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The Relationship between Nutritional Status and Learning Pattern with Learning Outcomes of Biology Student of Universitas Negeri Semarang

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Abstract

Students are a part of society that are potential to be an initiator in the development. In realizing the expectation, students must have a high quality. One of the indicators to measure college students' achievement is Grade Point Average (GPA). Moreover, nutritional status and learning pattern also influence the learning outcomes. This study aimed to analyze the relationship between nutritional status and learning pattern with learning outcomes of Biology student of Universitas Negeri Semarang. The research was a mixed method research design particularly sequential explanatory strategy. The population of there search were students majoring in biology class registered as college students in 2012, 2013, 2014, 2015 and 2016. The sampling technique in the quantitative method used proportional random sampling while purposive sampling was applied in the qualitative method. Students' learning outcomes, in this case,were GPA. Four methods in the data collection were employed. They were an assessment of Body Mass Index (BMI), questionnaires, interviews, and documentation. Data were analyzed used partial correlation analysis followed by a multiple correlation and regression analysis. The results showed that there was a positive and significant relationship as many as 44.2% of nutritional status and learning pattern with learning outcomes. Thus, it was suggested that the nutritional status and learning pattern contribute positively to improve students' learning outcomes.

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INTRODUCTION

A successful development of a nation depends on the success of the nation itself in preparing qualified, healthy, intelligent, and productive human resources (Bappenas, 2011). Students are a part of society that are potential to be an initiator in the development. In realizing the expectation, students must have a high quality. Qualified students can be seen in terms of education and health (Jalal, 1996).

The implementation of balanced nutrition intake pattern for students in higher education has not been implemented properly causing students easily become tired, drowsy and lack of concentration during lectures, so that it affects the learning outcomes (Afianti, 2008). The results of initial observation on April 2nd 2017, of Biology Student of Universitas Negeri Semarang indicated that as many as 60.6% of them consumed foods without regarding their nutritional substances and about 35-40% of them were lack of concentration, tired, and drowsy during the lectures (Interview, 2017).

It is needed a proper learning pattern in order to have students enable to follow the learning process. It is also required certain steps in the learning process called learning pattern to achieve maximum learning outcomes. Swandari (2013) stated that students' learning pattern had a positive effect on students' achievement in the Basic Courses Financial Accounting 1. However, not all students had a good learning pattern because they had both academic and non-academic activities that could affect students' learning patterns. The results of initial observation on April 2nd 2017, showed that 45.4% of the students had a learning pattern that was not good enough. It was because they were not able to manage their time between academic and non-academic activities (Interview, 2017).

One of the indicators to measure college students' achievement is Grade Point Average (GPA). Students who earn a high GPA indicates that these students succeed in the learning process (Daely, et al., 2013). Factors affecting learning outcomes can be classified into two categories, namely internal and external factors. Nutritional status is included in the physical internal factors that can affect achievement (Slameto, 2013). Meanwhile, learning pattern which consists of arranging learning objectives, planning for learning activities, implementing lesson plan and assessing learning outcomes included in the internal factors of psychological readiness of students that may affect the achievement (Surakhmad, 1982).

Based on the background above, it is necessary to do a research on the relationship of nutritionalstatus and learning patterns with learning outcomesof Biology students of Universitas Negeri Semarang. The purpose of this study was to analyze the relationship between nutritional status and students' learning outcomes, learning patterns and students' learning outcomes, nutritional status and learning patterns, and also nutritional status and learning pattern with learning outcomes of Biology student of Universitas Negeri Semarang.

RESEARCH METHOD

This research was a mixed method research design. The sampling technique in the quantitative method used proportional random sampling while purposive sampling was applied in the qualitative method. As many as 238 students of Universitas Negeri Semarang majoring in Biology class registered in 2012, 2013, 2014, 2015 and 2016 participated in this research.Four methodsin the data collection were employed. They were an assessment of Body Mass Index (BMI), questionnaires, interviews, and documentation. Furthermore, the data were related to students' learning outcomes. In analyzing quantitative data, it was used descriptive statistical analysis, partial

correlation analysis, multiple correlation analysis, followed by a multiple regression statistical analysis. Miles and Hubermas analysis was employed in analyzing qualitative data.

