The Effect of Service Quality, Campus Ecology, and Self-Efficacy on Students' Satisfaction in Anaa Specialist Education Program, Diponegoro University Semarang

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Article Info	Abstract
	Student satisfaction is an important indicator of the quality of higher education and is a measure of the service quality of its customers. Student satisfaction with their educational institutions also depends on the situation of the campus environment created for the convenience of the students. The main objective of this study is to obtain empirical evidence regarding the impact of service quality, campus ecology, and self-efficacy on the satisfaction level of the students of ANAA Specialist Education Program, Diponegoro University (PPSA UNDIP) Semarang. The population of this study was 125 specialist students of UNDIP and the students were chosen to be selected as samples using random sampling techniques. Data was drawn using a questionnaire; the data were analyzed using the SPSS and the Lisrel 8.54 program. The results of the study show that (1) service quality significantly affected self-efficacy and student satisfaction; (2) campus ecology has a significant effect on self-efficacy of 75.69% and on student satisfaction by 43.56%; (3) service quality and campus ecology together have a significant effect on student self-efficacy; (4) service quality, campus ecology, and self-efficacy together also have a significant effect on the satisfaction of the students of PPDSA UNDIP Semarang. Service quality and campus ecology are antecedent variables of self-efficacy and the three variables are determinants of the satisfaction of the students at the institution.

INTRODUCTION

Customer satisfaction is the main indicator of the standard of an educational institution's service and is a measure of service quality. Low customer satisfaction will have an impact on customer loyalty, while the attitude of employees to customers will also have an impact on the customer satisfaction because the needs of customers from time to time will increase, as well as the quality of services provided. Negricea, et al (2014) argue that in Romania the elements of university culture, physical evidence, discipline, cleanliness, and lecturer commitment significantly influence student satisfaction. Service units that are able to well serve the needs and desires of customers are expected to have competitiveness in order to be able to speak in the service business. Service is used as a benchmark for increasing customer satisfaction to the company.

According to Sallis (2009: 68), customers of educational institutions can be grouped into four types, namely (1) educator as internal customer, (2) student as main external customer, (3) parents as secondary customer, and (4) employment/ institution as a graduate user (tertiary customer). All these customers have interests and want them to get benefits and satisfaction. Students are direct customers of a higher education service system because they are parties directly involved in the process carried out by a higher education institution.

According to Tjiptono (2012: 24), the creation of satisfaction can provide several benefits, including the relationship between institutions/organizations and consumers to be harmonious so that it becomes the basis for consumer loyalty and recommendations from mouth to mouth that benefit the institution. Kotler (2003: 140) writes that the relationship between satisfaction and loyalty is when consumers reach the highest level of satisfaction that creates emotional ties and long-term commitment.

According to Kotler (2003: 83), service is any action or activity that can be offered to another party, which is basically intangible and does not result in any ownership. Production can be associated or not associated with a physical product. Service is the behavior of producers in order to meet the needs and desires of consumers in order to achieve customer satisfaction itself.

The process of education in general and the learning process in particular are forms of service. Educational service customers who receive educational services, especially services in high education, certainly want the fulfillment of student satisfaction. Taman, et al (2013) argue that simultaneously service quality variables have a positive and significant effect on student satisfaction. Satisfaction of education services is only obtained by customers if the education service is of high quality. According to Nastiti (2015), student satisfaction which includes services received and responses given are in the medium category. So, it needs more maximal effort from the higher education to increase the satisfaction of the students as its stakeholders.

In general, faculties can play an important role in integrating academic and social aspects of students into an institutional environment. Istiningtyas (2017) argues that universities are required to be able to manage their institutions professionally. They must improve the quality of physical facilities, lecturer quality, and service quality. The results of this study indicate that students are quite satisfied with the services provided by the Study Program. More specifically, student-faculty interaction can serve at least six important functions: socializing students with institutional culture, encouraging academic success, increasing student satisfaction, facilitating personal and intellectual development, helping to clarify educational and career goals, and supporting student perseverance. Quality measures are often based on student perceptions and satisfaction with their interactions with faculty members.

This source of information has a major influence on self-efficacy because it is based on real personal experiences of individuals in the form of successes and failures.

METHODOLOGY

This research employed quantitative methods. In the process of collecting data, the researchers used a survey method that is research that examines the broad phenomena of all members of the population. Information collected

through questionnaires is used to describe the characteristics of perceptions about research variables. The characteristics studied in this research were service quality, campus ecology, self-efficacy, and student satisfaction.

