

# SOME DETERMINANTS OF STUDENT PERFORMANCE IN PRINCIPLES OF FINANCIAL ACCOUNTING (II) – FURTHER EVIDENCE FROM KUWAIT

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## ABSTRACT

*The purpose of this study was to perform an empirical investigation of the influence of select factors on the academic performance of students studying Principles of Financial Accounting (II). This study attempts to fill some of the gaps in the existing local and regional accounting education literature and to provide comparative evidence for the harmonization of international accounting education. A stepwise regression model using a sample of 205 students from the College of Business Studies, one of the tributaries of accounting education in Kuwait, was used to test the study's hypotheses. The results indicate that the influences of the selected factors are diverse in their effects on student performance. The prerequisite grade had the most significant influence on student performance, followed by student GPA, time-lag (the time elapsed between studying the two parts of Principles of Financial Accounting), and finally college experience. Student gender, age, and major showed no significant influence on student performance. The study concludes by considering the implications of these findings for the administration of the College of Business Studies and similar institutions, and suggests avenues for future research.*

**Keywords:** Accounting Education, Principles of Financial Accounting, Student Performance, Determinants of Performance.

## I. INTRODUCTION

*“Accounting is a subject that builds upon itself, and it is imperative that students have a solid foundation and understanding of the principles of accounting before moving on to more advanced accounting topics” (Sanders and Willis, 2009: 319).*

Learning the principles of financial accounting has garnered considerable attention from both educational and

professional bodies for a long time as it represents the cornerstone upon which to build academic and professional success later in life (AECC, 1992). Moreover, it is viewed as a gateway to the professional world of accountancy, and it plays an important role in attracting or expelling talent from the profession. Subsequently, the wrong choice in a student's major may affect the value-added of the profession and its future (Hill, 1998; Mladenovic, 2000; Jones and Fields, 2001). Furthermore, Principles of Financial



Accounting has been identified as a critical course for both accounting majors and other business majors (AECC, 1992).

Accounting education scholars have recognized this decisive role that learning the principles of financial accounting plays in accounting education and have examined several factors thought to influence student performance when learning the principles of financial accounting such as gender, age, race, major, nationality, marital status, personality type, grade history, college GPA and experience, high school GPA and experience, motivation and expectations, study approaches, lecture attendance (absenteeism), lecture environment, and residential status (Eskew and Faley, 1988; Doran et al., 1991; Gul and Fong, 1993; Tho, 1994; Wooten, 1998; Hill, 1998; Al-Rashed, 2001; Paisey and Paisey, 2004; Elias, 2005; Nelson et al., 2008; Bealing et al., 2009; Mohrweis, 2010). However, the outcomes of these studies have not provided strong and consistent evidence regarding student performance, which has encouraged further research in this area.

Due to the crucial role that learning the principles of financial accounting plays in accounting education, many accounting educational institutions around the globe devote two separate courses for learning this subject over two semesters. The College of Business Studies (the College hereafter), one of the five colleges of the Public Authority for Applied Education and Training in Kuwait, teaches the principals of financial accounting in two separate parts over two semesters. The two courses are titled Principles of Financial Accounting (I) and Principles of Financial Accounting (II). Studying the two parts of principles

of financial accounting is compulsory for all business majors in the College. Passing the first part is a prerequisite to enroll in the second part which is a prerequisite to enroll in more advanced accounting subjects.

The purpose of this study was to perform an empirical investigation of the influence of select factors on the academic performance of students studying Principles of Financial Accounting (II) at the College. In order to achieve this objective, the study attempted to answer the following research question:

*Which factors significantly influence student performance when learning Principles of Financial Accounting (II)?*

Although studying Principles of Financial Accounting (I) is no less important than studying Principles of Financial Accounting (II), we selected Principles of Financial Accounting (II) for our investigation because the impact of the first course upon the second course is clear. Additionally, two of the factors we studied – time-lag (time elapsed between completion of Principles of Financial Accounting (I) and enrollment in Principles of Financial Accounting (II)) and prerequisite grade – were only available for the second course. Furthermore, the impact of cognitive development is clearer in studying the second course than in the first course, since accounting “is a subject that builds upon itself” (Sanders and Willis, 2009) and its educational attainment is accumulated (Chiou, 2008) in a hierarchical nature (Laing, 2010).