RESULTS AND DISCUSSION

Nutritional status obtained from the calculation of the Body Mass Index (BMI), which is the ratio of weight and height. The following was the nutritional status based on the research findings:

Table 1 The Result of Nutritional Status Analysis Based on BMI

No	Category	Nutritional Status Based on BMI	
		Amount	Percentage (%)
1	Good (Normal)	148	62.18
2	Poor (Petite, thin, fat, and obese)	90	37.82

Table 1 shows that most students have a good nutritional status in the normal category. This is also supported by the scores in some aspects such as cognitive, affective, and students' behaviour on the nutrition intake pattern that can be seen in Table 2.

Table 2 The Calculation of Some Aspects of Cognitive, Affective, and Students' Nutrition Behavior

Criteria	Percentage (%)		
	Knowledge	Attitude	Behavior
Very good	-	65.97	9.24
Good	23.11	34.03	87.39
Average	51.68	-	3.36
Poor	25.21	-	-

Table 2 shows that the students have sufficient knowledge. This is supported by the results of interviews that most students rarely and accidentally access the information about nutrition. The sixth semester students and above, access to nutritional information obtained from the nutrition and health subject. Therefore, they have a good attitude towards nutrition criteria. One's knowledge and attitudes on nutrition have a relationship with nutritional status (Florence, 2017). Knowledge about nutrition is an important foundation for determining food consumption (Khomsan, 2004). Not all students applied their knowledge about nutrition into their daily life in a good way. In table 2, there are 3.36% students in the average category.

This is supported by the interview results that the students approximately had their foods twice a day. It was because their living expenses were not allocated to food only. Most of them did not have their breakfast before going to college. It is quite unfortunate because they did know the effect of not having breakfast. In addition, most of them had a habit of having snacks and fast food without paying attention to the nutrition facts on the packaging label.

Table 3 Response Distribution on Students' Learning Pattern Variable of Each Aspect

Criteria	Learning Objectives Arrangement		Planning for Learning Activities		Learning Plan Implementation		Learning Outcomes Assessment	
	F	%	F	%	]	%	F	%
Very good	14	6	8	3.4	32	13	11	5
Good	121	51	100	42	123	52	142	60
Average	99	42	121	50.8	79	33	77	32
Poor	4	2	9	3.8	4	2	8	3

Total	238	100	238	100	238	100	238	100
Average (%)	66.3		62.13		69.12		65.55	
Criteria	Good		Average		Good		Good	

Note: F = Frequency; % = Percentage

Learning pattern is characterized by four aspects, namely arranging the learning objectives, planning for learning activities, implementing the lesson plan, and assessing the learning outcomes. In table 3, It is known that the three aspects of students' learning patterns could be achieved with good criteria. Meanwhile, in planning learning activities the results laid between average criterion. It is supported by the interview results that most of the students had the learning process without any preparation. Students are often unprepared for the materials will be taught, so they do not have any idea about it (Saleh, 2014). The one's readiness in planning for learning activities will determine the quality of the learning process (Mulyani, 2013). Furthermore, achievement on each aspect was analyzed to determine the learning pattern of each student.

Table 4. Learning Pattern Analysis of Biology Student

No	Category	Learning patterns	
		Amount	Percentage (%)
1	Very good	80	33.61
2	Good	40	16.81
3	Fair	41	17.23
4	Average	31	13.02
5	Poor	46	19.33

Based on Table 4, it is known that levels of students' learning pattern mostly laid between the very good category, yet there were 46 students who were in the poor category. A very good learning pattern can be achieved if the student meets those four aspects, namely arranging the learning objectives, planning for learning activities, implementing the lesson plan and assessing the learning outcomes (Surakhmad, 1982).

Table 5 Students' Learning Outcomes in the Form of Grade Point Average (GPA)

No	GPA	Category	Frequency	Percentage (%)
1	3.51 to 4.00	High	26	10.92
2	3.01 to 3.50	Moderate	183	76.89
3	2.50 to 3.00	Low	29	12.18

Based on Table 5, it was suggested that some students had GPA in the moderate category.

The Relationship between Nutritional Status and Students' Learning Outcomes

The finding of the relationship between nutritional status (X_1) and learning outcomes (Y) was obtained by the value of sig 0.00 <0.05 and r_{value} 0.397. It resulted a positive value indicated that the nutritional status and learning outcomes had a low significant positive correlation. Nutritional status contributed to the learning outcomes as many as 15.8%. It was in line with Effendy (2012) who argued that there was a low correlation between nutritional status and learning outcomes in SMK N 2 Indramayu proven by r_{value} 0.125. It showed that nutritional status was one of the contributing factors improving learning outcomes of Biology class. Physiological status in the form of health

factors and nutritional status, in general, affect the person's ability to learn (Ahmadi, 2007). Not entirely students having good nutritional status had good learning outcomes as well. The gap can be seen in table 6.