The population and sample of this study were students of the UNDIP Semarang specialist program with a sample of 125 respondents who were determined according to the table (Sugiyono, 2014: 126) with an error rate of 5%. The samples in this study were selected using a random sampling technique. The data were analyzed using item analysis to determine its validity. The data validity was tested using Pearson product moment scores. According to Sugiyono (2010: 115), if the correlation of each factor is positive and the amount is 0.361 and above, the factor is a valid construct. Furthermore, the instrument is said to be reliable if the measured variable has a Cronbach's Alpha score of > 0.60 (Sugiyono, 2014: 121).

The test of feasibility model aimed to determine the suitability of the model with various criteria of goodness of fit. Ghozali (2014) stated that several conformity indices and cut of value were used to test whether a model could be accepted or rejected. The t test is used to test the significance of the coefficient correlation of the

service quality (X1) and campus ecology (X2) variables on self-efficacy (X3) as path 1 analysis and on student satisfaction (Y) as path analysis 2. The technique of data analysis used in this study was a path analysis model with SPSS (Statistical Package for Social Sciences) version 21.0 and Lisrel 8.54.

Table 1. Scoring model of fit index

Goodness-of-fit index	Cut of value
Chi-square	> 0.05
GFI	> 0.90
AGFI	> 0.90
RMSEA	0.05 > x < 0.08
TLI	> 0.90
NFI	> 0.90

Source: Ferdinand (2002:61) and Ghozali (2014).

FINDINGS AND DISCUSSION

Findings

1. Description of Research Data

Analysis of respondents' answers on each indicator variable aimed to describe the perceptions of respondents in this study, especially perceptions of the research variables. From the respondents' answers to the questionnaires distributed, valid data are presented in Table 2.

Table 2. data distribution of research variables

		X1	X2	Y1	Y2
N	Valid	125	125	125	125
	Missing	0	0	0	0
Mean		83.5920	42.8080	71.0000	79.4720
Std. Deviation		6.72633	4.55910	5.89696	6.65216
Variance		45.243	20.785	34.774	44.251
Range		28.00	19.00	26.00	30.00
Minimum		70.00	34.00	61.00	67.00
Maximum		98.00	53.00	87.00	97.00

From the results of the data analysis of the respondents' answers to the service quality variables it is known that the highest score is 98, the lowest score is 70, and the mean is 83.59. Table 3 shows that it is within the interval of 82 - 87 (quality). So, the respondent's response to the service quality displayed by PPDSA UNDIP

Semarang is perceived by students to be of sufficient quality. From the distribution of respondents' answers about service quality, it can be seen that 6.4% of the respondents thought the service was very high quality, 32% of high quality, 24% of sufficient quality, 21.6% of poor quality, and 16% of very low quality.

Table 3. Student Perceptions of Service Quality

Interval	Criteria	Frequency	Percentage (%)
94 – 99	Very high quality	8	6.4
88 – 93	High quality	40	32.0
82 – 87	Sufficient quality	30	24.0
76 – 81	Poor quality	27	21.6
< 76	Very poor quality	20	16.0
		125	100

Regarding the campus ecology variable, it is known that the highest score is 53, the lowest score is 34, with a mean of 42.80. Table 4 shows that it is in the interval range of 41-44 (good enough). Overall, respondents' responses to the campus ecology displayed by PPDSA UNDIP Semarang are in a fairly good category. In the distribution of respondents' answers about campus ecology, it was seen that 12.8% of the respondents stated that the campus ecology was in a very good category, 20.0% said it was good, 33.6% was good enough, 24.0% said it was poor, and 9.6% stated that ecology was very poor.

Tabel 4. Students perception of the campus ecology.

Interval	Criteria	Frequency	Percentage (%)
49 – 53	Very good	16	12,8
45 – 48	Good	25	20,0
41 – 44	Good enough	42	33,6
37 – 40	Poor	30	24,0
< 37	Very poor	12	9,6
		125	100

Concerning the variable self-efficacy, it is known that the highest score is 87 and the lowest score is 6 with the mean score of 71.00. Table 5 shows that the score is in the range of 71 - 75 (high enough). So, the response to the self-efficacy of UNDIP Semarang PPDS students is high enough. From the distribution of respondents' answers to self-efficacy, it can be seen that 7.2% of respondents stated very high, 11.2% stated high, 40.0% stated that it was high enough, 24% stated low, and 17.6 stated very low.

