Factors Associated with Student Performance in Advanced Accounting: An Empirical Study at a US Residential Public University

Qian Hao
Kutztown University of Pennsylvania

Mostafa M. Maksy
Kutztown University of Pennsylvania

This study examines some determinants of student performance in Advanced Accounting. Of the motivation factors studied (intended grade, intention to take the CPA exam, or attend graduate school) only the first has some association with student performance. Of the three distraction factors (job hours, job type, and course load) only the last has negative effect on student performance. Of the four self-perceived ability factors (Writing, Math, Reading, and Listening) only the last has some association with student performance. Finally, the grade in the pre-requisite Intermediate Accounting II course and overall GPA have significant associations with student performance.

Keywords: Motivation, Distraction, Prior Ability, Self-perceived Abilities, Student Performance, Advanced Accounting.

INTRODUCTION

Several prior research studies have explored various factors (e.g., general academic performance, aptitude, prior exposure to mathematics, prior exposure to accounting, age, gender, motivation, effort, and other intervening variables) that are associated with student performance in college-level courses. It is widely believed that motivation and effort significantly influence individual performance in college. However, as the review of prior research below indicates, very few studies have investigated their impact on required undergraduate Accounting courses. This study investigates the associations between selected motivation, distraction, self-perceived ability, and prior ability factors and student performance in the undergraduate Advanced Accounting course at a residential public university in the U.S.

As proxies for motivation, the authors use the grade the students intend to earn in the course, intention to take the Certified Public Accountant (CPA) examination, and intention to attend graduate school. As proxies for distraction, the authors use the number of hours of work per week, the type of job (whether or not it is related to accounting, or business in general) and the number of courses taken per semester. The study measures students' self-perceived abilities using their own self-reported writing, math, reading, and listening abilities. Students' prior abilities are measured by the actual grade earned in the Intermediate Accounting II course, which is a prerequisite for the Advanced Accounting course, and by Overall Grade Point Average (OGPA.) The dependent variable, the student performance, is measured in two different

ways: the letter grade for the course, and the total overall points percent score (hereafter referred to as 'Points') for the course.

One of the motivations of this study is the belief that identifying factors that motivate students to perform well and factors that distract them from performing well may help us emphasize the motivation factors and discourage the distraction factors. Another purpose of the study is to provide empirical support to the intuitive notion that motivation does indeed lead to better student performance. Also the study could help us determine whether students make accurate assessment of their own writing, math, reading, and listening abilities. If they do, there should be significant association between their assessment of these abilities and their performance. If there is no significant association between their evaluation of these abilities and their performance, this would be an indication that the students are not making accurate evaluation of their abilities, which could be detrimental to their success in college.

The remaining parts of the paper present a review of prior research, discussion of the study objectives, variables and hypotheses, research methodology, and results. The paper ends with conclusions, recommendations, study limitations, and some suggestions for further research.

REVIEW OF PRIOR RESEARCH

Several prior studies have examined the association between various factors (e.g., general academic performance, aptitude, prior exposure to mathematics, prior exposure to accounting, gender, age, motivation, effort, and other intervening variables) and student performance in college-level courses. The overall Grade Point Average (OGPA) is used frequently as a proxy for prior academic performance and aptitude.

Several researchers, using data from various U.S. colleges, find evidence supporting OGPA as a significant predictor of performance in accounting courses (Eckel and Johnson 1983; Hicks and Richardson 1984; Ingram and Peterson 1987; Eskew and Faley 1988; Doran et al. 1991; Maksy and Zheng 2008; Maksy 2012 and 2014; Gupta and Maksy 2014; and Maksy and Wagaman 2012, 2013, and 2015, and Alanzi 2015). In the finance area, Paulsen and Gentry (1995), Chan et al. (1997), Sen et al. (1997), Didia and Hasnat (1998), Marks (1998), Van Ness et al. (2000), Johnson et al. (2002), and Biktimirov and Klassen (2008) find OGPA to be a strong predictor of grade in the Financial Management course that is required of all business majors. Wooten (1998) finds that aptitude, as measured by the Scholastic Aptitude Test (SAT) score, and grade history are significant variables in influencing performance of students in an introductory accounting course. U.S. research findings are supported in Australia by Jackling and Anderson (1998) and in Scotland by Duff (2004). In Wales, Lane and Porch (2002) find that performance in introductory accounting can partially be explained by reference to factors in the students' pre-university background. However, these factors are not significant when the student progresses to upper level accounting classes. Also, using another measure, pre-university examination performance, Gist et al. (1996) find no significant association between academic performance and performance in accounting courses at the university level.

Accounting is a subject area that requires accumulation of prior knowledge and quantitative skills. Thus, several studies have investigated the impact of prior exposure to mathematics and accounting on performance in college accounting courses and the results are inconclusive. On one hand, some studies (for example, Baldwin and Howe 1982; Bergin 1983; and Schroeder 1986) find that performance is not significantly associated with prior exposure to high school accounting education. On the other hand, some later studies (for example, Eskew and Faley 1988; Bartlett et al. 1993; Gul and Fong 1993; Tho 1994; Rohde and Kavanagh 1996) find that prior accounting knowledge, obtained through high school education, is a significant determinant of performance in college-level accounting courses. There is also some ambiguity with regard to the influence of mathematical background on performance in accounting courses. For example, Eskew and Faley (1988) and Gul and Fong (1993) suggest that students with strong mathematical backgrounds outperform students with weaker mathematical backgrounds. On the other hand, Gist et al. (1996) do not report the same results. Furthermore, Guney (2009) suggests that grades in

secondary education mathematics are a very strong determinant of performance in accounting but only for non-accounting majors.

