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The Quantitative and Qualitative Analysis of Students Learning Outcomes Acording to Student Admission Line of Biology Education Program FMIPA UNNES

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Info Article	Abstract
	PP RI no. 66 of 2010 article 53B (1) and Permendiknas no. 34 of 2010 article 3 (1) state that a higher education unit which is organized by the government is required to recruit new undergraduate students through a national admission of at least 60% of the number of new students who are accepted for each Study Program. The objective of this study was to analyze the differences in student learning outcomes according to the admission line of Biology Education Program students of FMIPA UNNES. This study used sequential explanatory design combination method. The population of this study was the students of Biology Education Study Program of FMIPA UNNES class of 2013 to 2016. The quantitative samples were chosen using total sampling method and the qualitative samples were chosen using purposive sampling method. In this study, the students learning outcomes were in the form of GPA. The data of this study were collected using document study method, questionnaire, and interview. The data were then analyzed using descriptive technique percentage, two way anova, regression, and qualitative analysis of Miles & Huberman (Sugiyono, 2011). The results showed that the average of students' GPA of SNMPTN was 3.32, the average of students' GPA of SBMPTN was 3.29, and the average of students' GPA of SM was 3.25. The *sig* value in the two way anova test to examine the difference of GPA according to the admission line is caused by the level of family, campus, society environment, and learning motivation were 0.834, 0.322, 0.810, and 0,246> 0.00 respectively which means there was no significant differences in GPA among students of the three admissions line. The result of R^2 value on the regression analysis showed that the most contributing variable to the GPA were the campus environment (86.1%), the learning motivation (82.2%), the family environment (76.7%), and the least was the level of community environment (74.8%). It can be concluded that there is no significant difference of students learning outcomes according to student admission line in Biology Education Program of FMIPA UNNES caused by the level of family, campus, society, and student's motivation.

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INTRODUCTION

Higher education institutions still face difficulties in accepting appropriate students (Agrey & Lampadan, 2014). The 21st century forces each university to improve the student selection program (Kelly & Koonce, 2012). According to Usman (2015) the new student recruitment has changed and improved over the time. The improvement was conducted in order to increase the quality and the effectiveness of education system in Indonesia. Every change in the selection of freshmen admissions is always much debated. The topic of debate revolves around accuracy and fairness.

Suryabrata in Amirulloh (2014) states that there are at least four main reasons why universities organize selection in admission of freshmen candidates. First, education in universities is a preparation for future leaders of the nation as it requires a certainty that prospective students who will study in college have good quality. Second, the opportunity to study in college is limited, so it is expected to be given to potential candidates and the most deserve it. Third, the selection allows for the selection of talented students. Fourth, higher education opportunity is an expensive thing, so it should be utilized effectively and efficiently.

Based on Article 3 (1) of Government Regulation of Indonesia Republic No. 66/2010 concerning Amendment to Government Regulation No. 17/2010 concerning Management and Implementation of Education and article 53B (1) of Regulation of the Minister of National Education No. 34/2010 on New Student Admission Pattern of Undergraduate Program at Higher Education organized by the Government, states that the higher education units which are organized by the government are compulsory to recruit new students of undergraduate programs through a national admission pattern of at least 60% of the number of accepted freshmen for each study program. Referring to the Regulation of the Minister of National Education No. 34/2010, the admission of freshmen of state universities can be grouped into three lines: (1) National Selection of State University Entrance (SNMPTN), (2) Joint Selection of State Universities Entrance (SBMPTN), and (3) Independent Selection (SM) which implementation is entirely managed by each state university.

