

**FACTORS ASSOCIATED WITH STUDENT
PERFORMANCE IN ADVANCED ACCOUNTING AND
CONTEMPORARY FINANCIAL ACCOUNTING ISSUES:
AN EMPIRICAL STUDY IN A COMMUTER UNIVERSITY**

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Abstract

No prior study that we are aware of has considered the associations between motivation, actual ability, self-perceived ability, and distraction factors and student performance in advanced level undergraduate accounting courses. This study considers the associations between these four factors and student performance in Advanced Accounting and Contemporary Financial Accounting Issues. Students enrolled in a highly diversified, commuter, public university located in one of the largest cities in the United States provided responses to 12 questions used as independent variables.

Of the three variables used as proxies for motivation, the grade the student would like to make in the course was found to be significantly associated with student performance, but intention to take the CPA exam or attend graduate school were not. Additionally, the grade in Intermediate Accounting II and GPA (used as proxies for actual ability) were found to be strong predictors of student performance. Self-perceived reading and

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listening abilities had moderate associations with student performance, but self-perceived writing and math abilities did no

Finally, holding non-accounting-related jobs, working high numbers of hours per week, and taking on higher course loads during the semester are factors which were, surprisingly, not significantly correlated with student performance. One important implication of this study is that accounting faculty need to find ways to motivate their students, but need not discourage them to take more courses per semester or work more hours per week outside of school.

INTRODUCTION

Many studies have explored various factors (e.g., aptitude, general academic performance, prior exposure to accounting, prior exposure to mathematics, age, and gender) that are associated with student performance in college-level accounting courses. While it is widely believed that motivation and effort significantly influence individual performance in college, as the review of prior research below indicates, few studies have investigated their impact on accounting education. Indeed, no prior study that we are aware of has considered the associations between motivation, prior actual ability, current self-perceived ability, and distraction factors and student performance in advanced level undergraduate accounting courses. This study considers the associations between these factors and student performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

The objective of the study is predicated on the assumption that identification of some factors that are associated with student performance and some factors that are not may help us to emphasize those factors that improve student performance and de-emphasize those factors that do not.

We distributed questionnaires covering the study variables, as well as demographic and other information, to 80 students in the above-mentioned two courses during the Spring, Summer, and Fall semesters of 2004. In the following parts of the paper we present a review of prior research, and we describe the study variables, hypotheses, sample, statistical tests, and research results. We end the paper with some conclusions, recommendations, study limitations, and some suggestions for further research.

REVIEW OF PRIOR RESEARCH

Prior studies have explored various factors that are associated with student performance in college-level accounting courses. Factors that appeared in prior research include aptitude, general academic performance, prior exposure to accounting, prior exposure to mathematics, age, and gender. Grade point average (GPA) is used frequently as a proxy for aptitude and prior academic performance. Several researchers¹ have found evidence supporting GPA as a significant predictor of performance in accounting courses. However, using another measure, pre-university examination performance, one study² found no

¹ Eckel, N. and Johnson, W.A. (1983), "A Model for Screening and Classifying Potential", *Accounting Education*, vol. 2, pp. 1-15; Hicks, D. W. and Richardson, F. M. (1984), "Predicting Early Success in Intermediate Accounting: The Influence of Entry Examination and GPA", *Issues in Accounting Education*, (Spring), pp. 61-67; Ingram, R. W. and Peterson, R. J. (1987), "An Evaluation of AICPA Tests for Predicting the Performance of Accounting Majors", *The Accounting Review* (January), pp. 215-223; Eskew, R. K. and Faley, R. H. (1988), "Some Determinants of Student Performance in the First College-level Financial Accounting Course", *The Accounting Review* (January), pp. 137-147; Doran, B., Bouillon, M. L. and Smith, C.G. (1991), "Determinants of Student Performance in Accounting Principles I and II", *Issues in Accounting Education*, vol. 6, pp. 74-84; and Jackling, B. and Anderson, A. (1998), "Study Mode, General Ability and Performance in Accounting: A Research Note", *Accounting Education: An International Journal*, vol. 1, pp. 33-42.

