

## Conference Paper

# Comparative Analysis of Students in Terms of Gender, Background of School, Student Enrollment (A Case study: Vocational Accounting Study Program)

**Birawani Dwi Anggraeni**

Laboratory of Accounting and Audit, Vocational Accounting Study Program, Universitas Indonesia

## Abstract

In this study, the authors have tried to analyze student-learning outcomes in terms of student's gender, educational background in previous school and student force. This study compares the learning outcomes reflected in the Grade Point Average (GPA) obtained by students from three independent variables. The data used in this study is secondary data taken from the academic system. The student population in accounting study program, about 516 students, became the sample in this research. Analyzed the comparative test using the *t*-test for gender and one-way ANOVA test for testing on the background of the school's department and student enrollment. The results of this study indicates a difference in learning outcomes between female and male students, but there is no difference between the school's department and the student enrollment.

Corresponding Author:  
Birawani Dwi Anggraeni  
b.dwi@ui.ac.id  
beerawani@gmail.com

Received: 8 June 2018  
Accepted: 17 July 2018  
Published: 8 August 2018

Publishing services provided by  
Knowledge E

© Birawani Dwi Anggraeni. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the 2nd ICVHE Conference Committee.

**Keywords:** learning outcomes, gender, background of school, student enrollment

## 1. Introduction

Accounting one of the majors that are in social clusters of humanities with social background. But it is possible that students who take accounting majors come from prospective graduate students IPA. Therefore, this research tries to analyze the relevance of educational background in high school (SMA) with the success of first grade students in Vocational Education Program of Accounting Study Program. Accounting not only focuses on mere calculation but also on reasoning that requires logic. Understanding accounting courses affect the ability of accounting students while working. Differences in the level of student understanding may be related to factors such as the background of the majors in previous school and gender. Differences in the level of understanding of accounting can also be based on the basis of majors when students in previous schools.

## OPEN ACCESS

Accounting education is a combination of understanding of logic and basic skills in the field of recording. Students who have a background of social major have had prior knowledge that has been studied during school while students of science majors have good logic ability so that this research tries to know whether there are differences of students with different background influence the achievement of measured learning through student's GPA. It is distinguished per years of enrollment students. For the first year of generation there may be a difference, but for the second and third batches there may be no difference because there is an adaptation process during accounting education.

The success rate of students is measured using academic achievement at college namely GPA (Grade Point Average). Differences in the student's educational background allow for an influence on academic achievement.

#### Scope and Research Problems

The scope of the study is limited:

1. The success of student learning is measured from the student's cumulative achievement index (GPA)
2. Accounting Students at Accounting Study Program University of Indonesia

The research problems analyzed in this research are:

1. The study compared the learning outcomes of female students with male students
2. The study compared the students' learning outcomes derived from IPA, IPS and others (SMK, etc.)
3. The study compared the learning outcomes between first year students (2016), second year (2015) and third year (2014)

## 2. Theoretical Review

According to Amalita and Kurniawati (2013), performance is a work that can be achieved by someone who can describe the quality of output. IPK also describes the performance of a university, because the GPA is the result of educational components obtained by students during the course lecture. The result of the research shows that the value of UN Mathematics of male students coming from state Senior High School, and the entry point through SNMPTN give significant influence to the increase of IPK.

Related to learning outcomes, female students are positioned as individuals who have a better level of accounting understanding than male students. [25]. Byrne and Flood (2008) obtained research results that gender was not significantly associated with achievement measurement. While the research Jelas & Dahan (2010). Doing research using secondary data and primary data. Secondary data shows that there is a tendency for female students to be more academically successful and to confirm research conducted by developing countries. Primary data indicate that female learning characteristics contribute substantially to their academic achievement. According to Garkaz et.al. (2011) that there is a significant difference between male and female academic achievement, that is, women have better academic achievement than men. The study also conducted by Aidia & Marina (2014) also said female students have an average GPA better than male students. Arthur and Everaert (2012, in [6]) conducted an investigation to find out whether gender affected student achievement by using multiple choice tests and constructed-response questions. The results show that women are superior to men and men are better at performing multiple choice tests than constructed-response questions. According to Muda et.al. (2013), his research results at University Technology MARA, Malaysia show that there is a significant difference between the proportion of men and women to pass the test. The results show a significant relationship between gender and ACC106 (Introduction to Financial Accounting) course achievement. Based on research from (Gammie, Paver, Gammie, & Duncan, 2003) There was a strong indication that the males prioritized their lives during their placement year in a different way to the females, and this was exacerbated by the fact that the females were more mature than the males in relation to their time male management skills.