SNMPTN selection is done through the three indexes assessment, namely student index, school index, and region index. Student index will be assessed through some indicators; the grade of school report card, the completeness of the grades and the achievement of lesson grade than the Minimum Completeness Criteria (KKM), the grade of National Exam, and additional achievements. School Index will be assessed through the indicator of the average grade of National Exam, the grade of alumni SBMPTN, school accreditation, and the number of students who are accepted in the state universities through the SBMPTN and SNMPTN lines in the previous year. The regional index is intended to pay attention to the principle of equity (Usman, 2015). The selection of SBMPTN line is conducted simultaneously by several universities in all regions of Indonesia and coordinated by local committees of each region (Saputra, 2016). The results of this selection are based on the results of the test. The last line for those who fail in the SNMPTN and SBMPTN line is SM line that the implementation is entirely managed by each university.

Based on the observation in the Bureau of Student Academic and Cooperation of UNNES, it was obtained the result that the number of students of Biology Education Study Program of Faculty of Mathematics and Natural Sciences (FMIPA) UNNES class of 2014 who were accepted through SNMPTN were more than the number of students who were accepted through SBMPTN and SM lines. Students who were accepted through the SNMPTN line were 54.29%, SBMPTN was 30.48%, and SM was 15.23%. After being the official students and taking the lectures, the three student groups from different admission lines will get the same treatment and will mingle with each other in the class. Assignments, assessments, courses, and total credits to be completed are similar. Muslimin (2012) states that the learning achievement is not only determined by the availability of learning facilities and infrastructure and the quality of the learning process, but also determined by the quality

of participants who enter. There are several assumptions that the students of SNMPTN and SBMPTN lines are more superior to the students of the SM line who are considered to have lower intelligence levels. This assumption has not been proven by the accurate data. The success of a college student can be known from the GPA. Students who obtain high GPA indicate that they are successful in their learning (Daely *et al.*, 2013).

Based on direct observation to the students of Biology Education Study Program of FMIPA UNNES class of 2014 using questionnaire, some students of SM line have higher GPA than the student of SBMPTN or SNMPTN. There are also some SBMPTN line students who have higher GPA than SNMPTN students. The results of interview with some students can be seen that every student has different factors affecting the learning outcomes. According to Slameto (2010) the factors that affect learning outcomes are divided into two, namely internal factor which is from inside the individual and external factor which is from outside the individual. Based on the description above, it is necessary to conduct a study to analyze the difference of students' learning outcomes according to student admission line caused by the level of family, campus, society environment, and learning motivation.

RESEARCH METHOD

This study used a mixed method research with *sequential explanatory models.* The population of this study were all students of Biology Education Studies Program, Mathematics and Science Faculty (FMIPA) UNNES class of 2013, 2014, 2015 and 2016. The samples for quantitative study were chosen using *total sampling* technique while the samples for qualitative study were chosen using *a purposive sampling* technique towards students with the GPA category of satisfying, very satisfying, and with praise (cum laude). Independent variable in this research was student admissions line.

The level of family environment, campus environment, society environment, and learning motivation were as the intervening variable, while the dependent variable in this study was the Grade Point Average (GPA). The data was collected through documents, questionnaires, and interviews. The quantitative data were analyzed using descriptive percentage, *two-way* ANOVA and regression analysis. This parametric analysis used SPSS *for windows* 21, while the qualitative data were analyzed descriptively according to opinion of Miles and Huberman in Sugiyono (2011).

RESULTS AND DISCUSSION

The GPA of the students of the Biology Education Study Program is presented in Table 1.

Table 1 GPA of the students of the Biology Education Study Program FMIPA UNNES

| Categories	GPA	Percentage (%)			
		2013	2014	2015	2016
Not Passed	0,00 – 1,99	0,00	0,00	1,02	0,00
Satisfy	2,00 – 2,75	1,98	0,99	3,06	0,00
Very Satisfactory	2,76 – 3,05	94,06	87,13	79,59	75,00
With Praise	3,51 – 4,00	3,96	11,88	16,33	25,00

Based on Table 1, most students were in the very satisfactory GPA. The number of students in class of 2016 had highest GPA category (with praise or cumlaude) compared to other force that was 25%. The number of students in the class of 2013 had least number of the cum laude GPA that was only 3.96%. The number of students with cumlaude GPA keep decreasing each semester. This was in accordance with research conducted by Saputra (2016) which stated that the cause of the decreasing of learning achievement in general is due to less understanding to the lectures material in a particular term, the drastic decline occurred in 7th and 8th semester since they cannot finish final project in time.

