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THE IMPACT OF CHANGING ASSESSMENT: DOES IT MAKE A DIFFERENCE TO STUDENTS' GRADE PERFORMANCE?

Rafiuddin Ahmed, James Cook University

ABSTRACT

Assessment in higher education sector is widely researched for its relevance to outcome measurements in different forms such as grade performance, students' exit skills at graduation, and employability. One of the most widely used forms of assessment, summative assessment, is used to gauge students' performances in these dimensions. The current quasi-experimental study reports the impact of a change in assessment from a single summative paper-based mid-term examination to three short online, open book, continuous mid-term examinations in a third-year management accounting subject. The study finds that students' performance, as measured by marks in the final exam and overall marks in the subject, did not significantly improve as a result of the change in assessment format. Other measures of performance such as changes in student numbers in different grade categories did not reveal changes at any statistically significant level. The findings of this study are contrary to the existing literature that changes in assessment improve grade performance in a subject. The implication of the findings are that changes in assessment need to be weighed against the benefits from it, and that traditional paper-based assessment still works as well, if not better than technology driven assessment such as online open book examinations.

Keywords*: motivation, learning, engagement, continuous assessment, summative assessment, online quiz*

INTRODUCTION

Assessment in higher education is a means to measure students' performances and teaching outcomes. Summative assessment, the most common form of assessment, is mainly used to award students' scores on attempts in examination content, and usually conducted in a supervised time constrained assessment environment (G. A. Brown, Bull, & Pendlebury, 2013; Hernández, 2012; Kuh, 2003). A single end of session assessment or one mid-term and a final exam is commonly used as summative assessments in any subject. Empirical studies report improvements in teaching and learning outcomes when a summative assessment is changed in supervised examination conditions (Greer, 2001; Hernández, 2012; Marriott & Lau, 2008). Very little is known about an assessment in an online, unsupervised examination environment in an Australian higher educational setting.

The current quasi-experimental study explores the impact of a change from a paper-based supervised summative mid-term examination to three short online unsupervised summative quizzes on students' final examination marks and overall marks in a management accounting subject. Using data from two years, before a change and after a change in a mid-term examination format, the study reports a number of important insights contrary to extant literature. The statistical analyses report that after the change in the assessment format, the marks in group essay and the average quiz marks declined slightly in 2014. The findings refute the

conventional wisdom that changes in an assessment improve students' performance (measured by marks or scores in a subject). The study has implications for academics contemplating moves to continuous and unsupervised online examinations.

The rest of the paper is organized as follows: the literature is reviewed in section two followed by the background of the study. The research method and the results are then discussed followed by the conclusions.

LITERATURE REVIEW

Assessment is a way of evaluating students' work, making inferences about the work and estimating the worth of students' actions (G. A. Brown, et al., 2013). Hernandez (2012) adds that assessment is about grading and reporting student achievements and about supporting students in their learning. Brown (2004) recommends the use of a variety of assessment practices so that students can demonstrate their abilities and optimize their potential. Rust (2001) argues that assessment practices should be dynamic enough to have a beneficial effect on students' learning. Empirical studies report a beneficial effect of learning from assessment and improvements in grades from changes in assessment practices (Greer, 2001).

In the higher-education context, two types of assessment items are widely used: summative and formative. Hernandez (2012) labels summative assessment as 'assessment of learning' and formative assessment as 'assessment for learning'. Summative assessment is compulsory in nature, usually completed as a single submission of work and provides little opportunities to students to reflect on how they are progressing (Marriott & Lau, 2008). It is also used as a performance indicator (Knight, 2001) to gauge learner's achievements against predetermined grading criteria. These strengths can be regarded as failings of summative assessment to take a holistic view of learning of subject content and focus on rewarding (related to assessable work) aspects of learning (Marriott & Lau, 2008).

Formative assessment, on the other, hand is an optional assessment which does not contribute to final outcomes (Aisbitt & Sangster, 2005; Marriott & Lau, 2008). It is seen as a lifeblood of learning (Rowntree, 1987) and expected to provide feedback to students to improve, accelerate and enhance learning (Sadler, 1989). The success of formative assessment in terms of increased grades is largely unproven as the majority of the studies shows mixed results (Aisbitt & Sangster, 2005; Sangster, 1996).

Both formative and summative assessments have merits and demerits, so combining the best aspects of these two types of assessment may be appropriate as interventions. Empirical research has revealed successful combination of both types of assessment in a subject (Lewis & Sewell, 2008; Trotter, 2006). Marriott and Lau (2008) argue that summative assessment can be a single piece of assessment or a series of assessments delivered throughout a teaching period which could take the form of essays, tests and presentations (see also Purvis, 1990). When continuous assessment is used, it is aimed to monitor students' performance and provide timely feedback that may be used to improve future performance (Marriott & Lau, 2008). The use of continuous summative assessment throughout the teaching period can be perceived to have formative and summative function in that performance in one test can feed forward to the next, thus possessing the attribute of a formative assessment.

While formative and summative assessment practices have taken different forms, there is an increasing level of use of technology to enhance both types of assessment tasks. Computer-aided assessment (CAA) is one form of assessment technique used in both summative and formative assessment (Bull & McKenna, 2003). It is regarded as an efficient assessment option

(Marriott & Lau, 2008) because this form of assessment does not place excessive burden on staff and students (Light, Calkins, & Cox, 2009). CAA can provide timely feedback to students which can enable students to identify their weaknesses, reflect on their performance and improve their study skills (Aisbitt & Sangster, 2005; Lewis & Sewell, 2008). CAA also offers options for "sustainable assessment" which encompasses knowledge, skills and predispositions required for lifelong learning activities (Boud, 2000, p. 151).

Students are observed to be motivated by extrinsic rewards (e.g. good job, good career) (Ottewill & Macfarlane, 2003) and intrinsic rewards (Biggs, 2011). Assessment is the only way to encourage students to learn (Race, 1995; Rowntree, 1987) though some students may be distracted and enervated by assessment tasks (Rowntree, 1987). Teaching curriculum plays an important role in students' learning (S. Brown, 2004). So a curriculum that is assessment driven is more useful for students' learning (Carless, 2007; Joughin, 2009). While learning is desired in any assessment, students must be engaged in learning activities by institutional initiatives (Kuh, 2001a, 2001b) or by coercive practices to ensure learning such as frequent assessment and feedback (Kuh, 2003; Oliver, 1998). Feedback facilitates learning (Gibbs & Simpson, 2004), allows autonomy and responsibility to monitor and manage students' own learning (S. Brown, 1999; Carless, 2007).

RESEARCH BACKGROUND

This quasi-experiment is based on data collected from a regional university in Australia and involves third-year majors in Accounting and Finance studying a three-credit compulsory Management Accounting subject. The subject is also accepted and taken by students as an elective in other courses offered by the university. An undergraduate program comprises of 72 credits for subjects studied over a three-year period, each year offering eight 3-credit subjects. The subject is delivered over a 13-week period with a break between weeks, once per year. The students attend a two-hour lecture, one-hour tutorial (with a class size of 25 students) and a one-hour workshop. The sessions are optional but students are strongly encouraged to attend as many sessions as they can. Recently the university commenced online studies and is taught online to external students, nationally and internationally.

The assessment items are different in terms of weights and structure between the years. In 2013, the final examination and the mid-term examination were invigilated. The weights of three assessment items were: essay (20%), mid-term examination (20%) and final examination (60%). Achieving an overall pass required only 40 out of 80 marks in invigilated components (50%) and another 10 marks (50%) in the essay. So achieving a pass grade was not too challenging to the students who did not perform well in the mid-term exam still could improve in the final examination.

In 2014, the assessment structure was changed. The paper-based mid-term test in 2013 was changed to three open book online quiz examinations each worth 5%. The two other assessment items remained the same but the weights were changed as essay carrying 20% weight and the final exam carrying 65% weight. The only invigilated component was the final examination and to pass the subject overall, the students were required to get 32.50 marks (50%) of the total (65) and another 17.50 marks from the non-invigilated components (35 marks in essay and three quizzes). In order to make the comparisons meaningful, the assessment items are converted to 2013 weights.

Assessment revision is a common practice in higher education and is motivated by the findings in the literature that a revision in assessment improves learning, engagement and

enthusiasm in students (see, for example, Greer, 2001; Marriott & Lau, 2008). Accordingly, the assessment in the subject was revised in 2014. The paper-based mid-term exam, covering 50% of the total topics, covering lectures one to six, was replaced with three open book, and phased-in online multiple-choice tests worth 5% each, covering only two lectures (two chapters) at a time. The tests were to be completed online (unsupervised), comprised 10 multiple-choice questions to be completed within 30 minutes. Though students were required to attempt only 10 questions, 20-25 questions were kept in two separate pools, a theory pool and a computational question pool, so that each student got different sets of theory and computational questions. In order to prevent plagiarism and collusion, answer choices were also randomized so that each student would see answer choices in different order. As a further precaution, alphabets for answer choices (a, b, c, and d) were removed and replaced with a tick box. The scores of the quizzes were made available through the online testing portal immediately after the submission of the tests by each student. The students were allowed to check their answers against the actual answers after everyone completed their tests.

DATA AND PROCEDURE

Data for the study was collected from the university's central database for the years 2013 and 2014 after receiving ethics approval from the university's Ethics Office. In 2014, 46 students were enrolled, an increase of four (4) students from 42 students enrolled in 2013. All students attempted all assessment tasks in both years, so the data comprises of assessment marks of 100% students on record when the results were finalized at the end of semester two each year (that is, December).

The marks of the students are analyzed in SPSS, Eviews and in Excel. A number of statistical tests are used to analyze the collected data. To learn about the characteristics of the marks in different assessment items, descriptive statistics of all assessment items are analyzed. To ascertain the relations between different assessments items, Pearson bi-variate correlations are used. To determine the effect of intervention on students' marks, an independent sample t-test procedure is used to compare and contrast the marks in different assessment items during 2013 and 2014. Finally, to determine the overall achievements from the intervention, test of proportions of different grades during 2013 and 2014 is used. The analysis and the discussions of the statistical tests are presented next.

RESULTS AND DISCUSSIONS

A number of statistical tests are used to analyze the results of different assessment items during the years 2013-2014. The descriptive statistics below summarizes the marks in different assessment items, after the adjustments, in 2013 and 2014.

Table 1
DESCRIPTIVE STATISTICS OF ASSESSMENT TASKS 2013- 2014

	Final exam (60%)		Essay (20%)		Mid-term (20%)	
	2013	2014	2013	2014	2013	2014*
Mean	34.29	35.43	15.51	15.15	11.04	10.83
Median	36.00	35.77	15.63	15.60	11.25	11.00
Maximum	49.00	54.00	17.63	19.55	15.00	14.50
Minimum	0.00	17.08	13.00	0.00	6.00	6.00
Std. deviation	11.07	7.62	0.89	3.12	2.06	2.27
Probability	0.00	0.78	0.00	0.00	0.52	0.49
Observations	N =42	N=46	N =42	N = 46	N = 42	N =46

*adjusted to reflect the total of 2013 mid-term marks

Table 1 above shows the marks distribution of the students enrolled in both years. The table shows that the average marks in the assessment items in 2013 were better than 2014 assessment items. Though the final marks in 2014 were slightly better in absolute terms, the median marks in 2014 (35.77) was inferior to 2013 marks (36.00). The descriptive statistics alone is not sufficiently informative to determine if an intervention in the form an assessment change was effective. In 2014, the change to open-book online examinations is the intervention used to improve the students' engagement with the learning activities and improve the acquisition of skills throughout the semester and be able to keep these skills for the future such as for their jobs and for management accounting subjects taken at professional levels. The correlations table below summarizes the results of causality between different assessment items during 2013 and 2014.

Table 2
CORRELATIONS BETWEEN DIFFERENT ASSESSMENT ITEMS IN 2013

		Essay	Mid-term
Mid term	Correlation	.365*	
	Sig.	0.017	
Final	Correlation	.373*	0.235
	Sig.	0.015	0.134
* Correlation is significant at the 0.05 level (2-tailed).			

*5% level of statistical significance

Table 2 above reports the correlations between all assessment items in 2013. A significant correlation between the essay and the final examination marks is observed. The correlation between the essay marks and the mid-term marks is seen as a surprise as the structures of these assessment items are different. The mid-term examination was a closed book multiple-choice exam, and the essay was a take-home group assessment task aimed to improve students' literacy skills. However, the results in Table 2 shows no significant correlation between the mid-term and the final examination marks. Though both assessment pieces required students to solve problems in supervised exam conditions, no apparent connection in the form of a significant correlation is observed between these two assessment pieces. Quite surprisingly a significant correlation is observed between the essay and the final examination marks. From the analysis of the content of the final examination of 2013, it can be inferred that the students' literacy helped the students in the final examination. The final examination in 2013 was quite challenging in that the questions were lengthy, verbose and required significant level of

comprehension skills in a timed test environment. Failure to comprehend the questions and operationalize the variables before solving the problems could have been quite disastrous to students' performance. The concerns over the students' engagement in learning activities in the subject required a reappraisal of the assessment structure in 2014. The mid-term was replaced in 2014 with three online open book take-home examinations, which followed relevant online mock practice exams from each exam topic. The objective was primarily to engage the students to continuous learning of subject materials throughout the semester and also to maintain the rigor of teaching and learning in the subject. An analysis of the correlations between different assessment items of 2014 is reported in the table below.

Table 3
CORRELATIONS BETWEEN DIFFERENT ASSESSMENT ITEMS IN 2014

		Adjusted final	Quiz01	Quiz02	Quiz03	Essay
Quiz01	Correlation	0.243				
	Sig.	0.104				
Quiz02	Correlation	0.234	0.207			
	Sig.	0.118	0.167			
Quiz03	Correlation	0.222	.416**	.489**		
	Sig.	0.138	0.004	0.001		
Essay_2014	Correlation	.368*	0.146	0.217	0.196	
	Sig.	0.012	0.333	0.148	0.192	
Average quiz marks	Correlation	.307*	.724**	.741**	.821**	0.244
	Sig.	0.038	0.000	0.000	0.000	0.102
*Correlation is significant at the 0.05 level (2-tailed).						
**Correlation is significant at the 0.01 level (2-tailed).						

Table 3 above reports the presence of significant correlations between the essay and the final examination marks, as observed in 2013 as well. The online quizzes are not significantly correlated to the final examination marks, but average quiz marks (aggregated) and the final examination marks are significantly correlated. Significant correlations are also observed between quiz one and three, and quiz two and three, which suggests that students who performed well in quiz one and two also performed well in quiz three. In Table 3 above, the other assessment piece (the essay) is kept as a control variable so that the impact of the intervention can be observed in terms of improvements in marks in the final exam. To determine the impact of the interventions, a comparison of marks between different assessment items is reported in Table 4 below.

Table 4
INDEPENDENT SAMPLE T-TEST OF DIFFERENT ASSESSMENT ITEMS

Overall grades	2013	2014	t- value	probability
Final exam	34.29 (11.07)	35.43 (7.62)	0.556	0.573
Class test/average quiz	11.04 (2.06)	10.83 (2.27)	-0.441	0.661
Group Essay	15.51 (0.89)	15.15 (3.12)	-0.767	0.447
Overall marks in the subject	63.80 (10.77)	65.02 (12.29)	0.491	0.624

In the Table 4 above, the results report no apparent significant differences in assessment marks during the years 2013 and 2014. The results above show that the final examination marks in 2014 improved slightly (1.13 in absolute terms or 1.89%) over 2013 marks (t= 0.553 and p= 0.709). Marks in the other two assessment pieces declined in 2014, but the decline was not statistically significant. The decline in mid-term marks, from 11.04 to 10.83 was not statistically significant (t= -0.433, p=0.3329). The standard deviation of marks in 2014 is larger while the average score is lower than the marks in 2013 (average = 11.04, standard deviation = 2.06). The variability in marks in 2014 may be due to the level of difficulty invoked to control for cheating in take-home quiz examinations. The essay marks reveal a similar story of decline from 2013 marks, from an average of 15.51 (standard deviation of 0.89) to 15.15 (standard deviation of 3.12) in 2014. The decline in marks, however, is not significant at any statistical level (t=-0.751, p= 0.2297). The variability of essay marks in 2014 is quite noticeable. One of the possible causes may be the efforts required in the subject, that is, in 2014 there were at least six (6) practice tests and another three (3) graded quizzes which collectively required students to acquire critical reasoning and problem-solving skills.

A departure from these nine piecemeal assessments, mostly problem solving in nature, to a different format of assessment requiring literacy skill, from week 7 to the submission of the essay in week 10, may have added some challenges to the majority of the students doing the subject. This challenge was, apparently, not well handled by the students as evidenced by the decline in the average marks and the increase in standard deviation of the marks in the essay in 2014. Even though there were changes in marks in different assessment items, the ultimate goal was to achieve a better outcome, in terms of intrinsic gain, that is, the acquisition of problem-solving skills and information literacy, and extrinsic rewards, that is, an improvement in grades and overall pass rates in the subject. A comparison of the number of students in different grade categories below sheds some lights on this issue.

Table5
TEST OF PROPORTIONS (Z-TEST) OF STUDENTS' COMPARATIVE PERFORMANCE

Letter grade	2013		2014		Z-value	Probability
Fail	4	9.50%	2	4.30%	0.9622	0.3371
Pass	11	26.20%	19	41.30%	-3.389	0.0007**
Credit	19	45.20%	17	37.00%	0.7892	0.4295
Distinction	8	19.00%	5	10.90%	1.08	0.2801
High Distinction	0	0.00%	3	6.50%	-1.68	0.092*
	42	100.00%	46	100.00%		
** significant at 5% level						
*significant at 10% level						

Table 5 above reports the results of test of proportions of two independent samples (2013 and 2014). The results suggest that there is a difference in proportions of students receiving the Pass and High Distinction (HD) grades between 2013 and 2014, and the differences are statistically significant: the Pass grade recipients are significant at 1% level (Z = -3.389, p = 0.0007) and the High Distinction grade recipients are significant at 10% level (Z = -1.68, p – 0.092). The rises in these two categories of student numbers and proportions were counterbalanced by a decline in Credit and Distinction category student numbers. The decline, however, is not different at any statistically significant level. Finally, the overall failures in 2013 (9.50%) and in 2014 (4.30%) were not statistically different (Z = 0.9622, p= 0.3371). The results

above suggest that overall, the outcomes, in terms of improvements in grade categories, were achieved from the intervention. A slight decline in marks, however, may be due to cohort issue or the number of assessment items in the subject (5 in 2014 compared to 3 in 2013).

CONCLUSIONS

The study seeks to understand the effect of an intervention, in the form of a change in an assessment item, on students' learning habits and learning outcomes of a third-year management accounting subject taught at a regional university in Australia. Two objectives are examined in this paper. The first objective seeks to understand the effect of an intervention (in the form of a change from a paper-based mid-term examination to three online open-book short quizzes) on students' intrinsic learning developments, that is, a change in students' learning habits throughout the semester so that students' attention is moved away from an exam-centered learning to continuous learning and improvement. The finding is that students' study habits changed as a result of the intervention assessment (online open-book quiz) in 2014. Significant correlations between different assessment items, the essay, three quizzes and the final examination, all significant at 5% level, suggest that the students were more involved in learning activities than before. The increased demands to complete more formative and summative assessment items may have driven the learning habits of the students throughout the semester.

The second objective seeks to understand the effect of the intervention on students' extrinsic rewards from the continuous learning activities, that is, a change in grades and overall pass rate in the subject. The findings are that the changes in learning habits affected the average marks in the final examination of 2014 but the marks in other assessment items, that is, average mid-term and the essay, declined in 2014 over 2013 marks. Though the declines are not statistically significant, it suggests that the students were overwhelmed with more assessments in 2014 over the number of assessments in 2013. The results also suggest an improvement of grade distribution over 2013, there were more students in Pass and High Distinction categories in 2014, and the differences were statistically significant within 10% level. Thus, the findings partially support the prior literature on assessment intervention benefits (see for example, Aisbitt & Sangster, 2005; Greer, 2001; Hernández, 2012; Marriott & Lau, 2008). From the instructor's point of view, the reduction in failures from 9.50% to 4.30% was noteworthy though the decline was not statistically significant at any level of confidence.

The study has obvious limitations of any study. Only one subject is examined over two years. The findings can be validated by repeating this study in other subjects with similar subject content, in other assessment formats and in other academic institutions. Other confounding influences such as students' perception about open book examinations, commitments of time and preparation for the online quizzes and time allocation to other subjects based on the belief that open book exams need less time, may have affected the results of this study. The inclusion of these variables in future studies may be worthwhile. Only two years of data is used to report the findings from the intervention. Future research may look into time series data for patterns of effects from an intervention reported in this paper.

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REFERENCES

Aisbitt, S., & Sangster, A. (2005). Using internet-based on-line assessment: A case study. *Accounting Education: an international journal,* 14(4), 383-394.

Biggs, J. B. (2011). *Teaching for quality learning at university: What the student does*: McGraw-Hill Education (UK).

Boud, D. (2000). Sustainable assessment: rethinking assessment for the learning society. *Studies in continuing education,* 22(2), 151-167.

Brown, G. A., Bull, J., & Pendlebury, M. (2013). *Assessing student learning in higher education*: Routledge.

Brown, S. (1999). Institutional strategies for assessment. *Assessment matters in higher education: Choosing and using diverse approaches*, 3-13.

Brown, S. (2004). Assessment for learning. *Learning and teaching in higher education,* 1(1), 81-89.

Bull, J., & McKenna, C. (2003). *A blueprint for computer-assisted assessment*: Routledge.

Carless, D. (2007). Learning-oriented assessment: conceptual bases and practical implications. *Innovations in Education and Teaching International,* 44(1), 57-66.

Gibbs, G., & Simpson, C. (2004). Conditions under which assessment supports students' learning. *Learning and teaching in higher education,* 1(1), 3-31.

Greer, L. (2001). Does changing the method of assessment of a module improve the performance of a student? *Assessment & Evaluation in Higher Education,* 26(2), 127-138.

Hernández, R. (2012). Does continuous assessment in higher education support student learning? *Higher Education,* 64(4), 489-502.

Joughin, G. (2009). *Assessment, learning and judgement in higher education*: Springer.

Knight, P. (2001). *A briefing on key concepts: Formative and summative, criterion and norm-referenced assessment*: Learning and Teaching Support Network.

Kuh, G. D. (2001a). The National Survey of Student Engagement: Conceptual framework and overview of psychometric properties. *Bloomington, IN: Indiana University Center for Postsecondary Research*, 1-26.

Kuh, G. D. (2001b). Assessing what really matters to student learning inside the national survey of student engagement. *Change: The Magazine of Higher Learning,* 33(3), 10-17.

Kuh, G. D. (2003). What we're learning about student engagement from NSSE: Benchmarks for effective educational practices. *Change: The Magazine of Higher Learning,* 35(2), 24-32.

Lewis, D. J. A., & Sewell, R. E. (2008). Instructional design and assessment: Providing Formative Feedback From a Summative Computer-aided Assessment. *American Journal of Pharmaceutical Education,* 71(2), Article ID 33.

Light, G., Calkins, S., & Cox, R. (2009). *Learning and teaching in higher education: The reflective professional*: Sage.

Marriott, P., & Lau, A. (2008). The use of on-line summative assessment in an undergraduate financial accounting course. *Journal of Accounting Education,* 26(2), 73-90.

Oliver, R. (1998). Experiences of assessing programming assignments by computer. *Computer based assessment, 2*.

Ottewill, R., & Macfarlane, B. (2003). Pedagogic challenges facing business and management educators: Assessing the evidence. *The International Journal of Management Education,* 3(3), 33-41.

Purvis, R. F. (1990). *Continuous assessment*: Scottish Central Institutions Committee for Educational development.

Race, P. (1995). The art of assessing 1. *New Academic*(Autumn), 3-6.

Rowntree, D. (1987). *Assessing students: How shall we know them?* : Taylor & Francis.

Rust, C. (2001). *A briefing on assessment of large groups*: LTSN York.

Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional science,* 18(2), 119-144.

Sangster, A. (1996). Objective tests, learning to learn and learining styles. *Accounting Education, 5*(2), 131-146.

Trotter, E. (2006). Student perceptions of continuous summative assessment. *Assessment & Evaluation in Higher Education,* 31(5), 505-521.

CRITICAL THINKING SKILLS FOR BUSINESS SCHOOL GRADUATES AS DEMANDED BY EMPLOYERS: A STRATEGIC PERSPECTIVE AND RECOMMENDATIONS

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ABSTRACT

The AACSB's (international accreditation body for business schools) call for business majors to be critical thinkers (CT) is not a new phenomenon but a renewed emphasis on a skill that has been in demand for some time. Recently, the results of surveys conducted by the Chronicle of Higher Education (Supiano 2013) and by the Association of American Colleges and Universities (2013 Press Release), found that American adults (n=1000) and employers (n=263) want colleges to produce graduates who can think critically and creatively, and can communicate orally and in writing. These results suggest that faculties teaching in academia should have a clear understanding of CT so that they can teach these skills to students. There exists, however, in the literature (as well as the authors' experience) a certain level of ambiguity in the understanding of CT, and raises the fundamental question: Is analytical skill the same as CT skill? This ambiguity leads the authors to believe that, in the absence of a clear definition of CT, there is a wide difference in faculty perceptions of CT. Thus, there are two issues. First, is there a common perception of the concept of CT among business school faculty and secondly, do business students actually learn how to think critically. The authors empirically test to understand and address the differences that possibly exist with instructors' perceptions of CT. The concept of critical thinking is discussed based in the literature review. The instructors' perceptions of CT are based on a survey of their approach to teaching and defining CT in business schools. The results of the literature review and the surveys are then analyzed and compared to understand the instructors' differences in perceptions of CT. Given the result of data analysis, the authors recommend that business schools develop a common understanding of what constitutes CT skills and then provide a standard where an alignment between business schools and their faculty can focus on CT skills in addition to analytical skills.

INTRODUCTION

This paper is the first of what is envisioned to be a series of articles dealing with critical thinking (CT) in the business school curriculum. This research will benefit not only business majors but it will have a more universal application across all majors. Why? Most university graduates enter the work force as either an employee or entrepreneur.

Students' ability to think critically has always been a key concern of business organizations and the general public. When asked which skills new college graduates needed to improve most, more than half of the respondents to the question on The Wall Street Journal's

survey of 479 college recruiters named some combination of critical thinking, problem solving skills and the ability to think independently (WSJ Sept. 13, 2010).

The Wall Street Journal's finding echoes what the Business Roundtable, a network of company chief executives, found in a 2009 survey of 600 employers. Despite the recession and high jobless rate, 61% of respondents said it was difficult to find qualified employees. Susan Traiman, the Roundtable's director of public policy, states that the skills companies felt were most lacking are work ethic, communication skills and analytic skills (Taylor, Marisa, Nov. 2, 2013). The 2012 Critical Skills Survey, which polled 768 managers and executives, found that employers rated most of their employees as either average or below average in communication skills (62 percent), creativity (61 percent), collaboration (52 percent), and critical thinking (49 percent). Three-quarters of respondents also reported that these skills will only become more important as the American workplace continues to change and expand globally. (Bascuas, Katie, February 20, 2013, accessed on Nov. 2, 2013). The Association of American Colleges and Universities reports that a National Survey of Business and Nonprofit Leaders indicated that more than 75 percent of those surveyed say they want more emphasis on five key areas including: critical thinking, complex problem solving, written and oral communication, and applied knowledge in real-world settings. The survey further indicated that employers are more interested in critical thinking and problem solving than the college major (aacu.org, 2013, accessed on Nov.12, 2013). A study by Kaplan University's College of Business and Technology discovered that critical thinking and written communications are the most important skills college graduates majoring in business or information technology programs will need to succeed in the workforce. (Brooks, 2003). A recent public opinion survey found that 63% of business leaders and 73% of American adults agree that to increase employment rates there should be greater push for college students to graduate with communication, writing, and CT skills (http://chronicle.com/article/Employers-Want-Broadly/138453/ accessed 11/11/2013). In another national survey of 318 business and non-profit leaders, 93% say that "a demonstrated capacity to think critically, communicate clearly, and solve complex problems is more important than a candidate's undergraduate major." The survey further indicated that more than 75% of employers want more emphasis on 5 key areas including: critical thinking, complex problem-solving, written and oral communication, and applied knowledge in real-world settings. Further, senior-executive professionals report that the competency that next-generation leaders lack the most is strategic thinking, which hinges on CT skills (Association of American Colleges and Universities, 2013 Survey Summary).

The purpose of the current paper is to investigate business professors' understanding of CT and to discover if similar pedagogical methods are used in the classroom to teach CT**.** This is important because the AACSB standards include the expectation that CT be taught to students as requested by employers. Cumulatively, the authors have several years of experience dealing with an experiential pedagogy that relies heavily on students' ability to think critically in order to successfully gain the educational value of the experiential class. It has been observed that students are, for the most part, not able to think critically even though the class is offered to senior undergraduates and graduate students. The reasonable expectation is that students should come to this class with some CT skill since CT cannot be perfected in a single class offered for one semester. The fact that the authors have had a different experience than the expectation gives rise to the question as to why students are not learning CT skills. One possible explanation is that professors do not understand CT in a consistent way or approach teaching it in a manner that

would reinforce the concept from class to class. A review of the literature provides some insight into why there may be an inconsistency of understand CT among professors.

BACKGROUND

The term "critical thinking" was first used in the early 20th Century by the philosopher and educator, John Dewey (Dewey, J. 1993), shortly after sociologist W. G. Sumner's discussion about developing the "critical faculty"(Sumner, W. G. 1906). However, its roots can be traced to the great philosopher, Socrates, about 2400 years ago. His greatly revered and feared Socratic Method of learning is a teaching strategy still used today. Plato and Aristotle followed with skeptical beliefs that required a process of logic and reasoning when evaluating any thesis of belief (Monk, R. and Raphael, F. 2000). Over time, great scholars and thinkers such as Aquinas, Bacon, Descartes, Locke, Newton, Smith, and Darwin applied critical thinking constructs to religion, education, politics, society, government, and science. In 1956, Benjamin Bloom formulated his iconic classification of educational objectives for curriculum design and student learning of higher order (critical) thinking (Bloom, B. S. 1956). This led to a plethora of articles during the next 35 years in the academy.

LITERATURE REVIEW

The literature on critical thinking has roots in two primary academic disciplines: philosophy and psychology (Lewis & Smith, 1993). Sternberg (1986) has also noted a third critical thinking strand within the field of education. These separate academic strands have developed different approaches to defining critical thinking that reflect their respective concerns (Lai 2011).

The Philosophical Approach

According to Lai (2011) "the writings of Socrates, Plato, Aristotle, and more recently, Matthew Lipman and Richard Paul, exemplify the philosophical approach. This approach focuses on the hypothetical critical thinker, enumerating the qualities and characteristics of this person rather than the behaviors or actions the critical thinker can perform (Lewis & Smith, 1993; Thayer-Bacon, 2000)." This tradition also includes the quality of the thinking as well as the personal traits of the thinker. As expected in a philosophical approach, the process of critical thinking must apply the formal rules of logic (Lai 2011). Lai (2011) notes that Sternberg felt the philosophical approach is limited by its lack of correspondence to reality at times.

The Cognitive Psychological Approach

Cognitive psychologists, particularly those immersed in the behaviorist tradition and the experimental research paradigm, view critical thinking differently than do those in the philosophical tradition. First, they focus on actual thought rather than how people should think under ideal conditions. Second, critical thinking is defined by the actions or behaviors of critical thinkers (Sternberg, 1986).

The Educational Approach

Researchers in the field of education have also been involved in discussions of critical thinking. Prominent research in this area has been conducted by Benjamin Bloom and his associates (1956). "Their taxonomy for information processing skills is one of the most widely cited sources for educational practitioners when it comes to teaching and assessing higher-order thinking skills. Bloom's taxonomy is hierarchical, with 'comprehension' at the bottom and 'evaluation' at the top. The three highest levels (analysis, synthesis, and evaluation) are frequently said to represent critical thinking (Kennedy et al., 1991)."

Lai (2011) notes that while there are differences between these three approaches, there are some similarities. Among these are analyzing, inferring, evaluating, and decision making. These similarities hide an important difference, however**.** For example, there is no standard definition of critical thinking nor is there agreement on whether it involves human traits, cognitive skills, or the educational or emotional level one needs to attain in order to think critically. To illustrate this point, we will provide several definitions from the literature. One research study noted that critical thinking is "the systematic evaluation or formulation of beliefs, or statements, by rational standards" (Vaughn, Lewis and Chris MacDonald 2010). Another, definition of critical thinking comes from a statement by Michael Scriven & Richard Paul (1987), presented at the 8th Annual International Conference on Critical Thinking and Education Reform, Summer 1987.

> *"Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. In its exemplary form, it is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness."*

A brief list of other definitions will illustrate our point:

1. "skillful, responsible thinking that facilitates good judgment because it 1) relies upon criteria, 2) is self-correcting, and 3) is sensitive to context" (Lipman, 1988, p. 39);
2. "purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or conceptual considerations upon which that judgment is based" (Facione, 1990, p. 3)
3. "disciplined, self-directed thinking that exemplifies the perfections of thinking appropriate to a particular mode or domain of thought" (Paul, 1992, p. 9)
4. "thinking that is goal-directed and purposive, thinking aimed at forming a judgment, where the thinking itself meets standards of adequacy and accuracy (Bailin et al., 1999b, p. 287)
5. "judging in a reflective way what to do or what to believe" (Facione, 2000, p. 61)

BUSINESS SCHOOLS AND CT

Historically, business schools have lagged in embracing the idea of teaching students to think critically. The earliest works discussing CT came first from the field of Accounting then followed by Management and Marketing. In 1979 Shute presented a paper, "Accounting students

and abstract reasoning: an exploratory study", at the American Accounting Association's Sarasota, Florida, meeting wherein he related cognitive development to exam performances in several accounting classes (Shute G. E. 1979). In 1983, Schon studied five professions—including Management—to determine how practitioners made decisions which included a chapter called " The Art of Managing: Reflection-in-Action Within an Organizational Learning System" (Schon, D. 1983). A second CT Accounting article by J.H. Amernic and T.H. Beechy (1984) conducted a similar study to Shute's in an introductory financial accounting course. In 1986, CT appeared to be gaining some momentum in the Management domain. Leavitt's book, Corporate Pathfinders, examined three leadership styles including the analytical problem solver (Leavitt, H. 1986) and D. A. Cowan developed a problem recognition process and related it to empirical testing in Management education (1986). The first Marketing-related CT article also appeared in 1986 aptly titled, "Critical thinking is important to marketing students" (Capella, L. M. and Robin, D. R. 1986). Berdine (1987) advocated debate as a way to foster CT in the marketing classroom.

Finally, just over 30 years after Bloom's taxonomy was posited for schools of education and after the above-noted CT writings in the three business disciplines (Accounting, Management and Marketing), Porter & McKibbin's (1988) comprehensive study of business schools found that they were too heavily focused on analytical problem solving and more attention was needed in designing pedagogy that got students to identify problems, one of the hallmarks of CT. After this study was published, a number of articles including Braun (2004), Wind (1996), McEwen (1994), Smith (2003), Snyder& Snyder (2008), Tempelaar (2006), and Bycio & Allen (2009) advocated CT as an effective pedagogy for business educators.

A plethora of articles now exist about CT in business education including almost every discipline. For example, in Accounting, Rodgers (1992) examined the cognitive-developmental perspective in designing class assignments that develop CT skills while Wolcott and Lynch (1997) employed a reflective judgment developmental process to do the same. Springer and Borthick (2004, 2007) utilized simulations to develop CT skills in an introductory course as well as in junior-level financial accounting and Jenkins (1998) found that CT is a valid predictor of student performance in an upper-division auditing course. Dudley, Davis and McGrady (2001) studied CT skills in a financial accounting class focused on a stock portfolio group project.

Bloom's taxonomy is used directly in the Management curriculum as a strategy to develop CT (Athanassiou, McNett and Harvey 2003), Smith (2003) proposes a broad framework of CT and decision-making content coupled with problem solving skills as a pedagogical approach in both business school curricula and the management classroom, Cunliffe (2004) uses a journaling technique to teach students how to be a critically reflexive manager, Bigelow (2004) designs a 7-step problem-solving model to develop CT skills for dealing with unstructured problems that will be encountered as a practitioner, and Meisel and Fearon (2006) argue that ethical leadership decision making is directly correlated to the ability to think critically especially when there is uncertainty in the organizational or external environment.

Since the 1990s, CT pedagogy has been gaining momentum in the Marketing classroom as well. Total quality management concepts were introduced in a service-marketing course (Ronchetto and Buckles 1994); Bloom's taxonomy helped develop case studies to promote CT skills in a professional sales course (Clabaugh, Forbes and Clabaugh 1995); a marketing research course uses reflective learning in group activity(Graeff 1997); reflective learning was also empirically measured in a MBA program in order to design a tool for marketing educators (Peltier, Hay, Drago 2005); critical reflection is urged for the marketing curriculum (Catterall,

Maclaren and Stevens 2002); classroom debate augments CT skills(Roy and Macchiette 2005); curiosity as a CT teaching strategy (Hill and McGinnis 2007); and**,** a structured case analysis promotes CT skills in a marketing strategy course (Klebba and Hamilton 2007). Bloom's taxonomy frames learning levels and assessment for international marketing students (Manton, English and Kernek 2008); historical orientation in the marketing curriculum arguably enhances CT skills (Petkus 2009); an advertising principles course using a case study increased CT skills (Celuch and Slama 1999); and, videotaping sales team presentations with critique was utilized as active learning to develop CT (Corbett, Kezim, Stewart 2010).

CT strategies and pedagogy can be found now in almost all business school disciplines: finance (Bean, 1996; Saraoghu, Yobaccio, and Louton, 2000; Robertson, Bean and Peterson, 2008; Carrithers and Bean, 2008; Carrithers, Ling and Bean, 2008); economics (Scheffrin, 1996; Greenlaw and DeLoach, 2003); business communication (Muir, 1996; Seifert, 2009); business law (Browne and Keeley, 2003; Dykstra, 2008; Cooley, 2009); negotiation (Page and Mukherjee, 2007); management information systems (Dalal, 1994; Mukherjee, 2004;Wang and Wang, 2011); international business (Whatley and Dyck, 2000; Gomes, Janavaras and Cheema 2008); management science (William and Reid 2010); operations research (Jackson, 2001); e-commerce (Ngai,2007); and human resource development (Lohman, 2002; Corley and Eades, 2004; Van Woerkom, 2004); leadership (Densten and Gray, 2001).

