

The Correlation Of Education Service Quality And Alumni Satisfaction: A Case Study In Islamic Higher Education

Fauzi Muharom¹, Lihar Raudina Izzati², Dwi Purbowati³, Erlinda Rahma Dewi⁴

^{1, 2, 3, 4}UIN Raden Mas Said, Surakarta

fauzi.muharom@staff.uinsaid.ac.id¹, liarh.izzati@staff.uinsaid.ac.id²,
dwi.purbowati@iain-surakarta.ac.id³, erlinda.dewi@staff.uinsaid.ac.id⁴

Abstrak: Perguruan tinggi harus mampu menyelenggarakan pendidikan yang bermutu dan menggali segala aspek pelayanan prima guna meningkatkan citra perguruan tinggi untuk menghadapi persaingan yang kompetitif. Dalam penelitian ini stakeholder yang dimaksud adalah stakeholder eksternal yaitu alumni. Beberapa layanan pendidikan yang akan dibahas dalam penelitian ini adalah kepemimpinan di tingkat fakultas dan program studi, proses pembelajaran yang dilakukan oleh dosen, layanan pendidikan yang dilakukan oleh karyawan atau staf atau tenaga kependidikan, sarana dan prasarana atau fasilitas yang diperoleh mahasiswa, serta lembaga alumni menampung alumni. Penelitian ini bertujuan untuk mengetahui apakah ada pengaruh kualitas layanan pendidikan di salah satu perguruan tinggi Islam terhadap kepuasan alumni dan seberapa besar pengaruhnya. Populasi dalam penelitian ini adalah alumni Institut Agama Islam Negeri (IAIN) Surakarta. Sampel penelitian sebanyak 300 orang. Hasil dari penelitian ini adalah terdapat hubungan antara kepemimpinan fakultas dan program studi, proses pembelajaran, pelayanan administrasi, sarana dan prasarana, dan organisasi alumni secara keseluruhan dengan tingkat kepuasan alumni secara simultan atau bersama-sama memiliki hubungan yang positif dan kuat. dengan tingkat kepuasan alumni sebesar 57,7%, sedangkan 42,3% ditentukan oleh faktor lain. Kata kunci: Korelasi, Kualitas Pelayanan, Perguruan Tinggi Islam

Abstract: Universities must be able to provide good quality education and explore all aspects of excellent service in order to improve the image of tertiary institutions to face competitive competition. In this study, the stakeholders in question are external stakeholders, namely alumni. Some of the educational services that will be discussed in this study are leadership at the faculty and study program level, learning processes carried out by lecturers, educational services carried out by employees or staff or educational staff, facilities and infrastructure or facilities obtained by students, as well as alumni institutions accommodate alumni. This study aims to determine whether there is an influence from the quality of educational services in one of the Islamic tertiary institutions on alumni satisfaction and how much the influence is. The population in this study were alumni of the State Islamic Institute (IAIN) Surakarta. The research sample was 300 people. The results of this study are that there is a relationship between leadership in faculties and study programs, learning processes, administrative services, facilities and infrastructure, and alumni organizations as a whole with the level of alumni satisfaction simultaneously or jointly having a positive and strong relationship to the level of alumni satisfaction of 57.7%, while 42.3% is determined by other factors.

Keywords: Correlation, Service Quality, Islamic Higher Education

Introduction

Education is said to be the currency of a nation. In education, there is a process of changing the attitudes and behavior of a person or group of people in an effort to mature humans through teaching and training efforts, processes, methods, and educational actions. The main task of tertiary institutions is to provide quality and good educational services in order to produce quality human resources, have high competitiveness, and excel in the world of work later. Improving the quality of human resources can be done by improving the education service system so that it will have an impact on the good quality of education services (Napitupulu et al., 2018). In the era of globalization, the climate of competition between tertiary institutions is increasing due to the increasing quantity of tertiary institutions in Indonesia. Universities must be able to provide good quality education and explore all

aspects of excellent service in order to improve the image of tertiary institutions to face competitive competition.