Table 2 Average GPA of Student of Biology Education Program of FMIPA UNNES according to Student Acceptance Path

Force	Average		
	SNMPTN	**SBMPTN**	**SM**
2013	3,26	3,21	3,17
2014	3,29	3,31	3,25
2015	3,41	3,21	3,11
2016	3,30	3,41	3,46
Average	**3,32**	**3,29**	**3,25**

Based on Table 2, the highest GPA of the students of 2013 they were from SNMPTN line with the average of 3.26, then the students from SBMPTN line had the average of 3.21, and the students from SM had the average of 3.17. Different with previous data, the highest student's GPA of class of 2014 was from SBMPTN line with the average of 3.31, then the students from SNMPTN with the average of 3.29, and students from SM had the average of 3.25. The student of class of 2015 was similar with the student of class of 2013, where the highest GPA was from SNMPTN students, SBMPTN, and SM with the average of 3,41, 3,21 and 3,11. Students' GPA of class of 2016 was the highest of all. The highest GPA in this force came from SM students with the average of 3.46, then SBMPTN students had the average of 3.41, and SNMPTN students had the average of 3.30. From these results, it was proven that not all students came from SNMPTN line had a superior GPA, as well as the SBMPTN and SM line. After calculating the average value from all the forces of 2013 to 2016, the highest average of GPA was came from SNMPTN line with the average of 3.32, then SBMPTN students with the average of 3.29, and SM students with average of 3.25. This study results were different from the study result conducted by Usman (2015) and Saputra (2016) where the students who had the highest GPA were students of the SBMPTN line. These differences perhaps were affected by the sampling. Those previous studies took only one sample that was from students of 2014, whereas in this study the samples were from four forces so that the data obtained were more diverse.

The higher GPA obtained by student from SNMPTN line compared to the other two lines can be understood because they were the best students in their original school (Usman, 2015). SBMPTN Students have higher GPA than SM students since they pass national selection through written test with intense competition, while SM students passed written selection in the narrower area so that the competition was less strictly, in addition the students of this line were those who mostly did not pass through the SNMPTN and SBMPTN lines (Usman, 2015). Besides those things above, the factors that affect student learning was also very possible affect the GPA achieved by students from the three admission lines. According to Slameto (2010) there were two factors that affect the learning outcomes. They were internal factors and external factors.nResult of descriptive analysis of percentage student's family enviromental presented in figure 2.
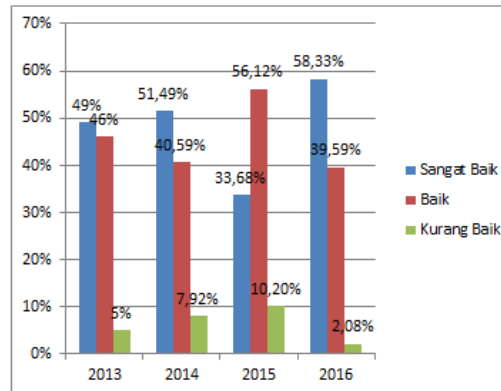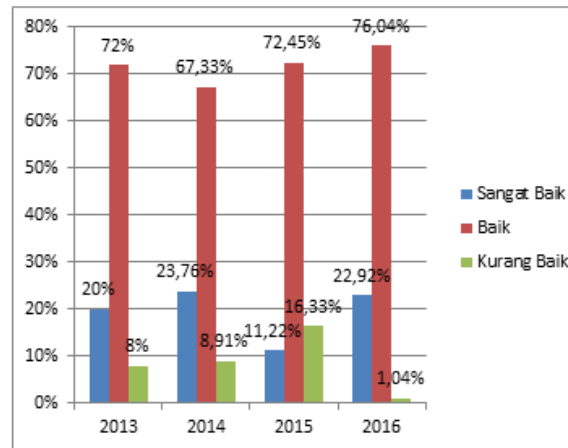
Figure 1 Level of Students' Family Environment