Table 5. Student Perceptions of Self Efficacy

Interval	Criteria	Frequency	Percentage (%)
81 – 87	Very high	9	7.2
76 – 80	High	14	11.2
71 – 75	High enough	50	40.0
66 – 70	Low	30	24.0
< 66	Very low	22	17.6
		125	100

In the variable of student satisfaction it is known that the highest score is 97, the lowest score is 67, the mean score is 79.47. Table 6 shows that the score is in the interval of 79-84 (satisfied enough). Then, the responses about student satisfaction with PPDSA UNDIP Semarang shows that they are quite satisfied. In the distribution of respondents' answers to satisfaction, it can be seen that 6.4% of respondents said they were very satisfied, 12.8% said they were satisfied, 26.4% stated they were satisfied enough, 37.6% stated they were less than satisfied, and 16.8% stated they were dissatisfied.

Table 6. Student Perceptions of their levels of Satisfaction

Interval	Criteria	Frequency	Percentage (%)
91 – 97	very sitisfied	8	6,4
85 – 90	satisfied	16	12,8
79 – 84	satisfied enough	33	26.4
73 – 78	less than satisfied	47	37,6
< 73	dissatisfied	21	16,8
		125	100

2. Student Satisfaction Measurement Model

The scoring of measurement model is intended to determine the score of the indicators of the research construct. This test was intended to determine the ability of indicators to measure the latent variables and to determine the indicator measurement consistency in the latent variables. The results of the test calculations are presented in Table 7.

Table 7. Test Results of Variable Indicator for Student Satisfaction Model

Observed Variable	Variable Indicator	Score Loading	Score t	t.s 0.05	Error Variance	r	R^2
$X_{1.1}$	Tangible	0.62	6.24	1.96	2.59	0.6164	0.38
$X_{1.2}$	Reliability	0.79	4.26	1.96	1.40	0.7937	0.63
$X_{1.3}$	Responsiveness	0.63	5.02	1.96	1.48	0.6324	0.40
$X_{1.4}$	Assurance	0.59	5.01	1.96	1.91	0.5930	0.34
$X_{1.5}$	Emphaty	0.67	6.45	1.96	2.54	0.6708	0.45
$X_{2.1}$	Faculty interaction	0.80	3.51	1.96	2.96	0.7937	0.63
$X_{2.2}$	Lecturer interaction	0.69	4.35	1.96	1.83	0.6655	0.47
$X_{2.3}$	Social interaction	0.61	4,11	1,96	1.77	0.6082	0.37
$Y_{1.1}$	Experience of success	0.62	3.21	1.96	1.77	0.6164	0.38
$Y_{1.2}$	Other people's experience	0.82	4.30	1.96	2.84	0.8124	0.66
$Y_{1.3}$	Verbal persuasion	0.84	3.38	1.96	5.45	0.8426	0.71
$Y_{1.4}$	Physical and psychological circumstances	0.70	5.50	1.96	2.19	0.7071	0.50

In Table 7 about the summary of output it appears that the measurement model has a very good fit; each indicator has a score of t greater than 1.96 for a significance level of 5%. Therefore, the estimated score (loading) can be used as a coefficient of validity. Table 7 can be explained as follows.

a. The indicator for the highest service quality variable is reliability (X1.2) with a loading score of 0.79 and the lowest is assurance (X1.4) with a loading score of 0.59.

b. The indicator of the highest campus ecology variable is faculty interaction (X2.1) with a loading score of 0.80 and the lowest is social interaction (X2.3) with a loading score of 0.37.

c. The indicator for the highest self-efficacy variable is verbal persuasion (Y1.3) score loading of 0.84, while the lowest is the experience of success (Y1.1) with a loading score of 0.62.

3. Results of Research Model Significance Test

The results of the calculation of parameter significance using the Lisrel 8.54 program on variables that influence the self-efficacy of PPDSA UNDIP Semarang students are presented in Table 8.

EfiDir = 0.48*KuaPel + 0.17*EkoKam, Errorvar = 0.77, R^2 = 0.58
(0.12)   (0.10)   (0.22)
4.07   3.72   3.48

The magnitude of the influence in the structural equation is a score of R2 = 0.58. This means that 58% of the self-efficacy variable of the PPDSA UNDIP Semarang students is explained

by service quality and campus ecology variables while the remaining (42%) are explained by other variables.