² Gist, W. E., Goedde, H. and Ward, B.H. 1996, "The Influence of Mathematical Skills and Other Factors on Minority Student Performance in

significant association between academic performance and performance in university accounting courses. Accounting is a subject area that requires accumulation of prior knowledge and considerable quantitative skills. Therefore, several studies have investigated the impact of prior exposure to accounting and mathematical background courses on performance in college accounting courses. However, the results are inconclusive. Some studies³ found that performance is not significantly associated with prior exposure to high school accounting education. However, some later studies⁴ found that prior accounting knowledge, obtained through high school education, is a significant determinant of performance in college-level accounting courses. Conflicting results are also observed about the association between student performance in introductory accounting and their performance in non-introductory accounting courses. One study found evidence that college-level exposure to accounting is

Principles of Accounting”, *Issues in Accounting Education*, vol. 1, pp. 49-60.

³ Baldwin, B. A. and Howe, K. R. (1982), “Secondary-level Study of Accounting and Subsequent Performance in the First College Course”, *The Accounting Review*, vol. 3, pp. 619-626; Bergin, L. J. (1983), “The Effect of Previous Accounting Study on Student Performance in the First College-level Financial Accounting Course”, *Issues in Accounting Education*, vol. 1, pp. 19-28; and Schroeder, N. W. (1986), “Previous Accounting Education and College-level Accounting Examination Performance”, *Issues in Accounting Education*, vol. 1, pp. 37-47.

⁴ Eskew and Faley 1988; Bartlett, S. M., Peel, J. and Pendlebury, M. (1993), “From Fresher to Finalist: A Three-year Study of Student Performance on an Accounting Degree Program”, *Accounting Education: An International Journal*, vol. 2, pp. 111-122; Gul, F. A. and Fong, S. C. (1993), “Predicting Success for Introductory Accounting Students: Some Further Hong Kong Evidence”, *Accounting Education: An International Journal*, vol. 1, pp. 33-42; Tho, L. M. (1994), “Some Determinants of Student Performance in the University of Malaya Introductory Accounting Course”, *Accounting Education: An International Journal*, vol. 4, pp. 331-340; and Rohde, F. H. and Kavanagh, M. (1996), “Performance in First Year University Accounting: Quantifying the Advantage of Secondary School Accounting”, *Accounting and Finance*, vol. 2, pp. 275-285.

positively related to student performance in the first MBA-level financial accounting course.⁵ However, another study showed that performance in the introductory accounting course has a negative impact on performance in subsequent accounting courses.⁶ The influence of mathematical background on performance in accounting courses is also ambiguous. Some studies⁷ found that students with strong mathematical backgrounds outperform students with weaker mathematical backgrounds, while a later study⁸ did not obtain the same results.

While it is widely believed that motivation and effort, among other factors, significantly influence individual performance in college,⁹ few studies have investigated their impact on accounting education in particular. One study¹⁰ that explored the association between effort and performance in the area of finance presented contra-intuitive evidence that the more time spent studying per week, the lower the grade in the introductory finance course. Another study¹¹ that used self-reported data found a positive yet non-significant relationship between effort and performance. A

⁵ Canlar, M. (1986), "College-level Exposure to Accounting Study and Its Effect on Student Performance in the First MBA-level Financial Accounting Course", *Issues in Accounting Education*, vol. 1, pp. 13-23.

⁶ Doran, Bouillon, and Smith (1991).

⁷ Eskew and Faley (1988); and Gul and Fong (1993).

⁸ Gist, Goedde, and Ward (1996)

⁹ Pascarella, E. and Terenzini, P. (1991), "*How College Affects Students: Findings and Insights from Twenty Years of Research*", San Francisco, CA: Jossey-Bass Publisher.

¹⁰ Didia, D. and Hasnat, B. (1998), "The Determinants of Performance in the University Introductory Finance Course", *Financial Practice and Education*, vol. 1, pp. 102-107.