The study tracked 205 students who were enrolled in five sections of Principles of Financial Accounting (II) at the College during the 2010/2011 academic year. The

dependent variable in this study was student performance measured in terms of the overall grade of each student. The independent variables in this study were student gender, age, major, college experience, college GPA, prerequisite grade, and time-lag. A stepwise regression model was employed to examine the influence of the independent variables on the dependent variable and to test the study's hypotheses in order for acceptance or rejection.

Our study addressed some of the shortfalls in the existing local and regional accounting education literature resulting from the scarcity of prior studies (Al-Twajiry, 2010); we attempted to provide comparative evidence for the harmonization of international accounting education. Furthermore, we focused on academic performance of students learning the principles of financial accounting that has been garnered considerable attention from both educational and professional bodies for a long time (AECC, 1992). In addition, a part of our study, such as examining the influence of time-lag on student performance, was considered to be within the students' attitude body of research, which attracts extraordinary attention from the international and American professional bodies (AECC, 1990; IFAC, 2009). Moreover, our study sought to improve the level of output of the College – one of the tributaries of accounting education in Kuwait – by considering the implications of this study's findings, which will be reflected in the Kuwaiti accounting profession. For all of the above, we believe that this study contributes remarkably to the existing literature of accounting education, especially in developing countries such as Kuwait.

The remainder of this paper is divided into four sections. Literature Review and Hypotheses Development covers earlier studies relevant to the factors influencing academic performance of students' learning of the principles of financial accounting. Research Methodology describes the data collection and data processing procedures. Results and Analysis discusses and analyzes the findings of the research. Summary and Conclusions summarizes the study, considers the implications of the study, notes its limitations and provides guidelines for future studies.

## **II. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT:**

The aim of this section is to provide the needed background to develop the research hypotheses. Specifically we will examine existing research on the factors influencing student performance when learning the principles of financial accounting.

Eskew and Faley (1988) investigated the relationship between students' performance in Principles of Financial Accounting (I) and pre-college accounting studies at the high school level, while taking into account other factors such as previous collegiate academic experience and motivation. They found that all of these factors were positively correlated with performance in Principles of Financial Accounting (I).

Doran et al. (1991) examined the relationship between performance on Principles of Financial Accounting (I and II) while exploring other factors such as gender, GPA, prerequisite grade, student's major, and pre-college accounting studies. They found that pre-college accounting studies affected the



performance of the first part of Principles of Financial Accounting, but did not affect the second part. They also found that male students' performances were better than female students' performances in the first part but not in the second part.

Gul and Fong (1993) investigated the relationship between performance on Principles of Financial Accounting (I) and students' personality types along with some other factors such as the intention to obtain a business degree, pre-college accounting studies, and high school grades in English and Math. They found that each of these factors were important in predicating student performance.

Tho (1994) examined the relationship between performance on the Principles of Financial Accounting and residential status of students (urban-rural) along with some other factors such as gender and pre-college accounting, math, and economics studies. The study found that grades in high-school economics and having studied high-school accounting and math were important predictors of performance; however, there was no significant relationship between student performance and residential status or gender.

Wooten (1998) investigated the impact of the student's aptitude and effort on performance in Principles of Financial Accounting (I), using students' ages as a distinguisher between traditional (young) and non-traditional (old) students. The study found that the aptitude and effort factors were in favor of traditional students.

Hill (1998) examined the relationship between performance on Principles of

Financial Accounting (I and II) and the size of the class in terms of the number of students enrolled. The author also included some other factors such as the intention to major in accounting and students' perceptions of class size. The study found that students in large classes outperformed students in small classes when controlling for GPA and lecture attendance.