The quality of services provided by a tertiary institution determines the quality of the tertiary institution. Identification of quality service can be through customer (stakeholder) satisfaction. Stakeholders are defined as parties who can influence or be affected (receive the impact) by the decisions taken. Analysis of stakeholder satisfaction is very important in maintaining the support and commitment of all stakeholders. The education system is seen as a transformation system with inputs, namely students (students), facilities, infrastructure, and the environment. The process is the activity that runs itself, and the output is education and alumni services.

In this study, the stakeholders in question are external stakeholders, namely alumni. The quality of human resources can be seen from the satisfaction of alumni while studying at universities. Alumni satisfaction is very important to know because it can maintain good relations between universities and alumni so that they can participate in the development of higher education. Alumni satisfaction can be used as an evaluation of educational outcomes (Elliott & Shin, 2002). The educational output in question is everything related or directly related to alumni when they were still students. Alumni satisfaction can be obtained from alumni experiences while studying at universities (Mukhtar et al., 2015). Universities must see if there is alumni dissatisfaction and determine what can be done to increase alumni satisfaction. Alumni are seen as a partial product that has an important meaning in determining the quality of higher education which is generative and applicable.

Generative means that through alumni the services of higher education are disseminated and developed. While applicative means alumni who can apply the services of higher education (science) that they have received into the world of work. If alumni are satisfied with the knowledge they have received and can apply it in the world of work, then this will have a positive impact on universities to be able to compete with other educational institutions. Efforts to improve the quality of education quality services from time to time become increasingly important to achieve stakeholder satisfaction because this is the first step to the success of tertiary institutions.

Appleton-Knapp & Krentler (2006) state that there are two things that can affect alumni satisfaction, namely 1) personal factors such as age, gender, learning style, GPA; 2) institutional factors such as institutional leadership policies, learning processes. Wilkins & Balakrishnan (2013) identified that the determinants of alumni satisfaction are influenced by the quality of lecturers, facilities and infrastructure, and technology used. Sojkin et al. (2012) argues that student satisfaction is influenced by class quality, good relations between lecturers and students, interaction between students, content or materials, facilities and infrastructure. Teaching ability, curriculum, university status, campus climate can also influence student satisfaction (Douglas et al., 2006). It was concluded that there are several factors that can affect the level of alumni satisfaction, namely physiological factors, learning styles, learning achievements, leadership policies, learning processes, facilities and infrastructure, and the technology used.

Therefore, this study aims to determine whether there is an influence from the quality of educational services in one of the Islamic tertiary institutions on alumni satisfaction and how much the influence is. Some of the educational services that will be discussed in this study are leadership at the faculty and study program level, learning processes carried out by lecturers, educational services carried out by employees or staff or educational staff, facilities and infrastructure or facilities obtained by students, as well as alumni institutions accommodate alumni. The research results can be used as material for evaluating higher education institutions to increase student satisfaction through improving the quality of several educational services in tertiary institutions as organizational accountability documents in the effort to implement a quality assurance system.

Method

This type of research used is quantitative research. The data used in this survey are primary data, obtained through a survey with a questionnaire consisting of closed questions. The population in this study were alumni of the State Islamic Institute (IAIN) Surakarta. Determination of sampling in this survey using non-probability sampling. This determination was chosen because not all members of the population have the same opportunity to become respondents. The technique used is convenience sampling, namely population elements are selected based on convenience and willingness to be sampled. The research sample was 300 people. The research instrument used a Likert scale questionnaire consisting of 38 statements with 5 scales, namely a score of 5 for very appropriate answers, a score of 4 for appropriate answers, a score of 3 for moderately appropriate answers, a score of 2 for inappropriate answers, and a score of 1 for very inappropriate answers.

Prior to the research, validity and reliability tests were carried out for each item of the questionnaire statement on 100 respondents. The validity test results are obtained as follows.

