

Determinants of Students' Performance in Introductory Accounting Courses

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Abstract. The main purpose of this study is to assess the importance of various factors in explaining variations in students' performance in introductory accounting courses (Accounting Principles 101 and 102). All students who took accounting principles 101 (283) and 102 (219) for the fall semester 1991/1992 were selected for the study. Using regression analysis it was found that cumulative grade point average (GPA), gender, major and stream are significant explanators of performance in accounting principles 101 and 102. Moreover, grade in accounting principles 101 was found to be significantly and positively correlated with performance in accounting principles 102. In addition, school average and repetition of the course are found to be significantly and negatively correlated with performance in accounting principles 101 but not in 102. However, the number of credit hours taken at the university is negatively correlated with performance in both courses. The relationship is significant in accounting 101 but not in 102.

Introduction

Faculty of Economics and Administrative Sciences students at Yarmouk University, Jordan are required to take Accounting Principles 101 and 102. In addition, students from outside the Faculty of Economics and Administrative Sciences who are minor-ing in accounting (e.g. computer science and English language students) are also required to take these two introductory accounting courses. Moreover, other students take one or both courses as university requirement. This has increased the number of students who register for these courses. Many students drop or fail such

courses. This may be because they are not majoring in accounting, or because they have never been exposed to accounting and find it extremely difficult to understand at the beginning. Tables 1 and 2 show the number of students enrolled in accounting principles 101 and 102 over four years together with the drop/fail rates.

Table 1. Students' enrollment in accounting principles 101.

Year	No.	Drop		Fail	
		No.	%	No.	%
<i>1987-1988</i>					
Fall	333	43	12.9	42	12.6
Spring	208	26	12.5	54	25.9
Summer	<u>92</u>	<u>17</u>	<u>18.4</u>	<u>19</u>	<u>20.6</u>
Total	<u>633</u>	<u>86</u>	<u>13.6</u>	<u>115</u>	<u>18.6</u>
<i>1988-1989</i>					
Fall	263	33	12.5	37	14.0
Spring	223	27	12.1	48	21.5
Summer	<u>113</u>	<u>11</u>	<u>9.7</u>	<u>9</u>	<u>7.9</u>
Total	<u>599*</u>	<u>71</u>	<u>11.9</u>	<u>94</u>	<u>15.7</u>
<i>1989-1990</i>					
Fall	233	34	14.6	38	16.3
Spring	239	56	23.4	36	15.1
Summer	<u>144</u>	<u>45</u>	<u>31.3</u>	<u>14</u>	<u>9.7</u>
Total	<u>616*</u>	<u>135</u>	<u>21.9</u>	<u>88</u>	<u>14.3</u>
<i>1990-1991</i>					
Fall	363	46	17.5	64	24.3
Spring	277	25	16.2	57	20.6
Summer	<u>189</u>	<u>24</u>	<u>12.7</u>	<u>25</u>	<u>13.2</u>
Total	<u>829</u>	<u>115</u>	<u>13.9</u>	<u>146</u>	<u>17.6</u>

*The decrease in the number of students in 1988/89 and 1989/90 is due to the limited number of sections offered.

Table 2. Students' enrollment in accounting principles 102.

Year	No.	Drop		Fail	
		No.	%	No.	%
<i>1987-1988</i>					
Fall	264	20	7.6	37	14.0
Spring	325	27	8.3	74	22.8
Summer	<u>61</u>	<u>4</u>	<u>6.6</u>	<u>13</u>	<u>21.3</u>
Total	<u>650</u>	<u>51</u>	<u>7.8</u>	<u>124</u>	<u>19.1</u>
<i>1988-1989</i>					
Fall	179	7	3.9	18	10.1
Spring	220	17	7.7	51	23.2
Summer	<u>79</u>	<u>2</u>	<u>2.5</u>	<u>16</u>	<u>20.3</u>
Total	<u>478</u>	<u>26</u>	<u>5.4</u>	<u>85</u>	<u>17.8</u>
<i>1989-1990</i>					
Fall	225	16	7.1	8	3.6
Spring	184	28	15.2	27	14.7
Summer	<u>68</u>	<u>10</u>	<u>14.7</u>	<u>14</u>	<u>20.6</u>
Total	<u>477</u>	<u>54</u>	<u>11.3</u>	<u>49</u>	<u>10.3</u>
<i>1990-1991</i>					
Fall	219	14	6.4	45	20.5
Spring	218	20	9.2	52	23.9
Summer	<u>129</u>	<u>5</u>	<u>3.9</u>	<u>21</u>	<u>16.3</u>
Total	<u>629</u>	<u>39</u>	<u>6.2</u>	<u>118</u>	<u>18.8</u>

It can be seen that identifying the factors which affect students' performance in these two courses is important. Therefore, the main purpose of this study is to examine the factors which influence students' performance in accounting principles (101) and (102).