Elias (2005) investigated the effect of study approaches, exploring how deep or surface study approaches affected student performance while students learned the Principles of Financial Accounting and the Principles of Managerial Accounting. The results indicated that female, non-traditional, accounting major, and other non-business major students using a deep studying approach was positively correlated with student performance and GPA.

Bealing et al. (2009) examined the relationship between performance on Principles of Financial Accounting (I) and type of learning through determining the personal desires of students. The study hypothesized that personality type determines a student's ability to perform well in the Principles of Financial Accounting (I). The study positively correlated students' success with six questions of the Keirseley Temperament Sorter, which could be used to supervise and guide students to the right path to success in this subject.

Mohrweis (2010) investigated the relationship between each student's age and performance on Principles of Financial Accounting (I) with three controlling attributes: GPA, gender, and class timing. The study found that the performance of non-traditional students was better than the

performance of traditional students, and there was a significant positive correlation between performance and student's age.

In light of the foregoing literature review and given the data available for this study, the following testable hypotheses will be developed in the next part of this section.

Investigating the influence of student gender on student performance has attracted the attention of many accounting education scholars (Doran et al., 1991; Tho, 1994; Hill, 1998; Wooten, 1998; Al-Rashed, 2001; Elias, 2005; Nelson et al., 2008; Mohrweis, 2010). We believe that examining the influence of student gender on performance is imperative to the current study; accordingly, the first null hypothesis is developed next:

*H1<sub>0</sub>: Gender does not significantly influence student performance when learning Principles of Financial Accounting (II).*

Examining the impact of student age on student performance has pulled the interest of many accounting education researchers also (Wooten, 1998; Hill, 1998; Al-Rashed, 2001; Elias, 2005; Nelson et al., 2008; Moore et al., 2008; Mohrweis 2010). We trust that examining the influence of student age on performance is fundamental to the current study; consequently, the second null hypothesis is developed next:

*H2<sub>0</sub>: Age does not significantly influence student performance when learning Principles of Financial Accounting (II).*

Examining the effect of student major on student performance has also pulled the attention of some accounting education scholars (Doran et al., 1991; Elias, 2005;

Nelson et al., 2008; Bealing et al., 2009). Therefore, we believe that examining the influence of student major on performance is substantial to the current study; accordingly, the third null hypothesis is developed next:

*H3<sub>0</sub>: Student major does not significantly influence student performance when learning Principles of Financial Accounting (II).*

Investigating the influence of college experience (represented in time of schooling at college level) on student performance has also pulled the interest of some accounting education scholars (Eskew and Faley, 1988; Elias, 2005; Cohn and Johnson, 2006; Stanca, 2006). We also trust that examining the influence of college experience on performance is imperative to the current study. The significance of examining the influence of this factor would boost when we reflect on the indirect impact of accumulated knowledge that is represented in the fact that a large proportion of students are those who have already reenrolled in this subject. This is not surprising, learning Principles of Financial Accounting is fraught with some risk including the failure and withdrawal, the percentage of success in this subject is extremely low locally (less than 25 % of surveyed students) and very low regionally (Atieh, 1997) and internationally (Doran et al., 1991; Wooten, 1998; Jones and Fields, 2001); subsequently, the fourth null hypothesis is developed next:

*H4<sub>0</sub>: College experience does not significantly influence student performance when learning Principles of Financial Accounting (II).*

Examining the impact of grade history represented in college GPA score on student

performance has also attracted the attention of many accounting education scholars (Eskew and Faley, 1988; Doran et al., 1991; Wooten, 1998; Hill, 1998; Al-Rashed, 2001; Elias, 2005; Mohrweis, 2010; Al-Twaijry, 2010). Therefore, we also believe that examining the influence of student GPA on performance is essential to the current study; consequently, the fifth null hypothesis is developed next:

*H5<sub>0</sub>: GPA does not significantly influence student performance when learning Principles of Financial Accounting (II).*