¹¹ Nosfinger, J. and Petry, G. (1999), "Student Study Behavior and Performance in Principles of Finance", *Journal of Financial Education*, (Spring), pp. 33-41.

third study¹² that utilized computerized quizzes and analyzed the effect of objectively measured effort on student performance found that, after controlling for aptitude, ability, and gender, effort remains significant in explaining the differences in performance.

STUDY VARIABLES

We use two dependent variables and 12 independent variables in the study.

Dependent Variables:

The two dependent Variables are:

1. *Points*: The actual average number of points (including mid-term and final examinations, cases, term papers, class presentations, and other projects) a given student received in a given course.
2. *Grade*: The letter grade (e.g., A, B, or C,) a given student received in a given course.

Independent Variables:

We use three independent variables (the grade the student would like to make in the course, intention to take the CPA exam, and intension to attend graduate school) as proxies for motivation. We use the grade obtained in Intermediate Accounting II and cumulative GPA as proxies for prior actual ability. We use what the students think of their writing, math, reading, and listening abilities (whether they are very good, good, average, or poor) as four independent variables for self-perceived ability. As proxies for distraction, we use three independent variables: the type of job outside of school (whether it is accounting related, business-related, or other), the number of hours of work outside of school, and the number of courses taken per semester.

¹² Johnson, D. L., Joyce, P., and Sen, S. (2002), "An Analysis of Student Effort and Performance in the Finance Principles Course", *Journal of Applied Finance* (Fall/Winter), pp. 67-72.

STUDY HYPOTHESES

We examine four categories--motivation, prior actual ability, current self-perceived ability, and distraction--that may be associated with student performance in Advanced Accounting, and Contemporary Financial Accounting Issues. We discuss below the research hypotheses under each of the four categories.

Motivation Factors

The first category, *motivation*, includes three variables:

The first variable is the grade the student would like to make in the course. Our hypothesis is that students who would like to make higher grades are motivated to perform better to achieve their wish. On the other hand, students who report that "a C is fine with them" are probably not that motivated. To eliminate redundancy we will not give the null hypotheses but will state all our hypotheses in the alternate form as shown below:

H_{a1}: There is a positive association between the grade a given student would like to make and that student's performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

The second variable is whether the student intends to take the CPA exam. Our hypothesis is that students who intend to take the CPA exam are more motivated to work hard to increase their chances of passing that exam and, therefore, they will earn higher grades than students who do not intend to take the CPA exam.

H_{a2}: There is an association between a student's intention to take the CPA exam and that student's performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

Our third motivation variable is whether the student intends to attend graduate school. Our hypothesis is that students who have that intention are more motivated to work hard to increase their chances of getting accepted at a good graduate school and, therefore, they will earn higher grades than students who do not intend to go to graduate school.

H_{a3}: There is an association between a student's intention of attending graduate school and that student's performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

Prior Actual Ability Factors

The second category, *prior actual ability*, includes two variables:

The first variable is the student's grade in Intermediate Accounting II. Our hypothesis is that students who earned higher grades in Intermediate Accounting II (which is a prerequisite for advanced level accounting courses) will earn higher grades in Advanced Accounting, and Contemporary Financial Accounting Issues.

H_{a4}: There is a positive association between a student's grade in Intermediate Accounting II and that student's performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

The second variable is the student's cumulative GPA. Our hypothesis is that students with higher cumulative GPAs will earn higher grades in Advanced Accounting, and Contemporary Financial Accounting Issues.

H_{a5}: There is a positive association between a student's cumulative GPA and that student's performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

Current Self-Perceived Ability Factors

The third category, *current self-perceived ability*, includes four variables.

These four variables represent students' perceptions of their writing, math, reading, and listening abilities. Our hypotheses are that students who perceive their writing, math, reading, and listening abilities to be good or very good will earn higher grades in Advanced Accounting, and Contemporary Financial Accounting Issues than students who perceive their abilities in these four areas to be average or poor.