In Indonesia, in high school (SMU) consists of two majors namely science majors and social majors. Science majors emphasize the scientific method that prioritizes logic in natural science education such as Physics, Biology, and Chemistry while social majors focus more on social science such as history, accounting and others. The determination of the department in the school starts in class X, with the separation of the curriculum in the two departments so students experience the differences of experience that affect the readiness of students in following higher education, this is said by Gagne (1968) on Oentari research (2004).

In the Oentari (2004) study explaining the existence of identical elements and associations in response stimuli that have been studied in high school will facilitate the transfer of learning that is positive in the learning process of students (Ausubel, Novak & Hanesian, 1978 and Lefrancois, 1985). Educational backgrounds are experiences that

a person has gained from an education program that was followed in the past according to a study by Dick and Carey (1990). In research conducted by Dick and Carey (1990) said that the educational background is experience-Experience gained from educational programs that followed in the past

According to a research conducted by Turner (1979) on Oetari (2014) says a person will experience a process of assimilation with new substances studied resulting in differences in adaptation of cognitive structures. According to Kusumaningsih (2010) in Aidia & Marina (2014) learning achievement is a level of ability one has in digesting information obtained in the learning process. Based on this understanding it can be concluded that the achievement of learning as academic achievement that Academic Achievement Index (GPA) that can show the success rate of students. According to Garkaz et al. (2011) that academic achievement has become an important issue for higher education institutions and academic achievement investigations are also important for universities, faculty, and students, as well as academic achievements can be effective in making policies toward student admissions and teaching style changes. Academic achievement is influenced by many factors, either directly, or indirectly. According to Graetz 1995 in [4], the success of student education relies heavily on the social status of parents or guardians in society. The same is approved by Considine and Zappala (2002). According to Minnesota (2007 in [4], high academic achievement depends on the academic achievement of siswayang who has graduated. Research by Byrne and Flood (2008) shows that previous academic achievement is the most important variable in explaining academic achievement of accounting students at Irish University. These findings have a serious impact on the admissions policy, and are at least related to the accounting study program. According [4], the most influential factors on academic achievement are age, parent/guardian's income, and number of hours of study. The general assumption that students who demonstrate higher academic achievement at the beginning of class or lecture also perform better in the upcoming academic year at the undergraduate level. Several studies have been developed by researchers in particular to explain the results of past academic performance to have a significant effect on future performance [7, 20, 22] extracted from Eskew & Robert (1988).

### 3. Research Methodology

This study aims to compare the independent variables to the dependent variable.

TABLE 1: Operationalization variable.

Variable	Indicator	Scale	Measurement Scale
Gender (X1)	· Female	· Female = 0	Nominal
	· Male	· Male = 1	
Majoring in school (X2)	· Science Major	· Science Major = 1	Nominal
	· Social Major	· Social Major = 2	
	· Others (SMK)	· Others = 3	
Year of student enrollment (X3)	· First Year 1 – 2016	· First Year 1 – 2016 = 3	Nominal
	· Second Year 2 – 2015	· Second Year 2 – 2015 = 2	
	· Third Year 3 – 2014	· Third Year 3 – 2014 = 1	
Learning Outcomes (Y)	GPA		Ratio

Population in this research is all student of Accounting Study Program year force 2014–2016 amounted to 516 student which all become sample of data in this research. Source of data used is secondary data, that is information obtained from academic information system (SIAK-NG) UI. The population studied are students of the first year of Accounting Study Program (2016), second year (2015) and third year (2014).