Few scholars have empirically examined student and faculty perceptions of CT. In the four studies found in the literature we learned that the instant study surpasses the others in breadth and scope. The Beachboards (2010) examined approximately 2000 survey responses from the National Survey of Student Engagement for 2005. The survey responses are self-reported by undergraduates with unreported majors. Notwithstanding five noted research limitations including potential method bias in the survey instrument as well as the use of cross-sectional data to support a causal argument, the study found that increasing the number of CT assignments correlates with improved overall academic development and job preparation. Unfortunately, this study does not focus on business students and fails to inform as to the number of business majors in the sample.

Choy and Cheah (2009) surveyed 30 university "teachers" from different institutions of higher education in Malaysia to determine how they perceive CT in the classroom. Three questions were asked concerning their perception of CT, their perception of student CT skills, and their perception of their role in utilizing CT in the classroom. The survey results, not unlike the diverse range of operational definitions of CT as provided by faculty in the instant study, supported the conclusion that teachers need to gain a better understanding of the CT concept so that they can effectively design their CT pedagogy and strategies. This lack of understanding further obfuscates the teacher's ability to know whether the student can think critically or has merely mastered the concepts and course materials .Once again, this study did not pertain to business faculty perceptions nor did it empirically measure student perceptions.

Another self-reporting study of the MBA program at the University of Malaya did measure student perceptions of graduates regarding the quality of their student experience. It was determined that analytical and strategic thinking plus decision-making with incomplete information (uncertainty) and creative problem solving skills were significantly increased (Sulaiman and Mohezar, 2008).

INTERNATIONAL CT LITERATURE

In the new global economy of the 21st Century business schools and universities in general are aware of the need to produce highly skilled graduates who can be productive in the workplace (Andrews and Higson, 2008). Several articles and studies have surveyed employers to determine their perception of these graduates and their conferring institutions and CT skills are a redundant theme.

A survey of employers in Australia (AC Neilsen research Services, 2000) found university graduates lacking in problem solving skills and creativity. Andrews and Higson (2008) interviewed business graduates and employers in four countries—UK, Romania, Slovania and Austria—and learned that soft skills including being able to plan and think strategically, being creative and working with uncertainty, were most valued. An Australian survey of employers and graduating accounting students indicated that analytical and problem solving skills were ranked highest (out of 17 attributes) by employers but CT was ranked near the bottom while students ranked those skills fourth and fifth, respectively (Kavanagh and Drennan, 2008). A survey of external auditors in Turkey demonstrated that both CT and analytical skills continue to be important attributes for accounting graduates (Uyar and Gungormus, 2011).

Two substantial studies examined higher education in Scotland and the UK, in particular, and in the European Union to determine how teaching and learning can be improved and modernized. The University of Glasgow School of Education's Scottish Council for Research in Education Centre in partnership with the charitable Edge Foundation was commissioned to study employer perceptions of job-readiness skills of new university graduates (Lowden, Hall, Elliott and Lewin, 2011). This was prompted by a 2010 Sodexo University Lifestyle Survey which reported that 73% of the responding students indicated they went to a university to improve their employment prospects (Foreword,iii). Some key findings and recommendations were:

1. Employers expect graduates to have CT and problem solving skills,
2. Higher education courses do not meet employers' needs and their requested input for course design is often ignored,
3. Higher education institutions systematically fail to include employability in their mission and promotion to students,
4. That there should be a strong partnership between higher education institutions and employers with employability at the center of higher education strategic planning,
5. That internships and work-based/experiential learning opportunities are being used in some business curricula while the humanities and social sciences need greater use of these approaches to employability,
6. That career services should have more resources and a stronger voice with faculty and departments to plan and implement employability activities.

In 2013, the European Union's Commission for Education, Culture, Multilingualism, Youth and Sport, commissioned a "High Level Group" to interview educational experts, student and teacher organizations, and other European stakeholders in higher education regarding best practices in promoting the highest levels of teaching and learning in a concerted effort to prepare for a new European Education and Training Programme which will begin in 2014. This initiative is focused on modernizing higher education systems and developing new pedagogies to better adapt to a wider diversity of students and more effectively prepare them for a rapidly changing society and employment market. In their report the group developed a checklist of questions for teachers with several centered upon CT pedagogy and assessment:

1. How can I make sure that my course design encourages and requires the active involvement of students in the learning process, e.g. through…problem-based learning?
2. Will my teaching lead students to questioning their preconceived ideas… and thus to 'self-thinking'?
3. Will (my teaching) stimulate critical and inquisitive attitudes?
4. How can I adapt my assessment formats to reflect….problem-based learning?

Finally, the findings indicate that soft skills such as CT and problem solving with enhancement of complex thinking, active learning, experiential learning and critical reflection through appropriate classroom strategies are what 21st century teachers must be trained in and able to implement in order to promote high quality learning (High Level Group, 2013)

Besides the international scholars mentioned above, the CT literature is both varied and pervasive on several continents as the following demonstrate. Critchley (2011) examines CT in UK business schools and explains the need for change along with society, cultures and the labor markets. Both French and Tracey (2010) and Lloyd and Bahr (2010) believe it to be crucial that higher education must understand what CT is and how it can be taught**,** and Egege and Kutieleh (2004) presents the inherent challenges of teaching CT to international students when Confucian reasoning meets Western thinking. There are challenges as well in Malaysian business schools when employing problem based learning strategies which tend to teach this skill indirectly and through implication (Zabit, 2010).Thomas (2011) argues that CT should be taught at the freshman level. Moore (2004, 2011) has written extensively on the debate between the CT generalists and the 'specifists'. Puteh and Hamid (2014) examine the levels of CT proficiency among graduating accounting students in Malaysia with significant differences among universities. Johnstone (2006) determined that graduate students can improve their problem solving skills when given CT exercises.

While acknowledged as important, an examination of the CT literature reveals that there is not an accepted definition. Even more troubling is that this review also indicates that the CT construct itself is not generally agreed upon. Given the importance placed on CT by business and the apparent lack of consensus on what it means to think critically, it is important to determine the degree of difference that exists between professors in understanding the construct, the skills they think are necessary to think critically, and how to teach and measure CT. As a corollary, it would also be instructive to determine not only the differences between professors in a given business major but also the differences between professors teaching in the different majors.

One question this paper strives to answer is the degree to which business school professors understand critical thinking and if they make an effort to teach it to students. Judging from the diversity of thought surrounding this subject in the literature, it would be instructive to determine this. In order to do so, the authors developed a survey which was distributed to professors at five different schools of business and their responses were analyzed. The methodology and survey results are discussed in the next section.

Implications beyond Business Education

The concept of CT extends well beyond the three "strands" and business school curricula as mentioned in this paper. It appears in such diverse fields as history (Frederick, 1991); English (Jackson, B., 1990); geography, earth and environmental sciences (Harrison, M., Short, C. and Roberts, C., 2003); medicine (Pee, Woodman, Fry, and Davenport, 2000; Sobral, 2000); nursing (Jones and Brown, 1993; Hartley and Aukamp, 1994; Rubenfeld and Scheffer, 1995; Colluciello, 1997); industrial technology (Gokhale, 1995); social work (Dempsey, Halton and Murphy, 2001); health sciences (Biggs, Kember, and Leung, 2001; Facioneand Facione, 2008); physical

chemistry (Gurses, Acikyildiz, Dogar, and Sozbilir, 2007); biology (Crowe, Dirks, and Wenderoth, 2008)(102); library science (Spencer and Millson-Martula, 2009); and, physics (Prosser and Millar, 1989).

The two commissioned studies discussed earlier (Scotland/UK and EU) underscore the need to understand the CT construct that the instant paper designed and implemented in determining perceptions of both faculty and students. It is especially important to note that both studies focused an all disciplines of higher education, not solely on business. In fact, the Scotland-UK study specifically recommended that the social sciences and humanities should expand internship and experiential learning opportunities to ensure a higher level of employability upon graduation. This is no different for all countries that are facing great social, cultural and economic shifts in the 21st Century.

The instant study was curious about the degree of understanding of the CT concept by faculty, if and how it was being taught and, if taught, how it was assessed. That data is paramount in determining if institutions of higher education are doing what is necessary to encourage and sustain CT pedagogy across all disciplines.

When student perceptions are surveyed, there is the possibility as occurred in this study that, a "gap" can exist between faculty-student perceptions. When this happens it becomes quite obvious that CT skills are either not being taught or are being taught ineffectively. With all of the diverse non-business disciplines utilizing some modicum of CT pedagogy it is time to discover and "mind-the-gap!"

Scott (2008) reported that this actually occurred in a technology course when students followed a CT strategy of using debate to actively learn. At the end of the course they were asked about their perception of how this technique affected their CT ability. The results revealed that the students' perception of the debate CT strategy was positive and it helped them better learn the materials. They also felt that the debates increased their CT ability.(105) Although not in the business school, this technology professor understood CT, employed a CT strategy as part of her pedagogy and, most importantly, assessed the learning outcomes of her students.

METHODOLOGY

Given the researchers' desire to explore the perceptions faculty has on critical thinking, the survey was developed with open-ended questions. The purpose was to let the respondents express their understanding of CT by not limiting the responses to a set of predetermined answers. According to the authors' view, such an approach may have influenced the results by forcing a certain structure and keywords when the desired outcome was**,** instead, to explore understanding, find comparisons and inferences, and capture diversity in responses based on the analysis of the data (Jackson & Trochim, 2002). Thus, it became imperative to employ a data analysis tool that was well-suited to the design and purpose of this research.

The methodology selected for the process was content analysis, a well-established process in the fields of communications and social sciences (Krippendorff 1989), but also flexible enough to be adapted to other fields and disciplines. According to Krippendorff, content analysis is a research technique for making replicable and valid inferences from data to their context (Krippendorff 1989).

After reading the above definition, one might assume that the term data is not referring only to documents or texts in general. Indeed, the data for content analysis could be nearly all forms of recorded communication (Mayring, 2000). A key factor according to White and Marsh (2006) is that the data communicate a message from the sender to the receiver and even items

such as pictures on web pages could be the objects of content analysis. For the purpose of our research, the data are the written answers that faculty members have provided to the open-ended questions in the surveys.

In employing content analysis as a tool to interpret data and provide context, the researchers understand that there are no systematic rules for analyzing the data (Elo & Kyngas , 2007). However, a decision must be made on whether an inductive or deductive approach should be used (Elo & Kyngas, 2007). Using the inductive approach, the researchers start the analysis of the raw data with little to no preconceptions and without a planned framework for coding the information (Finfgeld-Connet, 2014). In contrast, the deductive approach involves a coding template and guiding frameworks based on previous knowledge (Finfgeld-Connet, 2014, Elo & Kyngas, 2007). In the case examined in this article and according to the authors' previous research, there is a lack of structured knowledge on critical thinking as it applies in the business curriculum. Thus, a decision to use the inductive approach as it applies to content analysis was made.

According to Stemler (2001), one of the simplest ways to conduct content analysis on textual data is to begin with a word-frequency count. In their process, the authors took into consideration the probable presence of synonyms in the text. Furthermore, a weighting factor was not assigned to the important words identified, but plans to do so in more extensive research in the near future are already in place.

Before we proceed with the step-by-step description of the process used to analyze the results of the survey questions, a special mention to the limitations of content analysis must be made. As Krippendorff (1987) notes, statistically significant findings and replication requirements demand many units of analysis as well as fixed and observed categories. However, it is the authors' belief that by doing so, significant communications and respondent diversity could be lost. Thus, this article is not concerned with proving statistical significance of findings as of yet, but rather focuses on the measured perception of critical thinking among faculty from different schools and disciplines.

A survey of college instructors was conducted. The survey contains a set of questions that allow the authors to compile the perception(s) and definition(s) of critical thinking for each instructor. The instructors were also asked what specific CT skills the graduates must possess in their discipline to go into the workforce in that major. The instructors were then asked to describe briefly how they teach and assess the CT skills.

Sample

A sample of faculty from five institutions of higher education was selected for the survey. The number of instructors to be included in the survey varied depending on the institution, the major and whether the instructor agreed to participate in the survey. Institutions selected were based on direct contact of the authors with these institutions. A total of 32 faculty participated in the survey.

Data Collection and Analysis

The data was collected and organized according to the perceptions of the instructors. Similar responses, as determined by the authors, were grouped together. The purpose of the data analysis was to identify commonalities and differences in their perceptions of CT. Due to the textual nature of the data, this study uses content analysis for analyzing the data. Content

analysis is a research technique for systematically analyzing written communication. It has been used to study books, essays, news articles, speeches, pamphlets and other written material (classroom.synonym.com/content-analysis-2670.html -accessed on Dec 30, 2013). Content analysis can be applied to examine any piece of writing or occurrence of recorded communication (https://www.ischool.utexas.edu/~palmquis/courses/content.html - accessed on Dec 30-2013). There are two categories of content analysis – conceptual and relational. This study uses both categories of content analysis. Conceptual analysis refers to concepts used within the text. The number of concepts used and the frequency of their occurrence can be counted. Relational analysis builds on conceptual analysis by examining the relationships among concepts in a text.

Process of selecting CT elements

In order to illustrate how the CT elements were selected for the data analysis, the authors used examples from the responses of the participants. For example, one of the responses to the question "In your view, what are the specific elements of the definition of CT as applied to the major field of study you teach?" the respondent stated "Analysis and synthesis of information along with evaluation – to be able to apply basic principles in new situations and predict response." In this example, the respondent refers to concepts such as one's ability to analyze and synthesize the problem and be able use the basic concepts in new situations. Thus the elements of CT used by the respondent are analysis, synthesis, evaluation, problem formulation / solving and concept. From the relational analysis perspective, it can be inferred that the concepts used in this response are directly related. For example, the individual should be able to analyze the problem and be able to break the problem into small units and evaluate each unit so that the solution can be derived. In another example, the participant's response to the same question was "Questioning assumptions and the soundness of logical constraints in any argument". In this example the concepts used by the respondent are logic, problem domain, and ability to make assumption based on the participant's understanding of the problem. The relationship between these concepts is implied. For example, in order to be able to question the assumptions an individual must understand the problem domain and establish the logical relationship between the variables identified in the problem. Thus**,** the CT elements implied in this response are the ability to use logic when making judgments or arriving at a conclusion, problem solving and formulation, and being able to explore ideas in decision processes.

Using the process described above, the responses of the survey participants are analyzed and the results are summarized in an Excel spreadsheet for overall analysis of the data. Figures 1 through 5 in the next section provide a summary of the description of the results represented in the form of charts.

Statistical Computations

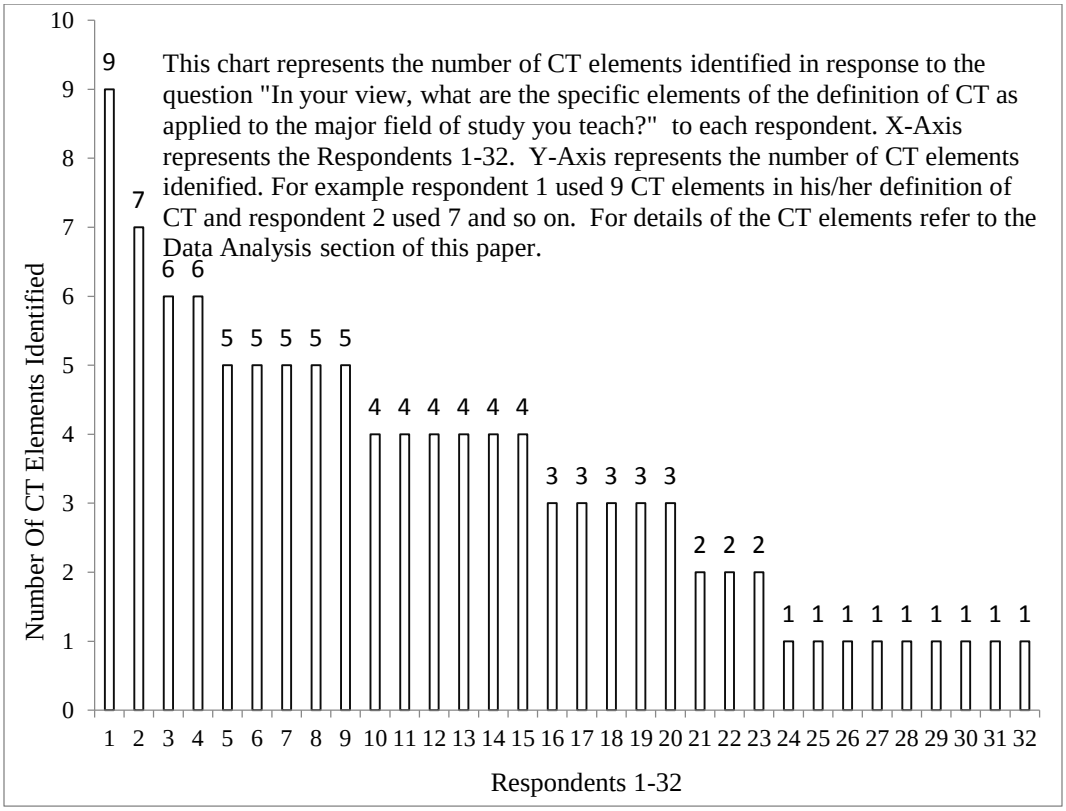
In order to compare the differences in the faculty's perceptions of CT, its elements were organized in Excel spreadsheets in the following manner:

To determine the number of CT elements used by each faculty, the responses to question 1 were organized in rows and the CT elements were organized in columns. Then using the process described above and based on the content analysis the presence of CT element(s) in each response was recorded by marking "X" for each CT element. After analyzing all the responses the totals of each CT element were computed and recorded at the end of the column representing

the CT element as a percentage of total responses (See Figure 2). The total count of the CT elements (rows) was computed by adding the number of "X"s marked for each response. It represents the total counts of CT elements used by each respondent (see Figure 1).

In order to analyze the number of CT skills identified by the respondents, a process similar to the one discussed above was followed. A worksheet was created to arrange the responses in rows and each CT skills in columns. "X" marks were placed for the presence of a specific CT skill identified in each response and both rows and column totals were computed. The row total represents the total number of CT skills identified by each respondent and the total at the bottom of each column total represents the frequency of each CT skill expressed as a percentage of the total number of respondents (see Figure 3).

Figure 1



To analyze the data regarding how faculty teach CT skills, a worksheet showing the responses in rows and methods for teaching CT skills in columns was constructed. Again**,** "X" marks were placed for each method identified in each response. For example, one respondent responded "Students must stay abreast of current news events and discuss their analysis of said events in each class period. Students must present cases and projects and demonstrate a similar thought process as analyzing news event". This response implies that the faculty uses reading outside the class, discussion, analysis, cases and projects to teach CT skills. These methods were then included in the columns. Next, the row totals and column totals were computed. The row totals represents the number different methods used by each respondent and the column totals represents a specific method of teaching CT skills expressed as a percentage of total respondents (see Figure 4).

For comparing the approaches used by faculty to measure CT skills the responses were arranged in rows and the approaches for measuring CT skills were arranged in columns. Similar to processes described above, the responses were analyzed to identify measuring technique by each respondent. Again, the row totals and column totals were calculated. The row totals represent the different approaches used by the respondents to measure CT skills and the column totals represent each method to measure CT skill expressed as a percentage of total respondents (see Figure 5).

Figure 2

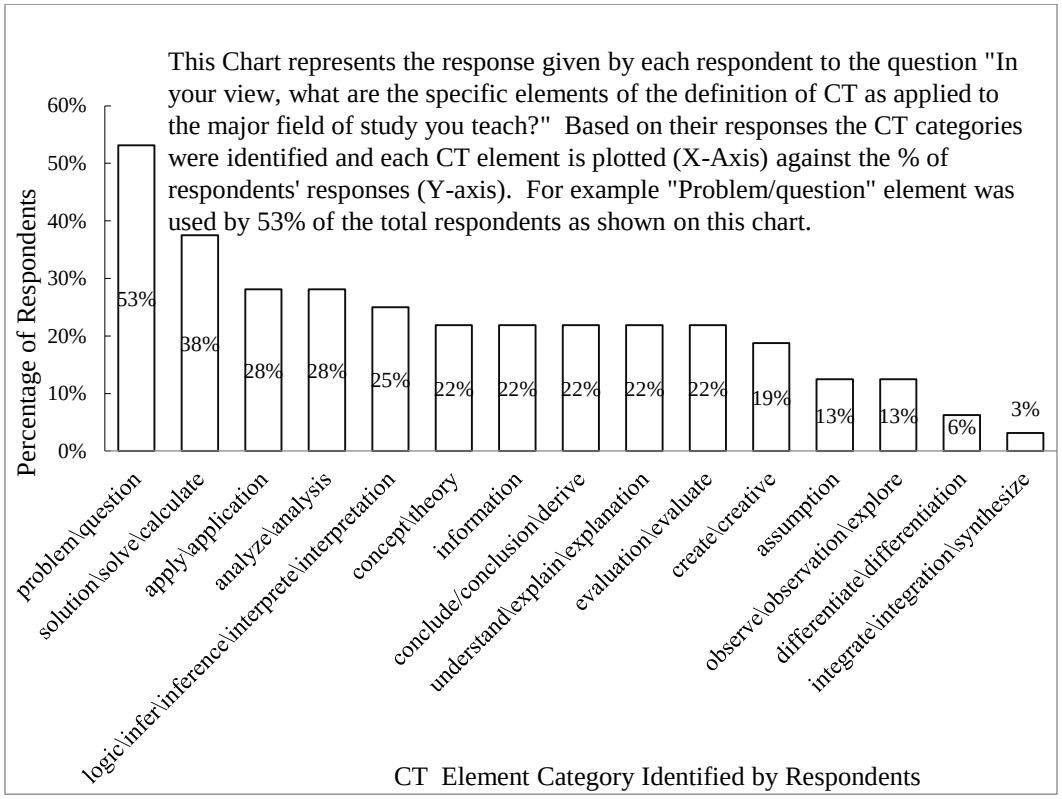
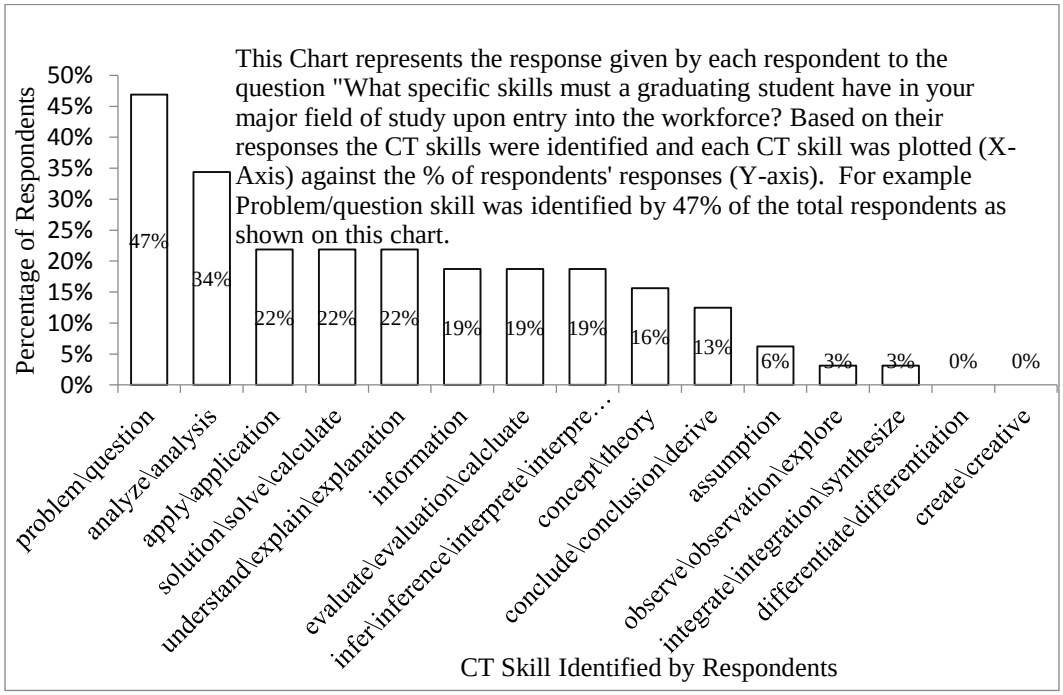


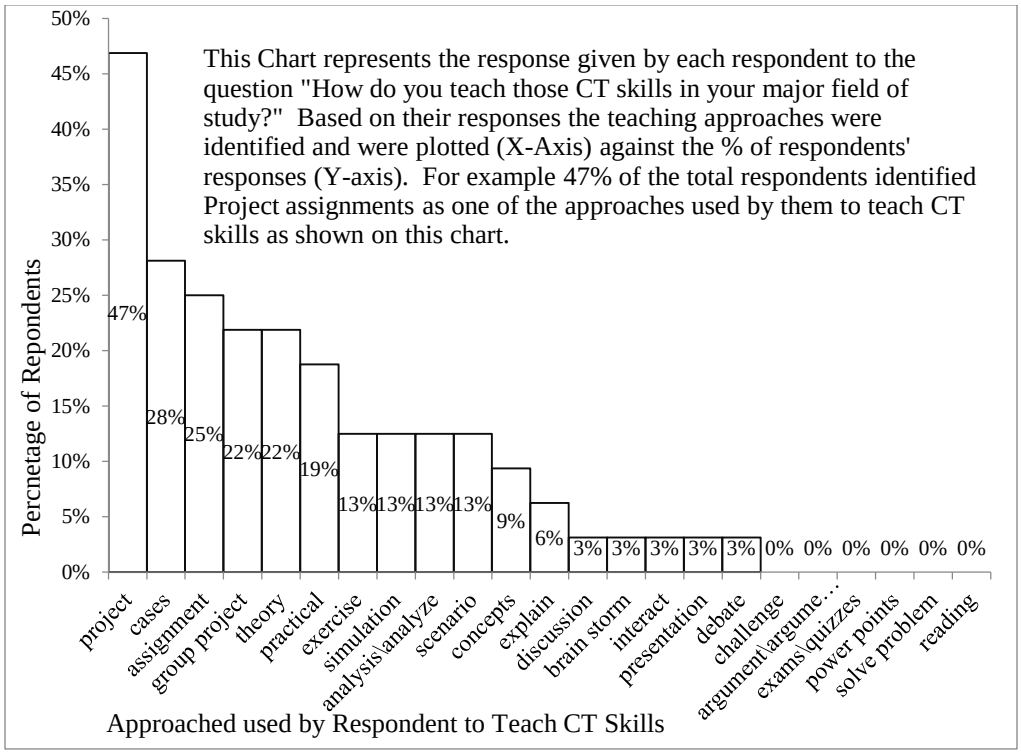
Figure 3



FINDINGS

From the data analysis and the charts represented based on various data categories such as, CT elements derived from CT definitions by the survey participants, approaches used to measure CT skills, and approaches to teach CT skills, it can be inferred that there is a disparity in the perception of the instructors regarding the CT concept**.** The authors' assumptions and observations based on their experience in teaching in schools of business, regarding variations in perception of the concept of CT and how it is taught and measured is supported based on the data. Following are the summary of findings.

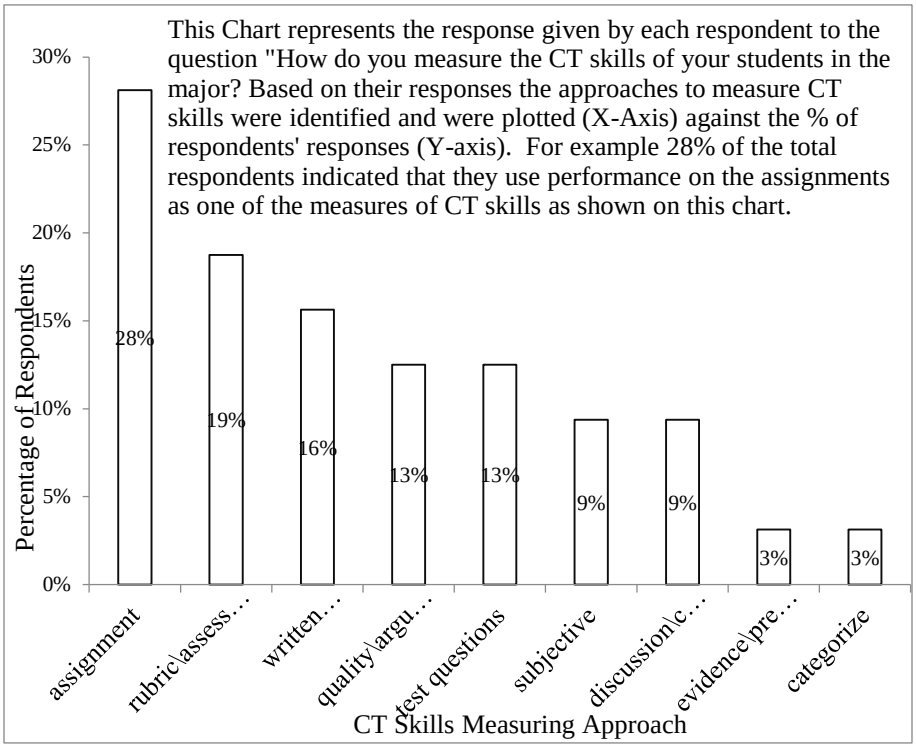
Figure 4



CT Definition

It can be seen from Figure 1 that the number of CT elements used by each respondent is different. This indicates that there is a certain level of difference in how the instructors view CT as an overall construct. For example, only nine out of 32 respondents identified five or more CT elements in their definition of CT, and the other 23 identified four or less CT elements. Nine respondents indicated only one CT element in defining CT. Thus, there is a wide variation among the respondents' view of the CT construct. From further analysis it can be seen (Figure 2) that 53% of the participants include ability to formulate a problem and question as one element of CT; 37% stated ability to solve or calculate as one of the elements of CT**;** while fewer than 30% indicated other CT elements. These variations in percentages of participants imply that there is a wide distribution of perceptions about the underlying definition of CT**.** In other words, if there was a consistency in perceptions about the CT elements then the chart would not have all bars of the different values.

Figure 5



CT Skills

The perceptions of instructors regarding the CT skills required by the graduates to get a job also shows a wide variation. For example, problem and question formulation skill is identified by 47% of the participants as the key CT element and 27 % of the total participants identified ability to do analysis and analyze a problem as the key CT element. Approximately 27% representing the remainder of the participants identified the other CT elements (see Figure 3) as key CT skills. Again, the results show a wide variation in the percentage of participants' perceptions regarding the CT skills required by the graduates to get a job.

How CT Skills are Taught and Measured

From Figures 4 and 5, it can be observed that the authors' observations and assumptions that there is a wide variation in how the instructors teach and measure CT skills are supported. For example, 47% of the participants indicated that they use projects to teach CT skills while 28% indicated using cases to teach CT skills. There were about fifteen other categories identified by the respondents. Each of these categories was indicated by less than 25% of the respondents as seen in Figure 4.

There is also a wide variation observed in how the respondents measure CT skills. For example**,** 27% of the participants indicated that they use general assignments while 19% use

some kind of rubric\assessment to measure CT skills. In all, about nine different techniques to measure CT skills were identified.

Thus, our findings indicate that there is indeed a varied perception regarding the concept of CT and how it is taught and measured by faculty in schools of business. The authors are not surprised by these findings because the literature also suggests that there is not a consensus or standard for the CT construct. In lieu of a standard construct**,** instructors are at liberty to define CT in the context of their discipline and their experience in teaching students so that they can be successful upon graduation. Based on these findings, the authors propose key recommendations in the following section.

RECOMMENDATIONS

A thorough review of the CT literature, the established and well-publicized need for strong CT skills in business school graduates, and a survey of business school faculty demonstrate with apodictic certainty that CT, at least among business school faculties, is not consistent or well understood. Therefore, business curricula development should include a search for a highly effective CT construct that can be agreed on, measured, assessed and easily taught to faculty in all business school disciplines. In light of this, utilizing projects or case studies to teach CT fails to provide one of the most important assessments—the business clients who are, in fact, potential employers of students. Critical feedback from employers is essential for providing faculty with necessary data that can be used to assess the effectiveness of their CT pedagogy. While individual faculty and school administration's inherent bias may very well lead one to believe that their students are being taught CT sufficiently with current methods, there is absolutely no unbiased and independent method to assess whether the students are proficient in their CT skills as required by employers. A question that needs to be asked is if professors really ever know with any certainty whether or not students, by and large, can execute effectively and efficiently in the real world upon graduation? Knowing the answer to this question is becoming increasingly important as the trend develops for state legislatures to require competency-based teaching even down to the departmental level.

Another recommendation is that business schools review the CT literature in several professions such as, education, philosophy and psychology as that may yield valuable insight to aid in the formulation of a common CT construct. Further, all CT assessment tools should be studied to determine relevancy to business education, reliability, cost, etc. Other forms of assessment used in disciplines other than business may be helpful as well.

CONCLUSION

This study highlights the need for creating a standard for teaching, measuring, and assessing CT skills in business schools. Based on their research, data analysis and findings, the authors provide three recommendations for unifying the understanding and formulation of the CT construct and how to teach and measure CT skills in the school of business. Additional data needs to be collected from students and employers to fully understand the current state of CT in business schools, thus the need for the authors to continue study in this area.

REFERENCES

ACNielson Research Services. (2000). Employer satisfaction with graduate skills: Research Report. *Evaluations and Investigations Programme Higher Education Division*, DETYA.

Al Ghamdi, A. K. H. and Deraney, P.M. (2013). Effects of teaching critical thinking to Saudi female university students using a stand alone course. *International Education Studies,* 6(7).

Amernic, J.H. and Beechy, T. H. (1984). Accounting students performance, and cognitive complexity: some empirical evidence. *Accounting Review*, 59(2), 300-313.

Andrews, J. and Higson, H. (2008). Graduate employability, soft skills versus hard business knowledge: A European stud. *Higher Education in Europe*, 33(4).

Association of American Colleges and Universities, (2013), Employers more interested in critical thinking and problem solving than college major. Association of American Colleges and Universities Press Release, http://www.aacu.org/press_releases/2013/leapcompactandemployersurvey.cfm (accessed 11/11/2013).

Association of American Colleges and Universities, (2013), It takes more than a major: Employer priorities for college learning and student success. http://www.aacu.org/leap/presidentstrust/compact/2013SurveySummary.cfm (accessed 11/11/2013).

Athanassiou, N., McNett, J. M., and Harvey, C. (2003). Critical thinking in the management classroom: Bloom's taxonomy as a learning tool. *Journal of Management Education,* 27(5).

Bailin, Sharon, Case , Roland, Coombs, Jerrold R., and Daniels Leroi B. (1999). 'Common misconceptions of critical thinking', *Journal Curriculum Studies*, 31(3).

Bascuas, Katie. (2013). Study: Most Employees Are Only Average at Critical Thinking. http://associationsnow.com/2013/02/study-most-employees-are-only-average-at-critical-thinking/, (accessed on November2, 2013).

Beachboard, M.R. and Beachboard, J. C. (2010). Critical thinking pedagogies and student perceptions of university contributions to their academic development. *Informing Science: The International Journal of an Emerging Transdiscipline*, 13.

Bean, J. C. (1996). *Engaging Ideas: The Professor's Guide to Writing, Critical Thinking, and Active Learning in the Classroom*, San Francisco: Jossey Bass.

Berdine, R. (1987). Increasing student involvement in the learning process through debate on controversial topics. *Journal of Marketing Education*, 9 (3).

Bigelow, J. D. (2004). Using problem-based learning to develop skills in solving unstructured problems. *Journal of Management Education*, 28(5).

Biggs, J, Kember, D. and Leung, D. (2001). The revised two-factor study process questionnaire: R-SPQ-2F. *British Journal of Educational Psychology*, 71(1).

Bloom, B. S. (1956). *Taxonomy of educational objectives handbook 1: Cognitive domain*. New York: Longman

Braun, N. M. (2004). Critical thinking in the business curriculum. *Journal of Education and Business*, 70(4).

Brooks, Chad. (2013). *IT Jobs Require Communication, Critical Thinking Skills*. BusinessNewsDaily Contributor, http://www.businessnewsdaily.com/4666-information-technology-communication-thinking-skills.html, (accessed on November. 2, 2013).

Browne, M. N. and Keeley, S. (2003). *Asking the Right Questions About the Legal Environment of Business: A Guide to Critical Thinking*, Upper Saddle River, NJ Prentice Hall.

Bycio, P. B. and Allen, J. S. (2009). The California Critical Thinking Skills Test and Business School Performance. *American Journal of Business Education*, 2(8).

Capella, L. M. and Robin, D. R. (1986). Beyond critical thinking and decision making: Critical thinking is important to marketing students. *Marketing News*, 20 (15), 28-30.

Carrithers, D. and Bean, J. (2008). Using a client memo to assess critical thinking of finance majors. *Business Communication Quarterly*, 71(1).

Carrithers, D., Ling, T., and Bean, J.C. (2008). Messy problems and lay audiences: teaching critical thinking within the finance curriculum. *Business Communication Quarterly*, 71(2).

Catterall, M., Maclaran, P., and Stevens, L. (2002). Critical reflection in the marketing curriculum. *Journal of Marketing Education*, 24(3).

Celuch, K. and Slama, M. (1999). Teaching critical thinking skills for the 21st century: an advertising principles case study. *Journal of Education for Business*, 74(3).

Choy, S. C. and Cheah, P. K. (2009). Teacher perceptions of critical thinking among students and its influence on higher education. *International Journal of Teaching and Learning in Higher Education*, 20(2).

Clabaugh, M. G. Jr., Forbes, J. L. and Clabaugh,J. P. (1995). Bloom's cognitive domain theory: A basis for developing higher levels of critical thinking skills in reconstructing a professional selling course. *Journal of Marketing Education, 17(3).*

Colluciello, M. (1997). Critical thinking skills and dispositions of Baccalaureate nursing students-A conceptual model for evaluation. *Journal of Professional Nursing*, 13(4).