Importance of the study

The study isolated those factors that may be uniquely related to student academic performance in accounting principles (101) and (102). These factors should contribute to an improved understanding of why some students pass these courses and some do not. This is beneficial to students in that they can evaluate their performance in the light of the factors identified. In addition, identifying the significant determinants of students' performance in introductory accounting courses could result in more efficient enrollment policies for these courses in that it helps institutions concerned with accounting education such as universities to develop new policies in admission requirements, curriculum and prerequisites.

Previous Research

Previous research indicates that past grade and grade-point average (GPA) are factors influencing students' performance in subsequent courses. In this regard, Dockweiler and Willis [1] found that GPA was the best predictor of subsequent academic performance. Hicks and Richardson [2] found that grades in accounting principles courses were better predictors of success in intermediate accounting than freshmen/ sophomore GPA [see also 3, 4, 5 and 6].

In addition Mutchler *et al.* [7] compared the performance of female and male students in upper-division accounting courses. They found that females outperform males. This result is consistent with previous research by Hendricks [8] and Weston and Matoney [9]. Mutchler *et al.* [7] attribute the better performance of females in accounting to the fact that females are more "success oriented" and career motivated during their college education.

The effect of gender on students' performance in lower division accounting courses was examined by Tyson [10]. The study indicated that superior performance by females was not unique to upper-division courses. However, when (GPA) was treated as a covariate, gender no longer had any significant impact on standard course grade. Tyson suggested that females outperform males because they exhibit higher "work needs" or the desire to perform tasks well.

Contrary to Mutchler *et al.* [7] and Tyson [10], Lipe [11] found no gender effects on performance [see also 12 and 13]. Eskew and Faley [14] found that the academic aptitude, effect, and prior accounting knowledge can be used to explain variation in the total examination points of students in a first level financial accounting course.

As far as the instructor is concerned, it was found that male (female) students tend to perform better in male (female) instructed classes [7 and 11].

Ramadan [15] examined the effect of pre-university accounting education on students' performance in first level university accounting courses. He found that students with pre-university knowledge of accounting outperform those who did not have such knowledge. Moreover, there were no significant differences in the performance of students who major in accounting and those who did not. This result contradicts Bouillon *et al.* [3] who found that accounting majors did significantly better on accounting exams than non-majors.

Doran *et al.* [16] found that measures of academic aptitude and performance are found to be significant explanators of examination scores in both accounting principles I and II. In addition, high school bookkeeping was found to be positively related to performance in accounting principles (I) and relatively related to performance in

accounting principles (II). On average, males are found to have significantly higher examination scores than females in accounting principles (I), but not in accounting principles (II).

Hayes *et al.* [17] found that there were no significant differences in exam performance attributable to gender and prior knowledge (prior knowledge was represented by grade-point average and final exam pretest midterm). They also found that high exam scores correlated significantly with student success expectations, academic majors and certain psychological characteristics (e.g. intellectual efficiency, well being, tolerance, and state anxiety).

Description of the Study

a. Samples, courses and subjects

All students who took accounting principles 101 and 102 during the first term 1991/1992 at Yarmouk University were the subject of the study (class enrollment for eight sections in 101 and six sections in 102). Five different instructors (all men) taught accounting 101 and four different instructors (all men also) taught 102, but uniformity was maintained by coordinator for each course. Each section meets either three times a week (50 min each), or two times a week (75 min each). All students used the same textbook (*Principles of Accounting* by Walgenback, Dittrich and Harmc) and were assigned identical homework problems from the text. In these sections 318 and 238 students were enrolled in accounting principles 101 and 102 respectively. Of the students enrolled in accounting principles 101 and 102, 35 and 19 respectively were excluded from the sample due to continuous absence. The total sample size then was (283) in accounting principles 101 and (219) in accounting principles 102.