H_{a6}: There is a positive association between a student's perception of his/her writing ability and that student's performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

H_{a7}: There is a positive association between a student's perception of his/her math ability and that student's performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

H_{a8}: There is a positive association between a student's perception of his/her reading ability and that student's performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

H_{a9}: There is a positive association between a student's perception of his/her listening ability and that student's performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

Distraction Factors

The fourth category, *distraction*, includes three variables: The first variable is the student's job type outside of school. Our hypothesis is that students whose jobs outside of school are non-accounting-related will be distracted by their jobs without gaining any understanding of accounting practice that might compensate for spending less time studying and will, therefore, end up earning lower grades in Advanced Accounting, and Contemporary Financial Accounting Issues than students whose jobs are accounting related.

H_{a10}: There is an association between a student's type of job outside of school and that student's performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

The second variable is the number of hours per week the student works outside of school. Our hypothesis is that students who work more hours outside of school are more distracted because they will spend less time studying and, therefore, will earn lower grades than students who work fewer hours or who do not work at all.

H_{a11}: There is a negative association between a student's number of hours of work per week outside of school and that student's performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

The third variable is the number of courses per semester the student is taking. Our hypothesis is that students who are taking more courses than average are more distracted because they spend less time studying per course and, therefore, will earn lower grades than students who take fewer courses.

H_{a12}: There is a negative association between a student's course load and that student's performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

STUDY SAMPLE

The study sample includes 85 students enrolled in Advanced Accounting and Contemporary Financial Accounting Issues at a major metropolitan university. The university in which we conducted this study is a commuter public university located in one of the largest cities in the United States and enrolls about 12,500 students.

The student body is very diverse as minority students (mostly Hispanic and Asian) account for over 50%. Most of the students are the first generation in their family to attend college. They combine studying with working and raising a family. We developed a list of survey questions that include, besides the study variables, some demographic and other information, and distributed it to students in Advanced Accounting, and Contemporary Financial Accounting Issues. To increase the sample size, we collected data over three consecutive semesters: Spring, Summer, and Fall of 2004. Our final sample included 80 useful responses (53 from the Advanced Accounting course and 27 from the Contemporary Financial Accounting Issues course).

STATISTICAL TESTS AND RESEARCH RESULTS

At the beginning of this research project we defined the dependent variable, student performance, only as the letter grade

(e.g., A, B, etc.) a given student would receive for the course. However, after discussions with the faculty teaching the two courses used for the study, we realized that using the letter grade to operationally define student performance has three drawbacks: (a) some faculty curve upward the average actual points received by every student before they determine the letter grade, (b) because we do not attach pluses and minuses to the letter grades at our school, the letter grade treats a student receiving the lowest end of the grade range as having the same exact performance as that of a student receiving the highest end of the grade range (e.g., a student with actual average points of 80 and another with actual average points of 89 would be considered having equal performance since both students receive a B for the course), and (c) the letter grade point averages of 4, 3, and 2 are not continuous and thus do not allow the use of multivariate models to test the hypotheses.

As a result, in addition to using the grade to define performance, we decided to use the actual average number of points (including mid-term and final examinations as well as cases, papers and other projects) a given student received for the course before any upward curving made by the faculty. All points used in the study were based on a maximum total of 100 points.

Some faculty members used total points of more than 100 to measure their students' performance; however, they converted those points to a number out of a maximum of 100 before giving them to us. We used the one-way analysis of variance (ANOVA) statistical model to test our hypotheses with the dependent variable defined as points. TABLE 1 presents the results of that test. Because the dependent variable defined as "grade" is a categorical variable, we used the Pearson and Spearman statistical tests instead of ANOVA. TABLE 2 presents the Pearson and Spearman correlation coefficients for "grade." Because the prior actual ability variables (the grade in Intermediate Accounting II and the cumulative GPA) may derive most of the significant associations that we obtain, we ran the Pearson and Spearman partial correlation tests to control for these prior actual ability variables. TABLE 3 presents these partial correlations.