Corbett, J.J., Kezim, B., and Stewart, J. (2010). Student perceptions of value added in an active learning experience: producing, reviewing and evaluating a sales team video presentation. *American Journal of Business Education*, 3(6).

Cooley, A. H. (2009). "Piggybacking" on business communication through interdisciplinarity: Developing student communication skills in legal environment of business courses. *Business Communication Quarterly*, 72(4).

Corley, A. and Eades, E. (2004). Becoming critically reflective practitioners: Academics' and students' reflections on the issues involved. *Human Resource Development International*, 7(1).

Cowan, D.A. (1986). Developing a process model for problem recognition. *Academy of Management Review*, 11, 763-776.

Critchley, B. (2011). Critical thinking in business education. Investigations in Teaching and Learning. *Centre for Academic Professional Development*, London Metropolitan University, 7.

Crowe, A., Dirks, C., and Wenderoth, M. (2008). Biology in bloom: implementing Bloom's Taxonomy to enhance student learning in biology. *CBE Life Sciences Education*, 7(4).

Cunliffe, A. L. (2004). On becoming a critically reflexive practitioner. *Journal of Management Education*, 28(4).

Dalal, N. P. (1994). Higher order thinking in MIS. *Journal of Computer Information Systems*, 34(4).

Dempsey, M., Halton, C., and Murphy, M. (2001). Reflective learning in social work education: Scaffolding the process. *Social Work Education*, 20(6).

Densten, I. L. and Gray, J. (2001). 'Leadership development and reflection: What is the connection? *International Journal of Educational Management*, 15(3).

Dewey, J. (1993). *How We Think*: *A Restatement Of the Relation of Reflective Thinking to the Educative Process*. Lexington, MA: Heath.

Dudley, L.W., Davis, H. H., and McGrady, D. G. (2001). Using an investment project to develop professional competencies in introduction to financial accounting. *Journal of Education for Business*, 76(3).

Dykstra, D. E. (2008). Integrating critical thinking and memorandum writing into course curriculum using the internet as a research tool. *College Student Journal*, 42(3).

Egege, S. and Kutieleh, S. (2004). Critical thinking: teaching foreign notions to foreign students. *International Education Journal* 4(4).

Elo S. & Kyngas H. (2008). The Qualitative Content Analysis Process. *Journal Of Advanced Nursing*, 62(1).

Facione, Peter A. (1990). Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction. Research Findings and Recommendations *American Philosophical Association*, Newark, Del. Reports- Research/Technical.

Facione, Peter A. (2000). The Disposition Toward Critical Thinking: Its Character, Measurement, and Relationship to Critical Thinking Skill. *Informal Logic (Reasoning and Argumentation in Theory and Practice.* Vol. 20, No.1.

Facione, N. C. and Facione, P. A. (2008). *Critical Thinking and Critical Judgment in the Health Sciences—An International Teaching Anthology*. The California Academic Press, Millbrae, CA.

Finfgeld-Connett D. (2014). Use of Content Analysis to Conduct Knowledge-Building and Theory-Generating Qualitative Systematic Reviews. *Qualitative Research*, June 2014 14, first published on April 4, 2013.

Frederick, P. (1991). Active learning in history classes. *Teaching History: A Journal of Methods*, 16(2).

French, E. and Tracey, N. (2010). Critical thinking and organizational theory: embedding a process to encourage graduate capabilities. *e-Journal of Business Education & Scholarship of Teaching*, 4(1).

Gokhale, A. A. (1995). Collaborative learning enhances critical thinking. *Journal of Technology Education*, 7(1).

Gomes, E, Janavaras, B., and Cheema, P. (2008). Improving decision-making and critical thinking skills using international business web-based tools. *Journal of International Business & Economics*, 8(3).

Graeff, T. R. (1997). Bringing reflective learning to the marketing research course: a co-operative learning project using intergroup critique. *Journal of Marketing Education*, 19 (1).

Greenlaw, S. A. and DeLoach, S. B. (2003). Teaching critical thinking with electronic discussion. *Journal of Economic Education*, 34 (1).

Gurses, A, Acikjildiz, M., Dogar, C., and Sozbilir, M. (2007). An investigation into the effectiveness of problem-based learning in a physical chemistry laboratory course. *Research in Science and Technological Education*, 25(1).

Hall, S. (2013). How to do content analysis. Demand Media. http://classroom.synonym.com/content-analysis-2670.html (accessed 12/30/2013)

Harrison, M., Short, C., and Roberts, C. (2003). Reflecting on reflective learning: The case of geography, earth and environmental sciences. *Journal of Geography in Higher Education*, 27(2).

Hartley, D. and Aukamp, V. (1994). Critical thinking ability of nurse educators and nursing students.,*Journal of Nursing Education*, 33(1).

High Level Group on the Modernisation of Higher Education. (2013). Report to the European Commission on Improving the quality of teaching and learning in Europe's higher education institutions. *European Union Commission for Education, Culture, Multilinualism, Youth and Sport*, Luxembourg Publications Office of the European Union.

Hill, M. E. and McGinnis, J. (2007). The curiosity of marketing thinking. *Journal of Marketing Education*, 29(1).

Jackson, B. (1990). Debating Huck Finn. *College Teaching*, 38(2).

Jackson, M. (2001). Critical systems thinking and practice. *European Journal of Operational Research*, 128 (2).

Jackson, M. K, Trochim, M. W. (2002). Concept Mapping as an Alternative Approach for the Analysis of Open-Ended Survey Responses. *Organizational Research Methods*, Vol. 5 No. 4.

Jenkins, E. K. (1998). The significant role of critical thinking in predicting auditing students' performance. *Journal of Education for Business*, 73:5.

Johnstone, M. N. (2006). Augmenting postgraduate student problem-solving ability by the use of critical thinking exercises. *Proceedings of EDU-COM International Conference, Edith Cowan University*. 245-253. http://ro.ecu.au/ceducom/81.

Jones, S. and Brown, L. (1993). Alternative views on defining critical thinking through the nursing process. *Holistic Nurse Practitioner*, 7(3).

Kavanagh, M. H. and Drennan, L., 2008. What skills and and attributes does an accounting graduate need? Evidence from student perceptions and employer expectations, *Accounting and Finance*, 48.

Kennedy, M, Fisher, M.B., and Ennis, R.H. (1991). "*Critical thinking: Literature review and needed research*". In L. Idol and B.F. Jones (Eds.), Educational values and cognitive instruction: Implications for reform. Hillsdale, NJ: Erlbaum.

Klebba, J. M. and Hamilton, J. G. (2007). Structured case analysis: developing critical thinking skills in a marketing case course. *Journal of Marketing Education*, 29(2).

Krippendorff, K. (1989). Content analysis, In E. Barnouw, G. Gerbner, W. Schramm, T. L. Worth, & L. Gross (Eds.), International encyclopedia of communication (Vol. 1, pp. 403-407). New York, NY: Oxford University Press. Retrieved from http://repository.upenn.edu/asc_papers/226.

Lai, Emily R. (2011). "Critical Thinking: A Literature Review" (Research Report) Pearson.

Leavitt, H. (1986). *Corporate Pathfinders*. Homewood: Irwin.

Lewis, A., Smith, D. (1993). Defining higher order thinking. *Theory into Practice, 32*(3).

Lipman, Matthew. (1988). Critical Thinking--What Can It Be? *Educational Leadership*, v46.

Lloyd, M. and Bahr, N. (2010). Thinking critically about critical thinking in higher education. *International Journal for the Scholarship of Teaching and Learning*, 4(2).

Lohman, M. C. (2002). 'Cultivating problem-solving skills through problem-based approaches to professional development', *Human Resource Development Quarterly*, 13(3)

Lowden, K., Hall, S., Eliot, D., and Lewin, J. (2011). Employers' perceptions of the employability skills of new graduates. *Research commissioned by the Edge Foundation. University of Glasgow/The SCRE Centre Research in Education*.

Manton, E. J., English, D. E., and Kernek, C. R. (2008). Evaluating knowledge and critical thinking in international marketing courses. *College Student Journal*, 42(4).

Mayring, P. (June, 2000). Qualitative Content Analysis. Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, 1(2). Retrieved from http://www.qualitative-research.net/index.php/fqs/article/view/1089/2385.

McEwen, B.C. (1994). Teaching critical education skills in business education. *Journal of Education for Business*, 70(2).

Meisel, S.I. and Fearon, D.S. (2006). Choose the future wisely: supporting better ethics through critical thinking. *Journal of Management Education*, 30(1).

Monk, R. and Raphael, F. (2000). *The Great Philosophers*, Routledge, New York.

Moore, T. J. (2004). The critical thinking debate: How general are general thinking skills? *Higher Education Research and Development*, 23 (1).

Moore, T. J. (2011). Critical thinking and disciplinary thinking: a continuing debate. *Higher Education Research and Development*, 30(3).

Muir, C. (1996). Using consulting projects to teach critical-thinking skills in business communication. *Business Communication Quarterly*, 59(4).

Mukherjee, A. (2004). Promoting higher order thinking in MIS/CIS students using class exercises. *Journal of Information Systems Education*, 15(2).

Ngai, E. W. T. (2007). Learning in introductory e-commerce: A project-based teamwork approach. *Computers and Education*, 48(1).

Page, D, and Mukherjee, A. (2007). Promoting critical thinking skills by using negotiation exercises. *Journal of Education for Business*, 82(5).

Paul, Richard. (1992). New Directions for Community Colleges. Volume 1992, Issue 77, (Accessed Nov.2, 2013).

Pee, B., Woodman, T., Fry, H., and Davenport, E.S. (2000). Practice-based learning: Views in the development of a reflective learning tool. *Medical Education*, 34 (9).

Peltier, J.W., Hay, A., and Drago, W. (2005). The reflective learning continuum: reflecting on reflection. *Journal of Marketing Education*, 27(3).

Petkus, E., Jr. (2010). Historical perspectives in marketing education: justification and implementation. *Journal of Marketing Education*, 32(1).

Porter, L. W. and McKibbin, L. E. (1988). *Management education and development: Drift or thrust into the 21st century*, New York: McGraw-Hill.

Prosser, M. and Millar, R. (2009). The how and what of learning physics. *European Journal of Psychology of Education*, 4(4).

Puteh, M. S. and Hamid, F. A. (2014). A test on critical thinking level of graduating bachelor of accounting students: Malaysian evidence. *Procedia-Social and Behavioral Sciences*, 116, 2794-2798.

Robertson, F., Bean, J. C., and Peterson, D. (2004). Using Federal Reserve publications in institutions and markets courses: An approach to teaching critical thinking, *Journal of Finance Education*.

Rodgers, R. F. (1992). Teaching to facilitate critical thinking: a cognitive-developmental perspective, In T.J. Frecka (Ed.). *Critical thinking, interactive learning, and technology: reaching for excellence in business education* (9 1-1 13), Chicago, IL.: Arthur Anderson & Co.; a series of papers commissioned for a conference on teaching, South Bend, Ind., June 27-29.

Ronchetto, J.R. and Buckles, T.A. (1994). Developing critical thinking and interpersonal skills in a service marketing course employing total quality management concepts and techniques. *Journal of Marketing Education*, 16(3).

Roy, A. and Macchiette, B. (2005). Debating the issues: a tool for augmenting critical thinking skills of marketing students. *Journal of Marketing Education*, 27(3).

Rubenfeld, G. M. and Sheffer, B. K. (1995). *Critical Thinking in Nursing: An Interactive Approach.* J.B. Lippencott Company, Philadelphia, PA.

Saraoghu, H., Yobaccio, E., and Louton, D. (2000). Teaching dynamic processes in finance: How we can prepare students for an age of rapid and continual change. *Financial practice & Education*. 10(2).

Schon, D. (1983). *The Reflective Practitioner: How Professionals Think in Action*. Basic Books

Scott, S. (2008). Perceptions of students' learning critical thinking through debate in a technology classroom: A case study. *The Journal of Technology Studies*, 34 (1).

Scriven, Michael, and Paul, Richard. (1987). Presented at the 8th Annual *International Conference on Critical Thinking and Education Reform*, Summer 1987.

Seifert, C. (2009). Writing for business: A graduate-level course in problem-solving. *Business Communication Quarterly*, 72(2).

Sheffrin, S. M. (1996). Bringing insights from research into the teaching of intermediate macroeconomics, *Journal of Economic Education*, 27(2)

Shute, G. E. (1979). Accounting students and abstract reasoning: an exploratory study. Sarasota, Florida: American Accounting Association

Smith, G. F. (2003). Beyond critical thinking and decision making: teaching business students how to think. *Journal of Management Education*, 27(1), 24-51.

Snyder, L.G. and Snyder, M. J. (2008). Teaching Critical Thinking and Problem Solving Skills. *The Delta Pi Epsilon Journal*, L (2).

Spencer, J. and Millson-Martula, C. (2009). *Critical Thinking Within the Library Program.* Routledge Publishing, New York, NY.

Springer, C. W. and Borthick, A. F. (2004). Business simulation to stage critical thinking in introductory accounting: rationale, design and implementation. *Issues In Accounting Education*, 19(3).

Sobral, D. T. (2000). An appraisal of medical students' reflection-in-learning. *Medical Education*, 34(3).

Springer, C. W. and Borthick, A. F. (2007). Improving performance in accounting: Evidence for insisting on cognitive conflict tasks. *Issues In Accounting Education*, 22(1).

Stemler, Steve (2001). An overview of content analysis. *Practical Assessment, Research & Evaluation*, 7(17), http://PAREonline.net/getvn.asp?v=7&n=17, (accessed November 12, 2014).

Sternberg, Robert J. (1986). Critical thinking: Its nature, Measurement, and Improvement. http://eric.ed.gov/?id=ED272882, accessed Nov.2, 2013.

Sulaiman, A. and Mohezar S. (2008). Quality in an MBA programme: students' perceptions, *International Journal of Management Education*, 7(2).

Sumner, W. G. (1906). *Folkways: A study of the Sociological Importance of Usages, Manners, Customs, Mores, and Morals*, Boston: Ginn.

Supiano, B. (April 10, 2013). Employers want broadly educated new hires, survey finds. The Chronicle of Higher Education, April 10, 2013. http://chronicle.com/article/Employers-Want-Broadly/138453/ (accessed 11/11/2014).

Taylor, Marisa (2010). Schools, Businesses Focus on Critical Thinking. updated Sept. 12, 2010 11:37 p.m. ET, http://online.wsj.com/news/articles/SB10001424052748703882304575466100773788806 (accessed on November 2, 2013).

Tempelaar, D. T. (2006). The role of metacognition in business education. *Industry and Higher Education*, 20(5).

Thayer-Bacon, Barbara, J. (2000). *Transforming Critical Thinking: Thinking Constructively*, Teachers College Press, New York.

The University of Texas at Austin School of Information. Course Guide 2013. http://www.ischool.utexas.edu/~palmquis/courses/content.html (accessed 12/30/2013).

Thomas, T., (2011), Developing first year students' critical thinking skills. *Asian Social Science*, 7(4).

Uyar, A. and Gungormus, A. H. (2011). Professional knowledge and skills required for accounting majors who intend to become auditors: Perceptions of external auditors, *Business and Economic Research Journal*, 2(3).

van Woerkom, M. (2004). The concept of critical reflection and it's implications. *Advances in Developing Human Resources, 6(2)*.

Vaughn, Lewis, and MacDonald, Chris. (2010). *The Power of Critical Thinking*, 2nd Canadian Edition, Oxford University Press. [Source: http://businessethicsblog.com/2011/01/26/critical-thinking-in-business-ethics-part-1/, « "Critical Thinking in Business Ethics, Part 1" posted January 2011, (accessed on November 1, 2013)].

Wall Street Journal (2010). Schools' Rankings Calculated From 479 Recruiter Responses, (updated September 13, 2010).

Wang, S. and Wang, H. (2011). Teaching higher order thinking in the introductory MIS course: A model-directed approach. *Journal of Education for Business*, 86(4).

Whatley, A. and Dyck, L. (2000). A postmodern framework for developing critical thinking skills: The international money fund as a live case. *Journal of Teaching in International Business*, 11(4).

White M, Marsh E. (Summer 2006). Content Analysis: A Flexible Methodology. Library Trends [serial online]. 55(1), Available from: Education Research Complete, Ipswich, MA. Accessed November 14, 2014.

Williams, J. A. S. and Reid, R. (2010). Developing Problem Solving and Communication Skills Through Memo Assignments in a Management Science Course. *Journal of Education for Business*, 85 (6).

Wind, J. (1996), A radical suggestion for business schools: teach students to think. *Sales Marketing Management*, 148(3).

Wolcott, S.K. and Lynch, C. L. (1997) Critical thinking: the key to successful competencies. Sarasota, FL: American Accounting Association.

Zabit, M. (2010). Problem based learning on students' critical thinking skills in teaching business education in Malaysia: a literature review. *American Journal of Business Education*, 3(6).

ENHANCING STUDENT PARTICIPATION AND COURSE OUTCOMES IN ONLINE GRADUATE COURSES

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ABSTRACT

Student engagement and enhancement of learning is a bigger challenge in online courses than in the traditional face-to-face classes. This study presents some taxonomies, frameworks, theories, and models that help us to understand various stages of learning and the changing roles of instructors and students as online instruction has become more prevalent over time. Some methods for enhancing student learning and course outcomes are presented here for online graduate courses. In particular, the authors find the use of templates, assessment rubrics, meaningful and professionally relevant projects, sample projects, sample assignments, and timely feedback to be very helpful in facilitating students' participation and learning and in improving course outcomes. These tools and techniques should also enhance traditional classroom-based instruction as well.

INTRODUCTION

In the traditional face-to-face settings, education is typically instructor-led while in online settings, the instructor becomes a facilitator of learning and education becomes learner-focused who play the central role in knowledge acquisition through participative, active learning (Rena & Pratt, 2007). As outcome-focused instruction has become prominent, it is helpful to provide templates and samples of assignments and projects along with their assessment rubrics to students so they would know what they are expected to produce and how their product will be evaluated by the instructor. These tools clarify instructor expectations and improve students' participation and outcomes. Rubric-based discussions are richer and more fulfilling for students than discussions without such rubrics.

There is an old saying: "Tell me and I forget. Show me and I remember. Involve me and I understand." The Bloom's revised taxonomy extends it by adding: applying, analyzing, evaluating, and creating. A review of literature produces several theoretical models of teaching and learning that are relevant in settings that utilize text, sound, video, and 3D virtual worlds. These models provide a comprehensive theoretical background to enhance student engagement and course outcomes in online and traditional education.

Purpose and Scope

This study focuses on the online setting and methods for enhancing student learning and course outcomes. The authors discuss the use of numerous techniques, especially, templates and assessment rubrics, to facilitate students' learning and to improve course outcomes. The use of

these techniques is discussed in specific MBA courses that were taught at a regional private university in the Northeastern United States. We provide several templates and rubrics that are utilized by our instructors and summarize students' reflective end-of-term assessment for such tools and techniques that improve course outcomes. A checklist for improving online instruction is also presented at the end. While this study focuses on online education, the concepts, tools, and techniques presented here should be equally relevant for the traditional classroom settings.

LITERATURE REVIEW

The literature on education and learning provides various theories, models, and perspectives. We present here significant taxonomies, frameworks, theories, and models that help us to understand the various stages of learning and the changing roles of instructors and students as online instruction became more prominent.

Crumpacker (2001) indicated that distance education students desired access to learning unconstrained by time and place and instructors desired face-to-face interaction with students. The desires of these two entities could be fulfilled by collaborative, problem-based asynchronous course designs that optimally balanced structure and dialog. Asynchronous Learning Networks fulfilled students' desire for flexibility, while collaborative, problem-based designs met instructors' need for interaction. He noted that compared with traditional course delivery, such a "compromise" design delivered comparable quality of education and outcomes. The quality of distance education could be significantly related to instructor motivation, skills and pedagogical approach that was learner-centered, collaborative, and problem-based in an asynchronous setting. He also noted that faculty training and development was critical for success of distance education programs.

Taxonomies of Objectives, Learning, and Assessing

Bloom (1956) introduced his taxonomy of learning objectives in the cognitive (knowledge), affective (attitude), and psychomotor (motor skills) domains. The six levels of learning objectives in his cognitive domain are listed here from the lowest to the highest order: knowledge, comprehension, application, analysis, synthesis, and evaluation. Anderson et al. (2001) modified Bloom's taxonomy from nouns to "action" verbs to identify six categories of learning, teaching, and assessing. These categories are listed here from the lowest to the highest order: remembering, understanding, applying, analyzing, evaluating, and creating. They add "create new knowledge" as the highest level on top of Bloom's cognitive taxonomy.

Constructivism

Molka-Danielsen (2009) summarized the three fundamental concepts of Vygotsky's Social Constructivist theory of learning (1978) as follows:

1. Reality does not pre-exist but is constructed through human activity (Kukla, 2000).
2. Knowledge is socially and culturally constructed through human actions.
3. Learning occurs when individuals participate in social activities.

Taylor & Maor (2000) developed the Constructivist On-Line Learning Environment Survey (COLLES) to help assess the quality of an online learning environment from a social

constructivist perspective. This instrument consists of 24 questions (actual and preferred) that are arranged into 6 scales that they define as follows:

1. Relevance - how relevant is online learning to students' professional practices?
2. Reflection - does on-line learning stimulate students' critical reflective thinking?
3. Interactivity - to what extent do students engage online in rich educative dialogue?
4. Tutor Support – how well do tutors enable students to participate in online learning?
5. Peer Support – do fellow students provide sensitive and encouraging support?
6. Interpretation – do students and tutors make good sense of each other's communications?

Dougiamas & Taylor (2002) utilized the COLLES instrument to evaluate the quality of learning in a 14-week online course that was taught in Moodle. The findings of their study were mostly supportive of their goals. Based on this study they developed additional hypotheses and research questions for future research. It is interesting to note that the lead author of this study, Martin Dougiamas, wrote the Moodle software to facilitate online education, and then made Moodle an Open Source Virtual Environment for Learning/Course Management.

Changing Roles of Instructors and Students in Online Settings

Along with a change of setting in online education, the traditional roles of educators and learners are also changing. These changing roles are nicely summarized by Collins & Berge (1996) as follows:

Table 1
CHANGING ROLES OF INSTRUCTORS AND STUDENTS IN ONLINE EDUCATION

Changing Roles of Instructors	Changing Roles of Students
1. From oracle and lecturer to consultant, guide, and resource provider 2. Teachers become expert questioners, rather than providers of answers 3. Teachers become designers of learning student experiences rather than just providers of content 4. Teachers provide the initial structure to student work, encouraging increasing self-direction 5. Teacher presents multiple perspectives on topics, emphasizing the salient points 6. From a solitary teacher to a member of a learning team (reduces isolation sometimes experienced by teachers) 7. From teacher having total autonomy to activities that can be broadly assessed 8. From total control of the teaching environment to sharing with the student as fellow learner 9. More emphasis on sensitivity to student learning styles 10. Teacher-learner power structures erode	1. From passive receptacles for hand-me-down knowledge to constructors of their own knowledge 2. Students become complex problem-solvers rather than just memorizers of facts 3. Students see topics from multiple perspectives 4. Students refine their own questions and search for their own answers 5. Students work as group members on more collaborative/cooperative assignments; group interaction significantly increased 6. Increased multi-cultural awareness 7. Students work toward fluency with the same tools as professionals in their field 8. More emphasis on students as autonomous, independent, self-motivated managers of their own time and learning process 9. Discussion of students' own work in the classroom 10. Emphasis on knowledge use rather than only observation of the teacher's expert performance or just learning to "pass the test" 11. Emphasis on acquiring learning strategies (both individually and collaboratively) 12. Access to resources is significantly expanded 13. Reality does not pre-exist but is constructed through human activity (Kukla, 2000). 14. Knowledge is socially and culturally constructed through human actions. 15. Learning occurs when individuals participate in social activities.

Models of Online Teaching and Learning

Next, we briefly present four models of online instruction and learning that focus on the setting and functions of various participants in online education and learning process.

Collins & Berge (1996) provided four tasks and functions of an online instructor:

1. Social function. Promote a friendly social environment.
2. Managerial function. Set norms, agenda, pacing, etc.
3. Pedagogical function. Educational facilitation.
4. Technical function. Assist students in learning the use of technology for online education.
5. Outcomes. Empowered learners, guided discussion, increased student-to-student discussion.

Garrison, Anderson & Archer (2000) presented the following functions of an online instructor:

1. Social presence. Open communication, group cohesion.
2. Teaching presence. Course design, facilitation and assessment, instruction.
3. Cognitive. Construction of meaning through sustained communication.
4. Outcomes. Co-constructed meaning, critical thinking.

Rena & Pratt (2007) presented the following functions of online instructors:

1. People. Students and instructional teams, social presence, interaction and communication.
2. Purpose. Establishing guidelines, shared goals, and practical considerations to manage teams.
3. Process. Interaction, communication, collaboration, reflection, learning, teamwork, social constructivist context.
4. Outcomes. Co-created knowledge and meaning, reflection, transformation, increased self-direction, reinforcement of presence.

Building upon the taxonomies of objectives, learning, and assessing, Salomon (2004) provided a Five-Step Online Learning Model that included technical support and e-moderating aspects for each step. This model can be summarized as follows (Deutschmann, 2009):

1. Access and Motivation.
    a. Technical Support - Setting up and accessing system.
    b. E-Moderating - Welcoming and encouraging.
2. Online Socialization.
    a. Technical Support - Sending and receiving messages.
    b. E-Moderating - Familiarizing and providing bridges between cultural, social, and learning environments.
3. Information Exchange.
    a. Technical Support - Searching, personalizing software.
    b. E-Moderating - Facilitating tasks and supporting use of learning materials.
4. Knowledge Construction.
    a. Technical Support - Conferencing.
    b. E-Moderating - Facilitating process.
5. Development.
    a. Technical Support - Providing links outside closed conferences.
    b. E-Moderating - Supporting and responding.

Rena & Pratt (2007) note that in the traditional face-to-face setting, the instructor generally plays the role of an expert imparting knowledge to willing learners. However, in an

online setting, the role of an instructor becomes that of a facilitator of learning who provides a general framework and guidance for the course allowing the students to explore the course material and other material. They further note (on p. 22) that the "keys to the creation of a learning community and successful facilitation online are simple: honesty, responsiveness, relevance, respect, openness, and empowerment." When faculty create online learning environments with these characteristics then students engage in active, rich online discussion without fear of retribution.

Enhanced Online Setting in a 3D Virtual World

Online 3D Virtual Worlds like *OpenSim* and Second Life (SL) offer rich opportunities for enhanced teaching and learning. Simulation Linked Object Oriented Dynamic Learning Environment (SLOODLE) is an open source platform that connects Moodle, a Learning Management System, with a 3D Virtual World like *OpenSim* or SL and offers several tools for enhanced teaching and learning experience. SLOODLE can be accessed here: https://www.sloodle.org/.

Dubas & Hill (2013) presented guidelines for enhanced meetings and presentations in SL. Dubas, Pressley, Tavakoli & Miah (2014) discussed various tools to improve online student engagement and course outcomes by utilizing a Learning Management System like Blackboard and a 3D virtual world like SL. Salmon, Nie & Edirisingha (2010) applied the five-stage learning model (Salomon 2004) using SL and concluded that "using a structured model for scaffolding learning in groups has value in 3D MUVEs such as SL as well as in text-based asynchronous environments, to ensure that for learners, and teachers, confidence in the environment and in each other builds up in a productive way. The basic structure appears to hold good…" These authors continue to research into the use of SL and the social scaffolding of learning in SL with campus-based and online educational settings and their findings are available at these two sites:

1. Delivering University Curricula: Knowledge, Learning, and Innovation Gains (DUCKLING) at http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/duckling?uol_r=f5d83a92
2. Second World Immersive Future Teaching (SWIFT) at http://www2.le.ac.uk/projects/swift?uol_r=8ebb16af

STUDENT PARTICIPATION AND DISCUSSION IN ONLINE MBA COURSES

Managerial Accounting Course

In accounting, it is necessary for students to apply that which is learned. As such, in discussion forums students must demonstrate a certain degree of critical thought as well as quantitative analysis. One of the most useful skills for graduate students is the ability to read and evaluate financial statements and audit reports of publicly-held companies. During the seven weeks of ACC 610, Managerial Accounting, they must evaluate the performance of a firm through a series of discussion questions (the sum of which is referred to as a "case") and using techniques practiced throughout the course.

An MBA course at this private university may be as small as three students or as large as 25. With a class size of less than six, every student must complete each assignment for his/her own company. Classes of six or more are divided into three teams. Cases rotate among teams

every two weeks, and during week 7, each team submits a summary report, including questions and answers, of the company they had in weeks 1 and 2. As a result, each team evaluates at the end of the course its respective members, and teams evaluate the work of one another three times, at the end of weeks 2, 4, and 6. At the end of the course, everyone will have been forced to review all parts of the case. During week 7, each team will provide a summary of their initial case.

This continuous case discussed throughout an online forum counts 20% of the course grade. Team ratings will compose 10% and individual ratings 10%. The summary in week 7 is worth 5%. This continuous case is described in Table 2.

Table 2
CONTINUOUS CASE FOR THE DURATION OF THE SEMESTER - ACC 610

Week	Assignment
1	This is the first of a series of exercises in which you will prepare an analysis of a publicly- traded company. Select a company for this case. Familiarize yourselves with this company by accessing its website, obtaining and reviewing its annual report.
2	1. Graph the company's daily stock price over the last three years. Identify major news events affecting your company over this period. Relate price movements to these events. 2. Prepare a business analysis for your company.
3	Obtain the financial statements for your company. 1. Confirm that the firm's income, dividends, and other capital transactions explain the change in equity for the most recent year. 2. Confirm that the firm's cash flow statement begins with the same net income amounts found in the income statement. 3. Confirm that the firm's cash flow statement shows a change in cash that is equal to the difference between cash shown on the balance sheet at the beginning and end of the year. Does your company have any special items? What are they? Do you expect them to recur? Do they tell you anything about the business situation?
4	1. What depreciation methods does the firm use? Have there been any changes? 2. What inventory methods does the firm use? Have there been any changes? 3. Does your firm have any significant contingent liabilities? 4. Does your firm have any equity method investments? What are they?
5	1. Does your firm have any minority interest (non-controlling interest)? 2. Review the historical cash flow statement. Are there any large reconciling items? What are they? What does this information tell you? 1. Does your firm have an unqualified, clean audit opinion? If not, what was the exception? 2. How would management choices, estimates, and judgment affect the financial statements?
6	1. Prepare a trend analysis of operating ratios over 3 years. 2. Use any other information in your company's annual report to explain the change in revenues, gross margin percentage, and operating margin percentage. 3. 3) Find another company in the same industry and calculate three years of operating ratios for this company. Compare the competitor's ratios to your company's ratios. Explain the similarities and differences between the ratios.
7	Summarize the findings of your original company.

In accounting, practice may not mean performance is perfect, however, students at a minimum, get better through the process. By answering questions, reviewing the work of others, making corrections and summarizing results, understanding is achieved. Everyday application of the material makes it more meaningful and emphasizes the importance of why learning it is important.

Table 3 provides the grading rubric while team evaluation and student evaluation forms are given in Tables 4 and 5 respectively

Table 3
GRADING RUBRIC – POSTED FOR CLASS - ACC 610

Objective – This case provides a practical application of financial statement analysis.

EXPECTATIONS	Highly competent (4)	Competent (3)	Marginally competent (2)	Less than competent (1)
Identification of the Primary Questions	Identifies and understands all of the main questions	Identifies and understands most of the main questions	Identifies and understands some of the questions	Identifies and understands few of the questions
Analysis of the Problem	Insightful and thorough analysis of all the questions	Thorough analysis of most of the questions	Superficial analysis of some of the questions	Incomplete analysis of the questions
Correct Calculations	Correct calculations	Correct calculations with the exception of minor (careless) mistakes	Calculations involving several mistakes	Incomplete or mostly inaccurate calculations
Comments on Calculated Values (ratios/rates/trends/ graphs)	Well documented, reasoned and appropriate comments to all questions	Appropriate, well thought out comments about solutions to most of the problems	Superficial and/or inappropriate solutions to some of the problems/ questions	Little or no action suggested, and/or inappropriate solutions to all of the problems/questions
Links to Course Readings and Additional Research	Excellent research into the issues with clearly documents links to class and/or outside readings	Good research and documented links to the material read throughout the course	Limited research and documented links to any readings	Incomplete research and links to any readings

Table 4
TEAM EVALUATION FORM – ACC 610
to be Completed at the End Of Weeks 2, 4, and 6 by Each Team

Instructions: Enter the name of the team being evaluated in the table below. Then rate each team's answers to the questions between 1 and 4, according to the grading rubric.

Team/Company being Evaluated: _____
Week: _____
Student (Evaluator):_____
*e.g., Team 1 students will evaluate teams 2 and 3; team 2 students will evaluate teams 1 and 3; team 3 students will evaluate teams 1 and 2. The ratings at the end of week 2 will be averaged, likewise weeks 4 and 6.

Grading Components	Rating (1-4)	Comments
Identification of the Primary Questions		
Analysis of the Problem		
Correct Calculations		
Comments on Calculated Values (ratios/rates/trends/graphs)		
Links to Course Readings and Additional Research		

Table 5
STUDENT EVALUATION FORM – ACC 610

Instructions: Enter your name and teammates' names in the table below. Then rate each person's participation in the discussion forum continuous case between 1 and 5. If your team member did his or her fair share, give them a 5. A rating of 1 indicates the team member did not contribute to the project.

Your Name:_____
Team/Company:_____

Teammate Name	Rating (1-10)	Comments

Business Law and Business Ethics Courses

The discussion forums in Business Law and Business Ethics are not graded separately. They are incorporated into a grade for a weekly team assignment wherein the discussion forums are used by team members to complete the weekly assignment. There are 5 online discussion forums that are used to generate a final Word document product to be submitted as a team. There is also a 6th assignment that requires each team member to evaluate the other members of their team. This requires no discussion, but is also part of the team discussion grade. This is worth 5 % of the total grade. The grade value for each weekly team project is 4 % for a total of 20 % of the overall grade in the course.

The project requires the team to evaluate a particular case or set of readings, legally analyze the case or readings, and develop a business action plan based upon the legal implications and analysis.

Students are graded on their performance as a team and as an individual each week. The assignment is graded in relation to the depth and breadth of the submission as well as taking into consideration the depth and breadth of the online discussion among group members to complete the assignment.

By utilizing team discussion forums, and then comparing them to the team member evaluation forms at the end of the semester, the professor is able to weekly evaluate student engagement in the assignment as follows:

1. Has the student participated in the discussion forum? At what frequency?
2. At what point in the week did the student begin posting?
3. In relation to other team member posts, is the student submitting a fair amount of work?
4. Is the student post administrative or academic?
    a. Administrative – Setting up completion schedule, designating team member tasks, reasons/excuses for lack of participation, getting other students involved or trying to get other students to participate.
    b. Academic - Providing critical analysis related to the assigned cases and readings, providing strategic suggestions for the team to consider.

The following team member evaluation is used in the course.

Table 6
TEAM MEMBER EVALUATION FORM – BUS 620 & BUS 630

Please, evaluate every team member based upon your experiences in your team over the past six weeks.
YOUR NAME: _____
Team Member 1: _____
Team Member 2: _____
Team Member 3: _____
Team Member 4: _____

Please rate your fellow students/colleagues using the following scale:
5 – exceptional, **4** – above average, **3** – average, **2** – below average, **1** – barely meets expectations, **0** – not enough participation to rate

No.	Evaluation Area	Team Member 1	Team Member 2	Team Member 3	Team Member 4
1	Participation level in Online Discussions to complete the assignment.				
2	Easy to include in group work. 5 means very easy.				
3	Participated in a timely manner and in a way that participation contributed to the final submission.				
4	Collaborative behavior with fellow team members.				
5	Team member shows respect and willingness to work with the team members.				
6	Team member provided original suggestions or ideas for completion and/or additions to the project.				
7	Team member allowed all members to participate in the group project.				
8	Team member's comments and participation displayed an understanding of ethical concepts, terms, and theories from the readings.				
9	Team member displayed the willingness to learn and develop ethical decision-making skills.				
10	Team member communicated effectively.				
11	Ability to identify, work through, and solve ethical issues presented in the assignment.				
	TOTAL SCORE (Average times 2)				

Instructors should incorporate discussion forums into concrete assignments so there should be something that the student can turn in. In our Business Ethics and Business Law classes, the discussion forums are tied to completed assignment grades. In our Business Law course, the discussion forum performance is evaluated in relation to a weekly team case/reading analysis.

Marketing Management Course

This course requires two books: a *Marketing Management* textbook and a *Marketing Plan Handbook.* Students take five online exams based on the *Marketing Management* textbook and work in their groups to write a marketing plan. Their marketing plans are developed by writing five weekly assignment reports that constitute sections of their marketing plans. Students are provided templates and assessment rubrics for each weekly assignment and for the marketing plans. In addition, they are provided sample marketing plans written by previous student teams in

this course. Student teams select and get approved their marketing plan topics during the first two weeks of class, and then complete their marketing plans over the remaining five weeks.

Each week, students work within their teams to develop and submit a section of their marketing plans by using its template and then evaluate it by using its assessment rubric. The group leaders submit their weekly assignment reports, their completed assessment rubrics, and Team Evaluation Forms to their instructor on Fridays. Other students also submit Team Evaluation Forms to their instructor. On Fridays, the team leaders also post their assignment reports in an online discussion forum for across group discussion to improve other groups' reports on Saturdays and Sundays. The instructor evaluates this across group discussion by using A Rubric to Assess Students' Participation in Online Discussion on Assignments that is also provided to students at the start of the semester.

Each week, the instructor provides comments on weekly assignment reports and also completes the assignment assessment rubric using the same form that was completed and sent to the instructor. Both the weekly assignment reports and the assessment rubric including the instructor's remarks are returned to their respective teams. This timely feedback by the instructor is critical in keeping students on the right track and for superior course outcomes.

