communication methods such as Facebook that they want to maintain as a social channel. Talking on the telephone provides a synchronous method of communication, while chat and sms texting can provide k-synchronous methods. Even when asynchronous, chat and sms texting are likely to receive faster replies than paper. Clearly the MAT2R model (Robinson, 2001) is a better descriptor of social communication than of work/school communication.

The practical implications of this research for institutions and instructors include the suggestion that communication channels need to suit the needs and wishes of their students and potential students. This does not, however, mean using the same communication methods that students use for social communication. As Ohio State University (Ohio State University Office of Student Life, 2010) discovered, students preferred email and web communication by a high margin for official communication. Facebook only increased to 14.3% (from less than 10%) when the communication was in regard to events and activities, which is a category easily fitting under the category of social communication. While Facebook groups have become very popular among universities in an attempt to reach members of the Net Generation, this tactic may backfire if students and potential students see this as an intrusion.

Regular periodic research will be necessary to assess this moving target of student preference for communication methods, not just for distribution of information, but also for the improvement of activities that could be used inside and outside of class to increase student engagement. Future research should also further examine the reasons for communication method choices and the effect of perceived time to response on student interaction.

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# **A SIX-COUNTRY STUDY ON EDUCATION LEVEL AND ETHICAL ATTITUDE TOWARD TAX EVASION**

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## **ABSTRACT**

*The purpose of this study is twofold – to review and summarize the findings of more than 30 prior studies that surveyed student opinions on the ethics of tax evasion, and to expand on that literature by examining the relationship between level of education and views on the ethics of tax evasion using a larger, more heterogeneous demographic. A number of surveys of student opinion have been conducted, both in the United States and elsewhere, soliciting the opinions of various student groups on the ethics of tax evasion. Students in various disciplines and students at various levels of education (graduate and undergraduate) were asked their opinions regarding when tax evasion could be justified on ethical grounds. The present study summarizes and analyzes those findings for the first time. The second part of the paper uses the Human Values data that was gathered by social scientists in Brazil, Russia, India, China, the USA and Germany and examines the relationship between level of education and attitude toward tax evasion, using a 10-point Likert Scale. An analysis of the data found that education level does make a difference in attitude toward tax evasion, as do gender and age, in some cases.*

## **INTRODUCTION**

Most studies on tax evasion have taken an economics or public finance perspective. They have focused on technical issues such as optimum tax rates, optimum evasion, reasons for suboptimum compliance, and so forth (Hyman, 1999; Marlow, 1995; Musgrave, 1959, 1986; Musgrave & Musgrave, 1976; Musgrave & Peacock, 1958; Rosen, 1999). Accounting journals have published articles that focus on practitioner issues, including professional ethics, but those studies have emphasized professional codes of ethics and how to conduct a tax practice that complies with the law and with the rules of professional conduct (Armstrong & Robison, 1998; Oliva, 1998). Some studies have appeared in the psychology literature that examine the psychological issues involved in tax evasion (Alm & Torgler, 2006; Kirchler, 2007; Kirchler, Muehlbacher, Kastlunger & Wahl, 2010; Torgler & Schneider, 2009).

In recent years, a number of studies have addressed ethical issues in tax evasion. Some of those studies have been theoretical in nature while others have been empirical. The present study begins with a review of the main ethical literature, then proceeds to examine prior student survey literature in more depth to determine what student opinion has been on the ethics of tax evasion.

We then use the Human Values data for Brazil, Russia, India, China, the USA and Germany to determine whether the level of education is related to views on tax evasion. The total sample size for the six countries in this study is 10,034.

## METHODOLOGY

Groups of social scientists all over the world have been conducting coordinated surveys of the world's population since the 1980s. Some surveys have solicited the opinions of more than 200,000 people in more than 80 countries. The surveys included hundreds of questions on a wide range of subjects. One question in the most recent surveys addressed attitudes toward tax evasion:

Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between: Cheating on taxes if you have a chance.

The range of responses used a 10-point Likert Scale where 1 = never justifiable and 10 = always justifiable. The surveys collected data on a number of demographic variables, including level of education, gender and age. The present study uses the data gathered in the most recent surveys.

Countries chosen for analysis in the present study included Brazil, Russia, India and China because they are classified as the BRIC countries. All are large in terms of population and have relatively large economies. Brazil is the largest country in South America. Russia is a large and important country in Eurasia that spans eleven time zones. India and China are the two largest countries in Asia in terms of population. Both also have large economies. The United States was chosen so that the study would include a country from North America. The USA is also the largest country in North America in terms of population and economy. Germany was chosen so that the sample would include a country from Western Europe. Germany has a relatively large population and has the largest economy in Western Europe.

Table 2 shows the sample size and population (CIA World Fact Book 2011) for each country included in the survey. The sample size was slightly more than 10,000. The countries included in the study have a combined population of more than 3.2 billion people.

Country	Population (million)	Sample Size
Brazil	201	1483
Russia	139	1901
India	1173	1677
China	1330	1763
USA	310	1182
Germany	82	2028
Totals	3235	10,034

Some prior tax evasion studies tested for gender differences. Some of those studies found that women are more opposed to tax evasion (McGee, Alver & Alver, 2008; McGee & Bose, 2009; McGee & Guo, 2007; McGee, López & Yepes, 2009; McGee, Nickerson & Fees, 2006) while others found that men are more opposed to tax evasion (McGee, 2006c; McGee & Tusan, 2008; McGee & Benk, 2011). A third group of studies found that both genders were equally opposed to tax evasion (McGee & Butt, 2008; McGee, Noronha & Tyler, 2007; McGee & M'Zali, 2009; McGee & Preobragenskaya, 2008). The present study examines gender differences to determine whether gender makes a difference in attitude toward tax evasion for the countries included in the study.