Two 75-min exams were administered during the term (each carries 25% of the total grade) and a 2 hr comprehensive final examination (carries 40%) was given. The remaining 10% was for assignments, quizzes and participation. All examinations comprised computational questions. The exams were common for all sections and were prepared by the instructors together.

Data about students' scores, drops and repeats was obtained from the record of the directorate of registration and admission and the department of accounting at the University.

Data collected included score in each course, students' cumulative GPA before taking the course, number of credit hours taken, major, stream in high school, grade in high school, gender, repetition of the course and instructor. Data was collected from university records and not via students' surveys because university policy does

not limit the access to and use of students' data from university records. Multiple regression was used to analyze the data using the Statistical Package for the Social Sciences (SPSSx).

b. Model and variables

For the purpose of investigating the effect of factors determining students' performance in accounting principles 101 and 102, the following model has been constructed. The model contains two equations. The first equation hypothesized that the performance in accounting principles 101 depends on cumulative GPA at the university, major, gender, number of credit hours completed, repetition of the course, stream and cumulative average at high school. The second equation hypothesized that performance in accounting principles 102 depends on the same variables that determine students' performance in accounting principles 101 and students' performance in accounting principles 101. Performance in accounting principles 101 is included as an explanatory variable because accounting principles 101 is a prerequisite for accounting principles 102. The choice of the explanatory variables in the two equations is based on the previous research findings and a few experiments done by the authors to select the most significant explanatory variables ⁽¹⁾. The regression models examined for accounting principles 101 and 102 are as follows:

Accounting principles 101

$$GRAPI = b_0 + b_1 CUM1 + b_2 MAJOR1 + b_3 STREAM1 + b_4 GENDER1 + b_5 AVG1 + b_6 CREDIT1 + b_7 REPEAT1 + E_1 \dots\dots\dots (1)$$

Accounting principles 102

$$GRAPII = b_0 + b_1 CUM2 + b_2 MAJOR2 + b_3 STREAM2 + b_4 GENDER2 + b_5 AVG2 + b_6 CREDIT2 + b_7 REPEAT2 + b_8 GRAPI + E_2 \dots\dots\dots (2)$$

(1) We tried different formulations for the two models such as:
a. Log form for both models, but most variables were insignificant.
b. Include different dummy variables for the instructors who taught the two courses. For example, we tried four different dummies for the five instructors who taught accounting principles 101 and three dummies for the four instructors who taught accounting principles 102. The results were not satisfactory.
c. Include the number of years between graduation from high school and enrollment in the university, but the variable was insignificant in both equations (1) and (2).

c. Definition of variables

Dependent variables

GRAPI = grade of a student in accounting principles 101.

GRAPII = grade of a student in accounting principles 102.

Independent variables

The independent variables in equations (1) and (2) above has the same definitions except the subscript at the end of each variable. Subscript 1 means the variable in accounting principles 101 and its value was taken from sample one which was used in estimating equation (1). Subscript 2 at the end of each variable means that the variable in accounting principles 102 and its value was taken from sample two that was used in estimating equation (2).

CUM	=	student cumulative average at the university. Grade in GRAPI was excluded from CUM in the second equation.
GENDER	=	sex of a student
STREAM ⁽²⁾	=	literary stream or the scientific stream at high school
AVG	=	student GPA at high school
CREDIT	=	credit hours completed by the student at the university before taking accounting principles 101 and 102.
MAJOR	=	student major, accounting or otherwise.
REPEAT	=	This indicates whether or not a student repeats any of the two courses.

The two equations were estimated using ordinary least squares (OLS) method. This is because the two equations were estimated from two different and mutually exclusive samples.

Results

Table 3 reports means and standard deviations for the dependent and independent variables used in regression models 1 and 2. It can be noted that average grades in accounting principles 101 and 102 were low (60 for the first and 59 for the second). Meanwhile, both cumulative GPA (CUM) and grade point average (AVG) were also low. This means a relationship may exist between previous academic performance and current performance in accounting classes.

(2) The 2 samples consisted of students from both the literary and the scientific streams only. There were no students from other streams because the policy of the university is not to admit students from other streams except the top five students in the commercial stream every year.

Table 3. Means and standard deviations for the dependent and independent variables.