Prior studies about the influence of motivation and effort on student performance also report conflicting results. For example, Pascarella and Terenzini (1991), report that motivation and effort, among other factors, significantly influence students' performance in college. Wooten (1998) finds that motivation significantly affects effort which in turn significantly affects performance in an introductory accounting course. Maksy and Zheng (2008), and Gupta and Maksy (2014) use 'the grade the student intends to earn in the course' as a proxy for motivation and find it to be significantly associated with the student's performance in auditing, and investment courses. Paulsen and Gentry (1995) report that students' academic performance in a large introductory Financial Management course was significantly related to several motivational variables such as intrinsic and extrinsic goal orientations and task value, and learning strategy variables, including time, study, and effort. Johnson et al. (2002) utilize computerized quizzes and analyze the effect of objectively measured effort on student performance in Financial Management course. They show that, after controlling for aptitude, ability, and gender, effort as measured by attempts and log time, remains significant in explaining the differences in performance. Rich (2006) uses students' homework preparedness and unpreparedness in class as a proxy for effort and non-effort. He finds significant positive association for the former and negative association for the latter with exam percent. Biktimirov and Klassen (2008) find weak association between hits to course management system and grade in finance course. However, using self-reported data, Didia and Hasnat (1998) present very week counter-intuitive evidence for one of the two OLS models, but not for the ordered-probit models, that the more time spent studying per week the lower the grade in the Introductory Finance course. However, they did not control for GPA. Also, using self-reported data, Nofsinger and Petry (1999) find no significant association between effort and performance in a Principles of Finance course.

In recent years, there has been increased interest in studying the influence of intervening variables on student performance. Paulsen and Gentry (1995) find that academic performance in a large introductory financial management class is significantly related to control over learning, test anxiety, self-efficacy, elaboration, organization and metacognition. Wooten (1998) finds no significant association between work, family, and extra-curricular conflicts and students' performance in an introduction to accounting course. Chan et al. (1997) find no significant association between performance in a financial management course and attendance, credit hours enrolled, and number of weekly work hours. In a similar vein, Van Ness et al. (2000) find no association between students' full time or part time status and grades in a Principles of Finance class. However, they find that students who are enrolled in internet class are more likely not to complete the course. This appears to be contrary to Paulsen and Gentry finding because the internet course is designed to give students more control over their learning in terms of very flexible deadline for assignments and one full year to complete the course. Didia and Hasnat (1998) find strong positive association between number of credit hours enrolled in the semester and course grades. This result may seem to be counter intuitive; however, some research, (e.g., Gupta and Maksy, 2014), shows that students with higher GPAs take more courses and more credits per semester. Rich (2006) reports significant negative association between class absences and being late to the class, and exam percent. In the accounting area, Wooten (1998) does not find significant association between course performance and work, family, and extracurricular conflicts. Paisey and Paisey (2004) and Guney (2009) show there is a clear positive association between attendance and academic performance in accounting courses. Paisey and Paisey also report that the most frequently cited reason for not attending classes was students' participation in part-time employment. Alanzi (2015) finds significant association between class attendance (and college experience) and student performance in a Cost Accounting course at a university in Kuwait. Lynn and Robinson-Backmon (2005) find a significant adverse association between employment status and learning outcomes in upper-division accounting courses. These authors also indicate that a student's self-assessment of course learning objectives is significantly and directly related to grade performance. In contrast, Maksy and Zheng (2008), Maksy (2012 and 2014), Gupta and Maksy (2014), and Maksy and Wagaman (2012, 2013, and 2015) find no significant negative association between the number of hours of work per week and student performance in several accounting, auditing,

and investment courses. Tessema et al. (2014) report that if students work 10 hours or less per week they are more satisfied and have higher GPAs than students who work more than 10 hours per week. Schleifer and Dull (2009) address metacognition in students and find a strong link between metacognitive attributes and academic performance. Metacognition is frequently described as 'thinking about thinking' and includes knowledge about when and how to use particular strategies for learning or for problem solving.

Age and gender are two demographic variables that receive less attention than those factors discussed above, but the results are still inconclusive. Chan et al. (1997), Didia and Hasnat (1998), and Van Ness et al. (2000) find no significant association between grade in an Introductory Finance course and gender or age of students. Henebry and Diamond (1998) and Johnson et al. (2002) also do not find any significant association between a finance principles course score and gender of students. Alanzi (2015) finds that gender, age, nationality, scores and majors in high school, grades in prerequisite courses and overall GPA in college, have no significant association with student performance in Cost Accounting. However, Henebry and Diamond (1998) show that both male and female students earn significantly higher grades in courses taught by female instructors. This difference was not attributable to adjunct, tenure track, or tenured status of instructors. Sen et al. (1997), on the other hand, show that female student performed worse than male students in principles of finance courses at two different mid-western universities. In the field of accounting, Bartlett et al. (1993) and Kohl and Kohl (1999) suggest that younger students have better performance, particularly at the senior university level. However, Jenkins (1998) and Lane and Porch (2002) conclude that age is not a significant determinant of performance in auditing and management accounting courses. Also, Schrouder and Rhodd (2013) report that older and more experienced students perform better than younger and less experienced students in a Public Administration course. The studies related to gender also produce conflicting results. Some studies indicate that male students perform better than female ones, but the results are either insignificant (for example, Lipe 1989) or only hold true for introductory courses (Doran et al. 1991). To the contrary, Mutchler et al. (1987) find that female students score significantly higher than male students. Also, Almunals et al. (2014) report that females perform better than males in the accounting major. They also find other factors significantly associated with the performance of students majoring in accounting including high school major (science majors perform better that humanities majors), marital status (married students perform better than single students), frequency of doing homework, class participation, peer interaction, and number of days studying before the exam. Furthermore, Gracia and Jenkins (2003) find that there is a significant difference in the performance in favor of female students over male students in Wales. In contrast, other studies find no significant differences in performance between male and female accounting students. For example, Tyson (1989) and Buckless et al. (1991) demonstrate that gender effect disappears after controlling for general academic ability. Similarly, Gammie et al. (2003) find very little indication of performance differential between males and females throughout the degree program.

It is also possible that other intervening variables, besides the demographic variables, may affect student performance in accounting courses in college. Bartlett et al. (1993) conclude that very few of the educational, demographic or financial characteristics variables appear to have a significant influence on student performance in university accounting examinations. Gracia and Jenkins (2003) observe that students who actively demonstrate commitment and self-responsibility towards their studies tend to do well in formal assessments. Accordingly, they agree with Bartlett et al. (1993) that intervening variables, rather than demographic variables, may be important determinants of student performance in university accounting examinations. They are also in agreement with Lane and Porch (2002) who suggest that other important factors like student motivation may explain student performance. Also, Seow et al. (2014) report that prior academic achievement, admission interview, critical thinking, and mathematical aptitude are significantly associated with successful academic performance in an undergraduate accounting degree at a Singapore University.