Number of Item	r_{xy}	r_{tabel}	Result	Number of Item	r_{xy}	r_{tabel}	Result
1	0,699	0,195	Valid	20	0,732	0,195	Valid
2	0,705	0,195	Valid	21	0,771	0,195	Valid
3	0,750	0,195	Valid	22	0,732	0,195	Valid
4	0,723	0,195	Valid	23	0,578	0,195	Valid
5	0,685	0,195	Valid	24	0,637	0,195	Valid
6	0,681	0,195	Valid	25	0,708	0,195	Valid
7	0,695	0,195	Valid	26	0,684	0,195	Valid
8	0,803	0,195	Valid	27	0,620	0,195	Valid
9	0,698	0,195	Valid	28	0,685	0,195	Valid
10	0,775	0,195	Valid	29	0,683	0,195	Valid
11	0,681	0,195	Valid	30	0,613	0,195	Valid
12	0,732	0,195	Valid	31	0,640	0,195	Valid
13	0,656	0,195	Valid	32	0,623	0,195	Valid
14	0,750	0,195	Valid	33	0,600	0,195	Valid
15	0,755	0,195	Valid	34	0,769	0,195	Valid
16	0,671	0,195	Valid	35	0,708	0,195	Valid
17	0,556	0,195	Valid	36	0,704	0,195	Valid
18	0,629	0,195	Valid	37	0,699	0,195	Valid
19	0,748	0,195	Valid	38	0,523	0,195	Valid

It can be seen that the calculated r value for all statement items is greater than r table, which is 0.195, so it can be said that all statement items used in this study are valid. When viewed from each statement item, the reliability test results will be obtained as follows.

Number of Item	Cronbach's Alpha	Result	Number of Item	Cronbach's Alpha	Result
1	0,968	Reliable	20	0,968	Reliable
2	0,968	Reliable	21	0,968	Reliable
3	0,968	Reliable	22	0,968	Reliable
4	0,968	Reliable	23	0,968	Reliable
5	0,968	Reliable	24	0,968	Reliable
6	0,968	Reliable	25	0,968	Reliable
7	0,968	Reliable	26	0,968	Reliable
8	0,967	Reliable	27	0,968	Reliable
9	0,968	Reliable	28	0,968	Reliable
10	0,968	Reliable	29	0,968	Reliable
11	0,968	Reliable	30	0,969	Reliable
12	0,968	Reliable	31	0,968	Reliable
13	0,968	Reliable	32	0,969	Reliable
14	0,968	Reliable	33	0,969	Reliable
15	0,968	Reliable	34	0,968	Reliable
16	0,968	Reliable	35	0,968	Reliable
17	0,969	Reliable	36	0,968	Reliable
18	0,968	Reliable	37	0,968	Reliable
19	0,968	Reliable	38	0,969	Reliable

It can be seen that the Cronbach's Alpha value for all statement items is greater than 0.60 and the r table is 0.195 so that it can be said that all statement items used in this study are reliable or consistent.

Findings and Discussion

The first alumni satisfaction is measured from the leadership in the faculty and study program. In this aspect there are five statements related to policies and activities in faculties and study programs as well as policy makers. The level of alumni satisfaction with the leadership is shown in Figure 1.