TABLE 1
 Analysis of Variance for Students' Performance Measured by Points
Panel A: ANOVA for points using variable grademk

<i>Source</i>	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>	<i>F Value</i>	<i>Pr</i>
Grademk	2	2878.10	1439.05	13.51	<.0001
Error	72	7670.57	106.54		
Corrected Total	74	10548.67			

Panel B: ANOVA for points using variable cpa

<i>Source</i>	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>	<i>F Value</i>	<i>Pr</i>
Cpa	2	268.99	134.49	0.95	0.39
Error	72	10236.40	142.17		
Corrected Total	74	10505.39			

Panel C: ANOVA for points using variable grad

<i>Source</i>	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>	<i>F Value</i>	<i>Pr</i>
Grad	3	1449.04	483.01	3.74	0.02
Error	70	9048.33	129.26		
Corrected Total	73	10497.36			

Panel D: ANOVA for points using variable grade322

<i>Source</i>	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>	<i>F Value</i>	<i>Pr</i>
grade322	2	1688.05	844.03	6.81	0.00
Error	70	8673.07	123.90		
Corrected Total	72	10361.12			

Panel E: ANOVA for points using variable gpac

<i>Source</i>	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>	<i>F Value</i>	<i>Pr</i>
Gpac	2	2250.78	1125.39	9.92	0.00
Error	66	7487.85	113.45		
Corrected Total	68	9738.64			

Panel F: ANOVA for points using variable write

<i>Source</i>	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>	<i>F Value</i>	<i>Pr</i>
Write	3	239.70	79.90	0.55	0.65
Error	72	10406.34	144.53		
Corrected Total	75	10646.04			

Panel G: ANOVA for points using variable math

<i>Source</i>	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>	<i>F Value</i>	<i>Pr</i>
math	2	123.22	61.61	0.43	0.65
Error	73	10522.82	144.15		
Corrected Total	75	10646.04			

Panel H: ANOVA for points using variable read

<i>Source</i>	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>	<i>F Value</i>	<i>Pr</i>
Read	2	720.08	360.04	2.65	0.08
Error	73	9925.96	135.97		
Corrected Total	75	10646.04			

Panel I: ANOVA for points using variable listen

<i>Source</i>	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>	<i>F Value</i>	<i>Pr</i>
Listen	3	975.19	325.06	2.42	0.07
Error	72	9670.85	134.32		
Corrected Total	75	10646.04			

Panel J: ANOVA for points using variable job

<i>Source</i>	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>	<i>F Value</i>	<i>Pr</i>
Job	3	444.27	148.09	1.03	0.38
Error	67	9597.61	143.25		
Corrected Total	70	10041.89			

Panel K: ANOVA for points using variable hrs

<i>Source</i>	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>	<i>F Value</i>	<i>Pr</i>
Hrs	4	202.58	50.64	0.34	0.85
Error	69	10161.37	147.27		

Corrected Total	73	10363.95			
<i>Panel L: ANOVA for points using variable load</i>					
<i>Source</i>	<i>DF</i>	<i>Sum of Squares</i>	<i>Mean Square</i>	<i>F Value</i>	<i>Pr</i>
Load	6	683.08	113.85	0.79	0.58
Error	68	9822.31	144.45		
Corrected Total	74	10505.39			

TABLE 2
Correlation Matrix for Grade
Panel A: Pearson and Spearman correlation coefficients for grade^a