Conflicting results are also observed about the association between student performance in introductory accounting and their performance in non-introductory accounting courses. For example, Canlar (1986) finds evidence that college-level exposure to accounting is positively related to student

performance in the first MBA-level financial accounting course. Additionally, Tickell and Smyrnios (2005) find that the best predictor of academic performance in any one year is the performance in the same discipline in the previous year. Doran et al. (1991) report very surprising and counterintuitive result that performance in the introductory accounting course has a negative impact on performance in subsequent accounting courses. Maksy and Zheng (2008) and Maksy and Wagaman (2012, 2013, and 2015) find that OGPA and the grade in intermediate accounting II are strong predictors of student performance in auditing, and senior seminar in accounting courses. Gupta and Maksy (2014) report that overall GPA and grades in Financial and Managerial Accounting courses are strong predictors of student performance in an Investment course.

While prior research has been largely inconclusive or replete with conflicting results, it is not the purpose of this study to resolve all these conflicts. The author's objective, in this study, is to provide more insight on those areas in which there was some general agreement. Since motivation and effort has generally been positively associated with student performance, the authors try, in this study, to test whether some new selected motivation factors affect student performance in the Advanced Accounting course. The study also looks at several factors which are commonly viewed as possibly distracting students from performing well and tests whether they indeed are negatively affecting student performance. Moreover, the study investigates the impact of four self-perceived abilities factors and student performance and whether students make accurate assessment of those abilities. Furthermore, the study investigates the impact of two specific measures of prior abilities on student performance, and also uses them as control variables while testing for the association between motivation, distraction, and self-perceived abilities factors and student performance in the Advanced Accounting course.

STUDY OBJECTIVES AND HYPOTHESES

The *first objective* of this research is to study the association between three selected motivation factors (the grade the student intends to earn in the course, the student's intention to take the CPA examination, and the student's intention to attend graduate school), and the student's performance in the Advanced Accounting course at a residential public university in the U.S. The authors hypothesize that there are positive and significant association between those motivation factors and student performance. That is, students who intend to earn higher grades, take the CPA exam, or attend graduate school, are motivated to perform well and do perform well in the course to achieve their intentions.

The *second objective* is to study the association between three distraction factors (the student's number of working hours per week during the semester, the student's job type, i.e., whether or not it is related to accounting, or business in general, and the student's number of courses taken in the semester) and the student's performance in the Advanced Accounting course. Intuitively, the higher the number of work hours per week, the less time the student will have to study for the Advanced Accounting course resulting in lower course grade. Also, if the student's work is not accounting or business related, it will not help the student do well in the Advanced Accounting course. Furthermore, it is likely that the performance of a student taking higher number of courses will be affected negatively because the student may not be able to devote sufficient number of hours of study to the course.

In light of the prior discussion, the authors hypothesize that if the student's number of work hours per week is higher, and/or the student's job is not related to accounting, or business in general, and/or the number of courses taken in the semester is higher, there will be a significant *negative* association between these distraction factors and the student's performance in the Advanced Accounting course. Of course, distraction factors may offset each other thereby cancelling out any single factor's effect. For example, a student who works higher number of hours per week may take fewer courses, and vice versa, so that there is no negative effect on performance. For this reason, the authors test the effect of each distraction factor on student performance while controlling for the other two factors. The authors also investigate the associations among the distraction factors themselves.

The *third objective* is to study the associations between students' performance in the Advanced Accounting course and their current self-perceived abilities in writing, math, reading, and listening. A

positive association between self-reported abilities and performance may indicate that students make reasonably accurate assessment of their abilities. A lack of positive and significant association between certain abilities and performance could be due to the possibility that those abilities are not relevant to the performance in the course or to students' inaccurate assessment of their abilities. Before the students filled out the questionnaires, the authors instructed them to be as honest as possible in their answers so students who plan to take this course in the future would benefit from the results of this research. The authors assume that the students followed those instructions and, thus, the authors hypothesize positive and significant associations between students' self-perceived abilities and their performance in the Advanced Accounting course.

The *fourth objective* is to study the association between students' performance in the Advanced Accounting course and their grade in the pre-requisite Intermediate Accounting II course, and their overall GPA. Based on the results of many prior studies, the authors hypothesize that there are positive and significant associations between these prior actual abilities and student performance. Thus, the hypotheses are that students who earned higher grades in Intermediate Accounting II, or have high GPAs, will earn higher grades in the Advanced Accounting course, and vice versa.

STUDY DEPENDENT VARIABLES

In addition to the 12 independent variables described under the study objectives above, the study uses two dependent variables. Initially, the authors used only the letter grade in the course (A, B, C. etc.) as the student performance dependent variable. However, the authors quickly realized that the letter grade treats a student earning the lowest end of the grade range as having the same exact performance as that of a student earning the highest end of the grade range. For example, a student with a total percentage points of 80 and another with a total percentage points of 89 would be considered having equal performance since both students receive a B for the course, even though the first student is one percentage point away from a C grade and the other student is one percentage point away from an A grade. As a result, the authors also decided to use overall points percentage earned by a student in the course as a dependent variable.

STUDY HYPOTHESES

The study tests one hypothesis for each independent variable. The formal statements of all 12 hypotheses are presented (classified under four categories of factors) in APPENDIX A. To prevent redundancy, each hypothesis is presented in the alternate form only.

RESEARCH METHODOLOGY

Survey Instrument

The authors modified a list of survey questions, from Ingram et al. (2002), to include, besides the study variables, some demographic and other information. For ethical, confidentiality, and potential risk issues pertaining to participants, the authors had to submit a comprehensive 10-page application (together with a copy of the survey instrument) to the University's Institutional Review Board (IRB) for approval. Prior to that, the authors had to take the National Institute of Health (NIH)'s training course titled 'Protecting Human Research Participants,' and pass the test given at the end of the course. The certificate of completion of the course was required to be submitted with the application to the University's IRB. The University's IRB made only one modification to the survey instrument by adding the statement that 'participation in the survey is completely voluntary.'

Study Sample

In spring and fall of 2018, the authors were able to collect the data on the survey instrument from 49 of 53 students enrolled in the two sections of the undergraduate Advanced Accounting course offered at a

public residential university. The university enrolls about 9,200 students, and the College of Business enrolls about 1,200 students. It is a state-supported university that has public access as a major part of its mission statement. It is located near one of the largest cities in the United States. The instructor teaching both sections of the course provided (using only students' ID numbers for confidentiality purposes) the data representing the two dependent variables (the 'letter grade,' and 'overall points percentage').