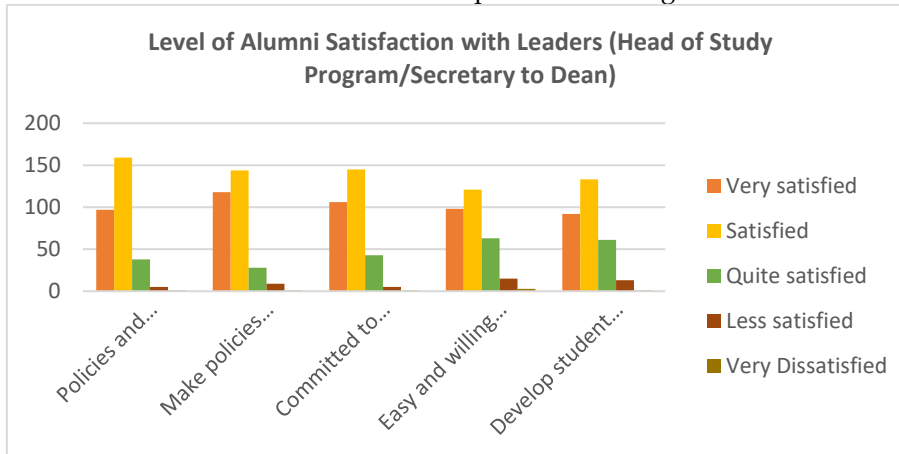


Figure 1. Level of Alumni Satisfaction with Leaders

The percentage of alumni's satisfaction level with leadership is presented in Table 1 below.

Table 1. Percentage of Alumni Satisfaction Level with Leaders

Statement	Score				
	5	4	3	2	1
Policies and activities are adjusted to the vision and mission of the faculties and study programs.	32,33%	53%	12,67%	1,67%	0,33%
Make policies that support the realization of a campus with Islamic character.	39,33%	48%	9,33%	3%	0,33%
Committed to quality that is adjusted to the development of the world of education.	35,33%	48,33%	14,33%	1,67%	0,33%
Easy and willing to communicate and consult.	32,67%	40,33%	21%	5%	1%
Develop student interests and talents.	30,67%	44,33%	20,33%	4,33%	0,33%

Based on the test results in Table 1 regarding alumni satisfaction with leadership in faculties and study programs, it ranges from a score of 4. If the percentages of satisfaction levels on scores 4 and 5 are added up, then the percentage ranges from 70% -80%. This shows that alumni are satisfied with the leadership in the faculty and study program. However, judging from the results of the percentage scores 1 and 2 which range from 1% -6%, there are still some improvements that need to be made.

This is supported by the results of the average alumni satisfaction level with the leadership shown in Figure 2.

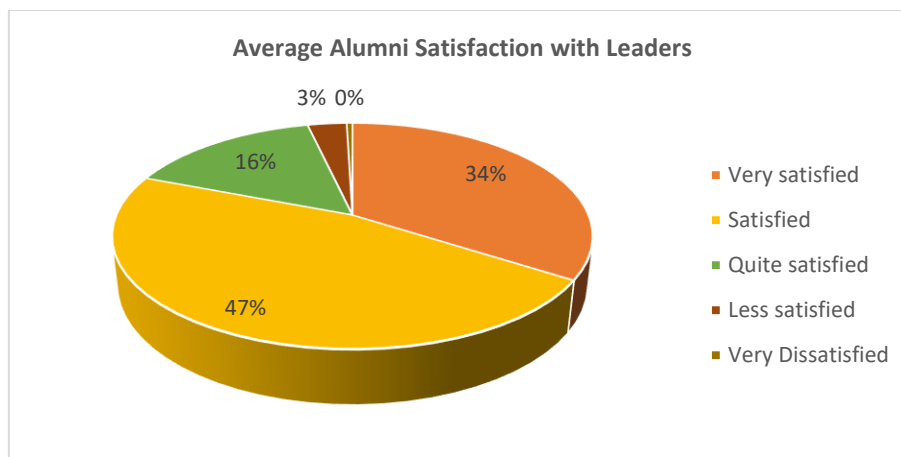


Figure 2. Average Level of Alumni Satisfaction with Leaders

This shows that the quality of leadership in one of the faculties of an Islamic tertiary institution, according

to alumni, is good, although there are still 3% of respondents who say it is not good.

The second alumni satisfaction is measured from the learning process. In this aspect there are 13 questions related to the quality of lecturers and the interaction between lecturers and students during the learning process. The level of alumni satisfaction with lecturers is shown in Figure 3.