	Mean	Standard deviation
Accounting principles 101 (n=283)		
<i>Dependent variable:</i>		
GRAPI	60.14	15.42
<i>Independent variables:</i>		
MAJOR1	0.39	0.49
CUM1	68.84	7.98
GENDER1	0.82	0.39
CREDIT1	35.23	22.01
REPEAT1	0.22	0.41
AVG1	77.69	6.08
STREAM1	0.29	0.45
Accounting principles 102 (n=219)		
<i>Dependent variable:</i>		
GRAPII	59.05	15.20
<i>Independent variables:</i>		
GRAPI	63.77	13.04
MAJOR2	0.22	0.41
CUM2	68.77	7.81
GENDER2	0.75	0.43
CREDIT2	52.83	24.79
REPEAT2	0.20	0.40
AVG2	78.17	6.24
STREAM2	0.35	0.48

As far as major is concerned it can be seen that a small percentage of the students was accounting majors (39% in accounting principles 101 and 22% in accounting principle 102). Furthermore, 82% of students in accounting 101 and 75% of students in accounting 102 were male. In addition, in accounting principles 101, 22% of students repeated the course and 29% were in the literary stream. In accounting 102, 21% repeated the course and 35% were in the literary stream. Finally, average number of credit hours taken was about 35 in 101 and 52 in 102 which indicates that

students taking accounting 101 are in their first year and those taking 102 are in their second year.

Table 4 reports Spearman correlation statistics and the significance levels for the variables included in the regression models. It is apparent that cumulative GPA (CUM) is significantly and positively correlated with both performance in accounting principles 101 and 102. Moreover, school grade and major are significantly and positively correlated with performance in accounting principles 101 and 102. Additionally, grade in accounting principles 101 is significantly and positively correlated with performance in accounting principles 102. However, credit hours completed, repetition of the course and stream are found to be significantly and negatively correlated with performance in accounting 101 and 102. Students' major and gender do not appear to be consistently associated with performance in accounting principles 101 and 102.

Table 4. Spearman correlation matrix for regression variables.

1. Accounting Principles 101								
	MAJOR1	CUM1	GENDER1	CREDIT1	REPEAT1	AVG1	STREAM1	
GRAP1	.21*	.56*	.25*	-.29*	-.21*	.23*	-.34*	
MAJOR1		.02	.19*	-.51*	-.20*	.11**	-.17**	
CUM1			.16**	-.19*	-.39*	.21*	-.29*	
GENDER1				-.11**	-.005	-.10**	-.14**	
CREDIT1					.48*	.05	.26*	
REPEAT1						-.05	.18*	
AVG1							.13**	
2. Accounting Principles 102								
	MAJOR2	CUM2	GENDER2	REPEAT2	AVG2	STRFAM2	CREDIT2	GRAP1
GRAP1	.25*	.60*	.07	-.23*	.20**	-.40*	-.41*	.66*
MAJOR2		.10	.17	-.10	.00	-.13**	.34*	.13**
CUM2			-.10	-.36*	.20*	-.36*	-.47*	.57*
GENDER2					.01	.20*	.48*	-.20*
CREDIT2						-.07	-.01	.20**
REPEAT2							.35*	-.27*
AVG2								-.33*

* Significant at 0.001 level.

** Significant at 0.05 level.

In addition, Table 4 shows significant correlations among the independent variables. For example, in accounting principles 101, cumulative GPA and credit hours completed are positively correlated with stream at high school while cumulative average is negatively correlated with stream. However, credit hours completed and repetition of the course are significantly and positively correlated. In addition, repetition of the course has a significant and negative correlation with cumulative average.

In accounting principles 102, credit hours taken are found to be significantly and positively correlated with repetition of the course. Stream at high school is negatively and significantly associated with cumulative GPA. In addition, grade in accounting principles 101 is significantly and positively associated with cumulative GPA. The existence of these correlations lead the researchers to investigate the effect of multicollinearity.

Multicollinearity

SPSSx regression procedure was used to estimate the two equations. In SPSS x regression procedure various steps are taken to warn the researchers about the existence of multicollinearity. Before an independent variable is entered into the estimated equation, its tolerance with other independent variables already in the equation is calculated. Therefore, the tolerances of all the explanatory variables in the equation are recomputed at each step. If either the tolerance of the explanatory variable or the tolerance of any explanatory variable already in the equation is less than 0.01, a warning is issued and the explanatory variable is not entered. In our estimation for the two regression equations we did not get such a warning. Therefore, the regression results reported in Table 5 do not suffer from multicollinearity problems.