One author and one graduate student entered the data from the student questionnaire on two separate Excel spreadsheets. The other author matched the two spread sheets and resolved any discrepancy by referring to the original questionnaire. This virtually eliminated any data entry errors.

Data Analysis

To test the formulated hypotheses in APPENDIX A, the study uses one-way analysis of variance (ANOVA), Pearson and Spearman's correlation coefficients, partial correlations, and ordinary least square linear regressions.

STUDY RESULTS

Table 1 presents the minimum and maximum value, the mean, and the standard deviation for each of the 14 variables of the study. That Table shows an average grade in the Advanced Accounting course of 1.96 versus 2.47 in the Intermediate Accounting II course which is a prerequisite for the Advanced Accounting course. Also, the average Advanced Accounting course grade is much lower than the overall GPA of 3.13, and average Intended Grade of 3.29. In comparison, Didia and Hasnat (1998) study of performance determinants in a finance course report a Financial Management course grade of only 1.85, GPA in a pre-requisite course of 2.71, and overall GPA of 2.61. It is interesting to note that the negative difference of 0.51 between the average course letter grade and the average Intermediate Accounting II pre-requisite course grade is much smaller than the comparable negative difference of 0.86 reported by Didia and Hasnat (1998). However, the difference of 1.17 between the average course letter grade and overall GPA is much higher than the difference of 0.76 reported by Didia and Hasnat. No comparable data is available in the literature for the difference between the average grade in the course and the average Intended Grade.

Following is an analysis of the study results by the type of factors investigated (motivation, distraction, self-perceived abilities, and prior ability) taking all observations into account.

Motivation Factors Associated with Student Performance

Of the three motivation variables discussed in H_1 to H_3, as Table 3 indicates, Intended Grade (IG) is significantly associated with student performance (only when it is defined as "Points") and based only on Pearson and Spearman's Correlations, and only at the .10 level of significance. Table 4 shows that this significant association disappears after controlling for prior ability, as measured by the grade earned in the pre-requisite Intermediate Accounting II (ACC 322) and OGPA. This is true also even if the authors control for OGPA alone (this additional partial correlation test is not reported in this paper but is available from the authors upon request.) As Tables 2 and 3 indicate, intention to take the CPA exam is not significantly associated with student performance under the ANOVA and Pearson and Spearman correlations tests. Interestingly, however, when the authors controlled for the prior ability factors, in Table 4, intention to take the CPA exam showed significant *negative* association with student performance (at the .10 significance level when performance is defined as "Grade" but at the .01 level when performance is defined as "Points"). A similar result is shown by the regression analysis, in Table 5, where intention to take the CPA exam has a significant *negative* association (at the .01 level) with student performance, but only when it is defined as "Points". This is a contra-intuitive result because it is telling us that of the students who have the same grade in Intermediate Accounting II and about the same GPA, those who stated that they intend to take the CPA exam got lower grades and those who stated that they do not intend to take the CPA exam got higher grades in Advanced Accounting. In light of this result, the authors ran a cross-tabulation between intention to take the CPA and Grade to understand why this is

happening. If we combine those who checked "No" with those who checked "Maybe" on the question "Are you planning to take the CPA exam?" and compare the total to those who checked "Yes" on this question, we find the following: (1) of the five students who got an A in the course, only two (or 40%) checked "Yes" on that question, (2) of the 12 students who got a B in the course, only three (or 25%) checked "Yes" on that question, (3) of the 15 students who got a C in the course, only seven (or 47%) checked "Yes" on that question, (4) of the 10 students who got a D in the course, only one (or 10%) checked "Yes" on that question, and finally and probably most importantly, (5) of the seven students who got an F in the course, four (or 57%) checked "Yes" on that question. From the above analysis we understand that the significant negative correlation is caused by numbers (1), (2) and especially (5) above. If we remove those who got an F for the course from the partial correlations, the significant negative correlation will most likely disappear. Intention to attend graduate school is not significantly associated with student performance under any test.

Distraction Factors Associated with Student Performance

Of the three distraction factors discussed in H_4 to H_6, as Table 3 indicates, Job Hours is significantly and negatively associated with student performance (however defined) but based only on Pearson and Spearman Correlations, and only at the .05 level of significance. Table 4 shows that those significant negative association disappear after controlling for prior ability, as measured by Intermediate Accounting II grade and OGPA. This is true also even if the authors control for OGPA alone (this additional partial correlation test is not reported in this paper but is available from the authors upon request.) However, as Table 6, Part A, indicates, when the authors controlled for the other two distraction factors (Job Type and Course Load), Job Hours showed significant negative association with student performance (at the .10 level when performance is defined as "Grade" and at the .05 level when performance is defined as "Points.") But, as Table 6, Part B, indicates, when the authors controlled for the other two distraction factors as well as the two prior ability factors, the significant negative association between Job Hours and student performance (however defined) disappeared again. These results are telling us that GPA is the determining factor of the grade in Advanced Accounting, i.e., regardless of how many hours per week the students are working those who have high GPAs earn high grades and vice versa. As Table 3 indicates, Job Type (when it is not related to accounting, finance, or business in general) is significantly and negatively associated with student performance but based only on Pearson and Spearman correlations, and only at the .10 level of significance. However, Pearson correlations do not show any significant negative association between Job Type and student performance defined as "Points." At any rate, as Table 4 indicates, all significant negative associations between Job Type and student performance disappear after controlling for prior ability factors (Intermediate II grade and OGPA.) This is true also even if the authors control for OGPA alone (this additional partial correlation test is not reported in this paper but is available from the authors upon request.) As Tables 2 and 3 indicate, Course Load is not significantly and negatively associated with student performance under the ANOVA and Pearson and Spearman correlations tests. However, when the authors controlled for the prior ability factors, in Table 4, Course Load showed significant *negative* association with student performance (at the .10 significance level when performance is defined as "Grade" and at the .05 level when performance is defined as "Points"). A similar result is shown by the regression analysis, in Table 5, where Course Load has a significant *negative* association (at the .05 level) with student performance (however defined.) This supports H_6 because it is telling us that of the students who have the same grade in Intermediate Accounting II and about the same GPA, those who carry higher (than average) course load have lower performance in the Advanced Accounting course than those who carry average or less than average course load. As Table 6, Part A, indicates, when the authors controlled for the other two distraction factors (Job Hours and Job Type), the significant negative association between Course Load and student performance (however defined) disappeared. This tells us that those student who work about the same number of hours per week and have the same type of job, their grade in Advanced Accounting will not be affected by the course load that they are carrying. But, as Table 6, Part B, indicates, when the authors controlled for the other two distraction factors as well as the two prior ability factors, the significant negative association between

Course Load and student performance appeared again (at the .05 level when performance is defined as "Grade" and at the .01 level when performance is defined as "Points.") This supports H_6 again because it is telling us that of the students who have the same grade in Intermediate Accounting II and about the same GPA, those who carry higher (than average) course load have lower performance in the Advanced Accounting course than those who carry average or less than average course load.