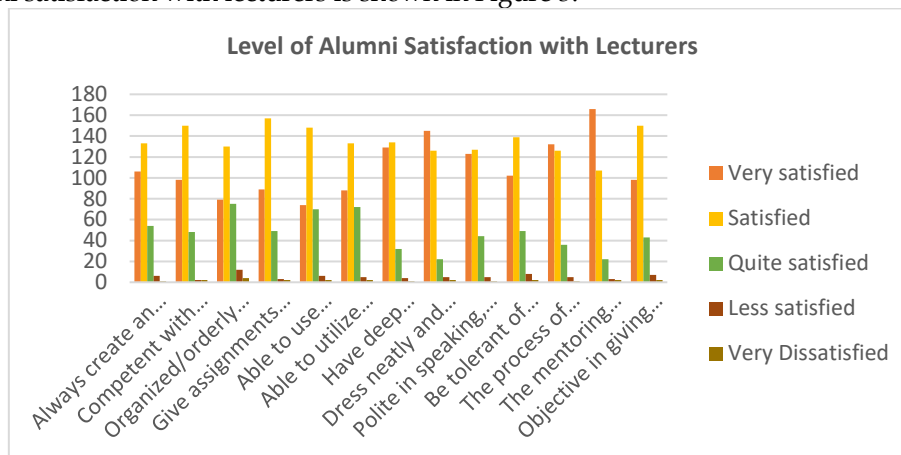


Figure 3. Level of Alumni Satisfaction with Lecturers

The percentage of alumni satisfaction levels with lecturers is presented in Table 2 below.

Table 2. Percentage of Alumni Satisfaction Level for Lecturers

Statement	Score				
	5	4	3	2	1
Always create an atmosphere of Islamic learning.	35,33%	44,33%	18%	2%	0,33%
Competent with the subject taught.	32,67%	50%	16%	0,67%	0,67%
Organized/orderly in the use of lecture time.	26,33%	43,33%	25%	4%	1,33%
Give assignments and exam questions that are in accordance with the syllabus, SAP, and teaching materials.	29,67%	52,33%	16,33%	1%	0,67%
Able to use effective learning strategies.	24,67%	49,33%	23,33%	2%	0,67%
Able to utilize learning media.	29,33%	44,33%	24%	1,67%	0,67%
Have deep scientific insight.	43%	44,67%	10,67%	1,33%	0,33%
Dress neatly and Islamically.	48,33%	42%	7,33%	1,67%	0,67%
Polite in speaking, behaving and acting.	41%	42,33%	14,67%	1,67%	0,33%
Be tolerant of differences of opinion.	34%	46,33%	16,33%	2,67%	0,67%
The process of academic mentorship or trusteeship.	44%	42%	12%	1,67%	0,33%
The mentoring process of compiling the final project or thesis.	55,33%	35,67%	7,33%	1%	0,67%
Objective in giving value.	32,67%	50%	14,33%	2,33%	0,67%

Based on the test results in Table 2 regarding alumni satisfaction with the learning process, it ranges from scores 4 and 5. If the percentages of satisfaction levels on scores 4 and 5 are totaled, then the percentage ranges from 70% -80%. This shows that alumni are satisfied with the teaching and learning process carried out by lecturers. However, judging from the results of the percentage scores 1 and 2 which range from 2% -5%, there are still some improvements that need to be made.

This is supported by the results of the average alumni satisfaction level with lecturers shown in Figure 4.