#### 4. Research Hypothesis

H1:	There is a difference between female students and male students against the student's GPA
H2:	There is a difference between students who come from science majors, IPS and Others against student's GPA
H3:	There is a difference of year of student enrollment to the average of Student's GPA

#### 5. Research Result

The result of descriptive analysis shows that the students of Study Program obtained Minimum GPA of 2.52 and the highest GPA of 3.93.

Based on Table 2, the data obtained female respondents as much as 331 students from 516 students that is equal to 64.1%. Data of male students as many as 185

TABLE 2: Description of student accounting study program.

Variable	Indicator	Frequency	Percentage (%)
Gender	Female	331	61.1
	Male	185	35.9
Majoring in school	Science Major	192	37.2
	Social Major	300	58.1
	others	24	4.7
Year of student enrollment	First Year – 2016	146	28.3
	Second Year – 2015	152	29.5
	Third Year – 2014	218	42.2

students from 516 students that is equal to 35.9%. In addition, based on the aforementioned data, the students who have 192 students of science background are 37.2%, students with background of IPS 300 students or 58.1% and the rest who have backgrounds other than Science and IPS of 24 students or 4.7%. Based on the aforementioned data, the number of students year three (2014) as many as 214 students (42.2%), student of class of 2015 as many as 152 students (29.2%) and first year students 2016 as many as 146 students (28.3%).

TABLE 3: Description of student of accounting study program—cross tabulation.

Year of student enrollment	Gender	Majoring in school			Total
		Science	Social	Others	
First year – 2016	Female	45	50	5	100
	Male	12	33	1	46
	<b>Total</b>	<b>57</b>	<b>83</b>	<b>6</b>	<b>146</b>
Second year – 2015	Female	42	45	1	88
	Male	16	42	6	64
	<b>Total</b>	<b>58</b>	<b>87</b>	<b>7</b>	<b>152</b>
Third Year – 2014	Female	53	82	8	143
	Male	24	48	3	75
	<b>Total</b>	<b>77</b>	<b>130</b>	<b>11</b>	<b>218</b>

## 6. Normality Test

Normality test is done by one sample Kolmogorov–Smirnov method. To determine the normality of the data, it can be read at a value of significance. Basic decision-making in the normality test, that is, if the value of significance greater than 0.05 then the data is normally distributed and vice versa.

TABLE 4: Test of normality Kolmogorov–Smirnov Test.

Variable	Asymp Sig 2-tailed
Gender	0.344
Majoring in school	0.386
Year of student enrollment	0.228

Based on testing using SPSS software, the value of significance obtained by the three variables above the value of  $\alpha$ , ( $> 0.05$ ), it can be concluded that the data is normally distributed. Therefore, in this study will use the analysis of parametric analysis.

## 7. Homogeneity Test of Variants

Homogeneity test aims to see the categories in the variables have an equivalent variant. If the value of  $p > 0.05$  then  $H_a$  is rejected (homogeneous). The result of testing for homogeneity test through SPSS software then obtained the following results:

TABLE 5: Homogeneity test variable.

Variable	Significance Value
Gender	0.499
Majoring in school	0.378
Year of student enrollment	0.278

So Based on the results in Table 5, the three independent variables have a significance value greater than 0.05 then have the same variant or in other words is Homogen.

## 8. Different Test Average

Based on the classical assumption test that is normality and homogeneity test, so this research use parametric statistic test. The parametric determinants of this study are as follows:

1. The number of samples in this study more than 30 samples
2. Variables that are measured (dependent variable) in the ratio of the GPA, distinguishing variables in the form of categorical (nominal), namely gender variables, school background variables and student entry force variables.
3. Variable terdistribusi normal

The parametric analysis used for testing the mean difference with the *t*-test is mutually independent and the one-way ANOVA test. Free *t*-test is used for comparison analysis of average GPA with student's gender because in that variable there are only two groups that is women and men. One-way ANOVA tests were used for comparison analysis of average GPA on school background variables and student enrollment in more than 2 groups.