Table 6 Correlational Analysis of Nutritional Status and Learning Outcomes

Learning Outcomes	Nutritional status			
	Good		Poor	
	F	%		%
High	10	4.2	16	6.7
Moderate	30	54.6	3	22.3
Low	8	3.4	1	8.8

Note: F = Frequency; % = Percentage

It can be seen in Table 6, there are 3.4% students having a low GPA in a good nutritional status category. It was known that R3 student, for instance, felt tired and drowsy during the lecture. It occurred due to the poor time management. R3 students found it difficult to set the time for learning and various non-academic activities. It caused R3 students did the overtime to finish the assignment. R3 student often felt sleepy even fall asleep during the lecture, thereby causing lack of concentration and less understanding of the material. It was in line with the statement that students usually experience barriers in the learning process caused by drowsiness and fatigue due to poor time management, thereby decreasing the concentration (Nilifda, 2016). The concentration in learning has a more dominant influence on learning outcomes than creativity variables (Kintari, 2014). In addition, time management is needed to help improve the individual learning motivation. A good time management is aimed to have effective learning so that optimal results can be achieved (Sasmita, 2013). This suggests that a poor time management and concentration in learning can affect the students' ability to understand the materials resulting in a less maximum learning outcomes. Learning outcomes are influenced by internal factors, one of which is the concentration in learning and time management (Slameto, 2013).

There were 6.7% students achieving a high GPA in a good nutritional status category. It was known from the interview that R4 students had interest in learning activities. The students' interest to understand materials was characterized by their attention during lectures, preference and desire to know more about Biology. The role of lecturers to motivate students also could foster students' interest to be always intrigued by the subject. Interest is a sense of love and involvement in a thing or activity, without being told. A person who has an interest in a particular activity tends to give great attention to the activity (Siagian, 2016). Interest in learning tends to produce a high achievement and vice versa (Djamarah, 2008).

The Relationship between Learning Patterns and Students' Learning Outcomes

The finding of the relationship between learning patterns with learning outcomes was obtained by the value of sig 0,00 <0,05 and r_{value} 0,579. It resulted a positive value indicated that the learning patterns and learning outcomes hada positive correlation in the medium significant category. The contribution of learning patterns to the achievement of learning outcomes equal to 33,5%. This finding was in line with Digara (2015) who stated that learning patterns had a positive effect on students' learning achievement of UMS Accounting Economics registered in 2013 in Basics Courses Financial Accounting 2. It was suggested that learning pattern was one of the supporting factors to improve Biology learning outcomes. Maryati (2013) stated that learning pattern is a way or learning strategy applied by someone as a learning effort in order to achieve a good learning achievement.

Learning pattern is not the only factor that influences learning outcomes. Not all students having good learning pattern also havea high GPA. It can be seen in Table 7.

Table 7 Correlational Analysis of Learning Outcomes andLearningPatterns

Learning outcomes	Learning patterns									
	Very Good		Good		Fair		Average		Poor	
	F	%	F	%	F	%	F	%	F	%
High	7	7.1	3	1.3	5	2.1	0	0.0	1	0.4
Moderate	55	23.1	5	14.7	6	15.1	28	11.8	29	12.2
Low	8	3.4	2	0.8	1	0.4	2	0.8	16	6.7

Note: F = Frequency; % = Percentage

Table 7, it can be seen that3.4% students with a very good learning patternhad low GPA. The reason was students were easily affected by environmental conditions. It was proved by R5 student interviews. Students R5 felt sleepy during lectures and difficult to concentre when other friendstalk. In addition, Leman (2007) stated that external factors such as social environment can affect students' learning outcomes. Korir & Kipkemboi (2014) stated that individual academic success was influenced by external factors such as social environment and learning facilities. It was in line with Saleh (2014) who argued that there was a significant influence on campus environment to students achievement of FITK IAIN Walisongo Semarang. Nabaiho et al. (2010) stated that a conducive campus environment influences students' learning outcomes. Another research conducted by Ahmad *et al.* (2016) stated that campus environment can build students' successful learning. Slameto (2013) showed that it is not only concentration in learning but also hardly conducive circumstances that make interest and motivation decrease, which impact on learning outcomes.