	<i>grade</i>	<i>grademk</i>	<i>Cpa</i>	<i>Grads</i>	<i>Grade322</i>	<i>gpac</i>	<i>Write</i>	<i>math</i>	<i>read</i>	<i>listen</i>	<i>job</i>	<i>hrs</i>	<i>load</i>
Grade		0.55***	0.04	-0.18	0.40***	0.51***	0.17	0.11	-0.06	0.05	-0.08	0.14	0.05
Grademk	0.55***		-0.11	-0.22***	0.31***	0.36***	0.11	0.13	-0.17	-0.02	-0.32***	-0.21*	0.10
Cpa	0.03	-0.10		0.10	0.05	0.17	-0.04	-0.11	0.02	-0.16	-0.07	0.05	0.03
Grad	-0.21*	-0.22*	0.11		0.06	-0.21*	0.04	0.32***	0.13	-0.04	0.15	-0.06	0.10
grad322	0.39***	0.334***	0.03	0.05		0.45***	0.30**	0.15	0.13	0.24**	0.23*	0.14	0.09
Gpac	0.492***	0.40***	0.19	-0.20*	0.47***		0.35***	0.27**	0.08	0.10	0.04	-0.01	0.17
Write	0.16	0.14	-0.05	0.00	0.31***	0.39***		0.01	0.25**	0.18	0.25**	0.22*	0.11
Math	0.08	0.12	-0.11	0.30**	0.14	0.22*	0.03		0.08	0.02	0.13	-0.29**	0.15
Read	-0.01	-0.12	0.03	0.07	0.12	0.15	0.30***	0.13		0.08	0.34***	0.08	0.05
Listen	-0.08	0.00	-0.12	0.00	0.14	0.10	0.14	0.03	0.12		-0.04	0.04	0.01
Job	-0.09	-0.32***	-0.08	0.12	0.21*	0.06	0.23*	0.14	0.29**	0.03		0.27**	0.29**
Hrs	0.14	-0.21*	0.05	-0.08	0.10	-0.05	0.20*	-0.27**	0.02	-0.01	0.17		-0.20*
Load	0.02	0.11	0.00	0.10	0.07	0.11	0.07	0.18	0.07	0.06	0.30**	-0.24**	

TABLE 3
Correlation Matrix for Grade

Panel A: Partial Pearson and Spearman correlation coefficients for grade^a controlling for grade322 and gpac

	<i>grade</i>	<i>grademk</i>	<i>cpa</i>	<i>Grads</i>	<i>write</i>	<i>Math</i>	<i>read</i>	<i>listen</i>	<i>job</i>	<i>hrs</i>	<i>load</i>
Grade		0.51***	-0.10	-0.24*	-0.07	0.05	-0.19	0.05	-0.22*	0.02	-0.04
grademk	0.52***		-0.21*	-0.19	-0.05	0.07	-0.32**	-0.09	-0.40***	-0.30**	0.03
Cpa	-0.13	-0.21		0.18	-0.01	-0.22*	0.05	-0.20	-0.01	-0.01	0.01
Grad	-0.26**	-0.17	0.20		0.06	0.42***	0.13	-0.03	0.11	-0.14	0.11
Write	-0.10	-0.05	-0.06	0.06		-0.04	0.20	0.15	0.18	0.22*	0.02
Math	0.06	0.10	-0.21	0.38***	-0.02		0.06	-0.11	0.14	-0.28**	0.14
Read	-0.18	-0.32**	0.06	0.10	0.24*	0.12		0.03	0.37***	0.09	0.07
Listen	-0.06	-0.07	-0.14	0.02	0.13	-0.05	0.13		-0.17	0.16	0.01
Job	-0.24*	-0.40***	-0.02	0.10	0.15	0.15	0.34***	-0.05		0.27**	0.25*
Hrs	0.05	-0.29**	0.00	-0.17	0.22*	-0.24*	0.03	0.12	0.17		-0.29**
Load	-0.02	0.07	0.00	0.08	0.00	0.20	0.07	0.02	0.28**	-0.32**	

We analyze below the results of the study by the type of factors associated or not associated with student performance.

Motivation Factors Associated with Student Performance:

As TABLE 1 indicates, of the three motivation variables discussed in H_{a1} to H_{a3} , only one variable, the grade the student would like to make in the course, is significantly associated (at the .01 level) with the student's performance defined as "points." One other variable, whether the student intends to attend graduate school, is significantly associated (at the .05 level) with the student's performance defined as "points."

The remaining motivation variable, whether the student intends to take the CPA exam, has no significant association with the student's performance defined as "points." As TABLE 2 indicates, of the three motivation variables discussed in H_{a1} to H_{a3} , one variable, the grade the student would like to make in the course, is significantly associated (at the .01 level in both Pearson and Spearman tests) with the student's performance defined as "grade."

As TABLE 3 indicates, these results remained the same even after we controlled for the prior actual ability factors. As TABLE 2 indicates, another variable, whether the student intends to attend graduate school, has a significant *negative* association (but only at the .10 level and only in the Spearman test) with the student's performance defined as "grade."