The textbook and marketing plan handbook should be carefully selected and the syllabus and the course itself should be carefully designed and continuously improved based on students' comments. At the end of the seven-week semester, the students are invited to engage in a reflective assessment of this course to provide feedback about all aspects of this course. We present, here, a summary of end-of-term reflective assessment of Marketing Management course by students in various sections of this course. Some templates and assessment rubrics utilized in this course are presented in appendices.

Course Syllabus

The syllabus and the course were well developed and did not require a change.

Textbook

Students indicated that the textbook used in this course was a great tool for the class.

Quizzes

There are five quizzes with multiple-choice exams and each quiz lasts two hours. These quizzes are available online over several days each week. Students felt that these quizzes were straightforward though lengthy after a long day of work at their companies.

Marketing Plan Handbook

Students indicated that this Handbook was fairly simple to understand and use; it was a great tool for the class and it offered great examples as to how to do the plan and led students in the right direction when writing the plan.

Sample Marketing Plans

Students found these to be very helpful.

Templates

The templates were very helpful and gave specific guideline to follow that helped in the completion of the plan.

Rubrics

The rubrics helped to facilitate more discussion and improved upon students' understanding of what was expected from them.

Marketing Plan

These projects should present real life experiences that students would be able to use in their professional careers. They noted that the marketing plan challenged them to keep thinking and required a lot of work but it was interesting and they learned a lot about marketing and the product they did their research on.

Group Size

The group size should be large enough to make workload manageable. We have increased group size from five to seven to make sure that a group can rotate leaders on a weekly basis.

Number of Groups

One section of this course had only one group of five students thus there was no across group discussion. Across group discussion has been quite rich when there are three or four groups.

Timely Feedback

The instructor should offer timely advice and suggestions. Students appreciated the timely responses to any questions or emails to their instructor. It is very important to grade student work and provide feedback in a timely fashion.

Discussion Forums

1. Within group discussion forums. These forums helped students to collaboratively write assignment reports and the marketing plan.
2. Across group discussion forums. These forums helped students as they provided comments to other teams' assignments reports and defended their own assignment reports.
3. Students liked being able to share with other classmates and to get an objective opinion on the marketing plan. Every new person that read the plan added new comments or suggestions not thought of by others. This helped the team consider new ideas.
4. The discussion forums gave students the opportunity to communicate as a team, as well as review other teams' projects and provide them with thoughts and questions that students hoped would assist them. The majority of questions presented to a team allowed it to pursue additional resources and other ideas that it may have otherwise missed.
5. Students noted that the discussion forums allowed them to keep up constant communication throughout the week. The forums allowed them to see everything that had been written and suggested on the same page. It made it easier to keep up with information and less likely to miss something important.

The Workload

The workload should be meaningful; avoid "busy" work. Students noted that working on their marketing plans was very meaningful since this assignment was directly related to the subject matter of the course and

they learned a great deal. They would rather do an assignment like this than spend hours upon hours working on busy work that feels unrelated to the course.

Teamwork

Most students were very satisfied with their teams and appreciated that each team member pulled their own weight appropriately and developed a phenomenal plan. Such teams would discuss the plan early in the week so they could complete their assignments by Friday. Some students noted that it was difficult dealing with team members that did not do their part which caused more work at the last minute for other team members.

DISCUSSION AND CONCLUSION

Online teaching and learning requires tools and techniques that were not often utilized in the traditional face-to-face courses. The roles of instructors and students have been changing across course delivery formats. The traditional face-to-face instruction is often instructor-centered implying that the instructor is "A sage on the stage," while in online settings learning is more learner-centered and the instructor often plays the role of "A guide by the side."

Group discussion enhances students' learning experience and for a rich discussion there should be about five or more students per group. Also, there should be more than one group per class to support rich discussion across groups. The instructor should provide prompt and detailed feedback to student's assignments to keep them on track. Use of templates and assessment rubrics provides guidance to students and keeps learning and assessment organized. Since there is an increased focus now on outcome-based learning, the use of templates and assessment rubrics cannot be over emphasized, especially for online courses. Each online learning management system provides its own tools and techniques for teaching and learning management and these tools can be enhanced by utilizing tools like templates, assessment rubrics, group discussion, weekly reports, and instructor feedback to improve student engagement and course outcomes.

The students' responses to a survey on reflective evaluation of a Marketing Management course indicate that a well-designed course that utilizes templates and assessment rubrics, along with an appropriate technological support system, and timely guidance and feedback by the instructor can provide rich learning outcomes for students. Future researchers should replicate the findings of this study to provide additional support in improving online education and learning. This study should also be replicated in a 3D Virtual World setting, especially one utilizing SLOODLE that integrated Moodle with *OpenSim* or *SL*, to provide a richer interaction among the participants through text, voice and face-to-face interaction among the avatars of the students and their instructors.

Future researcher should also build well developed and tested templates and assessment rubrics for specific courses and those templates and rubrics should be made available to other instructors so they could enhance teaching and learning outcomes of their online courses.

For richer communication, the group size and the number of groups per course is very important. We have learned that there should be five or more students per group and there should be three to five groups in a class for meaningful and manageable discussion. The workload may become excessive with too few students per group and the quality of across group discussion is likely to suffer with too many or too few groups.

A key to engaging students in an online discussion forum parallels two dimensions with which instructors are already familiar vis-à-vis the in-class modality: dialogue that adds to the discussion and incorporates feedback that contributes to the conversation.

As an online instructor, offer a positive comment that reinforces the student's contribution to the online dialogue then use the student's contribution as a lead-in to insights that you, the subject matter expert, have to share. Reserve constructive feedback, if any, until the end; presented as a suggestion – in both tone and context – that the student may employ to enhance or bolster their contribution. Such a discussion forum "sandwich" accomplishes the goals of offering feedback, contributing to the online discussion, bolstering student confidence, and enhancing the online learning experience.

The online learning experience is enhanced via establishing and adhering to expectations of students who participate in the online discussion forum. One way to communicate discussion forum expectations is via a well-articulated rubric, which should be made available to student at the start of the course. In addition to a rubric, clearly present the expectations for the weekly discussion forum in the course syllabus. Finally, reinforce the expectations in the prelude/introduction of the week's discussion forum. Moreover, expectations should adhere to SMART performance-management goal-setting principles: specific (substantive), measurable (word count, rubric and number of posts), achievable, relevant (applicable to the subject matter), and timely (by defined deadlines: first discussion forum post is due by midnight on Wednesday with two additional posts made in response to classmates' contribution by midnight on Sunday).

Finally, we present below a checklist to enhance student participation and performance:

1. Provide sample assignments and projects written by previous students in a course.
2. Provide meaningful and challenging assignments and projects that should provide students with a real world experience that they can use in their professional lives.
3. Provide templates for assignments and projects.
4. Provide assessment rubrics for assignments and projects.
5. Provide a forum and a template to guide online discussion within and across student teams.
6. Avoid "busy" work that is not related to the course or to the students' professional careers.
7. Determine the types and number of manageable online discussion forums that are required in a course.
8. Determine the grade value of these online discussion forums in the overall course grade.
9. Provide guidelines to students to encourage better performance in online discussion forums.
10. Share with students the assessment rubric that the instructor will use to evaluate online discussion forums.
11. Provide timely and constructive feedback and evaluation of assignments and discussion forums.

APPENDICES

Here, we present one of several templates and four of several assessment rubrics that are used in our Marketing Management course. These can be modified and adapted by others for use in business courses.

1. **Appendix A.** A Template for Tactics Assignment
2. **Appendix B.** An Assessment Rubric for Tactics Assignment
3. **Appendix C.** A Team Evaluation Form
4. **Appendix D.** An Assessment Rubric for Participation in Online Discussion Assignments.
5. **Appendix E.** Assessment Rubric for A Marketing Plan

Appendix A
A TEMPLATE FOR TACTICS ASSIGNMENT – MKT 640
Designing the Tactics (or Marketing Mix): (Chernev, *Marketing Plan Handbook*, Chapters 8, 13, & 14)

To execute a given strategy, provide tactics that translate the desired strategy into a specific set of actions. Outline the key aspects of the offering's marketing mix. Use the D-C-D framework of designing, communicating, and delivering value through seven key elements:

Product

Define relevant product characteristics (attributes, benefits, and costs). The key product aspects of the offering – performance, consistency, reliability, durability, compatibility, ease of use, technological design, degree of customization, form, style, and packaging.

Service

Identify relevant service characteristics (attributes, benefits, and costs). Product support, customer service, personnel selection and training. Service provided to customers, collaborators, and the company personnel.

Brand

Determine the key elements of brand identity (name, logo, symbol, slogan, jingle, and packaging) and the meaning of the offering's brand associations such as emotional benefits, social benefits, and self-expressive benefits.

Price

Identify the price(s) at which the offering is provided to customers and channel members.

Incentives

Incentives enhance the value of the offering by providing additional benefits and/or by reducing costs. Discuss monetary and non-monetary incentives. Define the incentives offered to customers (e.g., price reductions), collaborators (e.g., trade allowances), and company personnel (e.g., bonuses). Identify any proposed changes in the incentives.

Communications

Inform the target customers about the offering and its characteristics. Discuss six key decisions about communication: goal, message, media, creative solution, implementation, and evaluation. The message may emphasize any of the marketing mix elements (product, service, brand, price, incentives, and distribution). Identify the manner in which the key aspects of the offering (i.e., product, service, brand, price, and incentives) are communicated to target customers, collaborators, and company personnel and stakeholders.

Distribution

Distribution captures the channel through which the offering is delivered to customers. Describe the manner in which the key aspects of the offering are delivered to target customers, collaborators, and company personnel and stakeholders. Discuss decisions regarding channel structure, channel coordination, channel type, channel coverage, and channel exclusivity.

Appendix B
AN ASSESSMENT RUBRIC FOR TACTICS ASSIGNMENT

Instructor: _____
Course: MKT 640.
Group Name: _____

The desired outcome that the company is trying to achieve._____.

Evaluation Scale: A (Excellent) = 93-100, A- = 90-92, B+ (Good) = 87-89, B=83-86, B- = 80-82, C+ (Fair) = 77-79, C = 70-76, D (Poor) = 60-69, and F (Not Acceptable) = 0-59.

Category	Description	Assessment by Group Leader	Assessment by Instructor
1. Product	Define relevant product characteristics (attributes, benefits, and costs). The key product aspects of the offering – performance, consistency, reliability, durability, compatibility, ease of use, technological design, degree of customization, form, style, and packaging.		
2. Service	Identify relevant service characteristics (attributes, benefits, and costs). Product support, customer service, personnel selection and training. Service provided to customers, collaborators, and the company personnel.		
3. Brand	Determine the key elements of brand identity (name, logo, symbol, slogan, jingle, and packaging) and the meaning of the offering's brand associations such as emotional benefits, social benefits, and self-expressive benefits.		
4. Price.	Identify the price(s) at which the offering is provided to customers and channel members.		
5. Incentives	Incentives enhance the value of the offering by providing additional benefits and/or by reducing costs. Discuss monetary and non-monetary incentives. Define the incentives offered to customers (e.g., price reductions), collaborators (e.g., trade allowances), and company personnel (e.g., bonuses). Identify any proposed changes in the incentives.		
6. Communications	Inform the target customers about the offering and its characteristics. Discuss six key decisions about communication: goal, message, media, creative solution, implementation, and evaluation. The message may emphasize any of the marketing mix elements (product, service, brand, price, incentives, and distribution). Identify the manner in which the key aspects of the offering (i.e., product, service, brand, price, and incentives) are communicated to target customers, collaborators, and company personnel and stakeholders.		
7. Distribution	Distribution captures the channel through which the offering is delivered to customers. Describe the manner in which the key aspects of the offering are delivered to target customers, collaborators, and company personnel and stakeholders. Discuss decisions regarding channel structure, channel coordination, channel type, channel coverage, and channel exclusivity.		

Appendix C
A TEAM EVALUATION FORM - MKT 640

Instructions: Rate each team members' participation in the assignment between 1 and 10. A rating of 1 indicates the team member did not contribute to the project while a 10 indicates that your team member did his or her fair share. A rating of 5 indicates that the team member did half the expected work. Do not rate yourself.

Assignment:_____
Your Name:_____
Team Leader:_____
Team Name:_____

Teammate Name	Rating (1-10)	Comments

Appendix D
AN ASSESSMENT RUBRIC FOR PARTICIPATION IN ONLINE DISCUSSION ASSIGNMENTS - MKT 640

#	Items	Poor	Good	Excellent
1	Posted main topic (assignment under discussion) information only.	X		
2	Posted main topic information and more than one response.		X	X
3	No depth of presentation, no research base, opinion only.	X		
4	Comments were barely related to main discussion question and/or other student posting.	X		
5	No constructive comments to help class discussion.	X		
6	Postings were poorly written.	X		
7	Posted within a couple of hours of the deadline.	X		
8	Posted at least twice per week.		X	X
9	Responses were not limited to "I agree" or "great idea" but were supported with examples from personal and professional experiences.		X	X
10	Postings demonstrated a knowledge and understanding of assigned readings from both textbooks (Kotler & Keller and Chernev).		X	X
11	Referenced other research, gave examples, and evoked follow-up responses from other students.		X	X
12	Enhanced quality of discussion (i.e., illustrated a point with examples, suggested new perspectives on issues, asked questions that helped further discussion, cited current news events etc.)		X	
13	Substantially enhanced quality of discussion (i.e., illustrated a point with examples, suggested new perspectives on issues, asked questions that helped further discussion, cited current news events, etc.)			X
14	Replied to several other student postings and provided relevant responses and constructive feedback to the student.		X	
15	Replied to several other student postings on a regular basis and provided relevant responses and constructive feedback to the student posting.			X
16	Postings were well-written, incorporating proper grammar, spelling, and sentence structure.		X	X
17	Postings substantially helped the target group to write a high quality assignment report.		X	X
18	Postings utilized not just business periodicals but peer-reviewed scholarly articles with proper citations (using both in-text citations and end of posting citations in the APA format).		X	X
19	Read and considered substantial number of student postings before responding.			X
20	Demonstrated leadership in discussions.			X

Appendix E
ASSESSMENT RUBRIC FOR A MARKETING PLAN - MKT 640

Instructor: _____
Course: MKT 640
Group Name: _____.

Evaluate the written report of your marketing plan, section by section, and overall, by using this Evaluation Scale: A (Excellent) = 93-100, A- = 90-92, B+ (Good) = 87-89, B=83-86, B- = 80-82, C+ (Fair) = 77-79, C = 70-76, D (Poor) = 60-69, and F (Not Acceptable) = 0-59.

Assessment Criteria	**Underperforming**	**Average**	**Excellent**
Standard Marketing Plan* 1. Executive Summary 2. Situation Analysis 3. Goal 4. Strategy 5. Tactics 6. Implementation 7. Control 8. Exhibits 9. References	Some but not all sections of a standard Marketing Plan have been completed.	All sections of a standard Marketing Plan have been completed but some subsections are poorly developed.	All sections and subsections of a standard Marketing Plan have been completed.
Assessment Tools (Control)	Marketing plan has no appropriate measurement tools for its objectives; no periodic plan assessments are scheduled.	Marketing Plan contains appropriate measurement tools for some of the objectives; no periodic plan assessments are scheduled.	Every objective has an appropriate measurement tool and periodic plan assessments are scheduled.
Plan Cohesiveness	Most sections of the plan are disjointed so no consistent picture emerges.	The Marketing Plan is by and large cohesive.	The Marketing Plan is consistent and cohesive throughout all sections and subsection.
Information Resources	Information collection is weak or non-existent. Hypothetical information, if developed, is unsatisfactory.	Information collection is shallow but some effort was made to collect necessary information. Hypothetical information, if developed, is mostly satisfactory.	Thorough use of available information from various sources. Hypothetical information, if developed, is very satisfactory.
The APA Style of Writing	Did not follow the APA Style of writing in much of the following areas: document formatting, citations, body of text, headings/ subheadings, references, tables, figures, etc.	Mostly followed the APA Style throughout in terms of document formatting, citations, body of text, headings/ subheadings, references, tables, figures, etc.	Consistently followed the APA Style throughout in document formatting, citations, body of text, headings/subheadings, references, tables, figures, etc.
Writing Quality	Disappointing overall appearance; extensive spelling/grammatical errors; the Marketing Plan does not flow; the reader is lost; verbose or meandering and/or not sufficient explanation of concepts or arguments.	Good overall appearance; very few spelling/ grammatical errors; the Plan flows; the reader is usually not lost; mostly logical; mostly concise and to the point.	Overall appearance is good; very few or no spelling/grammatical errors; the reader is never lost; very logical; concise and to the point.

*A standard marketing plan is based on Chernev, *The Marketing Plan Handbook.* Chicago, IL: Cerebellum, 2011.

REFERENCES

Anderson, L. W., and D. R. Krathwohl. (Eds.) (2001), *A Taxonomy of Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives.* New York, NY: Longman.

Bloom, B. (1956). *A Taxonomy of Educational Objectives: Classification of Educational Goals Handbook I: Cognitive Domain*. New York: McKay Press.

Collins, M.P. & Z. L. Berge. (1996). Facilitating interaction in computer mediated online courses*." Proceedings of the FSU/AECT Conference on Distance Learning.* June 20-23, Tallahassee, FL. Retrieved Dec. 6, 2014, from https://www.academia.edu/711320/Facilitating_interaction_in_computer_mediated_online_courses

Collins, M.P. & Z. L. Berge. (1997). Moderating online electronic discussion groups. Paper presented at the *American Educational Research Association Conference*. Chicago, IL. March 24-28. Retrieved on December 6, 2014 from http://emoderators.com/wp-content/uploads/aera97c.html.

Crumpacker, N. (2001), Faculty pedagogical approach, skill, and motivation in today's distance education milieu, *Online Journal of Distance Learning Administration,* 4(4). State University of West Georgia, Distance Education Center. Retrieved December 17, 2015, from http://www.westga.edu/~distance/ojdla/winter44/crumpacker44.html

Deutschmann, M. (2009), Chapter 2: Instructional design, Teacher Practice and Learner Autonomy," in *Learning and Teaching in the World of Virtual World of Second Life,* Eds. J. Molka-Danielsen & M. Deutschmann (2009). Trondheim, Norway: Tapir Academic Press.

Dougiamas, M. & P. C. Taylor (2002), Interpretive analysis of an internet-based course constructed using a new courseware tool called Moodle, pp. 1-9. Retrieved December 11, 2014, from https://dougiamas.com/archives/herdsa2002/

Dubas, K. & J. Hill (2013), Guidelines for meetings and presentations in Second Life," *Academy of Educational Leadership Journal,* 17(2), 1-11.

Dubas, K. M., R. Pressley, A. Tavakoli, & F. H. Miah (2014), The impact of student engagement in a 3D virtual world on course outcomes," *Innovative Marketing,* 10(2), 17-34.

Hazari, S. (2004), Strategy for assessment of online course discussions, *Journal of Information Systems Education,* 15(4), 349-355.

Kayler, M., & K. Weller. (2007), Pedagogy, self-assessment, and online discussion groups, *Educational Technology & Society,* 10(1), 136-147.

Kukla, A. (2000), *Social Constructivism and the Philosophy of Science.* New York, NY: Routledge.

Molka-Danielsen, J. (2009) Chapter 1: The new learning and teaching environment," in *Learning and Teaching in the World of Virtual World of Second Life,* Eds. J. Molka-Danielsen & M. Deutschmann (2009). Trondheim, Norway: Tapir Academic Press.

Palloff, R., M. & K. Pratt (2007), *Building Online Learning Communities: Effective Strategies for the Virtual Classroom.* 2nd edition. San Francisco, CA: Published by Jossey-Bass, a Wiley Imprint.

Salomon, G. (2004), *E-moderating: The Key to Teaching and Learning Online.* London, Taylor & Francis.

Salmon, G., M. Nie, & P. Edirisingha (2010), Developing a five-stage model of learning in Second Life," *Educational Research,* 52(2), 169-182.

Vygotsky, L. S. (1978), *Mind in Society.* Harvard University Press.

Taylor, P. C., & D. Maor. (2000). Assessing the efficacy of online teaching with the constructivist on-line learning environment survey. Paper presented at the 9th Annual Teaching Learning Forum – Flexible Futures in Tertiary Teaching, Perth: Curtin University of Technology. Retrieved December 11, 2014, from https://www.academia.edu/2835531/Assessing_the_efficacy_of_online_teaching_with_the_Constructivist_Online_Learning_Environment_Survey

THE IMPACT OF AN ACTIVITY-BASED LEARNING ENVIRONMENT AND GRADE POINT AVERAGE ON STUDENT FINAL COURSE GRADE IN AN UNDERGRADUATE BUSINESS STATISTICS CLASS

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Gregory M. Kellar, Wright State University
Larry B. Weinstein, Wright State University

ABSTRACT

The use of an activity-based learning environment as part of a blended learning course has become popular in recent years. Many studies suggest that an activity-based learning environment, which may require more active engagement and additional effort by students, universally leads to positive student learning outcomes. However, since not all students may actively engage or put in the required additional effort, it may be that some students in fact perform more poorly in an activity-based learning environment. Yet, little research has empirically studied this phenomenon. This article examines three research questions: i) does an activity-based learning environment directly and positively impact final course grade, ii) does entering grade point average positively impact final course grade, and iii) does grade point average moderate the effect of an activity-based learning environment on final course grade. These questions are addressed using data from undergraduate business statistics courses at a large Midwestern public university. Results indicate that grade point average moderates the relationship between an activity-based learning environment and student learning outcomes. Specifically, students with high grade point averages respond differently than students with low grade point averages to an activity-based learning environment. Students with high grade point averages perform better in activity-based learning environments, while students with low grade point averages perform better in lecture-based learning environments.

INTRODUCTION

"I hear and I forget. I see and I remember. I do and I understand. – Confucius"

The undergraduate business statistics (UBS) course provides students with an important business foundation. An understanding of basic statistical concepts can be critical to graduates' success (Lohr, 2009). While we, the authors, would like to think that we prepare our students to evaluate, analyze, and apply what they learn in UBS to real-world business problems, we reluctantly acknowledge that many of them fail to achieve these higher-order learning outcomes. One reason is that for many, statistics is a difficult quantitative subject in which one must learn numerous techniques. Frequently, the application of these techniques requires that students manually crunch numbers—often using only hand-held calculators. Students' anxiety over these expected computations often interferes with their ability to understand the relationship between statistical techniques and the objectives of associated analyses (Rynearson & Kerr, 2005) Moreover, instructors often introduce statistical concepts in an abstract form that emphasizes theory rather than application. As a result, students do not learn how to apply these concepts.

Accordingly, a lecture-based learning environment (LBLE) that provides only a passive learning experience—typical of the learning environment of many UBS courses —may provide little value to many students.

Research suggests that instructors may improve learning outcomes by moving beyond the LBLE to an activity-based learning environment (ABLE) (Kayes, 2002; Kolb & Kolb, 2005; Roehl et al., 2013). While instructors have used elements of active learning in the classroom for decades (Strayer, 2012), considerable recent efforts to improve student learning outcomes have focused on improving ABLEs further by incorporating online technology into a blended learning environment in which some instruction takes place inside the classroom and some instruction takes place outside the classroom (Garrison & Vaughn, 2008; Arbaugh, Godfrey, Johnson, Pollack, Niendorf, & Wresch, 2009; Strayer, 2012; Roehl, Reddy, & Shannon, 2013; Myxter, 2014). Online technology lends itself well to an activity-based, blended learning environment, because it improves instructors' opportunities to offer learning activities, and it extends instructors' abilities to monitor students. It enables students to learn basic concepts outside the classroom, leaving more classroom time for active learning experiences. Cited research led to our attempt to improve learning outcomes in UBS by employing technology to help create an ABLE.

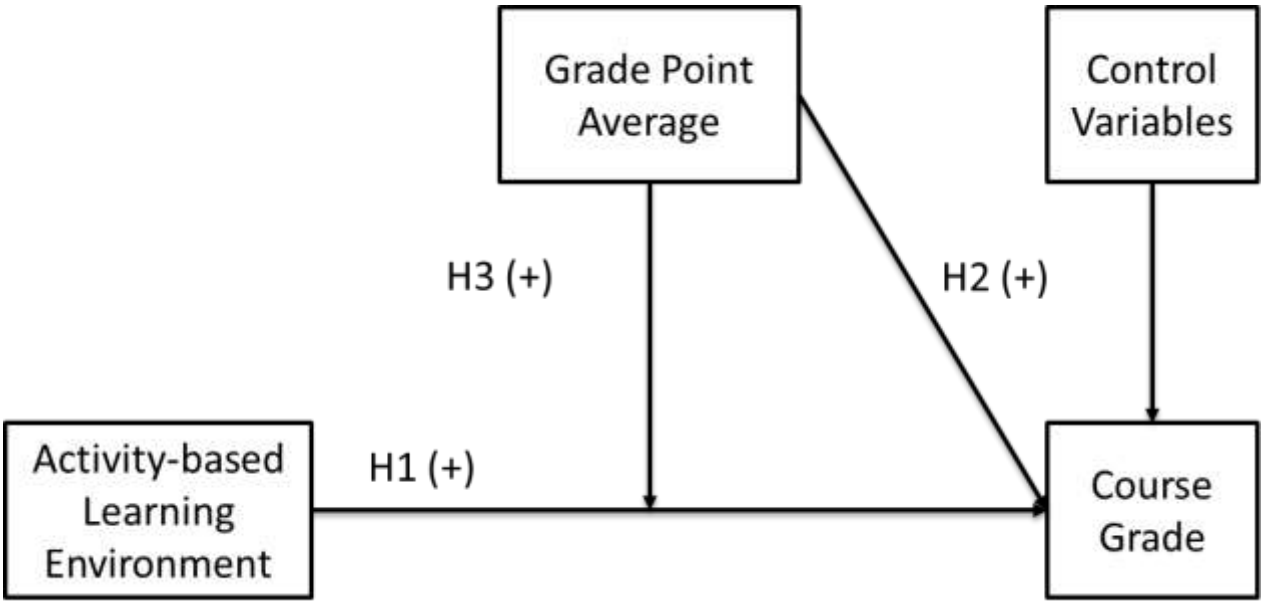
Numerous studies have suggested that using an activity-based approach may universally improve learning outcomes. However, two recent studies (i.e., Garrison & Vaughn, 2008; Strayer, 2012) have anecdotally suggested the benefits may be more limited because activity-based approaches may require additional student effort, they could diminish learning outcomes for students, who are less motivated to put in the additional effort). In a commentary literature stream, Whittingham (2006) and Noftle & Robins (2007) suggest that GPA is related not only to learning outcomes, but also to conscientiousness—that is, to the tendency for a student to put in effort. Students with higher GPAs are more conscientiousness and thus may put in more effort than those with lower GPAs. Taken together these two complementary literatures suggest that students with above-average GPAs may tend to put in more effort than students with below-average GPAs, and as a result have better learning outcomes. In other words, the relationship between the learning environment and learning outcomes may be influenced or moderated by the student's entering GPA, thus suggesting that an activity-based learning environment may not be universally beneficial. However, this dilemma has not been empirically investigated. Is it the case that activity-based learning environments universally improve student learning? Alternatively, does an activity-based learning environment improve the performance of high GPA students, while decreasing the performance of low GPA students? We contribute to the extant literature by empirically investigating these questions. This paper investigates (i) the direct impact of learning environment on final course grade (FCG); (ii) the direct impact of GPA on FCG and (iii) the moderating effect of GPA on the relationship between learning environment and FCG.

The remainder of this paper includes a review of relevant literature, a description of the methodology used, results of analyses and implications, and a discussion about the study's limitations and future research opportunities.

THEORETICAL BACKGROUND AND HYPOTHESES

The blended learning literature addresses the benefits of an ABLE over an LBLE. This literature suggests that both learning environment and student ability have an impact on learning outcomes. Based on our understanding of existing literature, we expected the study to show that (i) an ABLE has a direct and positive effect on FCGs when compared to an LBLE, (ii) students' entering GPAs have a direct and positive influence on FCGs and (iii) students' entering GPAs moderate the relationship between an ABLE and FCG. We represent these relationships in the model depicted in Figure 1.

Figure 1
HYPOTHESIZED MODEL

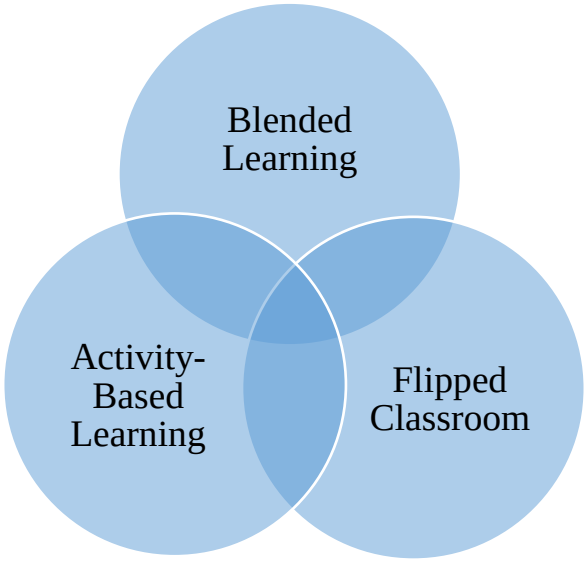


Activity-Based Learning Environment

Active learning (frequently manifested as experiential learning) is a process by which the learner creates meaning through activities and experiences (Dewey, 1938). An ABLE focuses on creating active learning by engaging students in activities and experiences when face-to-face with their instructors. Popular teaching methods (TMs) such as blended learning and the flipped classroom frequently use an ABLE.

Figure 2 illustrates the relationship among the concepts of three influential active learning approaches, blended learning, the flipped classroom, and activity-based learning. Blended learning may exist outside the flipped classroom and without activity-based learning; use of the flipped classroom does not mandate either a blended learning environment or the presence of activity-based learning; and activity-based learning may occur without a blended learning environment or use of the flipped classroom. Our interest is in the area where all three topics intersect.

Figure 2
RELATIONSHIP BETWEEN BLENDED LEARNING, ACTIVITY-BASED LEARNING, AND FLIPPED CLASSROOM



In designing our classroom ABLE, we incorporated many ideas from the literature. Melton (2008), Hakeem (2001), Grandzol (2004), and Rynearson & Kerr (2005) describe their use of activity-based learning in a UBS class. Van de Rhee (2010), Biesterfield (2001), and Carlton & Mortlock (2005) describe their use of segments from television shows such as *Numb3rs* and *The Price Is Right* to illustrate concepts of likelihood of events, random numbers, hypothesis testing, and conditional probability. Rappaport and Richter (2008) describe using racetrack betting markets to teach probability and sensitivity analysis.

In blended learning, knowledge is conveyed to students through complementary delivery modes in an effort to promote learning (Singh, 2003). In its most traditional sense, "blended learning" might refer to a course that delivers knowledge through a combination of lectures and film clips. Today, "blended learning" typically refers to a course that pairs face-to-face instruction with instruction delivered in an environment that enables students to interact online with the instructor, with other students, and with course content (Garrison & Kanuka, 2004). The blended learning approach enables instructors to exploit the strengths of both face-to-face interaction and online technology to create an appropriate pedagogic balance tailored to improve student learning and facilitate activity-based learning (Osguthorpe & Graham, 2003).

The flipped classroom extends the blended learning environment by using online technology to convey fundamental course concepts, while using classroom activities to foster a deeper understanding of those concepts (Fulton, 2012; Tucker, 2012; Roehl et al., 2013). The flipped classroom makes it possible to replace a traditional lecture-based classroom with an activity-focused approach by moving lower-level learning activities (such as lectures) to outside the classroom, while focusing on higher levels of application, analysis, and creation within the classroom (Hamdan, McKnight, McKnight, & Arfstrom, 2013).

In addition to the aforementioned theoretical literature that links an ABLE to positive learning outcomes, several studies (Hakeem, 2001; Alonso, 2010; Asef-Vaziri, 2015) have found support for this relationship. Therefore, we hypothesize that:

H1 An ABLE has a direct and positive influence on FCGs.

Grade Point Average and Student Learning

The literature shows that a student's preexisting cognitive and learning abilities may have a significant impact on learning outcomes (Whittingham, 2006; Bradley et al., 2007; Palocsay & Stevens, 2008; Hollister & Berenson, 2009). Several studies have found support for this proposition. For example, Bradley et al. (2007) examined the relationship between GPA and perceptions of improved higher-order cognitive skills in business courses. Bradley and his colleagues found that students with above-average GPAs tended to perceive greater improvement in higher-order cognitive skills than did students with below-average GPAs. Palocsay & Stevens (2008**)** examined the relationship between GPA and students' overall grade in a college calculus course, and the grade they received on a multiple-choice final exam in a UBS class. The researchers found that both the overall calculus grade and GPA have a significant correlation with the UBS final exam score. However, student GPA provided the best predictor of the final exam score. Hollister and Berenson (2009), noted that, after controlling for GPA, they were unable to show statistical differences between various methods of exam administration. They found this to not be surprising, given the numerous studies that indicate that GPA tends to be the primary determinant of student performance. Therefore, we hypothesize:

H2 A student's entering GPA has a direct and positive influence on FCG.

The Moderating Influence of Entering Cumulative GPA on the Relationship between ABLE and Student Learning

An ABLE engages students in higher-order thought processes such as evaluation, analysis, and synthesis that encourage student learning (Bonwell & Eison, 1991). It also requires that students a) be motivated enough to learn independently, b) self-direct their learning efforts and c) actively participate in the learning experience (Cybinski & Selvanathan, 2005). Since a student's GPA reflects traits such as conscientiousness (Whittingham, 2006; Noftle & Robins, 2007) that are related to their motivation, a student's entering GPA may correlate with student learning in an ABLE. Specifically, students with higher entering GPAs tend to have higher levels of conscientiousness and as a result may manifest greater degrees of motivation. As such, we would expect higher-GPA students to perform better in an ABLE, while lower-GPA students might actually achieve less than they otherwise would have in an LBLE. Strayer (2012) provides support for this notion. He observed that some students struggle to remain engaged in an ABLE, resulting in their feeling lost. This ultimately results in demotivation and poor performance in the course. He further suggests that lower GPA students tend to be the ones struggling with the ABLE, which implies that entering GPA may shape or moderate the relationship between an ABLE and student learning outcomes. He concluded his research by recommending that future research empirically investigate this phenomenon. On the basis of this prior research, we hypothesize:

H3 *Entering GPA moderates the relationship between an ABLE and FCGs such that students with above average entering GPAs enrolled in an ABLE will have higher FCGs than their counterparts in an LBLE and students with below average entering GPAs enrolled in an ABLE will have lower FCGs than their counterparts in an LBLE.*

METHODOLOGY

Experimental Design

This study focused on an ABLE's impact on student performance in a UBS class. Given the literature which supports the proposition that a student's entering GPA can have an impact on learning, we pursued an experimental approach in which we manipulated the learning environment and objectively observed learning outcomes. Following previous practice, we used an experiment to compare different educational outcomes across learning environments to allow for the explicit control of learning outcomes and the mitigation of possible effects of exogenous variables on findings (Clouse & Evans, 2003; Cybinski & Selvanathan, 2005; Strang, 2012).

The experiment had one treatment group and one control group. The factor that distinguished treatment from control was the type of classroom learning environment. We investigated how students' entering GPAs interacted with the classroom learning environment to affect FCGs (learning outcome) (Figure 1).

Subjects and Experimental Environment

The study sample comprised 512 student subjects enrolled in an entry-level UBS course at a public university in the Midwest. Of the eight sections of the UBS course, two were taught in fall 2012, one in spring 2013, two in fall 2013, and three in spring 2014. The LBLE courses occurred during fall 2012, spring 2013, and fall 2013. The ABLE courses occurred during spring 2014. Of the 512 student subjects, 71 were excluded from the final sample because they withdrew from the course, did not have an available cumulative entering GPA, or did not receive a grade for the course due to incompletes, academic integrity violations, or other circumstances.

Because students self-selected into course sections, the learning environment treatments in our study lacked random assignment; therefore, our study was potentially influenced by selection bias. To test for potential selection bias that might influence our results, we examined the two treatment groups across three measures that might indicate such a bias. The measures included (i) a chi-square comparison of the proportion of students who withdrew from an ABLE course versus the number who withdrew from an LBLE course, (ii) a t-test comparison of teaching evaluations, and iii) a t-test comparison of cumulative entering GPA across TMs. Results indicated the following: First, no statistically significant difference ($\chi^2 = 2.54$, $p > 0.10$) in the proportion of students that withdrew from courses when compared across learning environments existed. This finding suggests that there was not a selection issue from students self-selecting into or out of a particular TM. Second, no statistically significant difference ($t = -0.67$ [df = 6], $p > 0.10$) in the teaching evaluations based on the learning environment existed. This suggests that students' perceptions of instructor effectiveness did not vary significantly across learning environments. Third, a small but statistically significant difference ($t = 0.19$ [df = 439], $p < 0.001$) in the cumulative entering GPA for all the class sections based on the learning environment existed. While significant, we believe this difference is not substantive. The average cumulative GPA for the LBLE is 2.89; for the ABLE, it is 2.70. This difference *could have*

indicated that slightly higher-achieving students self-selected into the LBLE; however, this possibility is unlikely because i) all the ABLE treatments occurred in the same semester, ii) students had no alternative to the ABLE versus LBLE UBS courses in any given semester, and iii) students had no prior knowledge of the change in learning environments. Taken together, we believe these findings indicate that the potential for selection bias in our study was minimal.

In terms of demographics, 35.6% of the students in our study were females with an entering GPA of 2.82. Sixty-eight percent of the students self-identified as business majors, while 31.1% were undeclared and 0.9% were pursuing nonbusiness degrees. The number of undeclared students is not surprising, since many students were freshman (7.3%) or sophomores (44.4%) and had not yet selected a major. The remaining students in the study were juniors (34.5%) and seniors (13.8%). A summary of the student demographics can be seen in Table 1.