Examining the impact of grade history represented in prerequisite subject's grade on student performance has also attracted the attention of some accounting education scholars (Doran et al., 1991; Eskew and Faley, 1988; Wooten, 1998; Al-Rashed, 2001; Al-Twaijry, 2010). Therefore, we also trust that examining the influence of prerequisite grade on performance is necessary to the current study; accordingly, the sixth null hypothesis is developed next:

*H6<sub>0</sub>: The grade in a prerequisite subject does not significantly influence student performance when studying Principles of Financial Accounting (II).*

We accept as true that investigating the influence of the time-lag on student performance is critical to the current study, since a large proportion of students in the current study's environment do not enroll immediately in the second part after completing the first part. We strongly believe that examining this factor is no less important than examining other factors; consequently, the seventh null hypothesis is developed next:

*H7<sub>0</sub>: The time-lag between completing the first course and beginning the second course does not significantly influence student performance when studying Principles of Financial Accounting (II).*

### III. RESEARCH METHODOLOGY:

The participants of this study were 205 students who were enrolled in five sections of Principles of Financial Accounting (II) at the College during the 2010/2011 academic year. Three sections consisted entirely of male students (totaling 106 students) and two sections consisted entirely of female students (totaling 99 students). Studying at the College is based on a credit-hours or courses system, and genders are separated into two different campuses – one for male students and the other for female students. Studying is done in the Arabic language and lasts for two academic years; each year consists of fall, spring, and summer semesters, in addition to field training which usually takes place in the summer semester. The College policies state that student performance is to be evaluated by allocating 50% of the overall grade to semester's work, and the rest is dependent on the result of the final exam, which is comprehensive, unified, and generated by a committee from the Accounting Department.

The five sections were specifically selected in order to avoid confounding effects that might affect the study findings. All these sections were taught by the same educator (the researcher), the same text book, the same syllabus, and similar lecture times and theaters. Moreover, all students were evaluated according to the same standards and by the same manners.

Data were drawn from the students' registration lists at the beginning of each semester and after the withdrawal period. These lists contain some personal data such as student's name, major, study group, and civil identity number which contains the date of birth. Moreover, some personal data for each student were gathered from the student records that are collected from the Registrar Office such as prerequisite grade, time-lag, and student GPA. Differentiating student gender was straightforward since studying is segregated by gender into two different campuses. Furthermore, the overall grade in Principles of Financial Accounting (II) for each student was considered.

The dependent variable in this study was student performance represented by the overall grade of each student in Principles of Financial Accounting (II) (0 – 100 marks). The independent variables in this study were student gender (0 for male, 1 for female), student age (18 – 36 years), student major (0 for accounting, 1 for others), college experience (1 – 11 semesters), GPA (0 – 4 points), prerequisite grade (1 – 4 points), and time-lag (1 – 10 semesters).

We entered data into our personal computer

and then we incorporated statistical analyses by using the statistical program “Statistical Package for Social Sciences (SPSS)”. We applied a descriptive statistic to describe the study findings and conducted a correlation analysis to examine the relationship between student performance and the independent variables. We also employed a stepwise regression model to examine the influence of the independent variables on the dependent variable (student performance), and to test the study's hypotheses for acceptance or rejection.

#### IV. RESULTS AND ANALYSIS:

##### *Descriptive Statistic:*

Table (1) presents the number of enrolled, withdrawn, and net number of students by gender and major. The total number of enrolled students was 205, 31 students withdrew from the course (15.12%), which left a net number of 174 students. The total number of enrolled male students was 106 (51.71%), 16 withdrew (15.09%), which left a net number of 90 male students. The total number of enrolled female students was 99 (48.29%), 15 withdrew (15.15%), which left a net number of 84 female students.