Some prior studies examined the relationship between age and various ethical issues. Some of those studies found that people become more ethical as they become older. A few studies examined the relationship between age and attitudes toward tax evasion. Those studies generally found that older people are more opposed to tax evasion than are younger people. The present study tests this relationship to determine whether the older participants were more opposed to tax evasion than the younger participants.

### **CONCLUDING COMMENTS**

What can be said with a high degree of confidence is that opposition to tax evasion differed by country. The Chinese sample was most opposed to tax evasion, followed closely by the United States and Germany. Russians and Indians had similar opinions on the matter. Brazilians were by far the least opposed to tax evasion. It would take another study or two to determine the reasons for the differences. Culture, history, politics and economics all play a role.

A comparison of the relationship between educational level and attitude toward tax evasion yielded mixed results. The group most opposed to tax evasion was one of the groups with little or no formal education in Brazil, Russia and China, while the strongest opposition in India and the USA came from the most educated group. In Germany the two groups tying for strongest opposition were incomplete elementary education and university degree, which were at opposite ends of the education spectrum. Thus, one cannot say that the relationship between education and attitude toward tax evasion is uniform across countries and cultures. More research is needed to determine why the various relationships are what they are.

On the issue of gender and its relationship to attitude toward tax evasion, the results are also mixed. The only country where women were definitely and consistently more strongly opposed to tax evasion was the United States. In Russia, women were more strongly opposed to tax evasion, but only at the 11 percent level, which is generally considered insignificant. In India and China there was no significant difference between genders. In Brazil the difference was insignificant generally, but men were significantly more opposed to tax evasion in the categories of incomplete secondary: technical and university degree. In Germany, men and women generally had the same degree of opposition to tax evasion, except in the case of those who held a university degree. In that category men were significantly more strongly opposed to tax evasion.

Table 28 summarizes the findings.

<b>Table 28: Summary of Findings</b>					
<b>EDUCATION LEVEL</b>					
Brazil	Russia	India	China	USA	Germany
Most opposed Inadequately completed elementary education	Most opposed Incomplete elementary education	Most opposed University degree	Most opposed No formal education	Most opposed University degree	Most opposed Incomplete elementary education & university degree (tie)
2 <sup>nd</sup> place (tie) Completed secondary: technical; University degree	2 <sup>nd</sup> place Completed elementary education	2 <sup>nd</sup> place (tie) Completed elementary education; Complete secondary: college preparatory; Some university	2 <sup>nd</sup> place Completed elementary education	2 <sup>nd</sup> place Incomplete secondary: university preparatory	
Least opposed Incomplete secondary: technical	Least opposed Some university	Least opposed Incomplete secondary: university preparation	Least opposed University degree & Complete secondary: college preparatory (tie)	Least opposed Incomplete secondary: technical	Least opposed Incomplete secondary: technical
p < 0.0001	p = 0.1000	p = 0.516	p = 0.120	p = 0.135	p = 0.001
<b>GENDER</b>					
Brazil	Russia	India	China	USA	Germany
No significant difference overall.  p = 0.5217  Men significantly more opposed for 2 levels of education – (1) incomplete secondary: technical and (2) university degree.	Overall, women more strongly opposed but not significantly p = 0.1084	No significant difference  p = 0.1821	No significant difference  p = 0.2566	Women more strongly opposed  p = 0.0002	No significant difference overall.  p = 1.000  Men significantly more opposed – University degree  p = 0.0220

Table 28: Summary of Findings					
		AGE			
Brazil	Russia	India	China	USA	Germany
Most opposed – 65+ and 45-54	Most opposed – 65+ and 55-64	Most opposed – 15-24	Most opposed – 55-64 and 65+	Most opposed – 55-64 and 65+ (tie)	Most opposed – 65+ and 55-64
Least opposed – 15-24 and 25-34	Least opposed – 15-24 and 25-34	2 <sup>nd</sup> place (tie) 45-54; 55-64; 65+	Least opposed – 15-24	Least opposed – 15-24	Least opposed – 15-24
p < 0.0001	p < 0.0001	Least opposed – 25-34 p = 0.752	p = 0.005	p < 0.0001	p < 0.0001

The present study examined the relationship between education and attitude toward tax evasion from two perspectives. It summarized the findings of more than 30 student surveys and also analyzed the *Human Values* data on the topic, which includes a larger and more diverse demographic. Hopefully, it will pique the interest of other researchers to conduct additional research on the relationship between level of education and attitudes on tax evasion.



# **A QUALITATIVE ANALYSIS OF COLLEGE STUDENTS' PERCEPTIONS OF ACADEMIC INTEGRITY ON CAMPUS**

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## **ABSTRACT**

*Cheating on campus is more prevalent today than ever before. In an attempt to better understand the phenomenon of academic dishonesty, we distributed a survey to 250 undergraduate students located in a North Eastern University and asked them a variety of open-ended questions relating to various topics of academic integrity. We then conducted a content analysis on the data and found some interesting themes that emerged. Based on the data, we believe that the main problem is not a lack of awareness of the academic policy guidelines on campus that is contributing to the prevalence of cheating, but rather a lack of enforcement of these policies. In fact, many students expressed the belief that for the policy to have maximum impact, the consequences had to be effectively communicated and enforced along with the guidelines. There was also a general consensus amongst students that faculty had to get more involved and that they were responsible for encouraging a cheat-free environment. Interestingly, students also expressed a desire to be made partners in prevention and detection of academic cheating. They suggested that Universities provide easy & anonymous access to reporting mechanism for students to report such cheating and even offer rewards for cheating informants. Finally, students also offered their own suggestions to Universities as to how they can facilitate an environment that promotes academic integrity.*