Table 1
DEMOGRAPHIC INFORMATION

Cumulative GPA μ = 2.82, σ= 0.58

Gender	***Count***	***Percent***
Female	157	35.60%
Male	284	64.40%
Total	441	

Class standing	***Count***	***Percent***
Freshman	32	7.26%
Sophomore	196	44.44%
Junior	152	34.47%
Senior	61	13.83%
Total	441	

Major	***Count***	***Percent***
Accounting	94	21.32%
Economics	14	3.17%
Finance	43	9.75%
Human Resource Management	25	5.67%
Management	39	8.84%
Marketing	49	11.11%
Management Information Systems	26	5.90%
Supply Chain Management	10	2.27%
Undecided	137	31.07%
Other	4	0.91%
Total	441	

Main variables

The main variables in our study are FCG, entering GPA, and learning environments.

Final course grade

Learning outcomes are measured in many different ways [(e.g., student performance on a common final exam (Palocsay & Stevens, 2008), exam scores (Clouse & Evans, 2003; Anstine & Skidmore, 2005), or overall academic performance in a program of study (Whittingham, 2006)]. In our study, we used the FCG, measured numerically from 0 to 4.0. We did so for several reasons. First, numerous other studies use FCG as a measure of student performance, or achievement of learning outcomes (McLaren, 2004; Cybinski & Selvanathan, 2005; Schniederjans & Kim, 2005; Noftle & Robins, 2007; Hollister & Berenson, 2009). Second, the FCG reflects a student's understanding over the breadth of the material covered in assignments, quizzes, and tests. This is in contrast to timed tests that often restrict coverage. Third, other measures of learning outcomes may be influenced by factors beyond the interest of this study.

For example, individual exam scores, when used in isolation, may reflect test-taking anxiety rather than learning outcomes (Kirkland & Hollandsworth, 1980). Also, for example, overall academic performance in a program of study may reflect a student's performance across a broad range of qualitative and quantitative courses as opposed to his performance in any one qualitative or quantitative class (Whittingham, 2006).

Grade Point Average

The literature maintains that a student's existing cognitive and learning ability may have a significant impact on learning outcomes (Whittingham, 2006; Bradley et al., 2007; Palocsay & Stevens, 2008; Hollister & Berenson, 2009). Extending Whittingham's connection between GPA and conscientiousness (2006) we maintain that a student's GPA provides some measurement of ability, and greater ability can influence learning, particularly in an ABLE. This study drew upon university academic records to obtain entering GPAs for each student in this study. The average entering GPA was 2.82 on a four-point scale.

Learning Environments

In this study, the entry-level UBS courses were divided into two treatment groups: (i) courses using an LBLE, representing the control group, and (ii) courses using an ABLE, representing the test group.

Apart from the learning environment, the students in the two groups covered the same course topics and were assessed on homework, quizzes, and exams using a single question pool.

Course topics included theory and application of frequency distributions, measures of central tendency and variability, basic probability, discrete and continuous probability distributions, expectation, sampling and estimation, and one-sample hypothesis testing. Course materials—including the textbook and Excel-based spreadsheets for statistical analyses and example problems—were similar across the two groups. All students solved similar online homework problems administered through Pearson's online resource delivery system. All exams were administered through the learning management system Desire2Learn. While the actual questions assessed on the homework, quizzes, or exams across or within a semester differed numerically, the theoretical content coverage and the number of questions assessed on a given topic were similar.

Control Variables

The control variables in our study were class standing (CS) and gender (GDR).

Class Standing

Consistent with prior literature (Ford et al., 2007) we controlled for CS since learning outcomes may vary with a student's academic maturity (Anstine & Skidmore, 2005) or experience using web-based learning management systems (Davis & Wong, 2007).

Gender

Learning outcomes may vary by gender (Anstine & Skidmore, 2005; Ford et al., 2007; Strang, 2012), so our analyses controlled for student gender, as reported in their academic record (0 = female, 1 = male).

Model Specification

We used a multiple-regression model to investigate the relationship between cumulative entering GPA and TMs on the FCG. The final model, as seen below, included an interaction term between GPA and TM to account for differential learning outcomes. Also, the model included two control variables, GDR and CS. GDR coded "female" as zero and "male" as one. CS was a continuous variable which coded freshmen as one, sophomores as two, juniors as three, and seniors as four. Our final research model was:

$$FCG = \beta_0 + \beta_1\, GDR + \beta_2\, CS + \beta_3\, GPA + \beta_4\, TM + \beta_5\, (GPA \cdot TM) + \varepsilon_1 \quad (1)$$

RESULTS AND DISCUSSION

Since we employed regression analysis to test our expected outcomes, we tested that model assumptions were met. A general assumption of regression is the homogeneity of variance across groups. We performed a Levene's test for equality of variance and found that the variance across the two treatment groups was significantly different ($p \leq 0.05$). Tests for homogeneity of variance are sensitive to sample size (Cohen, Cohen, West, & Aiken, 2003). Cohen et al. (2003) suggest that significance tests from violations of the homogeneity of variance assumption are robust if the samples are relatively balanced, that is, if the ratio of the largest group's sample size to smallest is less than 2. The ratio of our larger group—the lecture-based treatment—to the smaller group was 1.5, therefore regression analyses were deemed appropriate. Table 2 summarizes the regression results. Notice that the control variable GDR is found to be statistically significant, the control variable CS is not and the overall regression model is statistically significant ($F = 51.68$, [$df = 435$], $p < 0.001$, $R^2 = 0.37$). Therefore, analyses proceeded with an examination of the hypotheses. We summarize findings in Table 3.

H1 stated that the ABLE would have a direct and positive effect on students' FCG when compared to an LBLE. The results, as seen in Table 2, suggested that the direct effect of an ABLE was not statistically significant ($p \geq 0.10$). This finding suggests that an ABLE, which requires students to actively engage in the learning process, may not universally benefit students' FCGs more than an LBLE. Considering that an ABLE requires more self-directed effort from students than an LBLE (Kolb & Kolb, 2005; Tucker, 2012), our finding suggests that not all students put in the required additional effort. Moreover, students may perceive the ABLE as less challenging because it is fun (Strayer, 2012), and perhaps this perception may cause some students to put in less effort than in the LBLE.

H2 predicted that entering GPA would be directly and positively related to students' FCGs. Our analysis found that entering GPA was indeed significantly related ($p \leq 0.01$) to FCGs. This finding supports the extant literature, which indicates that students' past academic performance influences their course grade (Whittingham, 2006; Bradley et al., 2007; Palocsay & Stevens, 2008; Hollister & Berenson, 2009). The literature also indicates that a student's existing

cognitive ability—which is, in part, represented by entering GPA—plays a significant role in student learning outcomes in a UBS course.

Table 2
RESULTS OF THE REGRESSION ANALYSIS
Coefficients (Dependent Variable: Course Score.**)**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.823*	0.023		35.526	0.000
Control Variables					
Gender	0.04*	0.012	0.128	3.349	0.001
Class standing	-0.003	0.007	-0.015	-0.379	0.705
GPA	0.145*	0.016	0.562	9.088	0.000
ABLE	0.014	0.021	0.046	0.671	0.350
ABLE • GPA	0.143*	0.034	0.187	4.191	0.000
R^2					0.373
F					51.684
Df					435
p-value					0.000

*p<.01

Table 3
TESTING SUMMARY FOR EXPECTED OUTCOMES

	→→→Hypothesis	Result
H1: ABLE	→ (+) Course Score	Not supported
H2: GPA	→ (+) Course Score	Supported
H3: ABLE • GPA	→ (+) Course Score	Supported

H2 predicted that entering GPA would be directly and positively related to students' FCGs. Our analysis found that entering GPA was indeed significantly related ($p \leq 0.01$) to FCGs. This finding supports the extant literature, which indicates that students' past academic performance influences their course grade (Whittingham, 2006; Bradley et al., 2007; Palocsay & Stevens, 2008; Hollister & Berenson, 2009). The literature also indicates that a student's existing cognitive ability—which is, in part, represented by entering GPA—plays a significant role in student learning outcomes in a UBS course.

Our study found support for our third hypothesis that entering GPA moderates the relationship between ABLE and FCG ($p \leq 0.01$). Figure 3 shows this moderating effect. To help explain this statistically significant moderator, we examined pairwise comparisons, as seen in Table 4. When students had an above-average entering GPA (defined in our study as one standard deviation above the mean entering GPA), within the ABLE their FCG was significantly better than the FCG of students with similar entering GPAs enrolled in an LBLE (I-J = 9.52, p <

0.01). In contrast, when students had below-average entering GPAs (defined in our study as one standard deviation below the mean GPA), within the ABLE their FCG was significantly lower than the FCG of students with similar GPAs enrolled in an LBLE (I-J = 6.73, $p < 0.05$). These findings are consistent with conclusions reached by Cohen et al. (2003). Our findings also complemented previous research studies which indicate that GPA reflects student conscientiousness (Whittingham, 2006; Noftle & Robins, 2007).

The results of our study demonstrate that students with low entering GPA earned lower FCGs in an ABLE than in an LBLE. Therefore, we should be cautious in applying this approach until we have developed mechanisms to ensure that all students will benefit, not just those students with high GPAs. To accomplish this we need to understand why students with low entering GPAs are not as successful in an ABLE. If we understand these specific causes we can develop relevant tools to address these issues. For example, the literature cited in the previous paragraphs suggests that ABLEs require students to be more self-directed than students participating in LBLEs. Students with below-average entering GPAs may lack the required self-direction which limits their higher order thought processes (e.g., evaluation, analysis, and synthesis of business problems that involve statistics). This contrasts with high entering GPA students who put in additional effort and improve their learning outcomes by increasing their engagement in higher-order thought processes. Bonwell & Eison (1991), Kayes (2002), Kolb & Kolb (2005), Fulton (2012), Tucker (2012), and Roehl et al. (2013) support this assumption. Therefore, an important challenge is to provide mechanisms for low GPA students to achieve higher order learning.

These results also suggest that we could offer a UBS taught with an ABLE as an honors class that would be very beneficial to high GPA students. This would provide a superior learning environment for those high GPA students for whom our research shows ABLE provides the greatest advantage.

Figure 3
THE MODERATING EFFECT OF GPA ON THE RELATIONSHIP BETWEEN THE LEARNING ENVIRONMENT AND COURSE SCORE

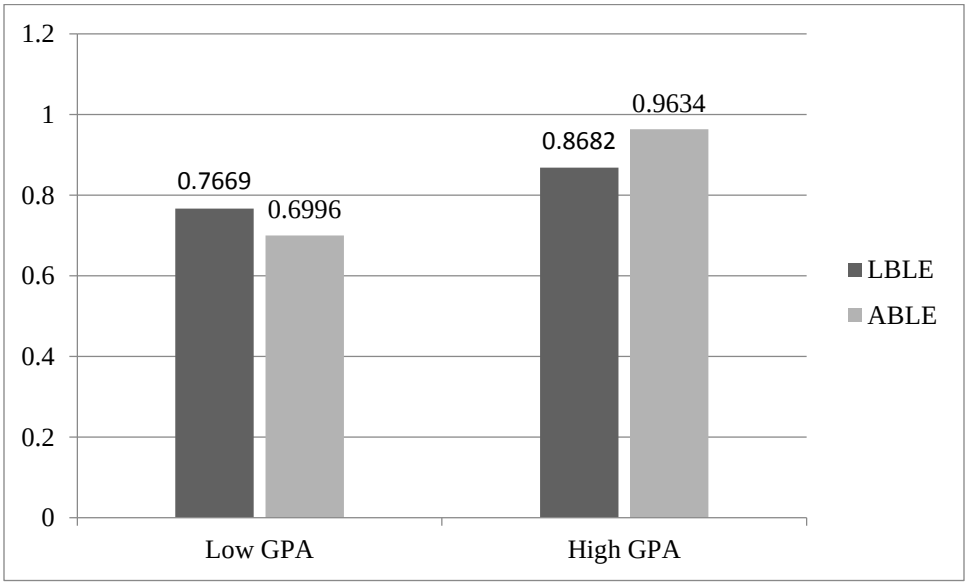


Table 4
PAIRWISE COMPARISONS

GPA Classification	Environment	Mean GPA	difference (I-J)
High (+1σ)	ABLE (I)	96.34	9.52*
	LBLE (J)	86.82	
Low (-1σ)	ABLE (I)	69.96	-6.73**
	LBLE (J)	76.69	

*p ≤ 0.01; **p ≤ 0.05

CONCLUSIONS

This study used a sample of 441 students selected from eight UBS sections utilizing either an ABLE or an LBLE. Aside from the in-class learning environment, all online and in-class outcome measurements (homework and exams) were similar. The control group used a traditional LBLE in which students functioned as passive learners and the faculty presented material with limited two-way interaction. The treatment group used an ABLE in which students actively learned and the faculty facilitated learning through a range of in-class exercises and simulations. These in-class experiences were supported by online learning resources.

Entering GPA was an observational variable and preexisting student characteristic. The dependent variable was the FCG, calculated numerically on a continuous four point scale (0 to 4.0). After controlling for GDR and CS, our results supported H2, which stated that entering GPA would positively impact learning outcomes, and H3, which stated that entering GPA would moderate the relationship between ABLE and students' FCGs. Surprisingly, the study did not support H1, which stated that use of the ABLE would directly and positively have an impact on FCGs. These results indicate that the use of activities to help students develop a deeper understanding of a topic (as suggested by Renkl et al., 2002; Prince, 2004; Westermann & Rummel, 2012) may not benefit all students in quantitative courses such as UBS.

In addition, our results have several practical implications for those who employ ABLEs. First, it may be most beneficial to differentiate instruction so that students with above-average entering GPAs participate in ABLEs and students with below-average entering GPAs participate in LBLEs. Second, students with below-average entering GPAs may require additional attention or effort from faculty in order to benefit from an ABLE.

LIMITATIONS AND FUTURE RESEARCH

The first limitation to our study was that assignment to the two treatment groups was not random. However, students had neither the prior knowledge of the study nor the choice to select into either treatment during any given semester, nor were they aware of future classroom environments that would be used in upcoming semesters. Consequently, self-selection bias was minimal. On the other hand, possible selection differences due to demographics remained. The second limitation is that UBS is a quantitative course, and our results may not generalize to non-quantitative subject areas. Third, use of an ABLE in a quantitative course such as UBS is

unfamiliar to many students. The novelty of this approach could have had an impact on our results. Future research could seek to replicate our results in different courses to overcome these limitations. Fourth, we speculate that student motivation may explain the impact of an ABLE on student effort and FCGs, even though we did not specifically measure the effect of motivation in our study.

Effort as a manifestation of motivation is only one of several reasons that an ABLE may moderate the relationship between entering GPA and FCG. For example, the unexpected devotion of class time to activity-based learning may be perceived as a waste of time by students with a below-average entering GPA, because these activities mark a significant departure from an LBLE. As a result, these students may have difficultly linking the activities to learning objectives, course materials, or real-world business situations. In addition, in-class activities may be challenging, and therefore de-motivate students with below-average entering GPAs. This causes these students to disengage (Skinner & Belmont, 1993; Stipek, 1993). Future research could investigate this conjecture.

Further, future research should investigate the use of teaching practices and behaviors that affect student motivation, in order to increase the effort put in by students with below-average entering GPAs (Skinner & Belmont, 1993). For example, the faculty members assigned to an ABLE course may have less experience teaching in an ABLE than they have teaching in an LBLE. As a result, they may develop in-class activities that are less structured and scripted than material in an LBLE. We speculate that students with a below-average entering GPA may have a more difficult time adapting to this approach. All of these factors may explain the moderation effect.

REFERENCES

Alonso, F. (2010). How blended learning reduces underachievement in higher education. *IEEE Transactions on Education*, 54(3), 471-478.

Anstine, J., & Skidmore, M. (2005). A small sample study of traditional and online courses with sample selection adjustment. *The Journal of Economic Education*, 36(2), 107-127.

Arbaugh, J. B., Godfrey, M. R., Johnson, M., Pollack, B. L., Niendorf, B., & Wresch, W. (2009). Research in online and blended learning in the business disciplines: Key findings and possible future directions. *The Internet and Higher Education*, 12(2), 71-87.

Asef-Vaziri, A. (2015). The Inverted Classroom of Operations Management: A Not-For-Cost-Reduction Platform. *Decision Sciences Journal of Innovative Education*, 13(1), 71-89.

Biesterfield, A. (2001). The Price (or Probability) Is Right. *Journal of Statistics Education*, 9(3).

Bonwell, C. C., & Eison, J. A. (1991). Active learning: Creating excitement in the classroom. *1991 ASHE-ERIC Higher Education Reports*, Washington, D.C.: ERIC, 1-104.

Bradley, R. V., Sankar, C. S., Clayton, H. R., Mbarika,V. W., & Raju, P. K. (2007). A study on the impact of GPA on perceived improvement of higher-order cognitive skills*. *Decision Sciences Journal of Innovative Education,* 5(1), 151-168.

Carlton, M. A., & Mortlock, M. V. (2005). Teaching Probability and Statistics through Game Shows. *Mathematics Teacher*, 98(8), 564-565.

Clouse, S. F., & Evans, G. E. (2003). Graduate business students performance with synchronous and asynchronous interaction e-learning methods. *Decision Sciences Journal of Innovative Education,* 1(2), 181-202.

Cohen, J., Cohen, P., West, S., & Aiken, L. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences (3rd ed.).* London, U.K.: Routledge.

Cybinski, P., & Selvanathan, S. (2005). Learning, experience, and learning effectiveness in undergraduate statistics: Modeling performance in traditional and flexible learning environments*. *Decision Sciences Journal of Innovative Education*, 3(2), 251-271.

Davis, R., & Wong, D. (2007). Conceptualizing and measuring the optimal experience of the e-learning environment*. *Decision Sciences Journal of Innovative Education*, 5(1), 97-126.

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

Ford, M. W., Kent, D. W., & Devoto, S. (2007). Learning from the pros: Influence of web-based expert commentary on vicarious learning about financial markets*. *Decision Sciences Journal of Innovative Education,* 5(1), 43-63.

Fulton, K. (2012). The inverted classroom: Transforming education at Byron High School: A Minnesota High School with severe budget constraints enlisted YouTube in its successful effort to boost math competency scores. *Technological Horizons in Education,* 39(3), 18-20.

Garrison, D. R., & Vaughan, N. D. (2008). *Blended learning in higher education: framework, principles, and guidelines*. San Francisco, CA: Jossey-Bass.

Garrison, R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education*, 7(2), 95-105.

Grandzol, J. R. (2004). Teaching MBA statistics online: A pedagogically sound process approach. *Journal of Education for Business*, 79(4), 237-244.

Hakeem, S. A., (2001). Effect of experiential learning in business statistics. *Journal of Education for Business*, 77(2), 95-98.

Hamdan, N., McKnight, P., McKnight, K., & Arfstrom, K. (2013). *A review of flipped learning*. Flipped Learning Network, accessed December 24, 2014, available at http://www.flippedlearning.org/cms/lib07/VA01923112/Centricity/Domain/41/LitReview_FlippedLearning.pdf.

Hollister, K. K., & Berenson, M. L. (2009). Proctored versus unproctored online exams: Studying the impact of exam environment on student performance. *Decision Sciences Journal of Innovative Education,* **7**(1), 271-294.

Kapur, M. (2008). Productive failure. *Cognition & Instruction,* 26(3), 379-424.

Kayes, D. C. (2002). Experiential learning and its critics: Preserving the role of experience in management learning and education. *Academy of Management Learning & Education,* 1(2), 137-149.

Kirkland, K., & Hollandsworth, J. G. (1980). Effective test taking: Skills-acquisition versus anxiety-reduction techniques. *Journal of Consulting & Clinical Psychology***,** 48(4), 431.

Kolb, A. Y., & Kolb, D. A. (2005). Learning styles and learning spaces: Enhancing experiential learning in higher education. *Academy of Management Learning & Education,* 4(2), 193-212.

Lohr, S. (2009). For today's graduate, just one word: Statistics. *The New York Times.* August 5, A1.

McLaren, C. H. (2004). A comparison of student persistence and performance in online and classroom business statistics experiences. *Decision Sciences Journal of Innovative Education,* 2(1), 1-10.

Melton, K. I. (2008). Using modified mastery assignments to increase learning in business statistics. *Decision Sciences Journal of Innovative Education*, 6(2), 239-245.

Myxter, J. (2014). *The effects of flipping the classroom on classroom environment and student achievement*. Master's thesis, Minot State University, Minot, North Dakota, USA.

Noftle, E. E., & Robins, R. W. (2007). Personality predictors of academic outcomes: Big five correlates of GPA and SAT scores. *Journal of Personality & Social Psychology*, 93(1), 116-130.

Osguthorpe, R. T., & Graham, C. R. (2003). Blended learning environments: Definitions and directions. *Quarterly Review of Distance Education,* 4(3), 227-233.

Palocsay, S. W., & Stevens, S. P. (2008). A study of the effectiveness of web-based homework in teaching undergraduate business statistics. *Decision Sciences Journal of Innovative Education*, 6(2), 213-232.

Prince, M. (2004). Does active learning work? A review of the research. *Journal of Engineering Education,* 93(3), 223-231.

Rappaport, J., & Richter, S. B. (2008). Experiential learning in a statistics class using racetrack betting markets. *Proceedings of the Northeast Decision Sciences Institute*, New York, NY, 177-185.

Renkl, A., Atkinson R. K., Maier, U. H., & Staley, R. (2002). From example study to problem solving: Smooth transitions help learning. *The Journal of Experimental Education,* 70(4), 293-315.

Roehl, A., Reddy, S. L., & Shannon, G. J. (2013). The inverted classroom: An opportunity to engage millennial students through active learning strategies. *Journal of Family & Consumer Sciences,* 105(2), 44-49.

Rynearson, K., & Kerr, M. S. (2005). Teaching statistics online in a blended learning environment. *Journal of Computing in Higher Education,* 17(1), 71-94.

Schniederjans, M. J., & Kim, E. B. (2005). Relationship of student undergraduate achievement and personality characteristics in a total web-based environment: An empirical study. *Decision Sciences Journal of Innovative Education,* 3(2), 205-221.

Singh, H. (2003) Building effective blended learning programs. *Educational Technology*, 43(6), 51-54.
Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology*, 85(4), 571-581.
Stipek, D. J. (1993). *Motivation to Learn: From Theory to Practice.* Needham Heights, MA: Allyn and Bacon.
Strang, K. (2012). Skype synchronous interaction effectiveness in a quantitative management science course. *Decision Sciences Journal of Innovative Education*, 10(1), 3-23.
Strayer, J. F. (2012). How learning in an inverted classroom influences cooperation, innovation, and task orientation. *Learning Environments Research*, 15(2), 171-193.
Tucker, B. (2012). The inverted classroom. *Education Next*, 12(1), 82-83.
van de Rhee, B. (2010). Using the TV show Numbers in a statistics course. *Decision Sciences Journal of Innovative Education*, 8(2), 385-389.
Westermann, K., & Rummel, N. (2012). Delaying instruction: Evidence from a study in a university relearning setting. *Instructional Science*, 40(4), 673-689.
Whittingham, K. L. (2006). Impact of personality on academic performance of MBA students: qualitative versus quantitative courses. *Decision Sciences Journal of Innovative Education*, 4(2), 175-190.

INTERVIEWING POTENTIAL ACCOUNTING FACULTY AT THE AAA NATIONAL MEETING AND ROOKIE CAMP: SURVEYS OF SCHOOLS' EXPERIENCES AND IMPRESSIONS

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ABSTRACT

Using electronic surveys, this research examines schools' use of the AAA national meeting (NM) and the Rookie Camp (RC) for recruiting accounting faculty. The results suggest that schools may have sent different signals to applicants by their choice of interviewing site (formal AAA interviewing area vs. common areas of the hotel vs. hotel suites). Generally, schools found more recruiting success from applicants interviewed at the AAA than candidates obtained by other methods. The annual meeting is also used to network for future hiring success, even with no current opening. Although less likely to interview at the AAA national meeting, large schools showed greater hiring success and satisfaction with the applicants and the AAA than did smaller schools. Nevertheless, the latter generally expected to continue recruiting there. Recruiters rated applicants at the Rookie Camp very highly. However, there was considerable competition for that pool of candidates; the acceptances to offers ratio was lower than for faculty obtained from other sources. The paper provides information that is potentially useful for effective and efficient accounting faculty recruiting.

***Key Words**: AAA national meeting, Rookie Camp, accounting faculty, recruiting.*

INTRODUCTION

In a "sellers' market," many schools have trouble filling an accounting faculty vacancy with a highly qualified candidate (Fogarty and Holder 2012; Hunt et al. 2009). The interview process provides a mechanism for the mutual exchange of information between recruiters and applicants and instilling a positive attitude toward the school (Caruth and Caruth 2012). Thus it is critical in attracting and retaining the interest of desirable candidates and in making a final selection (Jelf 1999; Boudreau and Rynes 1985; Saks and Uggerslev 2010; Turban et al. 1998).

The current paper examines the use of both a long-standing interviewing venue for accounting faculty – the American Accounting Association (AAA) national meeting (NM) – and the Rookie Recruiting and Research Camp (RC), created by the University of Miami in 2010. The NM serves as a recruiting venue both by providing structure through its placement services and by drawing large numbers of faculty, administrators, and candidates into one place to facilitate interviewing. Some schools interview at the convention through official AAA channels, while others do so in a less structured manner. Other schools bypass the convention altogether and bring selected candidates to campus without initial face-to-face interviews, although possibly after phone interviews. The NM's August date enables schools to schedule campus visits for the fall or possibly early winter and fill positions in time for the next academic year.

There are signs that the NM has become less of a necessity in recruiting than in previous times. Hunt et al. (2009) found that less than a third of accounting faculty who had recently accepted positions had interviewed at the NM, down from the 68% reported in Eaton and Hunt (2002) and the 65% reported in Ostrowski (1986). Those changes may have been caused somewhat by the movement from a buyer's market to a seller's market in the period between the dates of gathering data for each study.

The number of applicant resumes on file at the NM dropped from 180 in 1993 to 96 in 2007, while the number of schools recruiting increased from 110 to 222 (AAA, 2007). However, in 2010, 2011, and 2012 respectively, there were 133, 161, and 139 applicant resumes on file and only 119, 125, and 116 universities using AAA resources to recruit at the NM (AAA, 2013). This change, which should provide participating schools with a better chance of obtaining interviews with desirable potential faculty, may be due to a combination of current faculty attempting to relocate to take advantage of high market salaries, schools' disappointment with the previously low ratio of applicants to schools, or budgetary constraints.

The RC provides a venue for PhD candidates nearing completion of their dissertations to present their research and then interview with representatives of various schools. Although there are no restrictions as to what schools may attend, interviewers primarily have represented doctoral-granting or other elite schools. The December date, in contrast with that of the NM, provides the perceived advantage of enabling interviewers to get a better idea of how close the student is to finishing the PhD. The RC has grown rapidly; the number of candidates increased from 75 in 2011 to 124 in 2012 (Leone 2011, Rookiecamp 2012). The University of Miami now operates the RC in partnership with Deloitte and Touche and the AAA.

While research on the usefulness of the RC is in order, similar research dealing with the NM is also worthwhile, despite the rise of the RC. As noted above, the mix of applicants to schools at the NM is trending in schools' favor. In addition, since relocating faculty cannot interview at the RC, the NM is likely to continue to provide an important venue for recruiters. Finally, non-elite small and medium-sized schools interview at the RC in limited numbers; they may be more comfortable recruiting at the NM.

Little research has focused on the initial interviewing process of business or accounting faculty. Most of this limited body of research has focused on interviewing from the perspective of the applicant. Hunt and Sawhney (2003) examined applicants' preparation for and interviewing at the Academy of Management annual meeting. Hunt (2004) examined applicants' experiences and impressions at the NM. Other accounting studies (Hunt et al. 2009; Eaton and Hunt 2002; and Ostrowski 1986) focused on a range of job seeking activities, with a minor examination of interviewing at the NM. Hunt and Jones (2014) examined the entire recruiting and selection process from the point of view of the school, but focused only a small amount of attention on the AAA interview. We are aware of no published research on the RC, or any dealing primarily with the NM interview process from the viewpoint of hiring institutions.

This paper examines the use of both the NM and RC for recruiting, using separate surveys. The research has several objectives. First, we examine the extent of schools' use of the NM and RC for interviewing. We further examine the extent of schools' "formal" use of the NM for interviewing purposes as opposed to conducting interviews outside of the AAA structure, as well as the meeting's usefulness for networking. We also examine the number of campus visits and ratio of acceptances to offers for applicants interviewed at the NM and RC. Finally, we report information about participants' satisfaction with various aspects of the process of interviewing at the NM and RC. The various topics above for the NM are examined by size of

school, which has been related to prestige/reputation, but has not been examined in earlier research on accounting faculty recruitment. Results of this research should assist schools by indicating how various sized schools have used this venue, their success in doing so, and their perceptions regarding the process. This should provide useful information for effective and efficient accounting faculty recruitment, particularly for small and medium-sized schools, which may lack the resources to compete effectively for accounting faculty in today's market. The research should also prove valuable to AAA and RC administrators in finding ways to improve their assistance to recruiters.

The rest of the paper is organized as follows. The next section reviews the relevant literature and presents the research questions for the NM portion of the study. Next, we present the research methodology and results. Following sections deal with the same topics for the RC. The next-to-last section discusses implications of the results of both studies. The final section describes limitations of the research and offers suggestions for future research.

DEVELOPMENT OF RESEARCH QUESTIONS – AAA NATIONAL MEETING

School representatives, such as accounting department chairs, may use the NM to interview potential faculty for existing positions or to network to increase the likelihood of successful future hiring. The latter might include meeting with department heads or PhD program chairs at doctoral granting schools to attempt to get such individuals to recommend the school to their future doctoral candidates.

A major factor in a school's success in generating and maintaining applicant interest is organizational reputation. In the recruitment literature, organizational image (prestige) or reputation consists of general reactions toward a company (Gatewood et al. 1993) and beliefs about attributes of the firm that may be difficult to determine before accepting a position (Belt and Paolillo 1982; Cable and Turban 2003). Turban and Cable (2003) found that organizations with better reputations attracted more applicants, and some evidence existed for the proposition that they attracted better applicants.

An important factor in many research studies examining the prestige of colleges and universities has been enrollment size. A number of studies have used the size of the institution (e.g., Astin 1970; Astin and Solomo 1981; Porter and Toutkoushian 2002; Schmitz 1993; Volkwein 1989; Volkwein and Schweitzer 2006) as an indicator of prestige. A smaller number have examined the size of the business school (Sweitzer and Volkwein 2009) or of an individual department (Elton and Rogers 1971; Goldberger et al. 1995; Hagstrom 1971).

A recent study uses size in an accounting faculty context. Plumlee and Reckers (2014) divided schools into large and small categories based on the number of accounting graduates per year. They found that administrators at small schools, particularly those lacking AACSB accreditation, indicated that they had been harmed by the accounting PhD shortage and had great difficulty in hiring new accounting PhDs. Small, non-AACSB accredited schools were considerably more likely to have had decreases in the numbers of tenure-track accounting faculty in recent years.

The above findings are consistent with the prestige/resources model (Astin 1985). Larger organizations have more resources, which may be used to enhance their prestige. In an academic example, this might include obtaining AACSB accreditation for both business and accounting programs and hiring faculty from more prestigious doctoral programs. Reputation is instrumental in obtaining faculty applicants and gaining acceptances from desirable job candidates (Ehrenberg and Hurst, 1996). Note that the terms "prestige" and "reputation" are considered interchangeable

in many studies (e.g., Volkwein and Schweitzer 2006), so we will do so in this paper. One minor difference is that prestige tends to be favorable and is viewed as resulting from a reputation for success, while reputation is a neutral term (Shenkar and Yachtman-Yaar 1997).

Schools may be categorized by size in different ways. For example, Collegedata (2013) breaks schools into four sizes: small, medium, large and huge, with enrollments, respectively, of under 5,000, 5,001-15,000, 15,001-30,000, and over 30,000. The current study uses three categories and considers schools "small" if total enrollment is 10,000 or less, "medium" if between 10,000 and 20,000, and "large" if over 20,000.

Differences in school size may lead to different approaches to interviewing. Doctoral schools, many of which are large, and large nondoctoral schools, may have the resources and reputation to either consider it unnecessary to interview at the NM or to conduct only a limited number of interviews[1]. This is consistent with Plumlee and Reckers' (2014) finding that administrators at large schools consider themselves to have less difficulty hiring tenure-track faculty. Hunt and Jones (2014) found that nondoctoral but AACSB business-accredited schools represented about 70% of schools interviewing at the NM[2]. This result may correspond to medium-sized schools being likely to interview there. They may have sufficient prestige and resources to attract desirable candidates at the NM but not enough to feel comfortable in attempting to hire in a competitive environment without attending the meeting.

There are several reasons that small schools might choose not to interview at the NM. Some relatively small, but very prestigious, schools might prefer to interview candidates using other means because they are presumably more likely to attract applicants from other prestigious programs[3]. Some lesser-known schools are very selective for different reasons. For example, small church-affiliated schools, for whom belief consistency is often important, may not find sufficiently large numbers of candidates meeting somewhat unique requirements at the annual meeting to be worth the cost[4]. Some other small liberal arts schools may not interview at the NM because they do not believe they can offer the competitive salaries necessary to attract terminally-qualified accounting faculty. On the other hand, schools that will not naturally attract as many top candidates might view the large annual meeting attendance as offering their best chance at finding an acceptable number of applicants.

Based on the above arguments, it is expected that both large and small schools are less likely to interview at the NM than medium-sized schools. Small schools would also be expected to have greater likelihood than would large schools. Small schools that do interview there might be expected to conduct more interviews, to get their "money's worth" out of the meeting. Hunt and Jones (forthcoming) found that nondoctoral schools performed significantly more AAA interviews than did doctoral schools, which generally would be expected to be larger. This discussion leads to the following research questions

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1a. To what extent do schools interview potential faculty at the NM and/or network to increase the visibility of their programs, and does this differ by school size?

1b. For those who interviewed, how many interviews were conducted and does the number of interviews differ by school size?

The AAA offers a variety of services for recruiting schools, including providing online lists of school position openings, interviewing rooms, and a Career Fair in which school representatives can set up booths and meet with interested parties on the Sunday night before the NM. Various packages representing combinations of services are available; for instance, a school might purchase a package that includes everything except the Career Fair.

Some schools may prefer to not use the interviewing space set up by the AAA, which is generally one or more large rooms with numerous tables for various schools to interview simultaneously. There are several reasons for this. One is that some believe that the best interviewing areas are relatively quiet, private, and free from distractions (Caruth and Caruth 2012). Conducting interviews in a hotel suite might be more in keeping with those guidelines. Signaling theory (Rynes, 1991) might provide another reason. How applicants are treated during the recruiting process provides a signal as to how they would be treated on the job. Conducting interviews in a hotel suite or nice restaurant might send a more positive message to a job candidate than conducting interviews in a 'bullpen" area. Such an approach might be more likely to be taken by schools with greater resources, such as larger schools. On the other hand, conducting interviews in common areas of the convention hotel may send a message to applicants that the school is too "cheap" or cash-strapped to even pay for a AAA interviewing table. Hunt (2004) found that the most common complaint of accounting faculty jobseekers at the NM was that many were held in noisy areas, large meeting rooms or common areas of the hotel. This leads to the following research questions.

2a. To what extent did recruiters participate in formal AAA activities (interviewing in a designated area, participation in a Career Fair, posting job vacancies, etc.) and do these vary by school size?
2b. To what extent did recruiters interview in the AAA designated area vs. hotel suites, hotel common areas, restaurants, etc. and do results vary by school size?

Ideally, a school would obtain a number of acceptable job candidates as a result of interviews at the NM. Several top candidates might then be invited for campus visits. The success of any recruiting venue, therefore, could reasonably be measured to some extent by the number of candidates deemed worthy of a campus visit. As a reasonable proxy for school reputation, size of school may affect the number of campus visits offered to those who are interviewed at the NM. . This leads to the following research questions.

3a. How many campus visits were scheduled with those interviewed at the NM and do the results vary by school size?
3b. How many campus visits were scheduled with other candidates and do the results vary by school size?

The success of the NM as a recruiting venue could further be measured by the number of offers made to and/or accepted by those interviewed at the meeting, which may differ by type of school. Again assuming that school size is a reasonable proxy for reputation, schools of differing sizes may experience different levels of success in finding candidates worthy of an offer, or the process may differ in efficiency in terms of how many offers must be made to obtain an acceptance. The above discussion leads to the following research questions.

4a. How many offers were made to those with whom the school interviewed at the NM and do the results vary by school size?
4b. How many offers were made to other candidates and do the results vary by school size?
5a. What is the ratio of acceptances to offers made for candidates interviewed at the NM and do the results vary by school size?
5b. What is the ratio of acceptances to offers for other candidates and do the results vary by school size?

The continued success of an interviewing venue depends on its being viewed positively by attendees. Previous studies on interviewing at the NM have focused on applicant reactions. The most common applicant complaint noted in Hunt (2004) was that conference interviews

were too short and that the limited time available was not used effectively. Applicants generally rated the school representatives highly except in the area of knowledge of students' background and research. Respondents in that study reported a high level of satisfaction with the NM interviewing process (5.48 on a 7-pt. scale). This leads to the following research question.

6. What level of satisfaction with various aspects of interviewing at the NM did respondents report and does satisfaction vary by school size?

METHODOLOGY

The AAA survey was sent in 2012 to two groups of participants from the 2011 NM (Denver, CO). The first group consisted of 99 schools which were listed by the AAA as participating in placement activities and which had at least one faculty member on the list of registrants at the conference. This was less than the total numbers indicated by the AAA as participating in interviews. Since the published list of meeting attendees is prepared in advance and some people register at the conference, some schools participated in placement activities without having individuals on the list. Such schools were not included in our sample. Surveys were sent to department chairs; if a chair did not attend the conference, the survey was sent to the highest-ranked faculty member from that school in attendance. The second group consisted of 123 department chairs who attended the conference but whose schools did not participate in formal NM placement activities. Thus, we sent a total of 222 surveys.

The survey was distributed through SurveyMonkey, an online survey service. Some individuals responded by email that they had not interviewed at the meeting and directed us to other faculty at their school. We then sent a survey to these new individuals. Those who did not respond within approximately four weeks were sent a follow-up request. Those who still did not respond were sent a third request approximately four weeks later.