Regression Result

The results of multivariate regression analysis of equations (1) and (2) are reported in Table 5. Standardized beta coefficients⁽³⁾, coefficients of the independent variables, t-values and probability levels are reported for each independent variable in the two equations. The adjusted R^2 , F-value and Durbin-Watson test for each estimated regression are also reported [18 and 19].

(3) Standardized beta coefficient = coefficient of the variable multiplied by its standard deviation divided by the standard deviation of the dependent variable. This was reported because the actual magnitude of the coefficient depends on the units in which the variables measured. So it is not a good indicator of the relative importance of variables. The standardized beta coefficient is a better indicator of relative importance of variables because it expresses the coefficient of all independent variables in standardized (z-score) form.

Table 5. Regression results for Equations (1) and (2).

Independent variables	Accounting principles 101 dependent variable: GRAPI (N = 283)		Accounting principles 102 dependent variable: GRAPII (N = 219)	
	Standardized coefficient	Coefficient	Standardized coefficient	Coefficient
CUM	0.49 (8.97)***	0.94 (8.97)***	0.27 (4.35)***	0.53 (4.35)***
MAJOR	0.09 (1.67)*	2.92 (1.67)*	0.12 (2.47)***	4.47 (2.47)***
STREAM	-0.13 (-2.6)***	-4.40 (-2.6)***	-0.16 (-3.12)***	-4.94 (-3.12)***
GENDER	0.13 (2.56)***	4.99 (2.56)***	0.80 (1.71)*	2.84 (1.71)*
AVG	0.11 (2.16)**	0.27 (2.16)**	0.60 (1.25)	0.14 (1.25)
CREDIT	-0.14 (-2.34)**	-0.01 (-2.34)**	-0.04 (-0.63)	-0.02 (-0.63)
REPEAT	0.10 (1.72)*	3.66 (1.72)*	0.01 (0.23)	0.45 (0.23)
GRAPI	-	-	0.43 (7.60)***	0.50 (7.60)***
CONSTANT	-	-26.55 (-2.40)**	-	-20.53 (-1.81)*
Model statistics				
Adj. R ²	0.40		0.55	
F-value	27.50***		34.72***	
D-W test	1.84		1.76	

Note: t – value in parentheses under each coefficient.

* significant at .10 level (two-tailed test).

** significant at .05 level (two-tailed test).

*** significant at .01 level (two-tailed test).

The regression results in Table 5 suggest the following:

First: There are strong positive linear relationships between cumulative average (CUM), gender and major and students' performance in accounting principles 101 and 102. In this regard, Dockweiler and Willis [1] and Hicks and Richardson [2] did

not find a significant relationship between cumulative GPA and exam scores. Furthermore, students in the scientific stream at high school performed better than those in the literary stream in both accounting principles 101 and 102. This may suggest that the scientific stream suits the accountancy major more than the literary stream.

Second: Grade point average at high school (AVG) and repetition of 101 or 102 (REPEAT) are significantly and positively correlated with performance in accounting principles 101 but they are not significant in accounting principles 102. The number of credit hours taken at the university (CREDIT) has a slight negative impact on performance in the two courses, it is significant in accounting principles 101 but not so in Accounting principles 102. This negative relation could be explained by the fact that the two courses are required courses for all majors at the Faculty of Economics and Administrative Sciences and they are supposed to be taken in the first year. Good students take these two courses during their first year and average students postpone them on the belief that their performance may not be satisfactory in such courses.

Third: The performance in accounting principles 101 (GRAPI) is the most significant determinant of performance in accounting principles 102. This is expected because if a student does well in accounting 101, then this will be reflected in his performance in accounting 102.

Fourth: Given that the two sets of data used in our regressions are cross-sectional data, the two estimated regression models explain a very significant portion of the variation across all students in both accounting principles 101 (Adj. $R^2 = 0.40$ and F value = 27.5) and accounting principles 102 (Adj. $R^2 = 0.55$ and F value = 34.72). This means that the independent variables together explain 0.4 and 0.55 of the dependent variables variations (performance in accounting principles 101 and 102 respectively). Such results especially the values of adjusted R^2 are a good indication of the explanatory power of the two estimated regressions. Moreover, the D-W test for the two estimated regression models may show no sign of serial correlation problem in both regression models. Doran *et al.* [16] attained R^2 of 0.30 for accounting 101 and 0.55 for accounting 102. In addition, Eskew and Faley [14] attained R^2 of 0.54 in accounting principles I. This slight difference in the explanatory power of the first model is probably due to differences in the general level of measurement that exists across the two studies although both studies use data about all class sections taught in that semester.