### 8.1. Gender

The first hypothesis in this study to determine whether there are differences in the average GPA between female students and male students in Accounting Studies students.

TABLE 6: Different test results *t* gender against the average GPA of the student.

Gender	N	Mean
Female	331	3.3302
Male	185	3.1648
Results of Data		
Mean Difference	0.16545	
Value <i>t</i>	7.309	
Sig (2-tailed)	0.000	

The result shows that the obtained statistical value is 7309 and the *p*-value of the test is seen from the value of sig (2 tailed) or *p*-value obtained by 0.000 value



where the value is smaller (<) of 0.05, then the difference is statistically significant or significant in probability 0.05. The results based on the aforementioned table shows female students have a better average GPA of 3.33302 compared to male students with an average GPA of 3.1648. The magnitude of the mean difference or the mean of the two groups is 0.16545 in the mean difference column where the female student group is higher than the male student's GPA.

## 8.2. Majoring in school

The second hypothesis in this study to determine whether there are differences in learning outcomes between students who come from science, IPS and other majors (SMK etc.). In this test there are three groups that are independent of the parametric test so that the test uses one-way ANOVA test.

TABLE 7: One-way ANOVA test result background school accounting study program.

Majoring in School	N	Mean
Science (1)	192	3.2769
Social (2)	300	3.2668
Others (3)	24	3.2733
Result of Data		
Significance	0.378	
F count	0.090	
<i>df between groups</i>	2	
<i>df within groups</i>	513	
F Table ( <i>excel</i> )	3.013295	

The test result with one way ANOVA test resulted the significance value of 0.378 where the value is greater than 0.05, it can be concluded that it meets for ANOVA test requirement. Further analysis of the ANOVA test by considering the value of F arithmetic is 0.090 where *df between groups* 2 is the number of variables minus 1, and the value of *df within groups* of 513 obtained from the number of samples minus the number of groups of three then obtained F table using excel obtained for 3.013295. If compared then the value of F table 3.013295 greater than the F count 0.090 other than that other analysis can also be seen significant value of 0.378 is greater than 0.05. So from the two analyzes in this study can be concluded for acceptable hypothesis testing.

In this hypothesis can be concluded that there is no difference between students who come from science majors, IPS and others to the average student's GPA.

### 8.3. Year of student enrollment

The third hypothesis in this study is to find out whether there are differences in learning outcomes between first year students (2016), second year (2015) and third year (2014). In this test there are three groups that are independent of the parametric test so that the test uses one-way ANOVA test.

TABLE 8: One-way ANOVA test result: An entry level for students of accounting study program.

Year of student enrollment	N	Mean
First Year – 2016	218	3.2494
Second Year – 2015	152	3.3128
Third Year – 2014	146	3.2592
<b>Result of Data</b>		
Significance	0.278	
F count	2.912	
<i>df between groups</i>	2	
<i>df within groups</i>	513	
F Table ( <i>excel</i> )	3.013295	

Test results with one way ANOVA test resulted a significance value of 0.278 where the value is greater than 0.05, it can be deduced that it meets for ANOVA test requirements. Further analysis of ANOVA test taking into account the value of F arithmetic is 2,912 where *df* between groups 2 is the number of variables minus 1, and *df* within groups value of 513 obtained from the number of samples minus the number of groups of three then obtained F table by using excel obtained for 3.013295. If compared then the value of F table 3.013295 greater than F count 2,912 besides that other analysis can also be seen significance value of 0.278 which is greater than 0.05. So from two analyzes in this study can be concluded for acceptable hypothesis test. In this hypothesis it can be concluded that there is no difference between student enrollment either for first year students, second year and third year.