The level of family environment above then averaged according to the student admission line. From the average yield, it can be seen that students from SNMPTN, SBMPTN, and SM had a good family environment level criteria, with the percentage of respectively, were 83%, 82% and 83%. Furthermore, *two-way* ANOVA test to determine the differences in students learning outcomes according to the admission line caused by the level of family environment. The significance value in the ANOVA test was greater than 0.05 that was 0.843, thus it can be interpreted that there was no significant GPA difference between the students of the three admission lineways caused by the family environment. That's due to some of SNMPTN, SBMPTN and SM students came from very good, good, and unfavourable family environments. The regression analysis showed the coefficient of determination ($R^{2)}$) of 0.767 which means the family environment had contributed to the CPI amounted to 76.7%.

The results of qualitative research supported the test results above. The communications level of student with praise, very satisfactory, and satisfactory GPA to the parents / family went well, only parents and / family of students with more praise GPA who routinely asked news and learning difficulties though mobile phone. The parents' attention to their children education will foster children's activity as a very valuable potential to face the future (Saleh, 2014). The students with cum laude GPA can transparent communicate their learning difficulties without waiting to be asked. The parents/family provided suggestions, and motivation against the problems encountered. The parents/families of students with cum laude GPA more encourage the students to achieve the target.

According to the research by Udiyono (2011), the level of motivation from parents to the academic achievement of students Mathematics Education Widya Dharma University Klaten was high. Comfortable atmosphere in the family affect students can focus learn quietly. This was in accordance with the opinion of Agustiana (2015) stating that the rowdy atmosphere of the house will not give peace in the study. Family economic circumstances of students were diverse, but they did not feel burdened by those problems. Based on Winner *et al.,* (2014) 43% of students stated that the cost of college was important, so that the availability of scholarships and financial aid was also very important. Some students make extra money themselves, but with the aim to add experience and distribute their knowledge so as not to interfere with learning. Result of descriptive analysis of percentage of campus student environment level presented in figure 2.
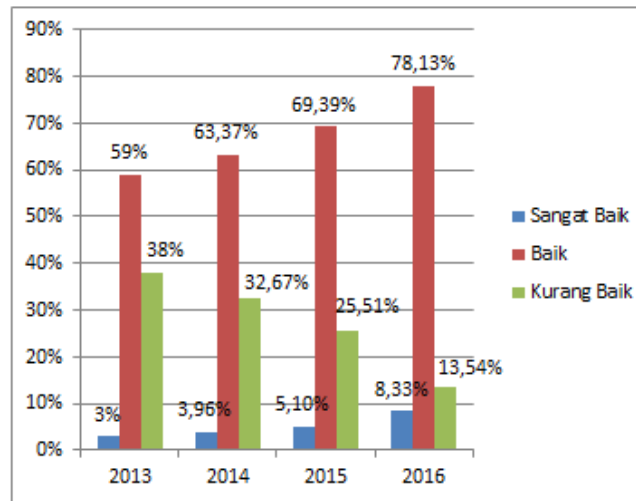
Figure 2 The Level of Students' Campus Environment

Figure 2 shows that the average level of students' campus environment is well. After being averaged according to the admission line, the percentage of student family neighborhood level of SNMPTN line is 77%, SBMPTN line is 76%, and SM line is 75% in which the three precentages are in good criteria. The result of Two Way Anova test gets the significance value more than 0,05 equal to 0,322 which means that there is no significant difference result of learning between students from three admission lines which caused by the level of campus environment. This happens since some students of SNMPTN have some criteria of campus environmental level which is very good, good, and less good, as well as students of SBMPTN and SM. The result of regression analysis shows the value of Coefficient of Determination (R^R) 0.861 which means the campus environment has contributed to the GPA of 86.1%.