Table (1) also presents the mean and standard

Table (1)  
Descriptive Statistic

Gender	Accounting Major			Other Majors			Total			Mean	SD
	En*	Wd*	Net*	En	Wd	Net	En	Wd	Net		
Male	42	6	36	64	10	54	106	16	90	33.60	20.64
Female	6	2	4	93	13	80	99	15	84	51.08	21.70
Total	48	8	40	157	23	134	205	31	174	42.04	22.85
Mean	35.45			44.00			42.04			=	=
SD	16.55			24.12			22.85			=	=

\* En = Enrolled students / Wd = Withdrawal students / Net = Net students

deviation (SD hereafter) of male and female students' final grades as well as by major. The female students' mean  $\pm$  SD was  $51.08 \pm 21.70$  out of 100 marks, while the male students' mean  $\pm$  SD was  $33.60 \pm 20.64$  marks. The non-accounting major students' mean  $\pm$  SD was  $44.00 \pm 24.12$  marks, while the accounting major students' mean  $\pm$  SD was  $35.45 \pm 16.55$  marks.

Student age ranged between 18 years old and 36 years old with an average age of 21.32 years. College experience ranged between 1 semester and 11 semesters with an average of 3.29 semesters. Time-lag ranged between 0 semesters and 10 semesters with an average of 1.6 semesters. Student GPA ranged between 0.96 points and 3.88 points with an average of 2.05 points. Prerequisite grades ranged between 1 point and 4 points with an average of 2.09 points.

#### ***Correlation Analysis:***

Table (2) reveals that the most correlated factor to student performance was prerequisite grade with a positive significant relationship ( $R = .787, P < .000$ ), followed by student GPA with a positive relationship ( $R = .763, P < .000$ ), then by time-lag with a negative significant relationship ( $R = -.464, P < .000$ ), and then by gender with a positive relationship ( $R = .384, P < .000$ ).

A less positive significant relationship, student major was correlated with performance ( $R = .158, P = .037$ ), while student age and college experience did not show any significant correlations to performance. Table (2) also provides some intercorrelations between the independent variables.

While correlation measures the degree to

which two or more variables are related, regression analysis involves identifying the relationship between the dependent variable and one or more independent variables. Accordingly, to examine the influence of the study's independent variables on student performance and to test the study's hypotheses for acceptance or rejection, regression analysis was incorporated and its results will be discussed in the next part.

#### ***Regression Results:***

Table (3) presents the results of a stepwise regression analysis for all variables entered into the regression model, where four different sub-models were developed. The results indicate that the most significant factor influencing student performance (the overall grade) was prerequisite grade, followed by GPA, then time-lag, and at last college experience. Student gender, age, and major did not show any significance influence on performance.

Table (4) presents the model summary which shows the R, the R squared, the adjusted R squared, and the standard error of the estimate for each of the four sub-models. These measures indicate that the regression models are a good fit. Table (5) presents an ANOVA which shows the sum of squares, the degrees of freedom, the mean square error, the F ratio, and the significance for each of the four sub-models. Table (6) presents the beta coefficients, the t values, the significance for all sub-models, and variance inflation factor (VIF). Table (7) confirms the excluded variables with their beta coefficients, t values, significance, partial correlation, and tolerance.