Table 7 showed that 0.4% students having a fair learning pattern got high GPA. R6 studentadmitted havingaverage learning pattern because of having difficulty in managing study time. It was known from the interview that R6 student was motivated to study to get a good result and be responsible to the parents. Pratimi (2015) stated that high motivation possessed by the students allow them not to be despair in achieving their dreams. It was line with Mulalic & Obralic (2016) argued that students who have high motivation tend to have curiosity and like challenges. It means that the level of learning motivation influences on students' GPA. Irhas (2017) also conducted a research.The subject of the study wasthe students of biology Universitas Negeri Semarang.The result was the learning motivation had influence on learning outcomes of Biologystudents of Universitas Negeri Semarang.

The Relationship between Nutritional Status and Learning Patterns with Students' Learning Outcomes

The result of multiple correlation analysis of the nutritional status and learning patterns with learning outcomes was obtained by sig value 0.00 <0.05 and r_{value}0.665. It was a positive result showing that learning patterns with learning outcomes had a strong significant positive relationship. The contribution of learning patterns to learning outcomes equal to 44,2%. The strong relationship between nutritional status and learning patterns with learning outcomes showed that nutritional status and learning patterns hada significant effect on learning outcomes of Biology. It was suggested that the higher nutritional status and learning patterns, the higherthe learning outcomes. The influence of nutritional status and learning patterns can be seen in the following figure 1.

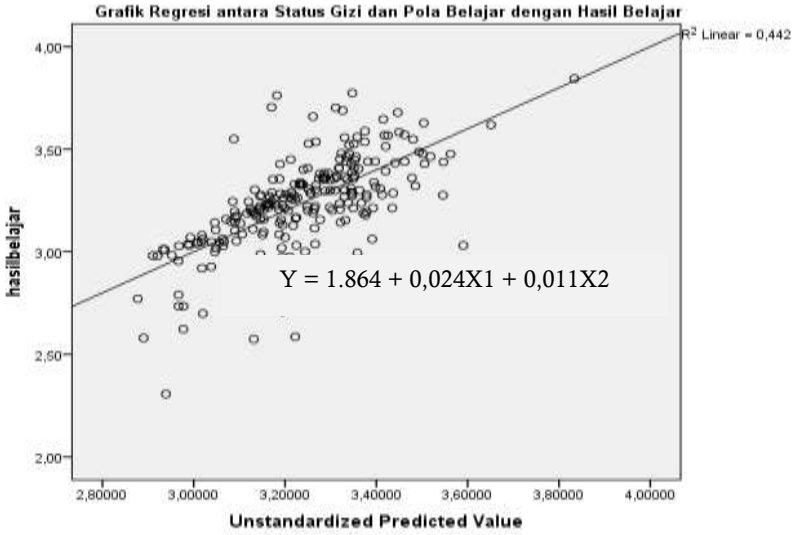

Figure 1 Regression Chart of Nutritional Status and Learning Patterns with Learning Outcomes of Biology Student

The figure above indicated that the nutritional status andlearning patterns influenced on students' learning outcomes. The results could be interpreted that each enhancement of 1 score on nutritional status, would improve learning outcomes by 0,024 as long as the learning pattern variables unchanged. In other word, students learning outcomes would be increased by 0,011 if the learning pattern increased, as long as the nutritional status had not changed. The following was the simultaneous equation: Y = 1.864 + 0.024 X1 + 0.011 X2.

The contribution of nutritional status and learning pattern towards the learning outcomes was 44.2%. The percentage used to see the magnitude of the contributionby each predictor variables on different criterion variables showed a difference. Based on the calculation, the amount of the contribution of the nutritional statuswas 15.8%, while learning pattern variable provided a percentage contribution of 33.5%. These results showed that the learning patterns had a more dominant influence on Biology learning outcomes compared with nutritional status.In improving Biology learning outcomes can be reached by paying attention to the nutritional status and enhance the learning patterns.

It also can be seen from the calculation that having good nutritional status did not mean that the individuals would get high learning outcomes as well. Moreover, individuals who had enough nutritional status would not always get low learning outcomes. Likewise, on learning patterns, individuals with very good learning patterns did not mean would get high learning outcomes and those who had enough learning patterns did not mean they got low learning outcomes. This was due to the differences in the level of intelligence, potential and character of each individual. In line with the opinion of Hamalik (2003) stated that actually, the difference between each individual was the readiness to learn. Each individual had a different level of intelligence, attention and knowledge. The learning outcomewas not only influenced by the level of intelligence but also many factors. According to Slameto (2013), learning is a complex process with many factors that influence it. They are internal factors and external factors. Nutritional status and learning patterns are internal factors that influence on learning outcomes.