Summary and Conclusion

The results of this study suggest that the cumulative GPA before taking accounting principles 101 is the most important determinant of students' performance in

accounting principles 101 while grade in accounting principles 101 is found to be the most important determinant of students' performance in accounting principles 102. These findings support the proposition that past academic performance is a significant determinant of future academic performance in accounting principles courses. Moreover, stream at school was found to be an important factor affecting students' performance. There is also an indication that the more credit hours accomplished, the worse student performance is in accounting principles 101 but not in 102. However, there is an indication that gender and major affect performance in accounting 101 and 102. It is also found that grade at high school (AVG) is an important determinant of performance in accounting principles 101 but not in 102.

The findings of this study are, in some way, consistent with those of Doran *et al.* [16] (except for some differences due to the factors included in each study). The implications of this study are that the findings are relevant to students, staff members at the department of accounting at Yarmouk University since they indicate some prudent courses of action to be taken by them. Regarding the Department of Accounting at Yarmouk University, it would be better to base admission policy on measures of student performance (e.g. grade in accounting principles and grade at high school). Therefore, it may be more efficient for the student to choose his major after passing a preparatory year in the college than to be admitted based on school grade. As far as staff members at the department of accounting are concerned, they should examine those academic measures mentioned above when counseling students so that those students who rank high on such measures relative to their peers should be encouraged to continue taking accounting courses, while those who rank low on such measures can be counseled toward other fields where they are more likely to succeed. With regard to students, Doran *et al.* [16] suggested that students can benefit from a critical self-evaluation of their individual strengths and weaknesses to determine whether a match exists between their abilities and the factors associated with success in accounting courses.

Finally, the findings of this study should be considered in the light of its limitations. First, external validity is limited by the fact that all students were from one university. This means that the results apply only to Yarmouk University students who participated in the study. While there is no evidence to indicate that students taking accounting principles at Yarmouk University are not representative of the general population of students taking accounting principles 101 and 102 in Jordan, the generalisability of the results must await the outcome of future research employing different samples of students taking accounting principles courses in all Jordanian universities.

Second, the sample was limited to students who took accounting principles 101 and 102 in the first term 1991/1992. Other terms and other accounting courses were not included due to time and costs involved in extending the investigation further. Results may differ if other courses and other terms were included in the study.

Third, the study examined the effect of certain factors on students' performance in accounting principles courses. However, other factors such as instructor and lecture time have not been examined. Therefore, for further research, these factors and others such as age of student, place of birth, ethnic background, occupation and education of parents, family income, and psychological characteristics that contribute to accounting education could be examined.

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العوامل التي تؤثر على أداء الطلبة في مواد المحاسبة الأولى في الجامعة

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ملخص البحث. تهدف هذه الدراسة إلى تحديد العوامل التي تؤثر على أداء الطلبة في مادتي مبادئ المحاسبة (١٠١) و(١٠٢) في جامعة اليرموك. وقد شملت الدراسة جميع الطلبة الذين سجلوا هاتين المادتين خلال الفصل الدراسي الأول ١٩٩٢/١٩٩١. بلغ عدد الطلبة في المادتين (٢٨٣) و(٢١٩) على التوالي. وقد تم الحصول على البيانات اللازمة من دائرة القبول والتسجيل وقسم المحاسبة في الجامعة.

وباستخدام تحليل الانحدار تبين أن المعدل التراكمي والجنس والتخصص في الجامعة وفرع الدراسة الثانوية (علمي أو أدبي) عوامل مهمة تؤثر على أداء الطلبة في المادتين. كما تبين أن درجة الطالب في مبادئ المحاسبة (١٠١) له تأثير على أدائه في مادة مبادئ المحاسبة (١٠٢). كما وُجدت علاقة سلبية وذات دلالة إحصائية بين أداء الطلبة في مبادئ المحاسبة (١٠١) وكل من معدل الطالب في المدرسة (التوجيهي) وتكرار دراسة المادة في الجامعة. أما عدد الساعات المعتمدة التي أكملها الطالب في الجامعة فكان ذا علاقة سلبية مع أداء الطلبة في كل من المادتين وكانت العلاقة ذات دلالة إحصائية في مبادئ المحاسبة ١٠١ فقط.