Self-Perceived Abilities Factors Associated with Student Performance

Of the four self-perceived ability factors discussed in H_7 to H_{10}, as Tables 2 and 3 indicate, only Listening is significantly associated with student performance (at the .05 when performance is defined as "Grade" and at the .10 level when it is defined as "Points") based on ANOVA and Pearson correlations. The Spearman correlations show similar significant association between Listening and student performance except that the level of significance is at the .05 level whether the performance is defined as "Grade" or "Points." However, as Table 4 indicates, all significant associations between Listening and student performance disappear after controlling for prior ability, as measured by Intermediate Accounting II grade and OGPA. This is true also even if the authors control for OGPA alone (this additional partial correlation test is not reported in this paper but is available from the authors upon request.) The regression analysis in Table 5 did not show any significant association between Listening and student performance. All statistical tests (ANOVA, Pearson and Spearman correlations, and regression) did not show any significant associations between Writing, Math, or Reading and student performance.

Prior Actual Ability (Control) Factors Associated with Student Performance

All statistical tests, in Tables 2, 3 and 5, show significant association (at the .01 level) between both Intermediate Accounting II Grade and Overall GPA and student performance, however defined, with only two exceptions: (1) The ANOVA test (in Table 2) shows no significant association at all between OGPA and "Grade" and it shows the significance level between OGPA and "Points" at only the .10 level; and (2) the regression test (in Table 5) shows no significant association at all between Intermediate II Grade and student performance defined as "Points" and it shows the significance level between Intermediate II Grade and student performance defined as "Grade" only at the .10 level of significance.

CONCLUSIONS AND RECOMMENDATIONS

One general conclusion of this study (which is not in agreement with most prior studies) is that none of the three motivation factors used (the grade the student intends to earn in the course, intention to take the CPA exam, or intention to attend graduate school) has any significant association with student performance, however defined. As Table 1 shows there was quite a disparity between average Intended Grade of 3.29 and average letter grade of only 1.96.

In light of the above general conclusion, the authors recommend that accounting faculty should know that encouraging their students to intend to earn high grades, or to plan to take the CPA exam, or pursue graduate studies, while seem to be good ideas, would probably not going to do the trick and motivate students to put the time and effort to study hard and to do well in the Advanced Accounting course. Accounting faculty may want to think of other motivating factors.

Another general conclusion from the statistical tests of this study is that of the distraction variables used (number of hours of work per week, working in non-accounting, or non-business related jobs, and number of courses taken in the semester) only course load seems to have a negative effect on student performance.

The study shows that students having about the same GPA perform the same in Advanced Accounting regardless of the number of hours of work per week or the type of job they work. However, of the students who have the same GPA those who take more courses per semester perform worse than those who take less courses.

In light of the above general conclusion, the authors recommend that accounting faculty need not encourage their students to work as few hours per week as possible or to work only in accounting or

business related jobs to earn high grades in the Advanced Accounting course. However, accounting faculty need to encourage students to not take higher than the average course load of four or five courses per semester, otherwise their grade in Advanced Accounting (and perhaps in the other courses as well) may suffer. Accounting faculty, when advising students with poor performance, need to think of causes to pinpoint to those students (e.g., poor study habits, poor time management, etc.) other than too many working hours per week or working in non-accounting or non-business related jobs.

A third general conclusion of the study is that, students' estimates of their own current perceived abilities (e.g., listening, and especially writing, math, and reading) have no significant association with student performance in the Advanced Accounting course. This is an indication of the possibility that students are providing inaccurate evaluation of their own abilities in these areas. The students' inability to accurately evaluate their abilities can have negative consequences on their performance because they may not seek help in the areas they have some weakness in.

In light of this general conclusion, the authors recommend that the college of business faculty in general, and accounting faculty in particular, should encourage students to make more accurate evaluations of their writing, math, reading, and even their listening abilities and to seek help for the areas they have some weakness in. Another recommendation for faculty is to encourage their students to listen carefully to the lecture (and ask questions if they don't understand something the instructor has said) and don't be distracted by using their cell phones and/or laptops if allowed in class. The instructor may support that by informing the students that research has shown that there is some association between listening and performance in the Advanced Accounting course.

As expected and as shown in prior studies with respect to other courses, a fourth general conclusion of the study is that students with high prior actual ability end up earning high grades in the Advanced Accounting course. Specifically, the study provides evidence that there are strong significant associations between the grade in the pre-requisite Intermediate Accounting II course as well as Overall GPA and student performance in the Advanced Accounting course.

In light of this general conclusion, the authors recommend that accounting faculty encourage their students to study hard to earn good grades in all courses (including the Intermediate Accounting II) to improve their GPA by emphasizing that research shows that students with high grades in Intermediate II and high overall GPA earn high grades in the Advanced Accounting course. Again, the authors realize that some faculty may already be doing this; thus, these recommendations are for those who may not be.

STUDY LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

This study is subject to some limitations. One limitation is that the study school is a public (or state-supported) university and, thus, the conclusions may not be applicable to private schools. One suggestion for further research is to replicate the study at a private school. Another limitation is that the study school is a residential school and it is possible that the results may not be generalizable to commuter schools. Consequently, another suggestion for further research is to replicate the study at a commuter school. A third limitation is that the study sample is somewhat small relative to the number of independent variables analyzed and, hence, the results may not be as robust as they would have been if the sample was larger. Thus, another suggestion for further research is to replicate the study using a somewhat larger sample.

REFERENCES

Alanzi, K. A. (2015). Determinants of students' performance in cost accounting-further evidence from Kuwait. *World Journal of Management*, 6(1), 136-152.

Almunals, T., Alfraih, M. & Alharbi, F. (2014). Determinants of accounting Students' performance. *Business Education and Accreditation*, 6(2), 1-9.

Baldwin, B.A. & Howe, K. R, (1982). Secondary-level study of accounting and subsequent performance in the first college course. *The Accounting Review*, 57(3), 619-626.