Table 8. Test results for variables that affect service quality

Exogenous Variable	t Score	α-5%	Qualificatgion
Service quality	4.07	1.96	Significant
Campus ecology	3.72	1.96	Significant

$R^2 = 0.48$

Based on the results of the calculations using the Lisrel program using a significance level of 5% (1.96), as shown in Table 8, it is evident that the service quality variable provides a t score of 4.07 > 1.96, campus ecology gives a t score of 3.72 > 1.96. The t score of each variable is greater than the t score at the 5% significance level. So, it can be inferred that the service quality and campus ecology variables have a significant effect on the self-efficacy of PPDSA UNDIP Semarang students.

The calculation results of parameter significance on variables that affect student satisfaction are presented in Table 9.

KepMhs =0.32*EfiDir + 0.43*KuaPel + 0.13*EkoKam, Errorvar= 0.59, R²= 0.61
(0.11)   (0.11)   (0.096)   (0.13)
4.78   3.76   3.13   4.54

The magnitude of the influence score in the structural equation from the three variables is indicated by the score of $R^2 = 0.61$. This means that 61% of the variance in the satisfaction of PPDSA UNDIP Semarang students is explained by the variables of service quality, campus ecology, and self-efficacy, while the remaining (39%) is explained by other variables.

Table 9. Test results of variables that affect student satisfaction

Exogenous Variable	t Score	α- 5%	Qualification
Service quality	4.78	1.96	Significant
Campus ecology	3.76	1.96	Significant
Sefl efficacy	3.13	1.96	Significant

$R^2 = 0.61$

Based on the results of the calculations using the Lisrel 8.54 program based on a significance level of 5% (1.96) as shown in Table 9, it turns out that the service quality variable gives a score of t 4.78 > 1.96, campus ecology gives a score of t 3.76 > 1.96, and self efficacy gives a score of t 3.13 > 1.96 . The t score of each independent variable is greater than the t score at the 5% significance level. So, it can be inferred that the variables of service quality, campus ecology, and self efficacy influence the satisfaction of PPDSA UNDIP Semarang students. The value of influence in the structural equation of the three latent variables is indicated by the value of $R^2 = 0.61$. This means that 61% of the variance in student satisfaction of UNDIP Semarang student specialists is explained by latent variables of service quality, campus ecology, and self-efficacy, while the remaining 39% is explained by other variables.

Discussion

1. Effect of service quality on self-efficacy and student satisfaction

The significance test results show that the effect of service quality on self-efficacy shows a coefficient of 0.48. That is, the effect of service quality on student self-efficacy is $(0.48)^2 = 0.2304$ or 23.04% changes that occur in the self-efficacy of PPDSA UNDIP Semarang students are caused by service quality. 76.96% of student self-efficacy is influenced by other variables beyond the research.

Based on the table it is known that the effect of service quality on student satisfaction provides a coefficient of 0.73 which means that the effect of service quality on student satisfaction is $(0.73)^2 = 0.5329$ or 53.29% changes that occur in student satisfaction are caused by changes in service quality, the rest (46.71 %) influenced by other variables.

These results indicate that the hypothesis which states that service quality has a significant effect on self-efficacy and satisfaction of PPDSA UNDIP Semarang students proved to be true. That is, if the student's scoring of the service quality shown to them is getting better, then self-efficacy and satisfaction are also getting better. The proof of this research hypothesis, that service quality has a significant effect on self-efficacy and student satisfaction, can also be explained through

indicators/dimensions of service quality, namely physical evidence, reliability, responsiveness, assurance, and empathy.

The first characteristic of service quality according to the ServQual concept is physical evidence because a service cannot be smelled and cannot be touched, then tangibility is important as a measure of service. Students will use their sense of sight to score a service quality. Second, the dimensions of reliability are dimensions that measure the reliability of higher education in providing services to students. There are two aspects to this dimension: (1) the ability of the universitiy to provide services as promised and (2) to what extend the university provides accurate services. Third, responsiveness is a dynamic dimension of service quality. Students' expectations for the speed of service can almost certainly change with the upward trend over time. The fourth dimension of the 5 dimensions of service quality that determines customer satisfaction is assurance, namely the dimension of quality assurance that is related to the ability of PPDSA UNDIP Semarang in instilling confidence in students.