The result of qualitative study confirms that the campus environment has a relationship with learning outcomes. It is proven by the respondents who are categorized as having satisfactory IPK less able to utilize the existing campus facilities to support their learning. Instead, they tend to be passive when they do not understand the material yet. They do not try to find sources from the internet or books in the library, and just ask friends at the time- on certain moment. Students with Cum Laude GPA tend to enjoy discussing with friends about course materials. They will be comfortable in the campus environment to discuss with college friends (Nabaiho et al., 2010). In addition, students with Cum Laude GPA have good relations with lecturers. When they have not understood a material then they will ask and discuss with lecturers even outside the lecturing hours.

According to Slamet (2010) states that in the relationship if educators and learners have good relationship, learners will love his subject. Glass et al., (2015) in his study states that an educator provides an opportunity for learners who have not understood a material in the classroom for discussion outside the classroom. Students with cumlaude IPK tend to be more optimizing campus facilities such as the internet and books in the library to support their learning. It is in line with Saleh (2014) states that at the higher education level, students are required to be active in the learning process through the existing media, such as libraries, journals, and internet. According to Korir & Kipkemboi (2014) in the International Journal of Humanic and Social Science, academic success is strongly influenced by school factors such as social environment and facilities. The result of descriptive analysis of percentage for environmental level of student society is presented in figure 3.

Figure 3 The Level of Students' Society Environment

The level of community environment above is then averaged according to students' admission line. The average result shows that the students from the SNMPTN, SBMPTN, and SM admission lines have good community level criteria with the percentage of 75%, 74%, and 74%. The result of Two Way Anova gets the significance value more than 0,05 that is 0,80. Thus, it can be interpreted that there is no significant difference of GPA between students of the three admission lines caused by society environment since students of SNMPTN, SBMPTN, and SM have criteria of environmental level of society in the range of very good, good, and less good. The result of regression analysis shows the value of coefficient of determination (R^2) of 0.748, which means the community environment has a contribution to the GPA of 74.8%.

Community environment is the least influential variable on GPA. The results of qualitative study confirm the above results. There is no significant difference in the community environment between students who have a Cumlaude GPA, are very satisfying, and satisfying. Most of the students live in the homestay, so the they rarely follow the activities in the community. The situation is in accordance with the study results of Saleh (2014) which found that most of the students live in boarding house, so they do not follow social activities. Community activities are sometimes followed only gymnastics and study course, so that does not make their learning disturbed. In addition, the condition of a conducive society makes them able to learn conducively.

The results of study conducted by Dirawati (2011) states that the community environment significantly influences the students' geography achievement of class XI IPS in SMA Negeri 1 Geyer, and study conducted by Hartini (2009) which also states that the public environment has an effect on students' economic achievement class XI IPS of SMA 2 Kayen. The results of this study indicate that the community environment has the smallest contribution to the GPA. This is possible because the sample of this study are students living in homestay, and they spend a lot of time in campus.

The descriptive analysis result of percentage shows that the students' learning motivation level is on very high, high, and low criteria (figure 4).
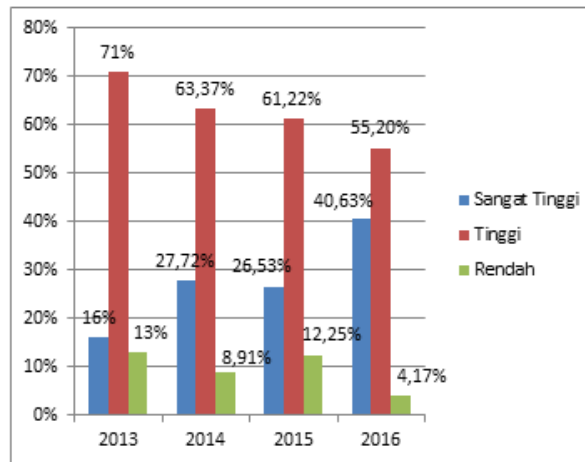
Figure 4 The Level of Students' Learning Motivation