The outcomes of the stepwise regression



**Table (2) Correlation Analysis**

	Overall Grade	Gender	Age	major	College Exper	GPA	Pre-grade	Time Lag
Overall Grade	Pearson Correlation	.384**	.104	.158*	-.051-	.763**	.787**	-.464**
	Sig. (2-tailed)	.000	.171	.037	.505	.000	.000	.000
	N	174	174	174	174	174	174	174
Gender	Pearson Correlation	.384**	.061	.418**	.231**	.341**	.226**	-.234**
	Sig. (2-tailed)	.000	.422	.000	.002	.000	.003	.002
	N	174	174	174	174	174	174	174
Age	Pearson Correlation	.104	1	-.043-	.018	.226**	.109	.068
	Sig. (2-tailed)	.171	.422	.569	.813	.003	.153	.376
	N	174	174	174	174	174	174	174
Major	Pearson Correlation	.158*	-.043-	1	.386**	.123	.009	.084
	Sig. (2-tailed)	.037	.569	.000	.000	.105	.904	.272
	N	174	174	174	174	174	174	174
College Experience	Pearson Correlation	-.051-	.231**	.386**	1	-.130-	-.040-	.715**
	Sig. (2-tailed)	.505	.002	.000	.000	.087	.599	.000
	N	174	174	174	174	174	174	174
GPA	Pearson Correlation	.763**	.341**	.226**	-.130-	1	.716**	-.409**
	Sig. (2-tailed)	.000	.000	.003	.087	.000	.000	.000
	N	174	174	174	174	174	174	174
Prerequisite Grade	Pearson Correlation	.787**	.226**	.109	-.040-	.716**	1	-.338**
	Sig. (2-tailed)	.000	.003	.153	.599	.000	.000	.000
	N	174	174	174	174	174	174	174
Time Lag	Pearson Correlation	-.464**	-.234**	.068	.715**	-.409**	-.338**	1
	Sig. (2-tailed)	.000	.002	.376	.000	.000	.000	.000
	N	174	174	174	174	174	174	174

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).



**Table (3) Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	Prerequisite Grade	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	GPA	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	Time-lag	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	College Experience	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: overall grade

model verify that the first independent variable to be excluded was student gender as predicted by H1<sub>0</sub>. The stepwise regression model showed no significant influence of gender on student performance, although it was significantly correlated with student performance. Consequently, it was excluded

Mohrweis, 2010); however, this is in contrast to the results of (Doran et al., 1991; Elias, 2005) which found a significant influence of gender on performance.

The second independent variable to be excluded from the stepwise regression

**Table (4) Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.787 <sup>a</sup>	.619	.617	14.13715
2	.837 <sup>b</sup>	.701	.697	12.56940
3	.849 <sup>c</sup>	.721	.716	12.16975
4	.870 <sup>d</sup>	.758	.752	11.38159

a. Predictors: (Constant), prerequisite grade

b. Predictors: (Constant), prerequisite grade, GPA

c. Predictors: (Constant), prerequisite grade, GPA, time-lag

d. Predictors: (Constant), prerequisite grade, GPA, time-lag, college experience

from the all four sub-models. Accordingly, the first null hypothesis was accepted. This result is comparable with the results of (Tho, 1994; Hill, 1998; "Al-Rashed, 2001";

model was student age as predicted by H2<sub>0</sub>. The stepwise regression model demonstrated that the least significance influence on the student performance was age; therefore, it was excluded from all four sub-models.

Accordingly, the second null hypothesis was accepted. This result is no different from the results of some previous studies (Hill, 1998; "Al-Rashed, 2001") ; however, it is unlike the results of Wooten, (1998); Elias, (2005); and Mohrweis, (2010), which found a significant influence of age on performance.

The third independent variable to be excluded from the stepwise regression model was student major as predicted by H<sub>3o</sub>. The stepwise regression model showed no significant influence of student major on student performance; therefore, it was excluded from the all four sub-models. Accordingly, the third null hypothesis was accepted. This result is in contrast with the results of (Doran et al., 1991; Elias, 2005) which found a significant influence of student major on performance.

The fourth independent variable to be tested by the stepwise regression model was college experience which proved to be relatively significant in affecting student performance in studying Principles of Financial Accounting (II). Its significance appeared on the fourth sub-model as the fourth significant independent variable. Table (5) and Table (6) present the stepwise regression values for college experience (Beta = .287 and t = 5.036, P < .000; and F = 132.011, P < .000). Accordingly, the fourth null hypothesis was rejected. This result is similar to the results of (Doran et al., 1991; Elias, 2005) which found a significant influence of college experience on performance.