Tabel 8 GPA of Students Registered in 2012, 2013, 2014, 2015, and 2016

Category	Percentage (%)				
	2016	**2015**	**2014**	**2013**	**2012**
High	25.9	10.9	4.4	8.3	0
Moderate	70.3	61.8	84.8	84	88.
Low	3.7	27.3	10.9	6.3	14

Based on the table above,students registered in 2016 had the highest GPA than others. The students registered in 2012 were in lowest position in achieving the highest GPA, in which none of the students got a high GPA. It showed the higher semester, the lower students with high GPA. Saputra (2016) stated that the reason for the decrease of students' learning outcomes was because the higher the semester, the student would get more difficult courses and focus on the final project when entering the eighth semester.

Paying attention to the nutritional status and managing students' learning patterns is a key for the student to be succesful in learning. Students' attitude has a great influence on implementation of the learning process an students' learning outcomes in the form of GPA. In doing research, the researcher should consider some factors. One of them is the determination of sample the considering this research concerns the students in a large population so that determination of a representative sample should capable to representthe entire population. Determining the variables and indicators in the scale was to be one of the most important things.It is because the more variables used,the moreaccurate the results obtained to determine the factors influence students' learning outcomes.

CONCLUSION

Based on the findings and discussion can be concluded that there is a positivesignificant relationship between nutritional status and learning outcomes with the correlation value of 0,397 and it is included in the weak category. The contribution of nutritional status in learning outcomes is 15.8%. There is a positivesignificant relationship between learning patterns and learning outcomes with a correlation value of 0,579 and it is included in the medium category. The contribution of learning patterns on the learning outcomes is 33.5%. There is a positivesignificant relationship between nutritional status andlearning patterns tolearning outcomes with a correlation value of 0.665. It is included in the strong category. The second contribution of these variables onlearning outcomes is 44.2%.Therefore, nutritional status and learning patterns have a positive effect on learning outcomes.

REFERENCES

Afianti, N. 2008. *Perilaku Gizi Mahasiswa Bidang Gizi Fakultas Pertanian dan Fakultas Ekologi Manusia IPB tentang Pesan-Pesan Umum Gizi Seimbang*. Skripsi. Bogor: IPB.

Ahmad, M.F, Tazilah, & M. Ali. 2016. The Relationship Between Enviromental Factors, Learning Style and Self Management Toward Academic Performance of Accounting Student. *South East Asia Journal of Contempory Business*. 10(1): 45-54. Bandar Barat : UniversitiTunku Abdul Rahman Malaysia.

Ahmadi, A. 2007. *Psikologi Sosial*. Jakarta: Rineka Cipta.

BAPPENAS. 2011. *Rencana Aksi Nasional Pangan dan Gizi 2011-2015*. Jakarta: Kementrian Perencanaan Pembangunan Nasional.

Daely, K, U. Sinulingga, & A. Manurung.2013. Analisis Statistisk Faktor-faktor yang Mempengaruhi Indeks Prestasi Mahasiswa. *Saintika Matematika*. 1(5): 483-494.

Digara, R. 2015. Pengaruh Pola Belajar dan Persepsi Mahasiswa tentang Keterampilan Mengajar Dosen terhadap Prestasi Belajar Dasar Akuntansi Keuangan 2 Pada Mahasiswa Pendidikan Akuntansi Fakultas

Keguruan dan Ilmu Pendidikan Universitas Muhammadiyah Surakarta Angkatan 2013. *Jurnal Publikasi Pendidikan*. Surakarta: UMS. 2(4) 1-12.

Djamarah, S. B. 2008. *Psikologi Belajar*. Jakarta: Rineka Cipta.

Effendy, F. 2012. Hubungan Status Gizi dengan Tingkat Prestasi Belajar Pada Siswa Kelas X SMK Negeri 2 Indramayu. *Naskah Publikasi*. Yogyakarta: UNY. 3(1): 1-14.

Florence, A. 2017. Hubungan Pengetahuan Gizi dan Pola Konsumsi dengan Status Gizi Pada Mahasiswa TPB Sekolah Bisnis dan Manajemen Institut Teknologi Bandung. *Skripsi*. Bandung: Universitas Pasundan.

Hamalik, O. 2003. *Proses Belajar Mengajar*. Jakarta: Bumi Aksara.

Irhas, M. 2017. Analisis Kuantitatif dan Kualitatif Hasil Belajar Mahasiswa Program Studi Pendidikan Biologi FMIPA UNNES. *Skripsi*. Semarang: Universitas Negeri Semarang.