After the above results are averaged, it can be seen that the students of SNMPTN, SBMPTN, and SM have a high level of learning motivation with the percentage of 77%, 76%, and 75% respectively. The significance value of the *two way anova* test is 0.246> 0.05. Thus, it can be interpreted that there is no significant difference of GPA between the students of the three admission lineways caused by learning motivation. This happens because students from the SNMPTN line have a very high, high, and low level of learning motivation. Likewise students of SBMPTN and SM lines, the GPA of the three groups do not differ significantly. The result of regression analysis shows the value of coefficient of determination (R2) of 0.822 which means learning motivation has a contribution to the GPA of 82.2%.

The results of qualitative research reinforces that the motivation in learning has a strong enough contribution to student learning outcomes. Students with satisfactory GPA, although they always do the assignment given by the lecturer, they sometimes do not do it on time. They do the job just to qualify. They do not try maximally and really in doing it although in fact they know if the results of the task will not be maximum. They still often rely on friends while doing the task. When it comes to disappointing results, they are less motivated and consider that it limits their ability. According to Agustiana (2015) if the learners do not have the motivation or motivation in themselves to learn in a discipline it will be difficult to create a discipline of learning in itself, thus affecting the learning outcomes.

Lack of motivation can lead to drop outs (Misiran et al., 2016). Before attending lectures they rarely study the material. They sometimes do not understand what materials will be delivered by lecturers. They try to understand the material they have not understood before the exam by asking a friend. The situation is in line with the findings of Saleh (2014) in his study which found that there are some students are not preparing for the lecture material that will be taught lecturers.

Different things are owned by students with cumlaude IPK, they always do the task given by the lecturers on time maximally and earnestly because they want to always get good results. Students' high motivation enables them not to despair in achieving their desires (Pratami, 2015). They are convinced of their efforts, without being dependent on friends. This is in accordance with the statement of Sardiman (2011) that one indicator of learning motivation is that learners prefer to work independently which means that they are not happy to rely on other people or friends. Whenever the results are less satisfactory, they make it as a motivation to study harder. They often study the material first before the lecture although sometimes can not understand it. If they do not understand the material then they feel challenged to immediately understand it by asking the lecturers and /

friends and looking for their own resources because they have a high curiosity. In the opinion of Richards et al., (2013), curiosity encourages students to ask questions. They are quite happy to do the questions on lecture materials. The situation is in line with Mulalic & Obralic's (2016) statement in the Journal of Trandisciplinary Studies states that highly motivated students tend to have high curiosity and love challenges.

The results of study conducted by Pratami (2015) which states that the motivation to learn has influence on the results of student learning Economics and Accounting Education of UNNES and a study of Saleh (2014) states that there is a significant influence between the motivation of academic achievement of FITK IAIN Walisongo Semarang students. Mulalic & Obralic (2016) reinforce that in his research results obtained a significant correlation between motivation and learning outcomes.

CONCLUSION

Based on the results and discussion of study, it is concluded that there is no significant difference in student learning outcomes according to the admission line of Biology Education Studies Program FMIPA UNNES caused by the level of family and campus environment, and students' learning motivation. The most contributive variable toward GPA is the level of campus environment (86,1%), family environment (76,7%), and the most contributive is the level of social environment (74,8%).

Based on the study above, it is suggested that the process of students' admission process in university level needs to be reexamined by considering the quota of each line. The quota decided is not differ significantly. In addition, it needs advanced study that find out about the study duration factor, selection stage, and students' origin school.

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