The survey asked whether a person had interviewed at the NM for an open position, had networked to increase visibility and interest in the school to help in filling future positions, had done both, or had done neither. Those who indicated they neither interviewed nor networked were automatically taken to the last section of the survey, which asked for demographic information. Those who indicated either that they interviewed, or both interviewed and networked, were also asked the number of interviews they conducted at the NM and where the interviews took place (AAA interviewing room, hotel suite, common areas of the hotel, etc.). Numbers of campus visits, job offers, and acceptances were obtained for both those candidates interviewed at the NM and for others. Participants were asked whether they participated in a career fair just prior to the NM and, if so, how many later interviews resulted. Satisfaction with various aspects of the interviewing process at the NM was obtained on a 7-point scale. Open-ended questions were asked about positive and negative experiences in interviewing at the NM. Finally, respondents completed a series of demographic questions, such as size of school.

RESULTS

We received responses from 58 schools, for a 26.1% response rate. The response rates varied between the two groups; 30/99 (30.3%) were from the AAA list of schools interviewing at the conference, while 28/123 (22.8. %) represented department chairs from schools not on this list. Table 1 shows demographics of the respondent schools. The number of responses shown is 56, as two respondents did not answer the demographic questions. The majority of schools were

public, AACSB-accredited for both business and accounting, and primarily teaching-oriented. In addition, a considerable majority (47/56) did not have a doctoral program in accounting. Thus 9/56 (16.1%) had doctoral programs in accounting, higher than that of the overall population of US schools with accounting programs (10.7% per examination of Hasselback, 2010).

Table 1
SCHOOL DEMOGRAPHIC INFORMATION

Panel A: Public vs. Private Institutions

	Frequency	Percent
Public	43	76.7
Private	13	23.2
Total	56	100.0

Panel B: Programs and Accreditations

	Yes	No	Total
Doctoral Program in Accounting?	9	47	56
Business Program AACSB Accredited?	48	7	55
Accounting Program AACSB Accredited?	30	24	54

Panel C: Primary School Focus

	Frequency	Percent
Primarily teaching-oriented	21	37.5
Primarily research-oriented	8	14.3
Equally balanced	27	48.2
Total	56	100.0

Table 2 shows the respondents broken down into how many interviewed or networked, or did neither at the NM. As shown in Panel A of Table 2, of the 58 respondents, 33 (56.9%) indicated that they either interviewed candidates for an open faculty position at the annual meeting or both interviewed and networked for future positions. Twelve (20.7%) networked only. The other 13 (22.4%) indicated that they did not use the meeting for either purpose. Fourteen of the 16 who stated that they had interviewed were from the interview list, but so were 13 of the 17 who indicated that they had both interviewed and networked. Therefore, only six respondents who were not on the AAA list did any interviewing at the NM.

To test for nonresponse bias, we categorized responses as early (n=32) or late (n=26) based on whether they responded to the initial appeal or to a follow-up. Early and late responses did not differ in terms of whether they interviewed, or on other key variables of interest.

Table 2
TOTAL NUMBERS OF RESPONDENTS AND INTERVIEWS

Panel A: Overall Numbers of Respondents

Type of Interaction	Frequency	Percent
Interview for open positions	16	27.6
Network with potential future faculty	12	20.7
Both interviewing and networking	17	29.3
Neither interviewing nor networking for future positions	13	22.4
Total	58	100.0

Panel B: Breakdown of Panel A Data by School Size

		Number Who Interviewed or Networked					
		Interviewed Only (A)	Networked Only (B)	Both (C)*	Neither (D)	Total	Percent A or C
School Size**	Small	7	2	4	8	21	52.4%
	Medium	7	3	8	1	19	78.9%
	Large	2	7	3	4	16	31.3%
Total		16	12	15	13	56	

*Column C shows different totals from Panel A because two respondents did not complete the item on school size.
**Schools size was significant (Pearson Chi-Square=14.642; df=6; p=.023, two-tailed)

Panel C: Number of Interviews**

School Size***	N	Mean	Std. Deviation
Small	11	12.45	7.39
Medium	15	14.47	7.24
Large	5	14.80	8.20
Total	31	13.81	7.26

**Includes those who indicated either that they interviewed or both interviewed and networked.
***School was not significant for number of interviews (F=.285; df=2; p=.754)

Participants were asked for their total institutional enrollment based on six categories: 1) Less than 5,000, 2) 5,001 to 10,000, 3) 10,000 to 15,000, 4) 15,001 to 20,000, 5) 20,001 to 25,000, or 6) over 25,000[5]. We classified the first two categories as "small," the second two as "medium," and the last two as "large." We used only three categories in order to have sufficient respondents in each for data analysis, Panel B of Table 2 shows a breakdown based on these size categorizations. To assess the appropriateness of the use of the small, medium, and large categories as relating to prestige and resources, we analyzed the size category in relation to accounting AACSB accreditation, which many believe enhances the stature of an accounting

program. Seventy-five percent of small schools lacked such accreditation, compared to only 6% of large schools and 44% of medium-sized schools.

The medium-sized school group had considerably more responses from those on the AAA list of schools interviewing than the separate group of department chairs (14 v. 6). This is consistent with the overall higher response rate from the AAA list. Large schools had the opposite result (4 v. 11). Small schools were more evenly divided (11 v. 10). These results reflect the expected smaller likelihood of large schools interviewing at the NM than medium-sized schools.

Research Question 1a dealt with how many schools interviewed at the NM., As shown, the percentage of those interviewing, networking, or both differed by school size. Medium-sized schools showed a greater tendency to use the NM for interviewing or networking, followed by small schools, and finally by large schools. A chi-square test revealed that school size was significant with respect to schools' use of the NM (Pearson Chi-Square=14.642; df=6; p = .023, two-tailed).

Research Question 1b examined how many interviews schools conducted. Panel C of Table 2 shows the mean number of interviews conducted at the NM, for those who indicated either that they interviewed or both interviewed and networked. Schools overall conducted an average of 13.8 interviews at the annual meeting. An ANOVA indicated no significant difference by school size in terms of number of interviews (F=.285; df=2; p = .754). The results indicate that, although schools of different sizes differ in how they use the NM overall, the number of interviews conducted when they do interview does not differ significantly.

Research Question 2a asked to what extent schools participated in formal NM recruiting activities such as the career fair and purchasing an interviewing package; data is shown in Table 3 Panels A and B, respectively[6]. Ten respondent schools (5 small, 4 medium-sized and 1 large) participated in the career fair and reported, respectively, an additional 1.6, .75, and .5 interviews at the NM as a result. Size of school was not significant in terms of the use of the career fair (Pearson Chi-Square=1.435; df=2; p = .488, two-tailed), perhaps due to the low power resulting from small numbers of participants, especially large schools. However, Panel B shows somewhat larger differences in terms of purchasing an interviewing package. Somewhat surprisingly, all of the small schools and four of the five large schools responding to this item reported doing so. Although the distribution was somewhat more even, a majority of medium-sized schools purchased an interviewing package as well. The distribution by school size is significant (Pearson Chi-Square=7.323; df=2; p=.026, two-tailed).

Table 3
FORMAL PARTICIPATION

Panel A: Career Fair Participation

		Participate in Career Fair?		
		Yes	No	Total
School Size*	Small	5	6	11
	Medium	4	11	15
	Large	1	4	5
Total		10	21	31

*School size was not significant (Pearson Chi-Square=1.435; df=2; p=.488)

Panel B: Purchase of Interviewing Package

		Purchase Interviewing Package?		
		Yes	No	Total
School Size	Small	11	0	11
	Medium	8	7	15
	Large	4	1	5
Total		23	8	31

School size was significant (Pearson Chi-Square=7.323; df=2; p=.026)

Research Question 2b dealt with where interviews were conducted. Table 4 shows the mean number of interviews conducted in the AAA interviewing area, suite or hotel room, restaurant or bar, and common areas within the meeting hotels. The largest number of responses was for the AAA interviewing area. The responses show a fairly wide range, with some interviews being conducted by all school sizes in all areas indicated, except medium-sized schools did not conduct any interviews in suites or hotel rooms. Inferences about differences among groups are limited by the small numbers of responses, particularly by large schools[7].

Table 4
INTERVIEW LOCATIONS*

Number of Interviews Held in	School Size	N	Mean	Std. Deviation
AAA Interviewing Area	Small	9	12.11	8.13
	Medium	10	8.36	10.01
	Large	4	13.50	10.76
	Total	23	10.87	9.43
Suite or Hotel Room	Small	6	2.50	2.26
	Medium	7	0.00	0.00
	Large	2	4.00	0.00
	Total	15	1.53	2.07
Restaurant or Bar	Small	6	1.33	1.21
	Medium	8	1.88	1.81
	Large	3	2.00	1.73
	Total	17	1.71	1.53
Common Areas in Meeting Hotels	Small	4	2.50	3.70
	Medium	12	9.58	7.23
	Large	3	2.00	1.73
	Total	19	6.89	6.90

*Statistical analyses were not provided due to small cell sizes in several cases.

Do we need something here to indicate why we show no statistical analysis?

Research Question 3a asked how many campus visits had occurred as a result of AAA interviews, while RQ 3b asked the same question relative to other candidates. Most surveys were completed early in the following summer, so we assume that campus visits would have occurred

by the time of participants' responses. Table 5 shows the mean number of campus visits from NM interviews and from other sources. The mean number of visits from candidates interviewed at the NM was 2.81, with large schools conducting essentially one more campus interview following the NM than medium-sized schools. Schools reported fewer campus visits from candidates not interviewed at the NM. Although the medium-sized schools reported somewhat higher numbers than other schools, an ANOVA did not indicate that school size made a difference for either NM (F=1.176; df=2; p=323) or other sources (F=1.904; df=2; p=.171).

Research Question 4a examined how many offers were made to NM interviewees, while RQ 4b asked the same question relative to other candidates. Finally, Research Question 5a (b) examined the ratio of acceptances to offers for candidates interviewed at the NM (or other candidates). Table 5 also shows the results for these questions. An overall mean of 1.85 offers was indicated from NM interviews, considerably higher than for candidates not interviewed at the NM. Large schools showed a 1/1 ratio of acceptances to offers from NM interviews, while small and medium-sized schools showed a ratio of less than 50%. An ANOVA showed that school size makes a difference with regard to the ratio of acceptances to offers (F=3.874; df=2; p=.035). Post-hoc analyses revealed that small and medium-sized schools both differ from large schools on this measure (p=.017 for small and .001 for medium)[8]. Medium-sized schools made offers to those not interviewed at the NM in considerably greater numbers than did other sized schools. Medium-sized schools represented the only group with a lower acceptance rate from those interviewed at the NM than from other source.

Table 5
CAMPUS VISITS, OFFERS AND ACCEPTANCES

	School Size	N	Mean	Std. Dev.	P-Value*
Number of campus visits from AAA	Small	11	2.27	1.49	.323
	Medium	15	2.87	1.96	
	Large	5	3.80	2.28	
	Total	31	2.81	1.87	
Other campus visits (not from AAA interviews)	Small	9	.33	.71	.171
	Medium	14	1.21	1.25	
	Large	4	.75	.96	
	Total	27	.85	1.10	
Offers from AAA Interviews	Small	10	1.70	1.06	.769
	Medium	12	2.00	.95	
	Large	5	1.80	.84	
	Total	27	1.85	.95	
Offers accepted by AAA interviewees	Small	10	.90	1.10	.174
	Medium	12	.92	.79	
	Large	5	1.80	.84	
	Total	27	1.07	.96	
Offers to others (not AAA)	Small	1	1.00		.600
	Medium	8	1.50	.76	
	Large	2	1.00	0.00	
	Total	11	1.36	.67	
Other offers accepted (not AAA)	Small	1	0.00		.267
	Medium	8	1.13	.64	
	Large	2	1.00	.0.00	
	Total	11	1.00	.63	
Acceptance Ratio – AAA	Small	10	.45	.50	.035
	Medium	12	.43	.40	
	Large	5	1.00	0.00	
	Total	27	.54	.45	
Acceptance Ratio – Other	Small	1	0.00		.111
	Medium	8	.77	.37	
	Large	2	1.00	0.00	
	Total	11	.74	. 0	

*Based on ANOVA with school size as the independent variable

Research Question 7 asked the level of satisfaction with various aspects of interviewing at the NM. Panel A of Table 6 reports mean responses to the question: "How satisfied were you with the following?" Participants responded on a seven-point scale from 1 (extremely dissatisfied) to 7 (extremely satisfied) regarding the selection and quality of candidates, applicant knowledge of the school, the enthusiasm and professionalism exhibited by applicants, the interviewing facilities at the NM, and the helpfulness of the AAA in facilitating interviews. Overall, respondents indicated a limited level of satisfaction with most aspects. Although the mean scores for applicant enthusiasm and professionalism of applicants were slightly above 5, the overall means for the other applicant qualities and the AAA facilities and helpfulness were around 4 (neither satisfied nor dissatisfied), even after being driven upward somewhat in most cases by the higher responses indicated by large schools. An ANOVA showed that school size was significant for selection (F=3.335; df=2; p=.05) and for quality of candidates (F=4.233; df=2; p=.025). Post-hoc comparisons showed that both small and medium schools differed significantly from large schools on selection (p=.011 and .002 for small and medium, respectively) and quality (p=.029 and .003 for small and medium, respectively) of candidates[9]. Small and medium-sized schools did not differ significantly on any of the items in Panel A. ANOVAs for the other dependent variables did not approach significance. To obtain another measure of satisfaction, we asked participants who purchased a recruiting package from the AAA if they would do so again. Most (78%) stated that they would.

Table 6
SATISFACTION WITH AAA INTERVIEWING

Panel A: Satisfaction with Specific Aspects of Interviewing at AAA*

Satisfaction with…	School Size	N	Mean	Std. Dev.	P-Value**
Selection of Candidates in Desired Areas	Small	11	4.18	1.40	.05
	Medium	15	3.73	1.83	
	Large	5	5.80	.45	
	Total	31	4.23	1.67	
Quality of Candidates in Desired Areas	Small	11	4.55	1.37	.025
	Medium	15	3.80	1.90	
	Large	5	6.20	.84	
	Total	31	4.45	1.77	
Applicant Knowledge of School and Program	Small	11	4.36	1.36	.201
	Medium	15	4.13	1.69	
	Large	5	5.60	1.52	
	Total	31	4.45	1.59	
Applicant Enthusiasm and Interest in the Position	Small	11	5.09	1.14	.250
	Medium	15	4.93	1.39	
	Large	5	6.00	.71	
	Total	31	5.16	1.24	
Overall Professionalism of Applicants	Small	11	5.27	1.27	.375
	Medium	15	5.07	1.39	
	Large	5	6.00	.71	
	Total	31	5.29	1.27	
Interviewing Facilities at the Annual Meeting	Small	11	4.09	1.81	.528
	Medium	15	3.67	1.68	
	Large	5	4.60	.89	
	Total	31	3.97	1.62	
Assistance of the AAA in Facilitating Interviews	Small	9	3.78	1.92	.248
	Medium	14	3.86	1.51	
	Large	5	5.20	1.30	
	Total	28	4.07	1.65	

*(From 1 (Extremely Dissatisfied) to 7 (Extremely Satisfied)
**Based on ANOVA with school size as the independent variable

Panel B: Likelihood of Interviewing at the National Meeting Again**

School Size***	N	Mean	Std. Deviation
Small	11	6.18	1.54
Medium	15	6.00	1.56
Large	5	5.60	2.61
Total	31	5.97	1.69

**(From 1 (Extremely Unlikely) to 7 (Extremely Likely)
***School size not significant (p=.826) using ANOVA

Panel B of Table 6 reports mean responses to the question "How likely are you to interview again at the NM if vacancies occur in your department?" The results in Panel B indicate that schools would likely continue to do so. Interestingly, small and medium-sized schools were somewhat higher on this item, despite their generally lower mean responses shown in Panel A. However, an ANOVA indicated that school size made no significant difference with respect to the likelihood of using the NM to interview again (F=.192; df=2; p=.826).

ADDITIONAL ANALYSIS

Participants were asked if they had set up a reception or open house at the NM and, if, so, how they viewed it as a recruiting device. Only one, a medium-sized public university, did so and reported a high level of satisfaction (6 on a 7-point scale).

Participants were asked, in two open-ended questions, to identify positive and negative aspects of their interviewing experience at the NM. Most of the positive comments involved the ability to meet numerous applicants in one convenient location.

The most common complaints (7) had to do with noise and/or lack of privacy in the NM interviewing areas. This was followed (5 mentions) by concerns about the complexity of scheduling interviews and the cost of AAA services compared to perceived benefits.

ROOKIECAMP STUDY

Methodology

A survey was sent by Survey Monkey in 2012 to each of the schools listed on the RC website as having participated in the 2011 RC. The survey was similar to the survey sent to NM participants, with non-pertinent information, such as participation in a career fair, excluded. Since individuals' names were not listed, we sent the survey to department heads listed in Hasselback (2011). We received a number of emails indicating that another individual had conducted the interviews, and revised our list accordingly. Those who did not respond were sent a follow-up email in six weeks. Those who still had not responded were sent a final request approximately three months later. We received 14 responses, for a 35% (14/40) response rate.

Research questions for the RC study follow. Since most participating schools were large, we did not examine these issues by size of school.

Research Questions – Rookiecamp

RQ7: How many interviews did schools conduct at the RC?
RQ8a: How many campus visits were arranged with applicants interviewed at the RC?
RQ8b: How many campus visits were arranged with other applicants?
RQ9a: How many offers were made to candidates interviewed at the RC?
RQ9b: How many offers were made to other candidates?
RQ10a: What was the ratio of acceptances to offers for those interviewed at the RC?
RQ10b: What was the ratio of acceptances to offers for other candidates?
RQ11: What level of satisfaction did interviewers have with various aspects of the RC interviewing process?

Results – Rookiecamp

Table 7 shows demographic information for the 14 RC respondents. As shown in Panel A, one-half of the respondents indicated a total enrollment of over 30,000. The majority of the schools were doctoral-granting and AACSB-accredited, including a separate accounting accreditation. No respondents indicated that their schools were primarily teaching-oriented, while six indicated that they were primarily research-oriented and another eight responded that their schools were equally balanced.

Table 7
ROOKIE CAMP PARTICIPANT DEMOGRAPHICS

Panel A: Total Enrollment

Enrollment Size	No. of Respondents
Less than 5,000	1
5,001-10,000	1
10,001-15,000	1
15,000-20,000	1
20,001-25,000	1
25,001-30,000	2
Over 30,000	7
Total	14

Panel B: Primary Orientation

School Orientation	No. of Respondents
Primarily teaching-oriented	0
Primarily research-oriented	6
Equally balanced	8
Total	14

Panel C: Public vs. Private

Public	9
Private	5
Total	14

Panel D: Accreditation and Degree Level

	Yes	No	Total
Undergraduate Program AACSB	13	1	14
Accounting Program Separately AACSB-Accredited	10	4	14
Doctoral Program in Accounting	10	4	14

Table 8 shows descriptive information about participants' experiences with the 2011 RC. Panel A shows mean responses relative to the number of interviews, campus visits, offers and acceptances from RC participants and others, relative to RQs 7-10. Schools interviewed an average of 9.43 candidates at this venue and interviewed on campus an average 1.39 applicants. Campus visits, offers made, and the ratio of acceptances to offers were higher for those not interviewed at the RC. In another item not separately tabulated, only one of the 14 respondents indicated that their school also interviewed at the NM that year. This respondent indicated the highest level (7 on a 7-point scale) of incremental value to the RC over the NM.

Panel B of Table 8 shows mean responses regarding the level of satisfaction with RC candidates (RQ 11). On a seven-point scale, participants expressed a high level of satisfaction with selection and quality of candidates, applicant's knowledge of and enthusiasm for the school, and overall professionalism. In a separate item (not shown), recruiters indicated the likelihood that they would interview again at the RC if vacancies occurred in their department. On a seven point scale from 1 (Extremely Unlikely) to 7 (Extremely Likely), the mean response was 6.29.

Table 8
ROOKIE CAMP DESCRIPTIVE INFORMATION

Panel A: Interviews, Offers and Acceptances

Number of…	N	Mean	Std. Deviation
Candidates Interviewed	14	9.43	6.87
Contacted for campus visit	14	2.36	2.76
Campus visits that have occurred	13	1.39	1.76
Offers Made	13	0.85	0.99
Acceptance/offer ratio – RC	7	0.29	0.49
Other (non-RC) candidates contacted	13	3.46	2.15
Visits from other candidates	13	3.08	1.89
Offers made to others	13	1.39	0.96
Acceptance/offer ratio – Other candidates	11	0.68	0.46

Panel B: Satisfaction with Candidates*

Level of satisfaction with…	N	Mean	Std. Deviation
Selection of candidates in desired areas	14	5.00	1.41
Quality of candidates in desired areas	13	5.46	1.20
Applicant knowledge of school and program	13	5.00	0.91
Applicant enthusiasm and interest in the position	13	5.85	0.99
Overall professionalism of applicants	14	6.07	1.00
Usefulness of candidate research presentations	14	5.79	1.19

*Response to "How satisfied were you with the following at the Rookie Camp", on a seven point scale from 1 (Extremely Dissatisfied) to 7 (Extremely Satisfied)

Participants were asked open-ended questions about positive and negative perceptions of the RC. Respondents indicated that the RC provided a good way to meet a lot of applicants and learn of their research. Other comments indicated that the process was intense and exhausting and that one would have preferred more non-financial accounting applicants to interview.

DISCUSSION AND CONCLUSIONS

As exploratory research dealing with schools' use of the NM and the RC for recruiting faculty, this study makes a contribution partly by suggesting future research. Additionally, we offer some tentative conclusions and implications for schools seeking to hire accounting faculty below.

The results indicated that most schools which interviewed had participated in the formal NM program. Relatively few schools set up and conducted their own interviews without any reliance on the AAA. This indicates that the benefit of the NM for interviewing is derived more from its placement services than from simply providing a venue for employers and potential employees to meet on their own.

The results concerning the usefulness of the NM for recruiting and selection purposes were mixed. The results support the value of the NM not only in hiring for current positions but as a venue for networking to increase the school's visibility, to aid in recruitment for future vacancies. The finding that campus visits, offers and the ratio of acceptances to offers were considerably higher for those candidates interviewed at the NM than from other sources also demonstrates the value of the venue.

However, the relatively low scores for satisfaction with the NM, along with complaints about the noise and lack of privacy in interviewing rooms, the cost of AAA services, and complexity of registering for them, both enable potential interviewers to know what to expect and indicate to the AAA various opportunities for improvement. The AAA has made some changes by increasing the number of interview rooms from two to four, reducing the number of tables in each section of the interviewing rooms from 10 in 2011 to 5 in 2012, with drapes between sections. The AAA had one large ballroom for interviewing again in 2013, but with each interviewing table separated from others with heavy cloth to reduce noise and increase privacy (AAA 2013). The AAA might consider the possibility of offering private interview rooms by some schools for a higher fee. Some schools might readily pay more in order to avoid any remaining problems with noise and cramped conditions and possibly send a positive signal to interviewees. Of course, not all hotels would have such rooms available. Having a small number of schools in a room separated by moveable partitions, as opposed to drapes, might offer more quiet and privacy than the standard 2013 interviewing arrangement. It is interesting that the AAA has made some changes without having an overriding incentive to do so, since most schools indicated that they likely will continue to interview there. This was especially true of small schools, which may believe they have fewer alternatives. Such improvements might be more successful in attracting larger schools.

Medium-sized schools used both the NM and other sources to a considerable extent in finding candidates to whom they offered positions. The relatively low acceptance rate for medium-sized schools of those interviewed at the NM may have led such schools to use a variety of other ways to meet candidates. Although medium-sized schools had relatively low satisfaction levels regarding applicants at the NM, they showed a high level of likelihood to return for interviewing in the future. This is consistent with the prediction of the prestige-resources model

in that they not believe that they have enough prestige and resources to hire qualified faculty without interviewing at the meeting.

Medium sized schools' somewhat pronounced tendency to interview in common areas of the hotel as opposed to hotel rooms or suites may be viewed negatively by applicants. While a regular room might be uncomfortable for some candidates, particularly when only one interviewer is present, a roomy suite used only for interviewing will perhaps send a positive message about the school's resources and willingness to expend them. Holding a small reception or an open house in a hotel suite might send a similar signal to potential faculty.

Small and medium schools' lower levels of satisfaction with the selection and quality of applicants may correspond with Hunt and Jones' (2014) finding that the most common complaint with the entire hiring process was that the applicant pool was small, of limited quality, and had high salary requirements. Some small and medium-sized schools may have found that their limited resources and prestige reduced the quantity and quality of applicants who chose to interview with them. However, results indicated that small schools may increase the quantity of interviews by participating in the career fair. The extremely small number of offers to those not interviewed at the NM by small schools indicates that they view the NM as their major source of recruitment. One might view this extensive use of the NM as a hiring tool as an indication of that venue's value in recruiting. However, when one considers the low scores such respondents give the applicants with whom they interviewed, small schools may have "settled" for less-than-desirable faculty because of a perceived lack of alternative hiring approaches. Such schools might consider alternative means of attracting candidates, such as placing ads in various publications after the NM or sending placement announcements to targeted individuals or PhD programs.

Schools seem to self-select into the NM or the RC based on certain school characteristics. The RC appears to attract primarily large public doctoral schools and smaller, relatively elite private schools, while the NM attracts primarily medium-sized nondoctoral schools and non-elite small schools. The applicants interviewed at the RC were viewed very favorably by interviewers, approximately as much as those at the NM, were among large schools. Responding schools had a very low acceptance to offer ratio, compared to the perfect ratio obtained by large schools in NM interviewing. This may indicate a high level of competition among schools at the RC. Thus deciding where to interview may involve tradeoffs between the ability to interview a large number of very desirable potential faculty vs. the likelihood of actually hiring such individuals. This implies that non-elite small and medium-sized schools would likely find interviewing at the RC to be of limited value, due to the considerable competition from larger schools with greater resources. The smaller schools would be likely to have less such competition for new PhDs at the NM and also could meet with existing faculty who might be relocating as a means of dealing with salary compression. Meeting potential relocating faculty in locations outside the official NM interviewing area might signal consideration for such applicants, who might want to reduce the likelihood of their current employer learning of the interview, as noted by one respondent.

Even for prestigious schools, the RC is not seen as the only, or even primary, method of interviewing potential faculty. Large schools' hiring success and satisfaction with the NM process indicate that more such schools may wish to interview at the NM as well as the RC. Large schools' highly positive views of applicants may indicate that they attracted top job candidates at the NM. Interviewing in hotel suites instead of the AAA interviewing rooms might help such schools maintain an elite image. If a school is already sending representatives to the NM, the minimal incremental cost might well be justified. As the NM is earlier, large schools

might be able to get attractive candidates to accept offers with less competition from similar schools than at the RC. This, however, might be mitigated by some applicants wanting to wait until after the RC to conduct campus interviews, as some anecdotal evidence indicates.

LIMITATIONS AND FUTURE RESEARCH

A limitation in analyzing the results is the small number of large schools among the respondents who indicated that they interviewed at the NM. However, as has been established in earlier research (Hunt and Jones 2014), doctoral schools are less likely to interview there than are nondoctoral schools. Doctoral schools, on average, are larger than nondoctoral schools. The lack of a considerable number of large schools among respondents is consistent with the small number of large schools interviewing at that venue.

Small sample sizes in some cases, such as in the use of the Career Fair, may mean that insignificant differences are due to lack of power rather than a true lack of a difference. However, this argues for the robustness of the significant results that are found.

Some items, such as the number of interviews performed in various locations, may have taxed respondents' memories and required estimates. Although we can draw general conclusions about the relative frequency of interview locations, the responses provided are less than exact.

Future research could examine why schools of various sizes choose not to recruit at the NM. Another extension would be to survey extremely prestigious schools, which may interview at neither the NM nor the RC, to determine how they obtain desirable faculty. Finally, research from the candidate's perspective has not been performed relative to the RC. Further research could determine whether PhD students self-select into one of the two major interviewing venues, as many schools do, or whether many candidates interview at both the NM and the RC. If the latter, what concerns or characteristics of the applicants cause them to do so? Determining the perceived usefulness of each venue in jobseeking would be useful to potential accounting faculty and administrators.

Determining explanations for some of the results in the current paper could be useful. For example, what methods are medium-sized schools using to hire faculty, since they have relatively low levels of offers accepted from candidates at the NM and do not interview in large numbers at the RC? Another issue to explore is how schools that are unsuccessful in hiring at the RC obtain faculty.

ENDNOTES

1. As an illustration, an examination of the list of employers at the 2013 NM revealed four doctoral-granting schools seeking tenure-track faculty. A fifth one indicated an opening for a lecturer.
2. This was not simply due to such schools representing a larger population than doctoral schools or nondoctoral, nonaccredited schools; a considerably higher percentage of nondoctoral accredited schools responding to the survey interviewed at the NM.
3. Such schools, although an exception to the size/prestige model discussed in this paper, would likely represent a very limited number of schools in relation to the population.
4. For instance, some schools require faculty to sign "lifestyle contracts" governing their personal behavior (Bindley 2013). Such contracts could make hiring more difficult by reducing the pool of candidates to those willing to adhere to such contracts.
5. We asked for total school enrollment under the assumption that such numbers were more salient and easier to answer quickly and accurately than numbers of accounting or business school enrollment.
6. There were 26 respondents who were on the interview list obtained by the authors. Two respondents did not fill out the information about purchasing an interviewing package. The remaining respondent perhaps

made an error in filling out the survey, thus accounting for the 23 who reported purchasing an interview package in Table 5.

7. As a follow-up, we obtained overall participant numbers for the same year (2011) from the AAA. According to this data, there were 63 employers on the list of interview hall participants and 47 schools participated in the Career Fair. Forty schools used online resources only to indicate that they would be recruiting at the annual meeting without participation in the interview hall or career fair. A total of 125 schools posted jobs. This indicates an overlap of 25 schools that both used the recruiting hall and participated in the career fair (AAA 2013).
8. Due to unequal variances, a Games-Howell correction was used for both post-hoc analyses discussed in this paragraph. Due to cell sizes being only one for non-AAA offers accepted at small schools (only one offer made), post-hoc analyses could not be performed for the acceptance ratio on non-AAA offers.
9. Due to unequal variances (perhaps due to smaller sample of large schools), a Games-Howell correction was used.

REFERENCES

American Accounting Association. (2007). Sign at the AAA national meeting.

American Accounting Association. (2013). Email from Career Center manager K. Gardner on 10/31/13.

Astin, A.W. (1970). How colleges are rated. *Change* 2(1): 11-86.

_____, and L.C. Solomon. (1981). Are reputational ratings needed to measure quality? *Change,* 13(2), 14-19.

_____. (1985). *Achieving Educational Excellence*. San Francisco, CA: Jossey-Bass.

Belt, J.A., and J.G.P. Paolillo. (1982). The influence of corporate image and specificity of candidate qualifications on response to recruitment advertisement. *Journal of Management,* 8(1), 105-112.

Bindley, K. (2013). Teri James, pregnant woman allegedly fired for premarital sex, sues Christian school. (http://www. Huffingtonpost.com/2013/03/01).

Boudreau, J.W., and S.L. Rynes. (1985). Role of recruitment in staffing utility analysis. *Journal of Applied Psychology,* 70(2), 354-366.

Breaugh, J.A., and R.B. Mann.1984. Recruiting source effects: A test of two alternative explanations. *Journal of Occupational Psychology,* 57(4), 261-267.

_____, and D.B. Turban. (2003). The value of organizational reputation in the recruitment context: A brand-equity perspective. *Journal of Applied Social Psychology,* 33(11), 2244-2266.

Carless, S. (2007). Graduate recruitment and selection in Australia. *International Journal of Selection and Assessment,* 15(2), 2153-165.

Caruth, D.L., and G.D. Caruth. 2012. Requisites for a successful employment interview. *Supervision,* 73(12), 8-12.

Collegedata. (2013). Student body size: Small, medium, or large? Retrieved from: http[://www.collegedata.com/cs/content/content_choosearticle-tmpl.jhtml?articleID=10006.

Eaton, T.V., and S.C. Hunt. (2002). Job search and selection by academic accountants: New and relocating faculty. *Journal of Accounting Education,* 85(2), 67–84.

Elton, C.F., and S.A. Rogers. (1971). Physics department ratings: Another evaluation. *Science* 174, 565-568.

Fogarty, T.J., and A.D. Holder. (2012). Exploring accounting doctoral program decline: Variation and search for antecedents. *Issues in Accounting Education,* 27(2), 373-398.

Gatewood, R.D., M.A. Gowan, and G.J. Lautenschlager. (1993). Corporate image, recruitment image, and initial job choice decisions. *Academy of Management Journal,* 36(2), 414-427.

Goldberger, M.L., B.A. Mayer, and P.E. Fatteau, P.E. (eds.). (1995). *Research Doctoral Programs in the United States: Continuity and Change.* National Research Council. Washington DC: National Academy Press.

Hagstrom, W.O. (1971). Inputs, outputs, and the prestige of university science departments. *Sociology of Education,* 44, 375-397.

Hasselback, J. (2010). Accounting Faculty Directory 2010-2011. Englewood Cliffs, NJ: Prentice-Hall.

Hasselback, J. (2011). Accounting Faculty Directory 2011-2012. Available at www. jrhasselback.com/Act.Dir.html.

Hunt, S. C., and R. Sawhney. (2003). Management PhD candidates' job search: The initial interview. *Journal of Education for Business,* 78(5), 249–254.

_____. (2004). The initial interview: Job search and selection of accounting PhD candidates and relocating faculty. A*cademy of Educational Leadership Journal,* 8(3), 91–109.

_____, Eaton, T.V., and A. Reinstein. (2009). Accounting faculty job search in a seller's market. *Issues in Accounting Education,* 24 (2), 157-186.

_____, and Jones, K. (forthcoming). Recruitment and selection of accounting faculty in a difficult market. *Global Perspectives on Accounting Education.*

Jelf, G.S. 1999. A narrative review of post-1989 employment interview research. *Journal of Business and Psychology* 14 (1): 25-58.

Leone, A. (2011). Telephone interview.

Ostrowski, B. (1986). First-time accounting faculty: The job search, acceptance and support process. *Issues in Accounting Education,* 1(1), 48–55.

Plumlee, R.D., and P.M.J. Recker. 2014. Lessons not learned: Why is there *still* a crisis-level shortage of accounting PhDs? *Accounting Horizons,* 28(2), 313-330.

Porter, S.R., and R.K. Toutkoushian. (2002). Institutional research productivity and the connection to average student quality and overall reputation. Paper presented at the 2002 annual meeting of the Western Economic Association, Seattle, WA.

Rookiecamp. (2012). Accessed at www.Rookiecamp.org.

Rynes, S.L. (1991). Recruitment, job choice, and post-hire consequences: A call for new research directions. In M. D. Dunnette and I. M. Hough (eds.), *Handbook of Industrial and Organizational Psychology* (2nd ed., vol. 2, 399-444), Palo Alto, CA: Consulting Psychologists' Press.

Saks, A.M., and K.L. Uggersley (2010). Sequential and combined effects of recruitment information on applicant reactions. *Journal of Business and Psychology,* 25(3), 351-365.

Schmitz, C.C. (1983). Assessing the validity of higher education indicators. *Journal of Higher Education,* 64(5), 503-521.

Shenkar, O., and E. Yutchman-Yaar (1997). Reputation, image, prestige, and goodwill: An Interdisciplinary Approach to Organizational Standing. *Human Relations,* 50(11), 1361-1381.

Sweitzer, K.V., and J.F. Volkwein (2009). Prestige among graduates of professional schools: Comparing the U.S. News' ratings among disciplines. *Research in Higher Education,* 50, 812-836.

Turban, D.B., and D.M. Cable. (2003). Firm reputation and applicant pool characteristics. *Journal of Organizational Behavior,* 24(6), 733-751.

Turban, D.B., M.L. Forret, and C.L. Hendrickson. 1998. Applicant attraction to firms: Influences of organization reputation, job and organizational attributes, and recruiter behaviors. *Journal of Vocational Behavior,* 52(1), 24.44.

Volkwein, J.F. (1989). Changes in quality among public universities. *Journal of Higher Education,* 60(2): 136-151.

_____, and K.V. Sweitzer. (2006). Institutional prestige and reputation among research universities and liberal arts colleges. *Research in Higher Education,* 47(2), 129-148.

THE IMPACT OF SPECIALIZED COURSES ON STUDENT RETENTION AS PART OF THE FRESHMAN EXPERIENCE

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ABSTRACT

First-year college experience seminars that are part of an effort to increase retention and graduation rates are becoming ubiquitous in higher education. Retaining students is an important imperative from the perspectives of business operations and reputational program quality consideration of an institution. This manuscript compares fall to spring retention rates of students enrolled in five different classifications of freshman experience courses at a mid-sized regional university. The empirical results provide evidence that students taking specialized freshman experience courses in business, agriculture, nursing, education, or other discipline- specific areas associated with a major have the highest retention rate. Generalized freshman experience courses or English courses perform in the middle grouping with respect to student retention. Seminar university transition courses modified in support of transfer students yields the lowest retention rate. The specialized courses in business yield a retention rate that is almost 9% higher than seminar courses targeting transfer students.

INTRODUCTION

In a study published by the National Student Clearinghouse Research Center in April of 2015, it was reported that of all students who started college in the fall of 2013, 69.6 percent returned to college at any U.S. institution in the fall of 2014 (a measure known as the persistence rate), and 59.3 percent returned to the same institution (a measure known as the retention rate). Thus, 30 percent of students who start college will not continue beyond the first year, a disappointing figure for students and parents who start college with the goal of graduation in mind. Low retention also creates inefficiency from the perspective of a college. Strategically, it is cheaper and more conducive to reputation enhancement for an institution to retain a student than to continue to compete for new students via the recruitment process.