## 9. Conclusions and Limitation of Research

This study aims to obtain empirical evidence on the difference test between gender variables, school background and student enrollment toward student learning outcomes reflected on student's GPA.

Based on the results of research conducted on students of Accounting Study Program Vocational Education Program UI, obtained the conclusion that there is a difference between female students with male students where female students have a better average IPK. This is in line with previous research as in the Jelas & Dahan (2010) study, Garkaz et.al. (2011), Aidia & Marina (2014). In the test for school background variables and student force on the average GPA can be taken conclusion does not occur difference of student's average GPA. In the Wally-Dima & Mbekomize study, 2013 female students are better at academic achievement as they attend more classes and tutorials, seek guidance to their lecturers and participate more in class than male students

In addition, female students believe that if they perform better than male students because they have better learning ethics and male students perform poorly because they are less enthusiastic about the study. Males Failed to balance social life and academic work while at school. However, in Okafor & Egbon (2011) research conducted in Nigeria, there is no difference in academic performance between male students and female students, this is due to Nigeria including developing countries where male domination will be destroyed by women so that academic value does not affect.

According to research Pirie (2001) female students are more mature and more responsible in their timing such as learning at lunch. Some of the male students write only during deadlines and some claim to have to work all night to complete their report.

Students who come from science majors have adapted to adapt themselves slowly to receive new stimuli that are different from those they have learned during school and gradually organize inputs equivalent to the cognitive level of students so that students who come from science majors, social and others there is no difference in results Learning achieved.

This study is limited to UI accounting courses where these results cannot be generalized in general. This study does not consider other factors to get a good GPA score such as the wishes of students to the field of accounting, how the teaching of lecturers that impact on student interests. In addition, the data used in this study is secondary data obtained from the academic system, it would be better if this study also uses other

methods in data collection such as interviews to find out more how to learn female students.

## References

- [1] Agustina, & Yanti, D. M. (2015). Analisa Faktor-Faktor yang Mempengaruhi Tingkat Pemahaman Akuntansi Mahasiswa Jurusan Akuntansi STIE Mikroskil Medan. *Wira Ekonomi Mikroskil*, Vol.5, 11-20.
- [2] Aidia, M. A., & Marina, D. (2014). Prestasi Akademik Semester Pertama dan Nilai Pengantar Akuntansi 1 Mahasiswa Jurusan Akuntansi FEUI ditinjau dari Jenis Kelamin, Latar belakang Pendidikan, Jalur Penerimaan Perguruan Tinggi dan Bidikmisi. Depok: Program Ekstensi Akuntansi FEUI.
- [3] Aldin, M. M., Nayebzadeh, S., & Heirany, F. (2011). The Relationship between background variables and the Educations Performance (Case study: Accounting MA Student). 2nd International Conference on Education and Management Technology. Singapore: IACSIT Press.
- [4] Ali, S., Haider, Z., Munir, F., Khan, H., & Ahmed, A. (2013). Factors Contributing to the students Academoc Performance: A Case Study of Islamia University Sub Campus. *American Journal of Educational Research*, 283-289.
- [5] Amalita, N., & Kurniawati, Y. (2013). Model Regresi Dummy dalam Memprediksi Performansi Akademik Mahasiswa Jurusan Matematika FMIPA UNP. *Prosiding Semirata FMIPA Universitas Lampung*, (hal. 387-391). Lampung.
- [6] Apostolou, B., Dorminey, J., Hassel, J., & Watson, S. (2013). Accounting Education Literature review. *Journal of Accounting Education*, 107-161.
- [7] Astin, A. (1971). *Predicting Academic Performance in COLlege*. New York: New York: Free Pres.
- [8] Baldwin, B., & Howe, K. (1982). Secondary-level study of accounting and subsequent performance in the first college course. *The Accounting Review*, 619-626.
- [9] Byrne, M., & Flood, B. (2008). Examining the Relationship among Background Variables and Academic Performance of first Year Accounting Student at an Irish University. *Accounting Education*, 202-212.
- [10] Considine, G., & Zappala, G. (2002). *Factors Influencing the Educational Performance of Students From Disadvantages Background*. Sydney: University of New South Wales.
- [11] Dick, W., & Carey, L. (1990). *The Systematic design of Intruction*. New York: Harper Collins.