Bartlett, S. M., Peel, J. & Pendlebury, M, (1993). From fresher to finalist: A three-year study of student performance on an accounting degree program. *Accounting Education: an international journal,* 2(2), 111-122.

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,* 1, 19-28.

Biktimirov, E.N. & Klassen, K.J. (2008). Association between use of online support materials and student performance in an introductory finance course. *Journal of Education for Business,* 83(3), 153-158.

Buckless, F.A., Lipe, M.G. & Ravenscroft, S.P. (1991). Do gender effects on accounting course performance persist after controlling for general academic aptitude? *Issues in Accounting Education,* 6(2), 248-261.

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,* 1(1), 13-23.

Chan, K. C., Shum, C. & Wright, D. J. (1997). Class attendance and student performance in principles of finance. *Financial Practice and Education,* 7(2), 58-65.

Didia, D. & Hasnat, B. (1998). The determinants of performance in the University introductory finance course. *Financial Practice and Education,* 1(1), 102-107.

Doran, B., Bouillon, M. L. & Smith, C.G. (1991). Determinants of student performance in accounting principles I and II. *Issues in Accounting Education*, 6(1), 74-84.

Duff, A. (2004). Understanding academic performance and progression of first-year accounting and business economics undergraduates: The role of approaches to learning and prior academic achievement. *Accounting Education,* 13(4), 409-430.

Eckel, N. & Johnson, W.A. (1983). A model for screening and classifying potential. *Accounting Education,* 1(2), 1-15.

Eskew, R.K. & Faley, R.H. (1988). Some determinants of student performance in the first college-level financial accounting course. *The Accounting Review,* 63 (1), 137-147.

Gammie, E., Paver, B., Gammie, B & Duncan, F. (2003). Gender differences in accounting education: An undergraduate exploration. *Accounting Education,* 12(2), 177-197.

Gist, W. E., Goedde, H. & Ward, B.H. (1996). The influence of mathematical skills and other factors on minority student performance in principles of accounting. *Issues in Accounting Education,* 11(1), 49-60.

Gracia, L. & Jenkins, E. (2003). A quantitative exploration on an undergraduate accounting programme of Study. *Accounting Education*, 12(1), 15-32.

Gul, F.A. & Fong. S.C. (1993). Predicting success for introductory accounting students: Some further Hong Kong evidence. *Accounting Education: an international journal,* 2(1), 33-42.

Guney, Y. (2009). Exogenous and endogenous factors influencing students' performance in undergraduate accounting modules. *Accounting Education*, 18(1), 51-73.

Gupta, K. & Maksy, M. (2014), Factors associated with student performance in an investments course: An empirical study, *Journal of Finance and Accountancy*, 16, 86-112.

Henebry, K. & Diamond, J. (1998). The impact of student and professor gender on grade performance in the managerial finance course. *Financial Practice and Education*, 8(1), 94-101.

Hicks, D.W. & Richardson, F.M. (1984). Predicting early success in intermediate accounting: The influence of entry examination and GPA. *Issues in Accounting Education,* (Spring), 61-67.

Ingram, R.W. & Peterson, R.J. (1987). An evaluation of AICPA tests for predicting the performance of accounting majors. *The Accounting Review,* 62(1), 215-223.
Ingram, R.W, Albright, T.L. & Baldwin, A.B. (2002). *Financial accounting—a bridge to decision making,* Cincinnati, OH: Thomson South-western.
Jackling, B. & Anderson, A. (1998). Study mode, general ability and performance in accounting: A research note. *Accounting Education: an international journal,* 7(1), 65-73.
Jenkins, E. K. (1998). The significant role of critical thinking in predicting auditing students' performance. *Journal of Education for Business,* 73(5), 274-279.
Johnson, D. L., Joyce, P. & Sen, S. (2002). An analysis of student effort and performance in the finance principles course. *Journal of Applied Finance,* 12(2), 67-72.
Kohl, M.Y. & Kohl, H.C. (1999). The determinants of performance in an accountancy degree Course. *Accounting Education: an international journal,* 8(1), 13-29.
Lane, A. & Porch, M. (2002). The impact of background factors on the performance of no specialist undergraduate students on accounting modules – A longitudinal study: A research note. *Accounting Education,* 11(1), 109-118.
Lipe, M. G. (1989). Further evidence on the performance of female versus male accounting students. *Issues in Accounting Education,* 1, Spring, 144-152.
Lynn, S. A., & Robinson-Backmon, I. (2005). Course-level outcomes assessment: an investigation of an upper-division undergraduate accounting course and the factors that influence learning outcomes. *Journal of Accounting and Finance Research*, 13(4), 133-140.
Maksy, M. & Zheng, L. (2008). Factors associated with student performance in advanced accounting and auditing: An Empirical Study in a Public University. *Accounting Research Journal*, 21(1), 16-32.
Maksy, M. (2012). Major factors associated with the performance of students taking undergraduate accounting courses at the upper level. *International Journal of Business, Accounting, and Finance,* 6(2), 1-19.
Maksy, M. & Wagaman, D. (2012). Factors associated with student performance in auditing: a comparative study in commuter and residential schools. *Journal of Accounting and Finance,* 12(2), 120-141.
Maksy, M. & Wagaman, D. (2013). Factors associated with student performance in the undergraduate senior seminar in accounting: a comparative study in commuter and residential schools. *Journal of Applied Business and Economics*, 14(4), 101-119.
Maksy, M. (2014). Factors associated with student performance in intermediate accounting: a comparative study at commuter and residential schools. *Journal of Applied Business and Economics,* 16(5), 86-104.
Maksy, M. & Wagaman, D. (2015). Factors associated with student performance in advanced accounting: a comparative study at commuter and residential schools. *Journal of Accounting and Finance,* 15(1), 72-94.
Marks, B. R. (1998). An examination of the effectiveness of a computerized learning aid in the introductory graduate finance course. *Financial Practice and Education*, 8(1), 127-132.
Mutchler, J.E., Turner, T.H. & Williams, D.D. (1987). The performance of female versus male accounting students. *Issues in Accounting Education*, 12(1), 103-111.
Nosfinger, J. & Petri, G. (1999). Student study behavior and performance in principles of finance. *Journal of Financial Education,* 25, Spring, pp. 33-41.
Paisey, C. & Paisey, N. (2004). Student attendance in an accounting module – reasons for non-attendance and the effect on academic performance in a Scottish university. *Accounting Education,* 13(1), 39-53.
Pascarella, E. & Terenzini, P. (1991). *How college affects students: findings and insights from twenty years of research,* San Francisco, CA: Jossey-Bass Publisher.
Paulsen, M. B. & Gentry, J. A. (1995). Motivation, learning strategies, and academic performance a study of the college finance classroom. *Financial Practice and Education,* 5(1), 78-89.
Rich, S. P. (2006). Student performance: does effort matter? *Journal of Applied Finance,* 16(2), 120-133.