According to Tjiptono (2008: 85), as one of the educational institutions higher education is required to provide quality academic services to be accountable and qualified. As a service industry, universities must begin to think about the importance of customer service more mature because it is now increasingly recognized that service and customer satisfaction are vital aspects in order to stay in business and win the competition.

2. Effect of campus ecology on self-efficacy and student satisfaction

Higher education is a system consisting of various elements, one of the main milestones is the interaction between lecturers and students. The interaction can basically be seen from the formal and non-formal sides. The formal side occurs when the lecturer performs his main function as a lecturer who must plan, implement, and score the students success in order to gain knowledge and skills. The implementation of these activities occurs when the lecturers teach, guide students' final assignments, guardianship/academic guidance, and so on. On the non-formal side, the task of the lecturer is to

help students get moral and social scores beyond formal activities. For example, instilling the personality and identity of students to implement the gained knowledge.

The results of processing the data show that the effect of campus ecology on student satisfaction provides a coefficient of 0.71. The effect of campus ecology on student satisfaction is $(0.71)^2 = 0.5041$ or 50.41%. That is, changes in student satisfaction that occur in PPDSA students of UNDIP Semarang are caused by changes in the campus ecology of educational institutions especially in the medical faculty environment. Indicators of campus ecology consisting of faculty interactions, lecturer interactions, and student social extraction significantly influence student satisfaction. The Faculty of Medicine, especially the Undip medical postgraduate program, is required to be responsible for creating a comfortable campus ecology in supporting the learning process and the process of student education.

The effect of campus ecology on self-efficacy provides a coefficient of 0.58. Institutional campus ecology especially PPDSA UNDIP Semarang has an effect on student self-efficacy of $(0.58)^2 = 0.3364$ or 33.64%. That is, changes that occur in the self-efficacy of PPDSA UNDIP Semarang students are caused by changes in campus ecology.

These results indicate that the second hypothesis which states that campus ecology has a significant effect on self-efficacy and satisfaction of PPDSA UNDIP Semarang students proved correct. This means that if the scoring of customers (college students) on campus ecology shown to them is better (higher), the higher the academic stress and self-efficacy towards the institution.

Campus ecology which is reflected by faculty interaction, lecturer interaction and social interaction also illustrates that effective lecturers have been conceptualized as something that gives the desired results in the course of their duties as lecturers. In observing the decline in academic achievement, attitudes and student scores, one of the peculiarities questioned is whether high failure rates and low quality of students is not a reflection of the quality of teaching or lack of competency of lecturers. The inability of lecturers to interact with

students in class can be responsible for the poor performance observed by the students in the class.

3. Effect of service quality, campus ecology, and self-efficacy on the satisfaction of PPDSA UNDIP Semarang students

The results of data processing showed that the effect of service quality, campus ecology, and joint self-efficacy on student satisfaction successively had a coefficient of 0.73 for service quality, 0.71 for campus ecology. and 0.64 for self-efficacy. That is, the effect of service quality on student satisfaction is $(0.73)^2 = 0.5329$ or 53.29%, campus ecology is $(0.71)^2 = 0.5041$ or 50.41%, and self-efficacy is $(0.64)^2 = 0.4096$ or 40.96%.

The total effect of the three variables altogether on the student satisfaction is shown by the R^2 score of 0.61. That is, 61% of changes that occur in the satisfaction of PPDSA UNDIP Semarang students are caused by changes in service quality, campus ecology, and self-efficacy experienced by the PPDSA UNDIP students; the rest (39%) of the students satisfaction is influenced by other factors. These results indicate that the hypothesis which states that service quality, campus ecology, and self-efficacy together have a significant effect on the satisfaction of PPDSA UNDIP Semarang students proved to be true.

The results of this study are in line with Pervin's opinion (in Smeth, 1994: 189) that self-efficacy refers to the perceived ability to form relevant behaviors in specific tasks or situations. Stajkovic & Luthans (in Luthans, 2006: 338) also revealed that self-efficacy refers to individual beliefs about their ability to mobilize motivation, cognitive resources, and actions needed to successfully carry out tasks in certain contexts. Nawangsari (2001: 80) defines self-efficacy as an opinion or belief held by someone regarding his ability to display a form of behavior, and this relates to the situation faced by that person and places it as a cognitive element in social learning.