Table (5)  
ANOVA<sup>e</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	55919.983	1	55919.983	279.797	.000 <sup>a</sup>
	Residual	34375.735	172	199.859		
	Total	90295.718	173			
2	Regression	63279.444	2	31639.722	200.264	.000 <sup>b</sup>
	Residual	27016.274	171	157.990		
	Total	90295.718	173			
3	Regression	65118.240	3	21706.080	146.561	.000 <sup>c</sup>
	Residual	25177.478	170	148.103		
	Total	90295.718	173			
4	Regression	68403.360	4	17100.840	132.011	.000 <sup>d</sup>
	Residual	21892.359	169	129.541		
	Total	90295.718	173			

a. Predictors: (Constant), Prerequisite grade,

b. Predictors: (Constant), Prerequisite grade, GPA

c. Predictors: (Constant), Prerequisite grade, GPA, time-lag

d. Predictors: (Constant), Prerequisite grade, GPA, time-lag, college experience

e. Dependent Variable:overall grade

Table (6) Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta				Tolerance	VIF
1 (Constant) Prerequisite Grade	5.735	2.421			2.369	.019		
	17.353	1.037	.787		16.727	.000	1.000	1.000
2 (Constant) Prerequisite Grade GPA	-5.929-	2.748			-2.157-	.032		
	10.891	1.322	.494		8.239	.000	.487	2.054
	12.285	1.800	.409		6.825	.000	.487	2.054
3 (Constant) Prerequisite Grade GPA Time-lag	1.263	3.353			.377	.707		
	10.573	1.283	.479		8.241	.000	.485	2.064
	10.667	1.802	.355		5.919	.000	.455	2.196
	-2.009-	.570	-.157-		-3.524-	.001	.828	1.207
4 (Constant) Prerequisite Grade GPA Time-lag College Experience	-2.603-	3.229			-.806-	.421		
	9.415	1.222	.427		7.706	.000	.467	2.140
	10.077	1.689	.336		5.965	.000	.453	2.207
	-4.971-	.794	-.388-		-6.261-	.000	.374	2.675
	3.714	.737	.287		5.036	.000	.441	2.267

a. Dependent Variable: overall grade

**Table (7) Excluded Variables<sup>e</sup>**

Model	Beta In	T	Sig.	Partial Correlation	Collinearity Statistics	
					Tolerance	VIF
1	Gender	4.757	.000	.342	.949	
	Age	.396	.692	.030	.988	
	Major	3.297	.001	.244	1.000	
	College Experience	-.409-	.683	-.031-	.998	
	GPA	6.825	.000	.463	.487	
Time-lag	-.224-a	-.4.752-	.000	-.342-	.886	
2	Gender	3.475	.001	.258	.883	
	Age	-1.037-	.301	-.079-	.943	
	Major	2.538	.012	.191	.972	
	College Experience	.535	.593	.041	.977	
	Time-lag	-.157-b	-3.524-	.001	-.261-	.828
3	Gender	3.183	.002	.238	.872	
	Age	-.457-	.648	-.035-	.914	
	Major	3.194	.002	.239	.952	
	College Experience	2.87 <sup>c</sup>	.000	.361	.441	
4	Gender	.529	.598	.041	.587	
	Age	.079	.937	.006	.902	
	Major	1.062	.290	.082	.737	

a. Predictors in the Model: (Constant), prerequisite grade

b. Predictors in the Model: (Constant), prerequisite grade, GPA

c. Predictors in the Model: (Constant), prerequisite grade, GPA, time-lag

d. Predictors in the Model: (Constant), prerequisite grade, GPA, time-lag, college experience

e. Dependent Variable: overall grade

The fifth independent variable to be tested by the stepwise regression model was student GPA which took place as the second significant independent variable that influenced student performance in studying Principles of Financial Accounting (II). Its significance appeared on the second sub-model as the second significant independent variable. Table (5) and Table (6) present the stepwise regression values for student GPA (Beta = .409 and  $t = 6.825$ ,  $P < .000$ ; and  $F = 200.264$ ,  $P < .000$ ). Accordingly, the fifth null hypothesis was rejected. This result is in parallel with most previous studies' results (Hill, 1998; Elias, 2005; Al-Rashed, 2001; Mohrweis, 2010) which found a significant influence of student GPA on performance.