However, as TABLE 3 indicates, after we controlled for the prior actual ability factors, the *negative* association between intention to attend graduate school and student performance became more significant (at the .05 level in the Spearman test and at the .10 level in the Pearson test). The third motivation variable, whether the student intends to take the CPA exam, has no significant association with the student's performance defined as "grade" and that is the case whether or not we control for the actual ability factors. Combining the results shown in TABLES 1 and 2, we can generally state that the grade the student would like to make in the course has a significant association with student

performance defined either as the grade or the average actual points received for the course.

The association between student intension of attending graduate school and student performance seems to be ambiguous since TABLE 1 shows significant *positive* association (at the .05 level) and TABLES 2 and 3 show significant *negative* associations (at the .05 and .10 levels).

This contradiction in results is most likely due to the fact that student performance is defined as “points” in TABLE 1 and as “grade” in TABLES 2 and 3. The latter definition has several drawbacks as explained earlier. One other possible reason for the somewhat significant *negative* association between intension to attend graduate school and grade is the fact that we assumed that students who intend to attend graduate school at a university other than ours are more motivated and, thus, will earn higher grades than students who intend to attend graduate school at our university.

This assumption was based on the general perception as well as our own knowledge that the other graduate schools in town are ranked higher academically than our school. As it turned out, from an analysis of the frequency tables of responses (which are available from the authors upon request) our students, particularly those with low grades, apparently thought that our undergraduate school is too difficult and our graduate school will be even more difficult.

Thus, even though many of them reported that they intend to attend graduate school, the majority planned to attend at another school. For example, of the 14 students who intended to attend graduate school at another university (i.e., those we thought will earn the highest grades), 11 (or 79%) earned the grade of C, two (or 14%) earned the grade of B, and only one student (or 7%) earned the grade of A.

The association between student intension of taking the CPA exam and student performance is not significant and, thus, apparently is not a good motivating factor for the students at our university to work hard to earn higher grades. This result may be

due to the possibility that the many of our students do not have any idea how difficult the CPA exam is or what the passing rate is. For example, an analysis of the frequency tables (which are available from the authors upon request) shows that of the 22 students who reported that they intend to take the CPA, nine (or 41%) received the grade of C, eight (or 36%) received the grade of B, and only five (or 23%) received the grade of A.

Prior Actual Ability Factors Associated with Student Performance

As TABLES 1 and 2 indicate, the two variables representing prior actual ability have significant associations (at the .01 level) with student performance defined either as the grade or the average actual points received for the course.

Current Self-Perceived Ability Factors Associated with Student Performance

As TABLE 1 indicates, of the four self-perceived ability variables, two variables, the student's reading and listening abilities, are significantly associated (but only at the .10 level) with the student's performance defined as "points." The other two variables, the student's writing and math abilities, have no significant associations with student performance. As TABLE 2 indicates, none of the four variables representing self-perceived abilities has any significant association with student performance defined as "grade."

As TABLE 3 indicates, these results remained the same even after we controlled for the prior actual ability variables. Thus, based only on the results shown in TABLE 1, we can generally state that students' self-perceived reading and listening abilities have somewhat significant associations with their performance defined as the average actual points received for the course. Based on the results shown in TABLES 2 and 3, we can generally state that students' self-perceived writing, math, reading and listening abilities have no significant associations with their performance defined as the "grade" received for the course. The contradiction

between the results in TABLE 1 and those in TABLES 2 and 3 may be attributed to using two different definitions of student performance, points and grade, with the latter having some drawbacks as discussed earlier. The non-significant results could also be due the possibility that students, particularly those earning low grades, overestimated their reading, math, writing, and listening abilities.

Distraction Factors Associated with Student Performance

As TABLES 1 and 2 indicate, the variables representing distraction factors have no significant *negative* associations with student performance defined either as the average actual points or the grade received for the course. However, as TABLE 3 indicates, after we controlled for the prior actual ability factors, the type of job has a significant *negative* association (but only at the .10 level) with student performance defined as “grade.” This somewhat counter intuitive evidence could be due to the possibility that students who work in accounting related jobs may have overestimated the benefits of their accounting work experience and, thus, may have not spent enough time studying for their advanced level accounting courses.