According to Tjiptono (2008: 9), customer satisfaction can provide several benefits, namely (1) creating a harmonious relationship between the institution and the customer, (2) providing a good basis for repurchasing, (3) encouraging customer loyalty, (4) testablishing word of mouth recommendations that benefit organizations/ institutions, (5) providing organizational/ institutional reputation to be good in the

customers, and (6) increasing the profits. In addition to the quality of education services, the reputation of universities also determines student satisfaction. Communities sometimes have their own views in determining education services based on the reputation of universities. In fact, the community is often willing to pay more for the cost of study at certain universities which are reputed to have a good reputation and can better satisfy the students' needs.

Likewise, as an education service provider, universities should also emphasize the provision of quality services to gain the trust of their students and the wider community. If the students and the wider community have a positive perception of the image or reputation of the tertiary institution, then the public trust in higher education will also be formed. Furthermore, this will affect the loyalty of the students and the wider community to continue to use the services of the higher education in the future. This study intends to survey student perceptions of service quality, reputation, and college service scores, and their impact on the student satisfaction.

CONCLUSION

Based on the research findings and discussion about the effect of service quality, campus ecology, and self-efficacy on the satisfaction of the students of PPDSA UNDIP Semarang, it can be concluded as follows;

Respondents' perception of the service quality is included in the category of sufficient quality, campus ecology in the category of good enough, self-efficacy in the category of sufficient and student satisfaction in the quite satisfied category. The relationship model between the research variables namely service quality, campus ecology, self-efficacy, and student satisfaction is in accordance with the empirical models. This conformity is expressed by obtaining a P-value of >0.05 and RMSEA of <0.05. The service quality and campus ecology are antecedent variables of self-efficacy and the three variables are the determinants of the satisfaction of the students of PPDSA UNDIP Semarang. The relationship between the variables in the research model provide significant results and show the effectiveness of the variables (self-efficacy) as

mediating service quality and campus ecology in the formation of student satisfaction.

The contribution of service quality to self-efficacy is 26.01% and to student satisfaction is 23.04%. The contribution of campus ecology to self-efficacy is 75.69% and to student satisfaction is 43.56%. The contribution of service quality and campus ecology together to student self-efficacy is 58%. The contribution of service quality, campus ecology, and self-efficacy together towards the satisfaction of PPDSA UNDIP Semarang students is 61%.

REFERENCES

Ghozali, I. (2014). Model Persamaan Struktural: Konsep dan Aplikasi dengan program AMOS ver.5.0 BP Universitas Diponegoro Semarang, 2nd ed.

Kotler, P. (2003). Manajemen Pemasaran, 11th ed. Jakarta: Indeks kelompok Gramedia.

Istiningtyas, L. (2013). Survey Kepuasan Mahasiswa Terhadap Kualitas Pelayanan Program Studi Psikologi Islam Fakultas Psikologi UIN Raden Fatah Palembang. Jurnal Psiklogi Islam (Psikis),3(2).

Luthans. (2006). Perilaku Organisasi, 10th ed. Yogyakarta: PT. Andi.

Nawangsari. (2001). Pengaruh Self Efficacy dan Expentancy-Value Terhadap Kecemasan Menghadapi Pelajaran Matematika. Jurnal Psikologi Volume, 3(2), 75-88.

Nastiti, U.D. (2015). Pengaruh Layanan Mengajar Dosen dan Pemanfaatan Fasilitas Belajar Terhadap Kepuasan Mahasiswa Universitas Pasundan. Jurnal Administrasi Pendidikan Volume, 22(1).

Negricea, et al. (2014). Establishing Influence of Specific Academic Quality on Student Satisfaction. 5th World Conference on Educational Sciences - WCES 2013. Procedia-Social and Behavioral Science www.sciencedirect.com

Sallis, E. (2009). Total Quality Management in Education, Translation Achmad Ali Riyadi & Fahrurrrozi, 8th ed. Yogyakarta: Penerbit IRCiSo.

Sugiyono. (2010 & 2014). Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif dan R&D. Bandung: CV. Alfabeta.

Taman, A., et al. (2013). Analisis Kulaitas Pelayanan Terhadap Kepuasan Mahasiswa Pada Fakultas Ekonomi Universitas Negeri Yogyakarta. Jurnal Nominal, 2(1).

Tjiptono, F. (2008 & 2012). Service Management (Mewujudkan Layanan Prima). Yogyakarta: Andi.