In the state of Texas, the General Academic Institutions Formula Advisory Committee has recommended that state funding for general academic institutions during the 2016-17 biennium should be based on seven defined metrics to include six-year graduation rates and retention rates to 30, 60, and 90 semester credit hours (Texas Higher Education Coordinating Board, 2015). This focus on retention, with financial implications for universities, illustrates the increasing demand for institutions to focus on student success and retention. The purpose of this manuscript is to compare student retention rates in general versus specialized freshman courses designed to enhance the college experience. The manuscript is organized into five sections. The first section offers a brief review of the literature. The second section puts forth background information relating to the courses that are part of the research cohort. The third section describes the methodology and data. The next section applies the empirical results. The final section is the conclusion.

LITERATURE REVIEW

Colleges and universities have been working to find ways to improve retention rates and to help students with the transition to college for many years. Mentoring programs, new student orientations, learning communities, first-year seminars, and many other initiatives have been implemented with this goal in mind. Early research on the subject of retention determined that persistence and retention rates could be improved by increasing student involvement, and the level and quality of a student's interactions with faculty and staff (Astin, 1977). Tinto suggested that institutions can improve retention rates by having a strong commitment to quality education and building a strong sense of inclusive educational and social community on campus (1993).

The earliest freshman seminar is said to have been offered at Lee College in Kentucky in 1882 (Barefoot & Fidler, 1996). In the 1940's, freshmen seminars were utilized to provide freshmen opportunities to collaborate with faculty members with similar interests on research opportunities as a form of engagement (Levine, 1985). In the 1960's, these courses were virtually nonexistent due to the individual accountability philosophy of this decade, but fiscal and academic challenges of the mid-1970's – including decreasing numbers of traditional-age students, demographic shifts in the entering student population, a commitment to access for students previously excluded from higher education, the alarming student dropout rate which peaks between the freshman and sophomore year, and a renewed concern about the quality of undergraduate education – created demand for the resurgence of freshmen seminar courses (Gordon, 1991; Barefoot & Fidler, 1996). Since the 1970's, John Gardner's work with the University 101 program at the University of South Carolina, his research publications, and his later founding of The Center for the First Year Experience (FYE) and Students in Transition has been influential in the growth of such courses across the nation (Ryan and Glenn, 2004).

A first-year seminar has been defined as a course intended to enhance the academic and/or social integration of first-year students (Barefoot, 1992). Ryan and Glenn (2004) suggest that these courses fit into two broad categories: academic-socialization models, where courses built around academic themes are used for the purpose of academic socialization, and learning strategies models, where active learning skills (such as note taking, textbook reading, and time management) are taught. Barefoot (1992) suggests a classification system that offers five basic types of courses:

- *Extended orientation seminars.* Often called freshman orientation, college survival, college transition, or student success course, these courses include an introduction to campus resources, time management, academic and career planning, learning strategies, and to student development concerns.
- *Academic seminars with generally uniform academic content across sections.* This type may be an interdisciplinary or theme-oriented course and sometimes is part of a general education requirement. The primary focus is an academic theme, or discipline, but will often include academic skills components, such as critical thinking and expository writing.
- *Academic seminars on various topics.* This seminar's content is similar to the previously mentioned academic seminar except that specific topics vary from section to section.
- *Preprofessional seminars or discipline-linked seminar.* These seminars are designed to prepare students for the demands of the major or discipline and the profession and are oftentimes taught within specific disciplines, professional schools, or majors.
- *Basic study skills seminars.* Generally offered to academically underprepared students, these seminars focus on basic academic skills, such as grammar, note taking, test-taking strategies, and critical-reading techniques.

Some institutions offer first-year seminars that are a hybrid of two or more of these types, so hybrid seminars are now considered a sixth type (Young and Hopp, 2014). The National Resource Center for the First-Year Experience and Students in Transition has surveyed institutions across the nation every three years since 1988 to collect data on first-year seminars (Young and Hopp, 2014). One finding of the year 2000 survey administration was the proportion of institutions offering academically-focused first-year seminars has increased, while seminars classified as extended orientation seminars has decreased (Hunter and Linder, 2005). Also, an increasing number of institutions report offering first-year seminars linked with other courses, from 17.2% in 1994 to 35.7% in 2009 (Barefoot & Fidler, 1996; Hunter and Linder, 2005).

George D. Kuh (2008) identified first-year seminars and experiences as one of ten high-impact educational practices to increase rates of student retention and engagement. He noted that the highest-quality seminars or experiences include critical inquiry, frequent writing, information literacy, collaborative learning, and other skills that develop students' intellectual and practical competencies.

Greenfield, Keup, and Gardner (2013) refer to first-year seminars as the curricular anchor for several other educationally effective practices, including service-learning, learning communities, common intellectual experiences, writing-intensive experiences, and undergraduate research, among others. This suggests that one benefit of students enrolling in first-year seminars could be the connection to these other opportunities that enhance the students' chances for success in college.

Ryan and Glenn (2004) found that freshmen who enrolled in strategy-based seminars were significantly more likely to re-enroll the following fall as compared to freshmen who enrolled in a socialization-focused seminar or in no seminar. Further, freshmen who enrolled in the socialization-focused, academic theme-based freshman seminar were less likely to re-enroll the following fall than students who were not enrolled in any seminar.

One finding of the 2012-2013 National Survey of First Year Seminars was the need for increasing academic rigor in all first-year seminars (Young & Hopp, 2014). The authors noted that it is important for first-year seminars of any type to provide students with an appropriate level of challenge and that students will not be well prepared for the challenges they will face in the remainder of their academic career and beyond if there are low expectations in courses they take when they first arrive on campus, including the first-year seminar. In the book, *Student Success in College: Creating Conditions that Matter*, the authors state the vast majority of students learn more when performance standards require a level of effort greater than what students would ordinarily put forth if left to their own devices. Being stretched in this way helps students cultivate habits of the mind that become the foundation for pursuing excellence in other areas of life (Kuh, Kinzie, Schuh & Whitt, 2005).

BACKGROUND

The research cohort for this study is derived from a public university located in the Southwestern part of the United States. The academic programs include 58 undergraduate degree programs and 40 graduate programs, which includes a doctoral program in agriculture. The institution is mid-sized with a total enrollment of approximately 9,500 students which includes

7,500 undergraduate students and 1,200 undergraduate business students. The student body is 56% female, 62% Caucasian, 23% Hispanic, 6% African-American, 2% Asian, and 7% as other.

The university requires students to complete six hours in the core curriculum designated as the component area option, known as core 90, by the Texas Higher Education Coordinating Board. This is commonly referred to a general education requirement in other states. During New Student Orientation (NSO), freshmen are encouraged to enroll in a freshman seminar course to satisfy part of this core curriculum requirement. In some disciplines, students are encouraged to enroll in discipline-linked, pre-professional seminars, or approved courses within the college (e.g., English majors are required to complete ENGL 1302 for this core requirement). The following courses are approved by the curriculum committee to satisfy the component area option requirement:

- AGRI 2300 – Personal and Professional Leadership Development
- BUSI 1304 – Business Communication (taught in the College of Business, with general information provided about campus resources and occasional discussions about college success topics)
- CS 1301 – Introduction to Computer Science (taught in the College of Agriculture, Science and Engineering)
- CIDM 1301 – Introduction to Information Science (taught in the College of Business, with general information provided about campus resources and occasional discussions about college success topics)
- ENGL 1302 – Academic Writing and Research (students must first complete ENGL 1301, Introduction to Academic Writing and Argumentation)
- ENGL 2311 – Introduction to Professional and Technical Communication
- FIN 1307 – Introduction to Personal Finance (taught in the College of Business, with general information provided about campus resources and occasional discussions about college success topics)
- IDS 1071 (1-3 hours) – Elementary Group Dynamics (this is the University's first-year seminar course with most sections focusing on basic study skills, some sections geared toward transfer students, some linked as a part of a learning community, and other sections discipline-linked seminars catering to student in areas such engineering, nursing, and education)
- PHIL 2303 – Logic (taught in the College of Fine Arts and Humanities)

As the university works to improve retention rates, it is important to determine whether a student's choice to satisfy a core curriculum requirement during the first semester could impact retention. This research can also be useful to other institutions as they evaluate their first-year seminars and look for alternatives to engaging students and help improve retention rates. The hypothesis of this study is that specialized courses within a major (e.g., BUSI 1304, CIDM 1301, and FIN 1307 in the business school) yield a higher retention rate than generalized courses (e.g., IDS 1071) based on the expectation that students in specialized courses are more engaged with access to content and faculty related to major area of interest. The alternative hypothesis is that there is no difference in retention across different freshman course classifications. The alternative hypothesis supports the notion that the first year experience in college is dominated by the often difficult transition from high school or junior college to university life, which is more of a maturation process than an academic engagement issue.

DATA AND METHODOLOGY

The institution for the study is a regional university with a Master's Comprehensive Carnegie Classification. Seventy-six courses approved as core 90 options and offered during the fall semester of 2014 were classified into five categories for the purpose of this study. The five categories are as follows: (1) BUSINESS (includes BUSI 1304, CIDM 1301, and FIN 1307); (2) SPECIALIZED (includes discipline-linked seminars in specialized majors outside of business); (3) TRANSFER (IDS 1071 courses tailored for transfer students); (4) GENERAL (all IDS 1071 courses that are not linked, targeted to a group, or discipline-specific); and (5) ENGLISH (ENGL 1302, ENGL 2311, and PHIL 2303). The University Office of Institutional Research is the data source. The primary variable for this research is the percentage of students enrolled in each fall of 2014 class that returned to the institution and enrolled in spring of 2015 classes (fall to spring retention). Table 1 puts forth mean retention rate percentages by course classification of 86.54 for BUSINESS, 85.82 for SPECIALIZED, 77.87 for TRANSFER, 83.69 for GENERAL, and 82.76 for ENGLISH. Sample sizes by course classifications range from a low of three courses in the TRANSFER classification to a high of 24 courses in the SPECIALIZED classification.

Table 1
SUMMARY STATISTICS FOR STUDENT RETENTION

Classification	Mean	Standard Deviation	Minimum	Maximum	n
BUSINESS	86.54	0.076	73.30	100.00	9
SPECIAIZED	85.82	0.086	72.20	100.00	24
TRANSFER	77.87	0.117	66.70	90.00	3
GENERAL	83.69	0.050	74.40	92.30	23
ENGLISH	82.76	0.091	65.20	95.50	17

The Kruskal-Wallis test is sensitive to differences among means in the *k* populations and is extremely useful when the alternative hypothesis is that the *k* populations do not have identical means. The null hypothesis is that the *k* retention rates in the different course classifications come from an identical distribution function. For a complete description of the Kruskal-Wallis test, see Conover (1980). The specific equations used in the calculations are as follows:

(1) $N = \sum_i n_i$ with i = 1 to k

(2) $R_i = \sum_j R(X_{ij})$ with j = 1 to n_i

(3) $R_j = \sum_i O_{ij} R_i$ with i = 1 to c

(4) $S^2 = [1/(N-1)] [\sum_i t_i R_i^2 - N(N+1)^2/4]$ with i = 1 to c

(5) $T = (1/S^2) [\sum_i (R_i^2/n_i) - N(N+1)^2/4]$ with i =1 to k

(6) $| (R_i/n_i) - (R_j/n_j) | > t_{1-a/2} [S^2(N-1-T)/(N-k)]^{1/2} [(1/n_i) + (1/n_j)]^{1/2}$,

where *R* is the variable rank and *N* is the total number of observations. The first three equations find average ranks. Equation (4) calculates the sample variance, while equation (5) represents the test statistic. If, and only if, the decision is to reject the null hypothesis, equation (6) determines multiple comparisons of retention rates across the various course classifications.

RESULTS

The retention rate for core 90 business courses and specialized courses from other majors have a statistically significant higher retention rate than any other classification. The retention rate of general IDS classes and the English (EPML) classes are in a second grouping for retention. Finally, the lowest retention rate is for IDS classes focusing on transfer students.

The nonparametric empirical approach yields an equation (5) test statistics of 34.63 (p-value = .0001), indicating a significant difference in the average rank order of retention rates across one or more of the five classifications. Table 2 presents a summary of the average rank value of retention rates for each course classification. Assuming an alpha level of .05, the empirical results from equation (6) indicate there are three groupings of course classifications with retention rates that are statistically different.

Table 2
COMPARISON OF RETENTION RATES BY COURSE CLASSIFICATION
(Average Rank Order Value of Retention)

BUSINESS	SPECIAIZED	TRANSFER	GENERAL	ENGLISH
44.78 **	41.80 **	23.81 -	36.04 *	36.47 *

Notes: Asterisk(*) and negative signs (-) signify difference in average rank values as follows:
(1) ** Indicates classification with the highest statistically significant retention rate derived from equation 6.
(2) * Indicates classification with the second highest statistically significant retention rate derived from equation 6.
(3) - Indicates period with lowest statistically significant retention rate derived from equation 6.

The most statistically significant observation from Table 2 is the relatively high retention rate observed in BUSINESS and SPECIALIZED course classifications. The result provides evidence that freshman experience courses that focus on specialized content relating to the area of student interest will facilitate fall to spring retention. The implication for business schools is significant given that most institutions do not have curriculum options for freshman business students that are part of the major. Courses in history, communication, math, science, political science, English, and other common body of knowledge content tend to drive freshman retention rates at most institutions. Business programs might lose a significant percentage of students before they ever take a single course in the business curriculum. Institutions that offer a freshman experience seminar course as part of the common body of knowledge can significantly increase retention if there are course options designed for specific majors or that are specialized. Introductory courses in business communication, financial planning, and computer information systems are a few options that appear to facilitate business program retention. The business program is not the only area that can benefit from program specific content in the freshman seminar. The empirical results indicate that specialized courses in nursing, agriculture, education and other areas also yield fall to spring retention rates that are higher than other classifications.

The course classifications with the second highest retention rate are GENERAL and ENGLISH classes. The difference in average retention rate for BUSINESS and SPECIALIZED courses versus GENERAL and ENGLISH courses is less than four percent. The rank order approach employed with the nonparametric test statistic yields a statistically significant difference. It is not surprising that student retention rates are higher in freshman seminar courses

that offer specialized content related to a major over courses that cover general information or explicit English language content. English language courses are often difficult for students transitioning to university curriculum and general content in a freshman experience course can easily become perfunctory.

The most interesting result from the study is the low retention rate from the TRANSFER classification. The research sample institution modifies the freshman experience seminar for transfer students in recognition that most of the transfer students are from junior college environments and need help adjusting to university expectations but this adjustment is not the same as a traditional high school student joining a university as part of a freshman cohort. The research results clearly show TRANSFER as the course classification with the lowest retention rate. The results imply that the transition from the junior college environment to university is a significant adjustment for many students. Simply modifying a freshman experience seminar with content that aligns with being a transfer student does not appear to be an effective retention tool. The non-traditional traits often associated with transfer students might require a completely different engagement approach than is often put forth in a new student university experience seminar. Time management, financing college, tutoring services, and support services via resources such as childcare are needs that are often critical for the success of transfer students as they move into a new university environment. Although transfer students are usually more mature than the traditional freshmen, the results from this research indicate a more aggressive approach with respect to engaging content and support is in order to facilitate success in retention.

CONCLUSION

The purpose of this research is to compare student retention rates of five classifications of courses at a mid-sized regional university. The courses are part of a common body of knowledge component in the university curriculum that can include a freshman experience seminar. The five course classifications include applied introduction to business courses, specialized introduction courses in majors that are not in business, general freshman seminar courses, introductory English and philosophy courses, and college experience seminar courses targeting transfer students. The statistical methodology incorporates a nonparametric Kruskal-Wallis test to compare the retention rates of the course classifications in the research cohort.

The results of this study provide evidence that specialized courses in business and other majors yield the highest fall to spring retention rate while courses designed for transfer students have the lowest retention rate. One policy implication is that institutions seeking to increase retention should find ways to engage students in course content specific to a program major as part of the freshman seminar experience. A second policy implication is to recognize that, despite being more mature than traditional new incoming freshmen, transfer students are a high- risk group requiring explicit academic content and student support services in order to facilitate persistence.

One of the limitations of the study is the observation that all of the data is from one academic institution. A more robust study for future research is to obtain data from multiple institutions. The inability to account for differences in rigor across the various courses in the sample cohort is a second limitation of the study. The curriculum in courses classified as GENERAL are likely to be driven more by participatory considerations, while

BUSINESS and SPECIALIZED courses are least likely to apply credit for simple participation. A confounding variable issue that mitigates the empirical research in the study is a lack of controlling for the impact of other freshman courses in math, history, political science, lab science, and related common body of knowledge courses on freshman retention. An avenue for future research is to examine retention across the start of two academic years via a more robust empirical approach instead of focusing on the less traditional fall to spring retention rate. Exploring four and six year graduation rates of an in incoming group of new students as a cohort is another avenue for future research.

REFERENCES

Astin, A. W. (1977). *Four Critical Years.* San Francisco, CA: Jossey-Bass Publishers.

Barefoot, B. (1992). *Helping first-year college students climb the academic ladder: Report of a national survey of freshman seminar programming in American higher education* (Unpublished doctoral dissertation). Williamsburg, VA: College of William and Mary.

Barefoot, B.O., & Fidler, P.P. (1996). *The 1994 National Survey of Freshmen Seminar Programs: ContinuingInnovations in the Collegiate Curriculum* (Monograph No. 20). Columbia, SC: University of South Carolina, National Resource Center for The Freshmen Year Experience & Students in Transition.

Conover, W. (1980). *Practical Nonparametric Statistics.* New York: John Wiley & Sons Publishing.

Cox, P. L., Schmitt, E. D., Bobrowski, P. E., & Graham, G. (2005). Enhancing the first-year experience for business students: Student retention and academic success. *Journal of Behavioral & Applied Management*, 7(1), 40-68.

Gordon, V. (1991). The evolution of a freshman seminar course: A case study. *Journal of the Freshman Year Experience*, 3(2), 107-117.

Greenfield, G.M., Keup, J.R., & Gardner, J.N. (2013). *Developing and Sustaining Successful First-year Programs: A guide for Practitioners.* San Francisco, CA: Jossey-Bass.

Hunter, M.S., & Linder, C.W. (2005). First-year seminars. In M.L. Upcraft, J.N. Gardner, B.O. Barefoot, & Associates (Eds.), *Challenging and Supporting the First-year Student: A Handbook for Improving the First Year of College.* (pp. 275-291). San Francisco, CA: Jossey-Bass.

Kuh, G.D. (2010). *High-impact educational practices: What they are, who has access to them, and why they matter.*
Washington, DC: Association of American Colleges and Universities.

Kuh, G. D., Kinzie, J., Schuh, J. H., Whitt, E.J., and Associates. (2005). *Student Success in College: Creating Conditions that Matter.* San Francisco, CA: Jossey-Bass.

Levine, A. (1985). Handbook of undergraduate curriculum. San Francisco: Jossey-Bass.

National Student Clearinghouse Research Center. (April 22, 2015). *Snapshot Report: Persistence - Retention*. Herndon, VA: National Student Clearinghouse.

Ryan, M. P., & Glenn, P. A. (2004). What do first-year students need most: Learning strategies instruction or academic socialization? *Journal Of College Reading And Learning*, *34*(2), 4-28.

Texas Higher Education Coordinating Board. (April 2014). *Formula Funding Recommendations 2014.* Austin, TX. Tinto, V. (1993). *Leaving College: Rethinking the Causes and Cures of Student Attrition.* Chicago, IL: University of Chicago Press.

Young, D.G. and Hopp, J.M. (2014). *2012-2013 National survey of first-year seminars: Exploring high impact practices in the first college year* (Research Report No. 4). Columbia, SC: University of South Carolina, National Resource Center for the First Year Experience and Students in Transition.

TEACHING ACCOUNTING EFFECTIVELY: AN EXAMINATION OF ACCOUNTING STUDENTS AND FACULTY PERCEPTIONS

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INTRODUCTION

University faculty members typically are evaluated based on their performance in three specific areas: scholarly research, teaching, and service. The order of importance of these responsibilities is determined based on the goals and objectives of individual departments. Scholarly research has traditionally been an overriding concern for most university administrators in hiring and promotion decisions (Reinstein and Hasselback 1997). However, both the academic and professional accounting communities have experienced a renewed emphasis on teaching quality, which began with the establishment of the Accounting Education Change Commission (AECC) in 1989, followed more recently by the establishment of the Pathways Commission.

Issues in Accounting Education published an article (AECC 1993) detailing the provisions of Position Statement No. 1, released by the AECC in September 1990. In the article, the AECC listed characteristics of effective teaching and provided strategies for evaluating and improving teaching. Since the AECC began releasing its issues statements[1] in 1990, accounting researchers have published many articles to help define effective teaching and assess "current practices" in accounting education. However, teaching effectiveness in accounting with respect to the master teaching literature has not received due academic attention. The master teaching literature is composed of a number of books and articles that address teaching effectiveness, both in general and in terms of how it is evaluated by students. In most colleges and universities, this evaluation is the primary measure of teaching quality used for faculty hiring and tenure/promotion decisions.

The concern over effective teaching, specifically the integration of practice-oriented skills and the balance between teaching and research, continues to be relevant, as evidenced by the work of the American Accounting Association's (AAA) Pathways Commission. The Pathways Commission in mid-2012 issued its recommendations regarding "the future structure and content of accounting education," which included bringing practitioners more fully into the educational process as well as increasing recognition and support for high quality teaching.

This study aims to examine and compare accounting faculty and student opinions of good teaching skills. Toward this end, we asked students in a large state university in the United States who had recently completed an accounting class, and accounting instructors from several colleges and universities in the southeast region of the U.S. to rank instructional qualities described on the Teacher Behaviors Checklist (TBC). The TBC is a primary personality inventory developed by Buskist et al. (2002) in the master teaching literature. A comparison of accounting faculty and student rankings on identified "master teacher" qualities can help identify differences between student and faculty views on what it takes to be a good accounting teacher. The results of this study, therefore, should contribute to a better understanding of effective

teaching in accounting and should help generate ideas for improving accounting education overall.

The first research question in this study addresses whether and how accounting faculty and students differ in their perceptions of a good teacher. Prior research (e.g., Schaeffer et al. 2003) has shown important differences between faculty and students in terms of their perceptions of effective teaching. The practice of accounting requires a skill set that is different from that required in other disciplines. Consequently, it is an interesting question to examine whether findings of effective teaching in other disciplines extend to the study of accounting. The second research question examines whether and how both groups' perceptions of a good teacher are unique compared with the perceptions of psychology students and a mixed group of faculty for whom the TBC was originally tested. A significant number of studies in psychology have used the TBC to examine student–faculty agreement with respect to positive teaching characteristics. However, this measurement tool has never been used to assess student–faculty agreement in the accounting context.

Our results show a number of unique agreements as well as disagreements between accounting faculty and students regarding their views of good teaching. Specifically, accounting faculty highly value academic rigor and their self-assessments of teaching quality, whereas students do not like having academically challenging classes and prefer professors to be friendly and lenient. However, both groups agree that fair and impartial grading is crucial. In addition, accounting faculty care more about students' grades compared with faculty at large. Meanwhile, accounting students value professors' communication skills more than do psychology students. Few of our findings contradict the popular notions of how students and professors differ in their preferences and perspectives on learning and teaching accounting. Even though such differences seem difficult or even unnecessary to reconcile, we believe that providing empirical data to support the existing phenomena on this vital issue is a worthy endeavor.

In the next section, we review the related literature and develop our research questions. Subsequently, we describe our research method. We then present our results, followed by the conclusion section.

LITERATURE BACKGROUND AND RESEARCH QUESTIONS

AECC and a Dilemma in Teaching Effectiveness

Most teachers have a natural interest in knowing how to teach effectively and receive good evaluations from their students. Consequently, there is enduring interest in the behaviors and personality characteristics that influence the effectiveness of college professors and their courses (e.g., McKeachie 1999). Two prominent committees, the AECC[2], formed in 1999, and the Pathways Commission, formed in 2008, were each charged with addressing important issues within accounting education, such as teaching effectiveness and the integration of applied accounting concepts

The climate in accounting education during the 1970s was characterized by the increasing divergence of academic and professional accountants' expertise. Academic accountants were deeply immersed in research, whereas professional accountants struggled to keep up with an ever-increasing demand for their specialized knowledge and skills in a constantly evolving market. Throughout this period, accounting students were taught the rules, techniques, and procedures necessary to succeed at entering the profession. However, there was a gap between what academic accountants and professional accountants expected new graduates to know.

Accounting communities needed to come together to meet the growing demand for bright and capable graduates who possessed technical competence and critical thinking skills as well. Given such a new emphasis on teaching, the AECC acceded to a reduction in the emphasis placed on research (Sundem 1999).

While emphasizing that the goal of accounting education is to produce future accounting professionals who possess technical skills and critical thinking ability, the AECC maintained that teaching evaluation and teaching effectiveness should be closely related (AECC Issues Statement No. 5). Teaching evaluation performed by students is required in most colleges and universities in the U.S., and is used widely by department heads for assessing faculty teaching performance (Calderon and Green 1997). Calderon and Green (1997) reported that 95% of accounting administrators rely on teaching evaluations in the assessment of teaching performance. Seldin (1993) found that student evaluation instruments are the most commonly used medium for faculty assessment.

The validity of teaching evaluation from students as a measure for teaching effectiveness has long been a debatable issue (Stratton 1990). Instructors tend to view good or effective teaching differently from how students view it. For example, Hativa (2000) reported that students and professors have almost completely different opinions on how well a class was taught: while students often felt that professors did a lousy job, professors perceived themselves to be good teachers who had sufficient general pedagogical knowledge and who applied it well in practice. Schaeffer et al. (2003) showed that professors attempt to teach their students critical thinking skills, which tends to earn them unfavorable evaluations from many students because "thinking is hard for many students and they simply may not appreciate the value of acquiring these skills or the value of cutting-edge information" (p. 136).

The divergence of students and faculty in their perceptions of what is, or what is not, a good teacher presents a dilemma on the issue of teaching effectiveness. As teaching involves both student and teacher, this dilemma cannot be solved through purely theoretical debates. The "master teaching" literature is a collective attempt to provide a meaningful alternative approach to resolving the dilemma concerning teaching effectiveness. The philosophy of the "master teaching" research is to find solutions for effective teaching in those teachers whom both students and faculty colleagues agree are good teachers or master teachers.

Master Teaching and TBC

While the American Institute of Certified Public Accountants (AICPA) and AAA were working with the AECC to improve the balance between teaching and research within the accounting profession, master teaching literature began to emerge. This period was marked by the publication of a series of books authored by master teachers on the art, craft, and science of teaching, and by master teaching scholars on related issues concerning master teaching (Brewer 1982; Eble 1983, 1984; Brookfield 1990; Hatfield 1995; Lowman 1995; Boice 1996; Roth 1997; Gill 1998; Baiocco and DeWaters 1998; McKeachie 1999). These books summarize the most important lessons learned by master teachers over their lifetime of college and university teaching. The authors of these books share three common themes on what they believe to be the qualities of master teachers: knowledge, personality, and classroom management skills.

To define a "master teacher," Buskist et al. (2002) extracted 40 qualities (see Table 1) from their review of the aforementioned publications. They divided the sources of the 40 qualities into three categories: (1) master teachers' own words, (2) analyses of the qualities of award-winning instructors, and (3) examinations of student evaluations of master teachers. The

first category (Masters' Writing) contains 22 qualities; the second category (Analyses of the Credentials of Award-Winning Teachers), 14 qualities, with five overlapping those in the first category; and the third category (Analyses of Student Evaluations), 10 qualities. Of the 40 qualities, only one (passion/enthusiasm) appears on each of the three lists given in Table 1.

Table 1
A SUMMARY OF THE QUALITIES OF MASTER TEACHERS BASED ON A BRIEF REVIEW OF THE LITERATURE

General Writings	*Analysis of Credentials of Award Winning Teachers*	*Analyses of Student Evaluations*
Approachable	Commitment to field	Caring
Creative	Concern for students	Clear
Current in field	Creative	Comprehensive
Establishes rapport	Enthusiastic	Enthusiastic
Flexible	Good classroom teacher	Fair
Genuine	High standards for student work	Stimulating
Good Listener	Humanistic	Understanding
Trusting	Intelligent	Warm
Passionate	Knowledgeable	Well organized
High expectations from students	Popular among students	Well prepared
Humorous	Scholarly	
Knowledgeable	Strong communication skills	
Models critical thinking	Strong work ethic	
Promotes cooperation	Write about their fields	
Respectful		
Stresses life-long learning		
Strong speaking skills		
Strong work ethic		
Thoughtful		
Uses active learning methods		
Uses common sense		
Uses interdisciplinary approach		

***From Buskist et al., 2002*

Table 2
TEACHER BEHAVIORS CHECKLIST

Item	
1	*Accessible* (Posts office hours, gives out phone number, and e-mail information)
2	*Approachable/Personable* (Smiles, greets students, initiates conversations, invites questions, responds respectfully to stu comments)
3	*Authoritative* (Establishes clear course rules, maintains classroom order, speaks in a loud, strong voice)
4	*Confident* (Speaks clearly, makes eye contact, and answers questions correctly)
5	*Creative and Interesting* (Experiments with teaching methods; uses technological devices to support and enhance lectur uses interesting, relevant, and personal examples; not monotone)
6	*Effective Communicator* (Speaks clearly/loudly, uses precise English; gives clear, compelling examples)
7	*Encourages and Cares for Students* (Provides praise for good student work, helps students who need it, offers bonus po and extra credit, and knows student names)
8	*Enthusiastic about Teaching and about Topic* (Smiles during class, prepares interesting class activities, uses gestures an expressions of emotion to emphasize important points, and arrives on time for class)
9	*Establishes Daily and Academic Term Goals* (Prepares/follows the syllabus and has goals for each class)
10	*Flexible/Open-Minded* (Changes calendar of course events when necessary, will meet at hours outside of office hours, p attention to students when they state their opinions, accepts criticism from others, and allows students to do make up wo when appropriate)
11	*Good Listener* (Doesn't interrupt students while they are talking, maintains eye contact, and asks questions about points students are making)
12	*Happy/Positive Attitude/Humorous* (Tells jokes and funny stories, laughs with students)
13	*Humble* (Admits mistakes, never brags, and doesn't take credit for others' successes)
14	*Knowledgeable About Subject Matter* (Easily answers students' questions, does not read straight from the book or notes uses clear and understandable examples)
15	*Prepared* (Brings necessary materials to class, is never late for class, provides outlines of class discussion)
16	*Presents Current Information* (Relates topic to current, real life situations; uses recent videos, magazines, and newspape demonstrate points; talks about current topics; uses new or recent texts)
17	*Professional* (Dresses nicely [neat and clean shoes, slacks, blouses, dresses, shirts, ties] and no profanity)
18	*Promotes Class Discussion* (Asks controversial or challenging questions during class, gives points for class participatio involves students in group activities during class)
19	*Promotes Critical Thinking/Intellectually Stimulating* (Asks thoughtful questions during class, uses essay questions on t and quizzes, assigns homework, and holds group discussions/activities)
20	*Provides Constructive Feedback* (Writes comments on returned work, answers students' questions, and gives advice on taking)
21	*Punctuality/Manages Class Time* (Arrives to class on time/early, dismisses class on time, presents Relevant materials in leaves time for questions, keeps appointments, returns work in a timely way)
22	*Rapport* (Makes class laugh through jokes and funny stories, initiates and maintains class discussions, knows student na interacts with students before and after class)
23	*Realistic Expectations of Students/Fair Testing and Grading* (Covers material to be tested during class, writes relevant t questions, does not overload students with reading, teaches at an appropriate level for the majority of students in the cou curves grades when appropriate)
24	*Respectful* (Does not humiliate or embarrass students in class, is polite to students [says thank you and please, etc.], doe interrupt students while they are talking, does not talk down to students)
25	*Sensitive and Persistent* (Makes sure students understand material before moving to new material, holds extra study sess repeats information when necessary, asks questions to check student understanding)
26	*Strives to Be a Better Teacher* (Requests feedback on his/her teaching ability from students, continues learning [attends workshops, etc. on teaching], and uses new teaching methods)
27	*Technologically Competent* (Knows how to use a computer, knows how to use e-mail with students, knows how to use overheads during class, has a Web page for classes)
28	*Understanding* (Accepts legitimate excuses for missing class or coursework, is available before/after class to answer questions, does not lose temper at students, takes extra time to discuss difficult concepts)

***From Buskist, 2002*

Buskist et al. (2002) argued that possessing only one or a few of the 40 qualities is unlikely to qualify one as a master teacher. A master teacher who possesses all of these 40

qualities is equally unlikely to find. Rather, master teachers, while sharing personal qualities and inclinations relevant to teaching, are likely to have extremely diverse teaching styles just as they have diverse personalities. Thus, a critical combination of the qualities listed in Table 1 may enable master teachers to be master teachers, that is, to accomplish what average teachers cannot. Although it is impossible to prescribe a master-teacher combination of the qualities, knowing these qualities should at least help one in an effort to become a good teacher.

To aid learning from these findings, Buskist et al. (2002) developed a set of 28 characteristics derived from the list of the 40 qualities (see Table 2) followed by a set of behavioral anchors describing each characteristic. This instrument, known as the TBC, is based on surveys of how undergraduate students understand the behaviors reflecting the 40 qualities. (The survey results suggest that overlapping behaviors represent different qualities, reducing the 40 qualities to 28 behaviors). Factor analysis conducted by Keeley et al. (2006) suggested that the TBC could be divided into two subscales: one identified as "caring and supportive" and the other as "professional competency and communication skills."[3] Keeley et al. (2006) also found that the TBC is consistent with the standard university teaching evaluation, which suggests that the TBC is a useful tool for improving teaching evaluation. A number of studies (e.g., Schaeffer et al. 2003; Buskist 2002; Mowrer et al. 2004; Vulcano 2007) have tested and confirmed the validity of the TBC with different groups of faculty (community college faculty, Division Two's two- and year-year award-winning professors), different groups of students (community college, regional university, and Canadian), and students with different gender and GPA.

RESEARCH QUESTIONS

The present study uses the TBC as a measurement to examine how accounting faculty and students view what it takes to be a good teacher. Administering the TBC to four different accounting classes in a large state university, Hart (2009) reported that accounting students tended to weigh qualities that denoted professional competence and communication skills more heavily compared with psychology students who weighted the two factors as being nearly equal in importance.

To determine what combination of qualities on the TBC provided good indicators of teaching expertise, Buskist et al. (2002) asked 916 undergraduate psychology students and 118 university faculty members to rank their "Top 10" from the TBC. The results showed that students and faculty agreed on six of the top ten qualities/behaviors (but in different orders) and disagreed on the remaining four items markedly. The particular content of the disagreements is worth noting: faculty included on their Top-10 list "promote critical thinking" (no. 3; no. 23.5 for students), "prepared" (no. 4; no. 20 for students), "master communicator" (no. 6; no. 15 for students), and "presents current information" (no. 9.5; no. 23.5 for students). Students included on their Top-10 list "understanding" (no. 3; no. 21 for faculty) and "happy/positive/humorous" (no. 7; no. 27 for faculty).

The different ordering of the shared six Top-10 items is also revealing. For example, students ranked "realistic expectations/fair" as no. 1, whereas faculty ranked this as no. 9.5; faculty ranked "enthusiastic about teaching" no. 2, whereas students ranked this no. 10. These results show a stark difference between faculty and students in perceptions and preferences on what a good teacher should be: professors cared about teaching students most, whereas students cared about getting good grades (or avoiding bad grades) most. Apart from this difference, students and faculty agreed on those items that seemingly can help teaching/learning interaction

with little or no implication of giving up academic rigor (faculty's concern)/imposing rigorous academic standards (students' concern): "knowledgeable about topic," "approachable/personable," "respectful," and "creative/interesting." Several studies following Buskist et al. (2002) (e.g., Shaeffer et al. 2003; Kerr and Smith 2003) found similar results.

Unlike the focus on faculty–student agreements in Buskist et al. (2002) and other similar studies using the TBC, faculty–student disagreements could provide as many, if not more, opportunities to evaluate potential convergence in faculty/student perceptions of effective teaching. Such disagreements are indicative of the profound dilemma concerning teaching effectiveness, and thus, examining them along with faculty/student agreements can help researchers identify opportunities for actual improvement of college teaching. For accounting education, knowing whether and how faculty and students evaluate teaching differently is important. Such information is also useful for potential employers who, facing an increasingly challenging environment in accounting practice, want to be involved in accounting education. For these reasons, we pose the following research question:

RQ1: *Do perceptions of accounting faculty and students as regards a good teacher differ?*

Important differences between psychology and accounting students' preferences for specific teaching characteristics have been identified. Psychology students place a higher value on the "caring and supportive" component identified by the TBC (Keeley et al. 2006), whereas accounting students emphasize the "professional competency and communication skills" aspect of master teaching (Hart 2009). As accounting students displayed a different emphasis when ranking the items on the TBC compared with psychology students (Hart 2009), accounting faculty and students, in general, may have a unique perception of master teaching.

Prior studies utilizing the TBC to identify master teaching characteristics (Buskist, 2002; Schaeffer et al. 2003) have made no attempt to associate students within any particular discipline with professors who taught them. Matching students with the professors who teach them, or could potentially teach them, on the same academic subject improves the validity and relevancy of a statistical comparison, as well as enhances the practical value of the study. In attempting to provide the first such comparison, we pose the following research question:

RQ2: *Do accounting faculty and students as a group (pair) show uniquely different perceptions of a good teacher?*

RESEARCH METHOD

The TBC was administered to a convenience sample of 310 accounting students enrolled in introductory financial, introductory managerial, and advanced accounting classes at a large state university. The accounting classes included in the sample were taught by seven different instructors, with considerable overlap in student enrollment among Introductory Financial Accounting and Introductory Managerial Accounting students. Each student was instructed to fill out the instrument only once. In other words, if a student had seen the instrument in a different class, the student was asked not to fill out the instrument a second time. Students volunteered to take part in the current research; however, a number of the respondents received minimal extra class credit for their participation.

In addition to providing demographic information, students were provided with the following instructions before completing the TBC.