The sixth independent variable to be tested by the stepwise regression model was prerequisite grade. The test revealed that it was the most significant independent variable influencing student performance in studying Principles of Financial Accounting (II). Its significance appeared on the first sub-model as the first significant independent variable. Table (5) and Table (6) present the stepwise regression values for student prerequisite grade (Beta = .787 and  $t = 16.727$ ,  $P < .000$ ; and  $F = 279.797$ ,  $P < .000$ ). Accordingly, the sixth null hypothesis was rejected. This result is comparable with most previous studies' results (Doran et al., 1991; Al-Rashed, 2001; Al-Twajry, 2010) which found a significant influence of prerequisite grade on performance.

The seventh independent variable to be tested by the stepwise regression model was time-lag. The test revealed that it was the third-most significant independent variable influencing student performance in studying Principles of Financial Accounting (II).

Its significance appeared on the third sub-model as the third significant independent variable. Table (5) and Table (6) present the stepwise regression values for time-lag (Beta = -.157 and  $t = -3.524$ ,  $P = .001$ ;  $F = 146.561$ ,  $P < .000$ ). Accordingly, the seventh null hypothesis was rejected. This result cannot be compared with any earlier study since this variable is empirically examined for the first time in the accounting education literature.

Potential multicollinearity between independent variables is a matter of concern. Multicollinearity occurs when the independent variables are so highly correlated with each other that they cause some complexities in assessing the individual effect of an independent variable upon the dependent variable. Referring to Table (2), the Pearson correlation matrix for the independent variables demonstrates a few cases of moderate intercorrelations that exist between the independent variables, particularly between college experience and time-lag, and between student GPA and prerequisite grade. Since all correlations are less than 0.75, VIFs in the regression model that are shown in Table (6) were less than 4.0, which are considered to be low enough in order to be acceptable, and tolerances of independent variables in the regression model that were shown in Table (7) were between .441 and 1.000, which are considered to be high enough in order to be acceptable, multicollinearity does not appear to be a serious problem in this case.

In general, the above discussed results of the statistical analysis were mixed and reveal that student performance when studying Principles of Financial Accounting (II) was influenced by some of the factors we investigated. The results reveal that the

most significant factor influencing student performance was prerequisite grade, followed by student GPA, then by time-lag, and finally college experience. The results also indicate that student gender and major did not influence student performance, although they were significantly correlated with student performance; while student age had no effect nor significant correlation with student performance when studying Principles of Financial Accounting (II).

## **V. SUMMARY AND CONCLUSIONS:**

The purpose of this study was to perform an empirical investigation of the influence of select factors on academic performance of students studying Principles of Financial Accounting (II) at the College of Business Studies in Kuwait.

The study found that the influences of the selected factors are diverse in their effect on student performance. The prerequisite grade had the most significance influence on student performance, followed by student GPA, then by time-lag, and finally college experience. Student gender, age, and major showed no significant influence on student performance.

The study findings have practical implications for how the administrations of the College of Business Studies and similar educational institutions should take action. The findings suggest that educators and their institutions should emphasize better education in Principles of Financial Accounting (I), since the prerequisite grade has significant influence on student performance when studying the Principles of Financial Accounting (II).

The prerequisite grade also directly affects student GPA which has significant influence on student performance when studying the Principles of Financial Accounting (II). The findings also suggest that educators and their institutions should adopt strategies that encourage students to enroll immediately in Principles of Financial Accounting (II) after completing Principles of Financial Accounting (I), since time-lag is negatively correlated with student performance and has a significant influence on it.

Generalization of the study findings is a matter of concern since the sample comprises just a group of students from one educational institution only. Therefore, reexamining the influence of the selected factors and other potential factors on student performance in other accounting subjects and in different educational environments is recommended. Another potential avenue for future research is to use the results of this study for another comparative research study.

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### **Short Bio of Khalid Abdulla Alanzi**

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