- [12] Dima, L. W., & Mbekomize, C. J. (2013). Causes of Gender Differences in Accounting Performance Perspective. Canadian Centre of Science Education.
- [13] Eskew, R. K., & Faley, R. H. (1988). Some Determinants of students Performance in the first College-Level Financial Accounting Course. *The Accounting Review*, 63(No.1), 137-147.
- [14] Gagne, R. (1985). *The Conditions of Learning and Theory of Instruction*. New York: Holt, Rinehart & Winston.
- [15] Gammie, E., Paver, B., Gammie, B., & Duncan, F. (2003). Gender Differences in Accounting Education: An Undergraduate Exploration. *Accounting Education*, 177-196.
- [16] Garkaz, M., Banimahdo, B., & H, E. (201). Factors Affecting Accounting Students's Performance: The Case of Student at the Islamic Azad University. *International Conference on Education and Educational Psychology*, (hal. 122-128).
- [17] Graetz, B. (1995). Socio -economic status in education research and polycy in Jhon Ainley et al. Canberra: Socio-economic Status and School Education DEET/ACER.
- [18] Jelas, Z., & Dahlan, H. (2010). Gender and Educational Performance: The Malaysian Perspective. *Procedia Social and behavioral Sciences*, 720-727.
- [19] Kusumaningsih, Y. (2010). Faktor-Faktor Utama yang berpengaruh terhadap prestasi belajar mahasiswa pascasarjana penerima S2 daam negeri BPK RI. Tesis. Depok: Fakultas Ekonomi Universitas Indonesia.
- [20] Lavin, D. (1965). *The Prediction of Academic Performance*. New York: Russell Sage Foundation.
- [21] Muda, S., Hussin, A., Johari, H., Sapari, J., & Jamil, N. (2013). The Key Contributing Factors of Non Accounting Student's Failure in the Introduction to Financial Accounting COurse. *Procedia-Social And Behavioral Sciences* 90, 712-719.
- [22] Odell, C. (1927). *Predicting the Scholastic Success of College Freshmen*. Urbana Illinois: University of Illinois.
- [23] Okafor, C. A., & Egbon, O. (2011). Academic Performance of Male versus Female Accounting Undergraduate Students: Evidence from Nigeria. *Higher Education Studies*, 1(1), 9-19.
- [24] Pirie, M. (2001, January). How Exams are fixed in Favour of Girls. *The Spectator* 20.
- [25] Susanti, & Ariyanto, S. (2013). Analisis Pengaruh Gender, Asal Sekolah dan Kemampuan Manajemen Waktu Terhadap Prestasi Akademik Mahasiswa Akuntansi Tahun Pertama di UBN. Jakarta: Universitas Bina Nusantara.

- [26] Tjandra, O., & Soekamto, T. (2004). Pengaruh Latar Belakang Pendidikan Terhadap Keberhasilan Belajar Mahasiswa. Studi Kasus di Fakultas Kedokteran Universitas Tarumanagara. *Jurnal Pendidikan Tinggi Universitas Tarumanagara*, 34-46.
- [27] Turner, J. (1979). *Psychology for the classroom*. London: Meuthuen.
- [28] Wally-Dima, L., & Mbekomize, C. J. (2013). Causes of Gender Differences in Accounting Performance: Student's Perspective. *International Education Studies*, 6(10), 13-26.
- [29] Wijayanti, Agustin, G., & Rahmawati, F. (2016). Pengaruh Jenis Kelamin, IPK dan Semester Terhadap Literasi Keuangan Mahasiswa Prodi S1 Ekonomi Pembangunan Universitas Negeri Malang. *JPE*, 102-115.