> *Following is a list of twenty-eight teacher qualities and the behaviors that define them. Please select the ten qualities/behaviors that you believe are most important to master teaching at the college and university level. There is no need to rank your answers in any particular order. Thus, you will cast ten votes for what you consider to be the top ten essential characteristics of an excellent teacher. Select the top ten qualities/behaviors by placing a check mark in the little box to the immediate left of the descriptions given for these qualities/behaviors. Please choose exactly ten items.*

An identical version of the TBC was administered to faculty members attending the mid-year meeting of the AAA, via e-mail for those not attending the meeting, and by personal delivery for faculty employed at the university where this research was conducted. Six of the student surveys and two of the faculty surveys were incomplete, yielding a usable student sample of 304 observations and a usable faculty sample of 65 observations.

The TBC was administered in its original form with all 28 items included. Participants were asked to read the instrument in its entirety and then choose exactly ten of the items that they deemed to be the most important in defining excellent teaching, without ranking them. All participants were instructed not to rate any specific teacher but to choose characteristics based on their ideal instructor. In addition, participants were asked to provide demographic information, such as gender, major, college rank, and university affiliation. Participants were assured that their responses would remain anonymous and that no information linking their responses to their identity would be collected.

Results

The student sample consisted of 162 males and 142 females, whereas the faculty sample, 42 males and 23 females. Faculty members included in the sample represented more than 30 colleges and universities in the southeast region of the U.S. The average teaching experience for this group was 18.49 years. Students responding to the survey were made up of 2 freshmen, 35 sophomores, 80 juniors, 130 seniors, and 57 graduate students.

Table 3 shows the Top-10 rankings on the TBC by accounting faculty and students from our samples. The two groups' Top-10 lists have six overlapping items of agreement: (a) approachable, (b) creative/interesting, (c) encourages/cares for students, (d) knowledgeable about subject matter, (e) realistic expectations of students /fair testing and grading, and (f) respectful. Three of them—"knowledgeable about subject matter" (no. 1), "realistic expectations of students/fair testing and grading" (no. 3), and "respectful" (no. 9)—were ranked identically by students and faculty.

Table 3
PERCENTAGE OF ENDORSEMENTS FOR TOP TEN ITEMS BY GROUP

Descriptor	Item #	n	Faculty	Rank	N	Student	Rank
Knowledgeable About Subject Matter	14	58	89.2%	1	226	**74.3%**	**1**
Encourages and Cares for Students	7	48	73.8%	2	150	**49.3%**	**6**
Realistic Expectations of Students / Fair Testing and Grading	23	41	63.1%	3	201	**66.1%**	**3**
Strives to be a Better Teacher	26	38	58.5%	4	81	**26.6%**	-
Promotes Critical Thinking/ Intellectually Stimulating	19	38	58.5%	5	65	**21.4%**	-
Prepared	15	36	55.4%	6	97	**31.9%**	-
Creative and Interesting	5	33	50.8%	7	138	**45.4%**	**10**
Approachable / Personable	2	32	49.2%	8	216	**71.1%**	**2**
Respectful	24	32	49.2%	9	139	**45.7%**	**9**
Presents Current Information	16	26	40.0%	10	86	**28.3%**	-
Effective Communicator	6	14	21.5%	-	165	**54.3%**	**4**
Understanding	28	14	21.5%	-	163	**53.6%**	**5**
Rapport	22	12	18.5%	-	148	**48.7%**	**7**
Happy / Positive Attitude / Humorous	12	11	16.9%	-	141	**46.4%**	**8**

Table 4
OVERALL AGREEMENT AMONG FACULTY-STUDENT RANKINGS OF TEACHING CHARACTERISTICS

Various Groups	**Pairwise Comparisons of Overall Agreement**	
	Spearman's Rho	**P-Value**
Accounting Students & Accounting Faculty	0.400	.035
Accounting Students & Psychology Students	0.829	< .001
Accounting Students & General Faculty	0.391	.040
Accounting Faculty & Psychology Students	0.351	.067
Accounting Faculty & General Faculty	0.784	< .001
Psychology Students & General Faculty	0.368	.054
Accounting Student Groups	**Pairwise Comparisons of Overall Agreement**	
	Spearman's Rho	**P-Value**
Sophomores & Juniors	0.869	< .001
Sophomores & Seniors	0.830	< .001
Sophomores & Graduate Students	0.799	< .001
Juniors & Seniors	0.915	< .001
Juniors & Graduate Students	0.839	<.001
Graduate Students & Seniors	0.909	<.001

Interesting disagreements among student-faculty responses were identified as well. Faculty included "strives to be a better teacher" (no. 4; no. 17 for students), "promotes critical reasoning" (no. 5; no. 20 for students), "prepared" (no. 6; no. 15 for students), and "presents current information" (no. 10; no. 16 for students) among critical teaching qualities. Meanwhile, students listed "effective communicator" (no. 4; no. 19.5 for faculty), "understanding" (no. 5; no.

19.5 for faculty), "rapport" (no. 7; no. 22.5 for faculty), and "happy/positive/humorous" (no. 8; no. 25 for faculty) as essential teacher characteristics.

Overall agreement between accounting faculty and accounting student responses was assessed using Spearman's rank–order correlation coefficient.[4] Each of the 28 variables was included in a ranking based on frequency for both student and faculty responses. A significant Spearman's rho is indicative of overall agreement between the rankings of both groups. Table 4 shows that our test resulted in a Spearman's rho of 0.400 (p=0.035), which is significant at the alpha = 0.05 level. Thus, the rankings of accounting faculty are not significantly different from those of accounting students.

These results suggest that accounting faculty and students shared the value for these 28 qualities as a whole, which supports the notion of "master teaching" in the master teaching literature. In other words, this study confirms the applicability and practical value of the TBC in accounting education. These results, although significant, also indicate less-than-perfect agreement between accounting faculty and students regarding the most important teaching characteristics. For example, accounting faculty members value the academic quality of teaching (promoting critical thinking and presenting current information) and their effort in providing good teaching (striving to be a better teacher and being prepared for class) more than students value them. Meanwhile, accounting students want professors to tell them precisely what they need to know (being an "effective communicator") and to have a friendly demeanor (understanding, having rapport with students, and being happy/positive/humorous).

To assess how these responses from accounting faculty and students differ from findings of previous studies (research question 2), the rankings of accounting faculty and students obtained in this study are compared with those reported in Buskist et al. (2002). Table 5 presents all comparative data of the two studies. All students and faculty sampled in the two studies chose the following five in their respective Top-10 lists: "knowledgeable about subject matter," "approachable/personable," "creative/interesting," "realistic expectations/fair testing and grading," and "respectful." Accounting faculty and students agreed that "encourages/cares for students" should be a Top-10 quality, a sentiment not shared by the psychology faculty and students in Buskist et al. (2002). Accounting faculty are substantially more concerned about their students' grades than the faculty in Buskist et al. (2002). This may be explained by the relative difficulty in achieving desired grades in accounting classes, or perhaps accounting students are easily/more concerned about their grades.[5] An unusual finding on accounting student rankings is that accounting students ranked "effective communicator" high (no. 4), which is not shared by their psychology peers (no. 15). This difference can be explained by the relatively "technical" nature of accounting topics taught in the classroom. Accounting students want professors to tell them precisely what they need to know to do well on tests.

Table 5
COMPARISON OF FACULTY & STUDENT RATINGS OF THE 28 TBC QUALITIES/BEHAVIORS AND THE RANKINGS REPORTED BY BUSKIST ET AL (2002)

	Current Study					Buskist et al (2002)	
QUALITY / BEHAVIOR CATEGORY	**%**	**Faculty Rank**	**%**	**Student Rank**		**Faculty Rank**	**Student Rank**
Accessible	26.2	15.5	36.2	12		11	12
Approachable / Personable*	49.2	8	71.1	2		5	4
Authoritative	24.6	17.5	17.8	23		23	26
Confident	27.7	14	35.2	13		17	16
Creative and Interesting*	50.8	7	45.4	10		8	6
Effective Communicator	21.5	20	54.3	4		6	15
Encourages and Cares for Students	73.8	2	49.3	6		12	8
Enthusiastic About Teaching	30.8	12.5	13.5	25		2	10
Establishes Goals	30.8	12.5	13.5	25		19	23.5
Flexible / Open Minded	24.6	17.5	44.1	11		13	9
Good Listener	20	22	18.4	21		20	18
Happy / Positive Attitude / Humorous	16.9	25	46.4	8		27.5	7
Humble	3.1	28	12.5	27		27.5	21
Knowledgeable About Subject Matter*	89.2	1	74.3	1		1	2
Prepared	55.4	6	31.9	15		4	20
Presents Current Information	40	10	28.3	16		9.5	23.5
Professional	12.3	26	13.5	25		25	28
Promotes Class Discussion	21.5	20	18.1	22		16	19
Promotes Critical Thinking / Intellectually Stimulating	58.5	5	21.4	20		3	23.5
Provides Constructive Feedback	36.9	11	33.6	14		14	13
Manages Class Time	26.2	15.5	23.4	19		18	23.5
Rapport	18.5	23.5	48.7	7		26	11
Realistic Expectations of Students/ Fair Testing and Grading*	63.1	3	66.1	3		9.5	1
Respectful*	49.2	9	45.7	9		7	5
Sensitive and Persistent	9.2	27	26.6	17		22	14
Strives to Be a Better Teacher	58.5	4	24.3	18		15	17
Technologically Competent	18.5	23.5	11.2	28		24	27
Understanding	21.5	20	53.6	5		21	3

In several items, faculty consistently gave a high ranking and students, a low one, or vice versa. For example, faculty sampled in both studies ranked "promotes critical thinking" and "presents current information" (particularly "promotes critical thinking") high, whereas all students sampled in both studies ranked them (particularly "promotes critical reasoning") low,

suggesting that accounting students are not any more eager to learn or to be academically challenged than psychology students. The reverse pattern occurred with "understanding" and "happy/positive/humorous," where students ranked this quality consistently high and faculty, consistently low. The similar student ranking for "understanding" as high and "promotes critical thinking" as low suggests a similar mindset for ranking. The consistent high student ranking for "happy/positive/humorous" is also remarkable.[6]

Spearman's correlation coefficient was calculated to assess the overall agreement of the rankings between the groups in this study and in Buskist et al. (2002). Each of the 28 variables was included in a ranking based on frequency for both student and faculty responses. The results, presented in Table 4, suggest an overall agreement among the students and faculty surveyed in the two studies. Different academic disciplines are shown to produce master teachers of different "shapes and sizes" who "represent different combinations or blends of the qualities" (Buskist et al. 2002, 31).

A final comparison was conducted to identify similarities among accounting students based on rank. Although most of the students who participated in this study were accounting majors, some were business majors who were required to take accounting principles courses. Spearman's correlation coefficients were significant for all accounting/business students ($p < 0.001$) in all pairwise comparisons. These comparisons, presented in Table 4, suggest significant agreement among accounting students in their perceptions of the characteristics of excellent teaching regardless of classification in their respective programs.

CONCLUSION

This study investigated how accounting faculty and students perceive what a good teacher should be like or should do, using the rankings of the 28 qualities of master teaching on the TBC. The results revealed unique agreements as well as unique disagreements between accounting faculty and students.

Specifically, while accounting faculty highly value academic rigor and their self-assessments of teaching quality, accounting professors tend to agree with their students on the importance of students receiving "fair" grades. The lesson here seems to be that for whatever reasons (we believe this is an open question for debate and future research), accounting professors are perhaps required to be more careful and thoughtful in grading, which does not necessarily mean being lenient as desired by students. The accounting faculty's low ranking on "understanding," which is consistent with the rankings of faculty at large, suggests the fine line between being rigorous and being reasonable. For example, good professors certainly cannot be "understanding" that their students do not want to learn or engage in critical thinking, as the ability to exercise critical thinking is a "must-have" quality for a successful accounting professional, as outlined by the AECC. Accounting faculty must strive to find ways to make the necessary learning more acceptable to their students.

Accounting students share with psychology students their dislike of academically challenging classes—as reflected in their low rankings on "promotes critical thinking" and "presents current information." However, accounting students are more demanding of professors' ability to speak well, as they rank "master communicator" substantially higher compared with psychology students. Accounting students want their professors to be transparent about exam content and they want to be tested exclusively on in-class lecture material. These inclinations may be due to the "technical" nature of accounting topics or to accounting students' predisposed learning habits. In turn, accounting professors do not entirely agree with students'

on this matter. They may generally not believe that effective communication should be an issue for teaching accounting—at least not as much as it is for teaching classes in the liberal arts. Another possibility is that accounting professors are not sympathetic with students' desire to avoid dealing with complicated or critical thinking issues. Again, the lesson here is to facilitate learning while maintaining adequate academic rigor.

One similarity in student ranking between this study and Buskist et al. (2002), the comparison study, is the high ranking on "happy/positive/humorous." While accounting students distinctively value a professor's professional competence, it would appear that a positive attitude seems to be one of the "must-have" qualities in any master-teaching combination of the qualities in any discipline.

We want to acknowledge several limitations of this study. First, the potential for self-selection bias is inherent in the use of voluntary participants. Many of the participants in the current study received minimal extra credit in exchange for their responses to the TBC. While the final sample obtained in this study may not be representative of the general population of accounting students, self-selection bias was kept to a minimum by the inclusion of nearly all accounting classes within the sample population.

Second, the pool of subjects used in the current study consisted of accounting students at both the undergraduate and graduate levels, whereas the comparison psychology study used only undergraduate psychology students. Additionally, the student sample consisted of students from one large southern university, whereas the instructor sample consisted of faculty members from all over the southeast region. A better matching of study participants is desired for a rigorous comparison. Future work in this area should include a comparison between accounting student responses by class, between business and non-business majors, and between accounting and other business majors to explore the interdisciplinary differences identified in the current study.

A third limitation is that we asked students and faculty to rank important qualities for a good teacher in general; we did not make an effort to solicit views specifically on *accounting* professors. While designing such a research instrument is not difficult, implementing such an instrument requires a more selective pool of participants and more complicated survey techniques. However, as we collected the students' responses in accounting classes when these students had shortly finished an accounting course, their ranking should mostly reflect their views of a good accounting teacher. The accounting professors' responses, on the other hand, are less likely to include views of teachers other than accounting teachers owing to the exclusive work of accounting education. Given that this is only an initial work using the TBC in accounting education research, this study can certainly be extended.

ENDNOTES

1. The AECC was charged with effecting change in accounting education by redefining the overall goal of the educational process. With input from both professional and academic accountants, the AECC communicated its opinions through the issuance of either position or issues statements. Position statements were the more formal of the two, requiring an exposure and revision process. Throughout its existence, the AECC has issued two position statements and six issues statements.
2. The AECC has been a great influence on research in accounting education. Between 1992 and mid-1998, the AECC was cited in nearly 50 percent of all articles published in the two largest accounting education journals, *Issues in Accounting Education* and *Journal of Accounting Education* (Sundem 1999). From mid-1998 through 2008, these two journals have published 201 main articles, of which 67 cited the AECC.

3. The results of this factor analysis are not particularly new as many other studies have proposed various models of effective teaching that reflect these two basic components (e.g., Stratton 1990; Lowman 1996). The TBC is uniquely valuable because it is derived from the teaching practice of master teachers and it offers behavioral descriptions of the qualities of master teachers so that it has instructional values.
4. The present study performed the first formal statistical test on the overall agreement/disagreement between faculty and students. Although prior studies offered observations and discussions on this matter, they never performed a formal test to support their conclusions. For example, Buskist et al. (2003) concluded in their seminal work that "students and teachers do not view the teaching enterprise all that differently" after presenting the ranking data, but they did not perform a formal test to support this conclusion.
5. Apart from difficulty in getting good grades, there are also other reasons for accounting students to be relatively more concerned about their grades. For example, grades directly affect accounting internship opportunities and employment.
6. Most teachers are apparently not perceived by students to be happy/positive/humorous? Perhaps this partially explains the low number of master teachers. We believe most professors have a "professional" disposition or preference to look "serious," which may relate to professional pride and/or the personality of a "typical" professor. However, an important fact all professors should know is that students want them to be happy/positive/humorous. Thus, professors seeking to be a master teacher should take this as a challenge.

REFERENCES

Accounting Education Change Commission (AECC) (1990). Objectives of Education for Accountants. Position Statement No. 1. *Issues in Accounting Education*, 5, 307–312.

Accounting Education Change Commission (AECC) (1993). Evaluating and Rewarding Effective Teaching. Issues Statement No. 5. *Issues in Accounting Education*, 8, 436–439.

Baiocco, S. A. and J.N. DeWaters (1998). *Successful college teaching: Problem solving strategies of distinguished professors.* Needham Heights, MA: Allyn & Bacon.

Boice, R. (1996). *First order principles for college teachers: Ten basic ways to improve the teaching process.* Bolton, MA: Anker.

Brewer, C. L. (August 1982). "Gladly learn and gladly teach." Paper presented at the *annual meeting of the American Psychological Association*, Washington, DC.

Brookfield, S. D. (1990). *The skillful teacher.* San Francisco: Josey-Bass.

Buskist, W., J. Sikorski, T. Buckley, and B. K. Saville (2002). "Elements of Master Teaching." In *The Teaching of Psychology: Essays in Honor of Wilbert J. McKeachie and Charles L. Brewer. Edited by Stephen F. Davis and William Buskist*, 27–39. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Buskist, W. (2002). Effective Teaching: Perspectives and Insights From Division Two's 2- and 4-Year Awardees. *Teaching of Psychology*, 29(3), 188–193.

Calderon, T. and B. Green. (1997). Use of Multiple Information Types in Assessing Accounting Faculty Teaching Performance. *Journal of Accounting Education,*15(2), 221–239.

Eble, K.E. (1983). *The aims of college teaching*. San Francisco: Josey-Bass.

Eble, K.E. (1984). *The craft of teaching.* San Francisco: Josey-Bass.

Gill, V. (1998). *The 10 commandments of good teaching.* Thousand Oaks, CA: Corwin Press.

Hart, D. (2009). An Examination of the Validity of the Teacher Behaviors Checklist. Working paper at the University of Mississippi.

Hatfield, S. R. (1995). *The seven principles in action: Improving undergraduate education.* Bolton, MA: Anker.

Hativa, N. (2000). "The Tension Between Thinking and Beliefs of Professors and Students Regarding Instruction." Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Keeley, J., D. Smith, and W. Buskist. (2006). The Teacher Behaviors Checklist: Factor Analysis of Its Utility for Evaluating Teaching. *Teaching of Psychology*, 33(2), 84–91.

Kerr, D.S., and L.M. Smith, (2003). Effective Accounting Instruction: A Comparison of Instructor Practices and Student Perspectives. *Advances in Accounting Education Teaching and Curriculum Innovations*, 5, 143–163.

Lowman, J. (1995). *Mastering the techniques of teaching*. San Francisco: Josey-Bass.

McKeachie, W. J. (1999). *Teaching tips: Strategies, research, and theory for college and university teachers*. Boston: Houghton Mifflin.

Mowrer, R., S. Love, and D. Orem. (2004). Desirable Teaching Qualities Transcend the Nature of the Student. *Teaching of Psychology*, 31(2), 106–108.

Reinstein, A., and J.R. Hasselback. (1997). A Literature Review of Articles Assessing the Productivity of Accounting Faculty Members. *Journal of Accounting Education*, 15(3), 425–455.

Roth, J. K. (Ed.). (1997). *Inspiring teaching: Carnegie Professors of the Year speak.* Bolton, MA: Anker.

Schaeffer, G., K. Epting, T. Zinn, and W. Buskist. (2003). Student and Faculty Perceptions of Effective Teaching: A Successful Replication. *Teaching of Psychology*, 30(2), 133–136.

Stratton, W.O. (1990). A Model for the Assessment of Student Evaluations of Teaching and the Professional Development of Faculty. *The Accounting Educators' Journal, (*Summer), 77–101.

Sundem, G.L. (1999). *The Accounting Education Change Commission: Its History and Impact*. American Accounting Association, Sarasota, FL.

Vulcano, B.A. (2007). Extending the Generality of the Qualities and Behaviors Constituting Effective Teaching. *Teaching of Psychology*, 34(2), 114–117.

Young, E. (2012). Accounting for Innovation. *Inside Higher Ed*, Retrieved December 23, 2015, from https://www.insidehighered.com/news/2012/07/31/updating-accounting-curriculums-expanding-and-diversifying-field.

Yunker, P. and J. Sterner. (1988). A Survey of Faculty Performance Evaluation in Accounting. *The Accounting Educators Journal*, 1(2), 63–74.

AN INTRODUCTORY ACCOUNTING ASSIGNMENT USING STOCK PRICES AS PROXIES FOR INVENTORY COSTS

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ABSTRACT

In this project, students learn accounting by recording and reporting on accounting transactions. Commercial accounting transaction sets provide lists of transactions for students to record and from which to create financial statements. This project differs from commercial transaction sets in that students develop their own transactions using actual stock prices as proxies for purchase and sales prices of inventory. By developing their own transactions and competing to obtain the highest net income based on their judgments of investment strategies, students are engaged in the project with measurable learning improvement over students that do not participate in the project.

PROJECT DESCRIPTION

Introductory accounting courses often have a large number of non-accounting students and are often taught in large sections. For example, this accounting project was developed at a university in which sections of introductory accounting have from 100 to 200 students, of which fifteen to twenty percent are typically accounting students, with as many as half of the students being non-business students. Large sections of introductory courses are conducive to teaching with lectures, but alternative teaching strategies that promote active learning can develop interest in accounting and increase the depth of learning (Lloyd & Abbey, 2009).

Various practice sets are available to support an active-learning approach to learn the accounting process, journal entries, and financial statements. These projects, although extensively used and very helpful, have some weaknesses. First, students often feel that they are busy work and are not engaged in the project. Second, the projects typically include a limited set of transactions provided by the practice set. The advantages of the practice set are that they integrate the entire accounting process from recording to preparation of the financial statements. The project's advantages include

- Students put the concepts they learn in class into practice, deepening their learning.
- Students compete with each other based on obtaining higher earnings per share, leading to greater engagement in the project. This also helps them learn how choice of accounting principle and operational decisions affect reported financial results.
- Transaction data is generated from real-world data, increasing student engagement.
- The project is relatively simple, in that the students do not need to do a large variety of different types of transactions.

Each student is placed in the position of a manager and accountant for a business. The business is a merchandising company with some simplifications from reality.

First, stock is used as a proxy for inventory. Students can choose to buy and sale from a menu of ten companies' stocks. The choice of stocks is limited to enable manage grading and to guide students unfamiliar with the stock market to companies that are comparable to each other. The students are informed that the stock represents inventory, not investments, so that accounting for inventory rather than for investments is used. Using stock as the inventory allows the costs and prices to be determined by the market prices of the stock, rather than being artificially provided in the project. Choosing which inventory items (stock) to carry and when to sell the inventory are the primary determinants of making a profit. Each individual purchase is limited to 100 shares to promote the quantity of transactions, but students could make multiple purchases in one day. Sales quantities were not limited.

Second, the list of possible types of transactions were limited to the following:

- Raising of up to $50,000 of capital, of which at least $25,000 needed to be common stock. The remainder could be common stock or bonds. As students were rewarded by maximizing earnings per share, alert students only issued $25,000 in stock and raised another $25,000 using bonds.
- Inventory purchases.
- Inventory sales.
- Short sales. Each short consisted of an original stock borrowing/sale followed by a stock purchase to return the borrowed stock. Approximately a quarter of the students actually did shorts, but they were more successful than other students at generating profit, as stock prices did not increase on average during the time of the project.
- If a student issued bonds, interest payable and expense was recorded.

To complete the project, students had to do the following (see Table 1):

1. Turn in a 3 x 5 card detailing each transaction. The card had to be turned in the same day as the transaction was dated. In the case of an inventory (stock) purchase or sale, the price had to be a valid price on that date. Requiring immediate completion of transaction cards stopped students from retroactively writing transactions based on historical prices to maximize profit.
2. Record the transaction in the journal. The students used a spreadsheet with a template for journal entries, t-accounts, a trial balance, an income statement, and a balance sheet.
3. Post transactions to the general ledger.
4. List general ledger balances on the trial balance.
5. Prepare the income statement and balance sheet from the trial balance.
6. Calculate a small set of financial ratios (Earnings per share, Return on Equity, and Gross Profit Margin).
7. Turn in their transaction cards and the spreadsheet that contains the accounting system.

Table 1
PROJECT STEPS

Student step	Student Project Input	Given to Instructor
Students receive instructions and a spreadsheet template with space for a journal, t-accounts, ledger, trial balance, balance sheet, and income statement		
Students do transaction to raise capital (all stock or mixture of stock and bonds)	Journal entry into journal	3 x 5 card that describes transaction (given to instructor so that students do not prepare the transactions *post hoc*)
Purchase inventory	Journal entries into journal	A 3 x 5 card for each transaction
Sell inventory	Journal entries into journal	A 3 x 5 card for each transaction
Prepare adjusting entries	Record interest in the journal if the student choose to issue bonds	Nothing
Post to the ledger	Post to the ledger	
Prepare the trial balance and financial statements		Turn packet into instructor

LEARNING OBJECTIVES AND ASSESSMENT

After completing the project, students should be better at

- Recording accounting transactions
- Preparing financial statements based on those transactions
- Account for issuing stock, issuing bonds and recording associated interest, and purchasing and selling inventory, including inventory flow assumptions.
- Calculating basic financial ratios.
- Understanding how business decisions affect the financial statements and earnings.

The project is designed to help students to learn beyond remembering vocabulary or steps in the accounting process, but to understand accounting concepts, apply those concepts, recognize the effect of business and accounting decisions on financial reporting, and create financial statements (Anderson & Krathwohl, 2001).

The project has been tested in one semester of an Introduction to Financial Accounting course with an enrollment of 142, of whom 21 (15 percent) were accounting majors. The assignment was given as extra credit. Fifty-four students completed the project, of whom 13 percent were accounting majors. The project was designed to increase student learning through increasing engagement. For this reason, students' perceptions about the project are important. Student perceptions about the project were accessed with the following questions and positive response rates:

- How well did the assignment help you learn accounting? 82% answered that the assignment helped them learn accounting.
- Was the assignment more interesting than the other homework assignments given in the course? 84% of students answered positively.
- How much better do you understand class material from completing the assignment, compared to if you had not done it? 97% of students indicated that the project increased their understanding.

The effect on actual learning, as opposed to perceived student learning, was tested by comparing the midterm and final test scores of students that completed the assignment and students that did not complete the assignment; the assignment was extra credit and tended to be done by a mixture of high- and low-achieving students. The project was made available after the midterm and completed before the final. Students that completed the project scored on average 4.5% below the class average on the midterm. Many students with good grades did not bother to complete the project as it was extra credit and they did not need the points. Students that completed the project scored on average 2.8% above the class average on the course final. Students that participated in the project had a significant improvement between the midterm and the final over non-participants ($t=3.17$, $p < .01$).
The project instructions given to the students follow:

PROJECT INSTRUCTIONS

In this assignment, you will simulate accounting transactions for an actual company. The purpose of the assignment is to

1) Give you an opportunity to apply accounting in a Realistic way.
2) Give you the opportunity to see how business performance is reported and communicated using accounting.

Scenario

You own and operate a business in which you buy and sell shares of stock. Your objective, of course, is to make a profit by selling shares of stock at a higher price than you buy them. Because your operations consist of buying and selling stock, you will treat the shares of stock as inventory. Be aware that actual accounting for investments differs from accounting for inventory.

Requirements

1) Complete and record at least 10 transactions.
2) Record, post, and report on those transactions using a properly formatted multi-step income statement and classified balance sheet.

You will do the accounting for the following business transactions. Most of the transactions will involve some choices.

1. Obtain financing. You may raise up to $50,000 with a combination of issuing stock or bonds. If you issue stock, the stock will have a $1 par value and a price of $10. If you borrow money, you will do so with 6% bonds issued at a price of 100 or 4% bonds issued at a price of 90. The choice is use. You may not do anything else until you do this transaction.
2. Purchase inventory. You may do this as often as you want. You may only buy a maximum of 100 shares of stock of any individual company in any given purchase transaction, but you may buy stock from more than one company with any given purchase. Each purchase transaction will have a $10 trading fee that you will add to the cost of inventory. All purchase transactions are cash transactions.
3. Sell inventory. You may do this as often as you want. You may sale as many shares of stock as you wish in any given transaction. All sales transactions are in cash. All sales transactions will have a $10 trading fee that you will record as "Trading Fees." Treat trading fees as an operating expense.
4. Derivative transactions. If you believe that the price of a stock will fall, you may enter into a one week short transaction. Each short transaction is limited to 100 shares of one stock. Each short position actually involves two transactions.
    a. Borrow and sale shares. You will borrow shares from an imaginary market participant. You will then immediately sale the shares you borrowed at the current price.
        i. The fee for borrowing the shares is 1% of whatever the price is at the time of borrowing that you will record as "Transaction Expenses."
        ii. Record the sale of the transactions at the same time, and recognize a liability ("short position payable") at the same time.
    b. Within the next seven days, you must buy the same number of shares of the same stock and return to the party from which you borrowed stock. You will dismiss the liability.
5. Adjusting entries. If you issued bonds, you must recognize interest for the period of time the bonds were outstanding. For any month in which you borrowed money, include a full month's worth of interest. You only need to do the adjusting entry at the conclusion of the project.

You can find current stock prices from http://finance.yahoo.com. You may buy or sell stock only from the following companies:

Symbol	Company
AAPL	Apple
COST	Costco
DELL	Dell
F	Ford Motor Company
FB	Facebook
GM	General Motors
GOOG	Google
ODP	Office Depot
SPLS	Staples
WMT	Walmart

You will need to complete the following documentation to receive credit.

- For each transaction, you must turn in a 3x5 card with transaction information on the same day as the transaction (you may turn the transactions in at class or by putting the card in the tray outside my office.) Any transaction turned in late will not be accepted. Incorrectly completing the cards can result in the reduction of points. Please note that you must track what your cards state. You may not ask me to review the cards after you have turned them in. Each card should include the following:
    - Your name in the top left corner
    - The date in the top right corner.
    - A sentence that describes the transaction in detail ($ amount, number of shares, price per share, nature of the transaction (purchase, sale, short a, short b, stock issue, bond issue, adjusting entry).
    - You do **not** need to include the journal entry on the card.
- Your project packet (may be hand-written or completed on software, but must be professionally completed.) Turned in by the due date. Includes
    - A cover page with your name and date. Do not put your date on any other page.
    - A list of journal entries.
    - A list of t-accounts, with all the journal entries posted.
    - A trial balance.
    - An income statement.
    - A balance sheet.
    - A page listing the following calculated ratios:
        - Earnings per share
        - Gross profit rate
        - Return on stockholders' equity.

This extra credit project is worth 40 points. The majority of the points are for completion of the project. However, some points are awarded based earning performance. The grading process will consist of the following steps:

- I will give each completed project a cursory grading for completion purposes, and award 30 points to all complete projects.
- Students that achieve an Earnings per Share (EPS) in the top 25% of projects will be given 10 more points.

TEACHING NOTES

In this project, students learn accounting by recording and reporting on accounting transactions. Commercial accounting transaction sets provide lists of transactions for students to record and from which to create financial statements. This project differs from commercial transaction sets in that students develop their own transactions using actual stock prices as proxies for purchase and sales prices of inventory. By developing their own transactions and competing to obtain the highest net income based on their judgments of investment strategies, students are engaged in the project with measurable learning improvement over students that do not participate in the project.

Students simulate the operation of a merchandising company through recording transactions to raise capital, buy inventory, and sell inventory. Students use stock prices as proxies for the purchase and sales price of their merchandise. Students record transactions and prepare financial statements. The project is designed to engage students in the process of learning the accounting process, how accounting transactions affect the financial statements, and recording basic accounting transactions.

Teaching Implementation

The instructor must make several decisions regarding the implementation of the project. The assignment could be assigned as either an extra-credit or regular project. Forty percent of the students attempted the project in the class assigned. An advantage of assigning the project as extra-credit is that students will be self-motivated to complete the project, and will not complete the project if they believe it beyond their ability. The points assigned should be more than nominal, as the project entails a significant effort. The instructor could also alter specific limitations included in the project, such as the list of stocks allowable for transactions, the amount of transaction fees, and the limit on the number of shares purchased. A final decision for the project is the timing of the assignment. The project should probably be assigned about half way through the semester so that many of the concepts used in the project will have been learned. The topics used in the assignment are typically included in an introductory accounting course, but the project could be used as a refresher in intermediate accounting.

Students should be graded on compliance with the instructions and accurately following the accounting process. Transactions can be traced to the journals, t-accounts, ledgers, and financial statements.

APPENDIX: SAMPLE STUDENT TRANSACTIONS AND FINANCIAL STATEMENTS

Actual student submission.

Journal Entries

Transaction #	Date	Account	Debit	Credit
1	9/25/2013	Cash	$25,000.00	
		Common Stock		$2,500.00
		Capital in Excess of Par Value		$22,500.00
	To record sale of 2,500 shares of common stock at $10/share. $1 par value			
2	9/25/2013	Common Stock - Walmart	$3,742.50	
		Cash		$3,742.50
	To record purchase of 50 shares of Walmart common stock at $74.65/share + $10 broker fee			
3	9/26/2013	Common Stock - Walmart	$3,741.00	
		Cash		$3,741.00
	To record purchase of 50 shares of Walmart common stock at $74.62/share + $10 broker fee			
4	9/27/2013	Common Stock - Walmart	$3,728.00	
		Cash		$3,728.00
	To record purchase of 50 shares of Walmart common stock at $74.36/share + $10 broker fee			
5	9/30/2013	Common Stock - Walmart	$3,708.00	
		Cash		$3,708.00
	To record purchase of 50 shares of Walmart common stock at $73.96/share + $10 broker fee			
6	10/1/2013	Common Stock - Walmart	$3,689.50	
		Cash		$3,689.50
	To record purchase of 50 shares of Walmart common stock at $73.59/share + $10 broker fee			
7	10/2/2013	Common Stock - Walmart	$3,696.00	
		Cash		$3,696.00
	To record purchase of 50 shares of Walmart common stock at $73.72/share + $10 broker fee			
8	10/3/2013	Common Stock - Walmart	$3,668.00	
		Cash		$3,668.00
	To record purchase of 50 shares of Walmart common stock at $73.16/share + $10 broker fee			

9	10/4/2013	Common Stock - Walmart	$3,650.00	
		Cash		$3,650.00
	To record purchase of 50 shares of Walmart common stock at $72.8/share + $10 broker fee			
10	10/7/2013	Common Stock - Walmart	$3,603.50	
		Cash		$3,603.50
	To record purchase of 50 shares of Walmart common stock at $71.87/share + $10 broker fee			
11	10/8/2013	Cash	$25,000.00	
		Common Stock		$2,500.00
		Capital in Excess of Par Value		$22,500.00
	To record sale of 2,500 shares of common stock at $10/share. $1 par value			
12	10/9/2013	Cash	$3,650.00	
		COGS	$3,732.50	
		Trading Fee	$10.00	
		Common Stock - Walmart		$3,732.50
		Revenue		$3,650.00
		Cash		$10.00
	To record sale of 50 Walmart stocks purchased on 9/25 at $73.00/share			
13	10/10/2013	Cash	$3,739.50	
		COGS	$3,731.00	
		Trading Fee	$10.00	
		Common Stock - Walmart		$3,731.00
		Revenue		$3,739.50
		Cash		$10.00
	To record sale of 50 Walmart stocks purchased on 9/26 at $74.79/share			
14	10/11/2013	Cash	$3,741.00	
		COGS	$3,718.00	
		Trading Fee	$10.00	
		Common Stock - Walmart		$3,718.00
		Revenue		$3,741.00
		Cash		$10.00
	To record sale of 50 Walmart stocks purchased on 9/27 at $74.82/share			
15	10/14/2013	Cash	$3,734.00	
		COGS	$3,698.00	
		Trading Fee	$10.00	
		Common Stock - Walmart		$3,698.00
		Revenue		$3,734.00
		Cash		$10.00

To record sale of 50 Walmart stocks purchased on 9/30 at $74.68/share

16	10/15/2013	Cash	$3,718.50	
		COGS	$3,679.50	
		Trading Fee	$10.00	
		Common Stock - Walmart		$3,679.50
		Revenue		$3,718.50
		Cash		$10.00

To record sale of 50 Walmart stocks purchased on 10/1 at $74.37/share

17	10/16/2013	Cash	$3,780.00	
		COGS	$3,686.00	
		Trading Fee	$10.00	
		Common Stock - Walmart		$3,686.00
		Revenue		$3,780.00
		Cash		$10.00

To record sale of 50 Walmart stocks purchased on 10/2 at $75.6/share

18	10/17/2013	Cash	$3,789.00	
		COGS	$3,658.00	
		Trading Fee	$10.00	
		Common Stock - Walmart		$3,658.00
		Revenue		$3,789.00
		Cash		$10.00

To record sale of 50 Walmart stocks purchased on 10/3 at $75.78/share

19	10/18/2013	Cash	$3,785.50	
		COGS	$3,640.00	
		Trading Fee	$10.00	
		Common Stock - Walmart		$3,640.00
		Revenue		$3,785.50
		Cash		$10.00

To record sale of 50 Walmart stocks purchased on 10/4 at $75.71/share

20	10/21/2013	Cash	$3,757.50	
		COGS	$3,593.50	
		Trading Fee	$10.00	
		Common Stock - Walmart		$3,593.50
		Revenue		$3,757.50
		Cash		$10.00

To record sale of 50 Walmart stocks purchased on 10/7 at $75.15/share

Income Statement
For Period Ending 12/1/13

Revenue		$33,695.00
COGS	$33,226.50	
Trading Fee	$90.00	
Total Expenses		$33,316.50
Net Revenue/Loss		$378.50

Balance Sheet

12/1/2013

Assets	
Cash	$50,378.50
Inventory	$0.00
Total Assets	$50,378.50
Liabilities and SE	
Common Stock	$5,000.00
Additional PIC	$45,000.00
RE	$378.50
Total Liabilities and SE	$50,378.50

REFERENCES

Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing : a revision of Bloom's taxonomy of educational objectives*. New York: Longman.

Lloyd, C. B., & Abbey, A. (2009). Teaching elementary accounting to non-accounting majors. *American Journal of Business Education, 2*(2), 23-30.