Rohde, F.H. & Kavanagh, M. (1996). Performance in first year university accounting: quantifying the advantage of secondary school accounting. *Accounting and Finance,* 36(2), 275-285.

Schleifer, L. & Dull, R. (2009). Metacognition and performance in the accounting classroom. *Issues in Accounting Education*. 24(3), 339-367.

Schroeder, N.W. (1986). Previous accounting education and college-level accounting examination performance. *Issues in Accounting Education,* 1(1), 37-47.

Schrouder, S.M. & Rhodd, R. G. (2013). Non-intellectual variables as factors in determining academic success - are older students likely to be more successful? *International Journal of Education and Research,* 1(6), 1-12.

Sen, S., Joyce, P., Farrell, K. & Toutant, J. (1997). Performance in principles of finance courses by students with different specializations. *Financial Practice and Education*, 7(2), 66-73.

Seow, P.S., Pan, G. & Tay, J. (2014). Revisiting the determinants of students' performance in an undergraduate accountancy degree program in Singapore. *Global Perspectives on Accounting Education,* 11(1), 1-23.

Tessema, M.T., Ready, K. J. & Stani, M. A. (2014). Does part-time job affects college students' satisfaction and academic performance (GPA)? the case of a mid-sized public university, *International Journal of Business Administration*, 5(2), 50-59.

Tickell, G. & Smyrnios, K (2005). Predictors of tertiary accounting students' academic performance: a comparison of year 12-to-university students with TAFE-to-university students. *Journal of Higher Education Policy and Management,* 27(2), 239 – 259.

Tho, L. M. (1994). Some Determinants of student performance in the university of Malaya introductory accounting course. *Accounting Education: an international journal,* 3(4), 331-340.

Tyson, T. (1989). Grade performance in introductory accounting courses: why female students outperform males. *Issues in Accounting Education,* 4(1), 153-160.

Van Ness, B. F., Van Ness, R. A. & Adkins, R. L. (2000). Student performance in principles of finance: difference between traditional and internet settings. *Financial Practice and Education,* 10(2), 160-166.

Wooten, T. (1998). Factors influencing student learning in introductory accounting classes: a comparison of traditional and nontraditional students. *Issues in Accounting Education*, 13(2), 357-373.

APPENDIX A

STUDY FORMAL STATEMENTS OF HYPOTHESES

Motivation Factors

H_1: *There is a significant positive association between the grade the student intends to earn in the Advanced Accounting course and student performance in that course.*

H_2: *There is a significant positive association between the student's intention to take the CPA exam and student performance in the Advanced Accounting course.*

H_3: *There is a significant positive association between the student's intention to attend graduate school and student performance in the Advanced Accounting course.*

Distraction Factors

H_4: *There is a significant negative association between the student's average number of hours of work per week and student performance in the Advanced Accounting course.*

H_5: *There is a significant negative association between the student's job type (if it is not related accounting, or business in general) and student performance in the Advanced Accounting course.*

H_6: *There is a significant negative association between the number of semester courses a student is taking and that student's performance in the Advanced Accounting course.*

Self-Perceived Ability Factors

H_7: *There is a significant positive association between the student's self-reported writing ability and student performance in the Advanced Accounting course.*

H_8: *There is a significant positive association between the student's self-reported math ability and student performance in the Advanced Accounting course.*

H_9: *There is a significant positive association between the student's self-reported reading ability and student performance in the Advanced Accounting course.*

H_{10}: *There is a significant positive association between the student's self-reported listening ability and student performance in the Advanced Accounting course.*

Prior Ability Factors

H_{11}: *There is a significant positive association between the grade the student earned in the Intermediate Accounting II course and student performance in the Advanced Accounting course.*

H_{12}: *There is a significant positive association between the student's overall GPA and student performance in the Advanced Accounting course.*

APPENDIX B – TABLES

TABLE 1
DESCRIPTIVE STATISTICS OF THE STUDY VARIABLES

	N	Minimum	Maximum	Mean	Std. Deviation
Letter Grade[1]	49	0	4	1.96	1.207
Overall Points (in %)	49	14.10	95.00	70.37	16.250
Intended Grade[1]	49	2	4	3.29	0.645
CPA[2]	49	1	3	2.08	0.786
Grad Sch[2]	49	1	3	2.06	0.689
Job Hours	49	0	60	22.38	15.792
Job Type[3]	49	1	4	2.49	1.082
Course Load	49	1	6	4.49	1.309
Writing Ability[4]	49	1	4	2.84	0.717
Math Ability[4]	49	2	4	3.22	0.743
Reading Ability[4]	49	2	4	3.02	0.750
Listening Ability[4]	49	2	4	3.04	0.538
ACC 322 Grade[1]	49	1	4	2.47	0.960
OGPA (out of 4.0)	49	2	4	3.13	0.506

[1]A = 4.00; B = 3.00; C = 2.00; D = 1.00; F = 0.00.
[2]No = 1; Maybe = 2; Yes = 3
[3]Other = 1; Business Related (but not accounting or finance) = 2; Finance related = 3; Accounting related = 4
[4]Very Good =4; Good =3; Average =2; Poor =1

TABLE 2
ONE-WAY ANALYSIS OF VARIANCE
(All numbers are for Between Groups Only)

		Dependent Variables			
		Letter Grade		**Overall Points %**	
Independent Variables	**DF**	**F Value**	**Sig.**	**F Value**	**Sig.**
Intended Grade	2/48	1.386	0.261	1.714	0.191
CPA	2/48	0.442	0.645	0.793	0.458
Grad School	2/48	0.432	0.652	0.422	0.658
Job Hours	2/48	1.149	0.355	1.309	0.253
Job Type	2/48	1.789	0.163	1.302	0.286
Course Load	2/48	0.395	0.849	0.198	0.962
Write	2/48	0.491	0.690	0.485	0.695
Math	2/48	0.138	0.871	0.496	0.612
Read	2/48	0.264	0.769	0.781	0.464
Listen	2/48	4.019	0.025**	2.503	0.093*
ACC 322	2/48	6.900	0.001***	4.728	0.006***
OGPA	2/48	1.793	0.130	2.294	0.055*