CONCLUSIONS AND RECOMMENDATIONS

1. One general conclusion of the study is that motivated students earn higher grades in Advanced Accounting, and Contemporary Financial Accounting Issues than students who are not motivated. More specifically, the study provides evidence that the majority of students who responded that they would like to make high grades in these courses ended up making high grades. However, intension to take the CPA exam and intension to attend graduate school do not seem, in this study, to be good motivating factors for students at our school to perform well.

In light of the above general conclusion, we recommend that college of business faculty in general and accounting faculty in particular should find ways to motivate students

by instilling in them the desire to earn high grades. One way to do this is to inform the students that research shows that students who have the desire to earn high grades usually end up earning those high grades.

2. Another general conclusion of the study is that, as expected and as shown in prior studies with respect to other courses, students with high prior actual ability end up earning high grades in Advanced Accounting, and Contemporary Financial Accounting Issues than students with low prior actual ability. Specifically, the study provides strong evidence that student performance in Intermediate Accounting II and their cumulative GPA are strong predictors of student performance in Advanced Accounting, and Contemporary Financial Accounting Issues.

In light of this general conclusion, we recommend that accounting faculty who teach Intermediate Accounting II encourage their students to work hard and try to do well in that course by emphasizing that research shows that students who earn high grades in that course will most likely earn high grades in Advanced Accounting, and Contemporary Financial Accounting Issues.

3. A third general conclusion of this study is that self-perceived abilities in reading and listening are good predictors of performance in Advanced Accounting, and Contemporary Financial Accounting Issues. More specifically, the study provides some evidence that students who reported that their reading or listening ability is good or very good earned higher grades than students who reported that their reading or listening ability is average or poor.

In light of this general conclusion, we recommend that accounting faculty encourage their students to concentrate on improving their reading and listening skills by informing them that research has shown that there is a correlation between good reading and listening skills and student

performance (defined as the actual points received for the course) in Advanced Accounting, and Contemporary Financial Accounting Issues. We realize that some faculty may already be encouraging their students to improve their reading and listening skills; thus our recommendation is for those who may not be.

The fact that this study shows no significant association between self-perceived writing and math abilities (using the ANOVA test) or between self-perceived writing, math, reading and listening abilities (using the Pearson and Spearman correlation tests) and student performance is puzzling. As we mentioned above, one explanation for this may be that students tend to over-estimate their abilities, and that their self-perceptions of their abilities in these areas are not accurate representations of their actual abilities.

4. A fourth general conclusion of the study is that the distraction variables (i.e., working too many hours per week, even in non-accounting related jobs, and taking too many courses per semester) have no significant *negative* associations with student performance. That is, they are not distracting the students and preventing them from earning high grades

In light of this conclusion we recommend that accounting faculty need not encourage their students to work as few hours as possible to earn high grades. And if the students have to work many hours anyway to support their families, accounting faculty need not encourage those students to take as few courses per semester as possible to earn high grades in Advanced Accounting, and Contemporary Financial Accounting Issues.

STUDY LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

Our study is subject to some limitations. One limitation is that our school is a public university and, therefore, we do not know if the results will be the same for private schools. So, one suggestion for further

research is to replicate the study in a private school. Another limitation is that our school is a commuter school and, therefore, we do not know if the results will be the same for residential schools. Accordingly, another suggestion for further research is to replicate the study in a residential school. A third limitation is that our student body is highly diversified and, therefore, we do not know if the results will be the same for much less diversified schools.

Thus, a third suggestion for further research is to replicate the study in a much less diversified school. A fourth limitation of this study is that about 80% of our students work almost full time while going to school and, therefore, we do not know if the results will be the same for schools where a much less percentage of the students work full time.

Therefore, a fourth suggestion for further research is to replicate the study in other schools where a much smaller percentage of the students work full time. A fifth limitation of the study is that the results are based on a small sample size and, thus, are not as robust as they could have been if the sample size were larger. Hence, a fifth suggestion for future research is to replicate the study using a larger sample.