Jalal, F. 1996. Peran Gizi dalam Kecerdasan dan Produktivitas. *Makalah disampaikan pada Simposium dalam Kongress Nasional V Pergizi Pangan Indonesia.* Surabaya, 9-10 Desember 1996.

Khomsan, A. 2004. *Pangan dan Gizi untuk Kesehatan*. Jakarta: Raja Grafindo Persada.

Kintari, F. 2014. Pengaruh Konsentrasi Belajar dan Kreativitas Belajar terhadap Prestasi Belajar Akuntansi Siswa Kelas XI IPS SMA Muhammadiyah 1 Sragen. *Naskah Publikasi*, 4(3): 1-12.

Korir, D.K dan F. Kipkemboi. 2014. The Impact of School Enviroment and Peer Influences on Students' Academic Permormance in Vigha County, Kenya. *International Journal of Humanic and Social Science*. 4(1): 240-251. Vihiga: Moi University Kenya.

Leman. 2007. *The Best of Chinese Life Philosophies.* Jakarta: Gramedia PustakaUtama.

Maryati.2013. Pengaruh Intensitas Belajar dan Pola Belajar terhadap Prestasi Belajar Akuntansi pada Siswa Kelas XI Akuntansi SMK Batik 2 Surakarta. *Jurnal Publikasi Pendidikan. UMS.* 2(3) 1-10.

Mulalic, A, dan N. Obralic. 2016. The Relationship Between Motivation ComponentsandPreferedLeraning Components Among Students at International University of Sarajevo. *Journal of Transdisciplinary Studies*. 9(1): 75-84. Bosnia : International University of Sarajevo

Mulyani, D. 2013. Hubungan Kesiapan Belajar Siswa dengan Prestasi Belajar. *Jurnal Ilmiah Konseling*, 2(1): 27-31.

Nabaiho, N, F. Aldi, Veryco dan Sugiarto. 2010. Pengaruh Lingkungan Kampus terhadap Motivasi Belajar Mahasiswa. *Jurnal Manajemen Pemasaran.* 5(1): 22-26. Surabaya :Universitas Pelita Harapan Surabaya.

Nilifda, H. 2016. Hubungan Kualitas Tidur dengan Pestasi Akademik Mahasiswa Program Studi Pendidikan Dokter Angkatan 2010 FK Andalas. *Artikel Penelitian,* 5(1): 243-249.

Pratami, R. 2015. Pengaruh Jalur Seleksi Masuk, Lingkungan Keluarga dan Motivasi Belajar sebagai Variabel Intervening terhadap Prestasi Belajar Mahasiswa Jurusan Pendidikan Akuntansi Fakultas Ekonomi Universitas Negeri Semarang Tahun 2014. *Jurnal Pendidikan.* Semarang: Universitas Negeri Semarang.

Saleh, M. 2014. Pengaruh Motivasi, Faktor Keluarga, Lingkungan Kampus dan Aktif Berorganisasi terhadap Prestasi Akademik. *Jurnal Phenomenon*. 4(2): 109-141. Semarang: IAIN Walisongo.

Saputra, K. 2016. Studi Komparatif Prestasi Belajar Mahasiswa Jurusan Pendidikan Ekonomi Ditinjau dari Jalur Penerimaan Mahasiswa Baru Tahun 2011. *Jurnal Jurusan Pendidikan Ekonomi*. 6(1). Singaraja: Universitas Pendidikan Ganesha.

Sasmita, E. 2013. Pengaruh Kesiapan Belajar, Disiplin Belajar dan Manajemen Waktu terhadap Motivasi Belajar Mata Diklat Bekerjasama dengan Kolega dan Pelanggan Pada Siswa Kelas X SMK N 2 Semarang. *Skripsi*. Semarang: UNNES.

Siagian, R. 2016. Pengaruh Minat dan Kebiasaan Belajar Siswa terhadap Prestasi Belajar Matematika. *Jurnal Formatif*, 2(2): 122-131.

Slameto.2013. *Belajardan Faktor-Faktor yang Mempengaruhinya*. Jakarta: Rineka Cipta

Surakhmad, W. 1982. *Cara Belajar Terbaik di Universitas*. Bandung: Tarsito.

Swandari. 2013. Prestasi Belajar Ditinjaun dari Pola Belajar dan Kreativitas Belajar Mahasiswa dalam Mata Kuliah Dasar Akuntansi Keuangan (DAK) 1. *Jurnal Pendidikan Akuntansi*, 2(1): 27-31.