*Significant at 10% level of significance using two tails test
**Significant at 5% level of significance using two tails test
***Significant at 1% level of significance using two tails test

TABLE 3
PEARSON/SPEARMAN CORRELATION COEFFICIENTS[a]

	Letter Grade	Points	IG	CPA	Grad Sch	Job Hours	Job Type	Course Load	Write	Math	Read	Listen	ACC 322	OGPA
Letter Gr		.895***	.202	.026	.028	-.320**	-.240*	.052	.064	.034	.001	.291**	.539***	.680***
Points	.972***		.263*	-.081	-.117	-.313**	-.195	.009	.057	-.027	.005	.267*	.486***	.685***
IG	.224	.274*		.240*	.334**	-.258*	-.026	.299**	-.032	.211	.203	.146	.351**	.373***
CPA	.030	-.018	.246*		-.086	-.108	-.072	.223	.135	.182	.103	.336**	.279	.244
Grad Sch	.023	.046	.329**	-.090		-.009	.071	-.149	.147	.135	.521***	.161	-.044	.144
Job HRS	-.325**	-.357**	-.284**	-.135	-.010		-.558***	-.493***	-.057	-.175	.064	-.334**	-.242*	.363**
Job Type	-.250*	-.263*	-.032	-.087	.070	.580***		-.349**	-.163	-.165	-.064	-.357**	-.086	-.235
C Load	.122	.168	.286**	.232	-.173	-.507***	-.373***		-.046	.313**	- .095	.119	.211	.330**
Write	.053	.075	-.009	.142	.170	-.085	-.134	-.048		-.281*	.432***	.233	-.007	.189
Math	.055	.060	.237	.197	.147	-.145	-.182	.301**	-.246*		.104	.445***	.083	.062
Read	-.007	.009	.207	.095	.525***	.076	-.056	-.084	.450***	.137		.308**	.044	.129
Listen	.288**	.316**	.160	.331**	.164	-.330**	-.376***	.167	.253*	.461***	.310**		.244*	.273**
ACC 322	.515***	.513***	.359**	.268*	-.037	-.253*	-.109	.201	.006	.092	.048	.238*		.552***
OGPA	.679***	.715***	.338**	.239*	.104	-.361**	-.246	.286**	.242	.059	.134	.284**	. 566***	

a Pearson correlations are above the diagonal and Spearmen correlations are below the diagonal.
*Significant at 10% level of significance using two tails test
**Significant at 5% level of significance using two tails test
***Significant at 1% level of significance using two tails test

TABLE 4
PEARSON PARTIAL CORRELATION COEFFICIENTS
(CONTROLLING FOR ACC 322 AND OGPA)

	Letter Grade	Points	IG	CPA	Grad Sch	Job Hours	Job Type	Course Load	Write	Math	Read	Listen
Letter Gr	**1**											
Points	.798***	**1**										
IG	-.132	-.022	**1**									
CPA	-.259*	-.395***	.137	**1**								
Grad Sch	-.059	.053	.344**	-.102	**1**							
Job HRS	-.097	-.087	-.135	-.012	.039	**1**						
Job Type	-.131	-.058	.060	-.026	.118	.526***	**1**					
C Load	-.268*	-.327**	.198	.152	-.208	-.423***	-.299**	**1**				
Write	-.056	-.080	-.090	.121	.105	.006	-.118	-.114	**1**			
Math	-.028	-.108	.196	.165	.138	-.161	-.159	.309**	-.295**	**1**		
Read	-.115	-.111	.178	.082	.514***	.118	-.033	-.146	.419***	.099	**1**	
Listen	.124	.096	.028	.275*	.149	-.258*	-.322**	.028	.212	.443***	.291**	**1**

*Significant at 10% level of significance using two tails test
**Significant at 5% level of significance using two tails test
***Significant at 1% level of significance using two tails test

TABLE 5
REGRESSION ANALYSIS
(All numbers are for 49 Observations)

Independent Variables	Dependent Variables			
	Letter Grade		Overall Points %	
	t Coeff.	Sig.	t Coeff.	Sig.
Constant	-0.975	0.336	1.148	0.258
IG	0.090	0.929	0.916	0.366
CPA	-1.615	0.115	-2.701	0.010***
Grad Sch	-0.602	0.551	-0.214	0.832
Job Hours	-0.655	0.517	-0.714	0.480
Job Type	-0.649	0.520	-0.384	0.703
Course Load	-2.056	0.047**	-2.259	0.030**
Write	-0.290	0.773	-0.528	0.600
Math	0.082	0.935	-0.613	0.543
Read	-0.587	0.561	-0.879	0.385
Listen	0.962	0.342	1.539	0.133
ACC 322	1.800	0.080*	1.294	0.204
OGPA	4.456	0.000***	5.055	0.000***
Adj. R^2	0.494		0.558	
F	4.902	0.000***	6.059	0.000***

*Significant at 10% level of significance using two tails test
**Significant at 5% level of significance using two tails test
***Significant at 1% level of significance using two tails test

TABLE 6
PARTIAL CORRELATION COEFFICIENTS OF SELECTED DISTRACTION FACTORS WITH STUDENT PERFORMANCE[a]

Part A					*Part B*				
Dependent Variable	**Letter Grade**		**Overall Points %**		**Dependent Variable**	**Letter Grade**		**Overall Points %**	
Distraction Factor	***Coef.***	***Sig.***	***Coef.***	***Sig.***	**Distraction Factor**	***Coef.***	***Sig.***	***Coef.***	***Sig.***
JHours	-.265	0.072*	-.299	.041**	**JHours**	-.156	.306	-.210	.166
JType	-.092	0.539	-.045	.766	**JType**	-.138	.367	-.060	.695
CLoad	-.137	0.359	-.179	.229	**CLoad**	-.356	.016**	-.407	.006***

a ***Part A:*** *While controlling for the other two distraction factors.*
Part B: *While controlling for the other two distraction factors and prior actual ability factors (ACC 322 & OGPA).*
*Significant at 10% level of significance using two tails test
**Significant at 5% level of significance using two tails test
***Significant at 1% level of significance using two tails test