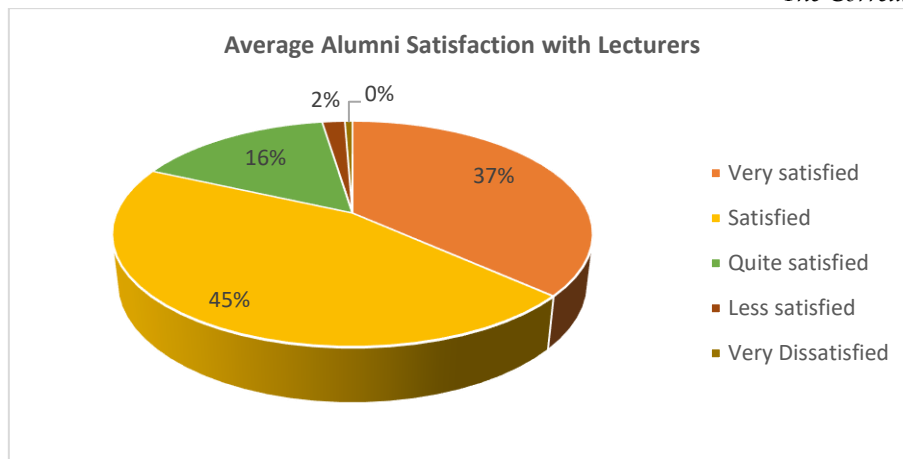


Figure 4. Average Level of Alumni Satisfaction with Lecturers

This shows that according to the alumni, the quality of lecturers in one of the faculties of an Islamic tertiary institution is good, although there are still 2% of the respondents who say it is not good.

The third alumni satisfaction is measured from administrative services. In this aspect there are 5 questions related to administrative services performed by staff or employees. The level of alumni satisfaction with administrative services is shown in Figure 5.

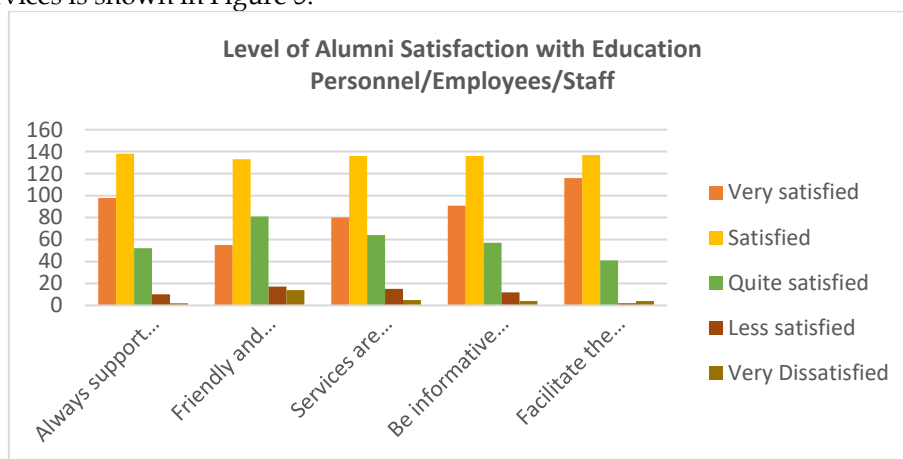


Figure 5. Level of Alumni Satisfaction with Administrative Services Performed by Education Personnel/Employees/Staff

The percentage of alumni's satisfaction level with administrative services carried out by educational staff/employees/staff is presented in Table 3 below.

Table 3. Percentage of Alumni Satisfaction Level with Administrative Services Performed by Education Personnel/Employees/Staff

Statement	Score				
	5	4	3	2	1
Always support an Islamic campus atmosphere.	32,67%	46%	17,33%	3,33%	0,67%
Friendly and courteous service.	18,33%	44,33%	27%	5,67%	4,67%
Services are carried out in an orderly, precise and responsible manner.	26,67%	45,33%	21,33%	5%	1,67%
Be informative and communicative.	30,33%	45,33%	19%	4%	1,33%
Facilitate the management of correspondence and academic documents.	38,67%	45,67%	13,67%	0,67%	1,33%

Based on the test results in Table 3 regarding alumni satisfaction with administrative services, it ranges from a score of 4. If the percentages of satisfaction levels on scores 4 and 5 are added up, then the percentage ranges from 60% -70%. This shows that alumni are satisfied with administrative services. However, judging from the results of the percentage scores 1 and 2 which range from 1% -10%, there are still some improvements that need to be made.

This is supported by the results of the average alumni satisfaction level with administrative services carried out by educational staff/employees/staff as shown in Figure 6.

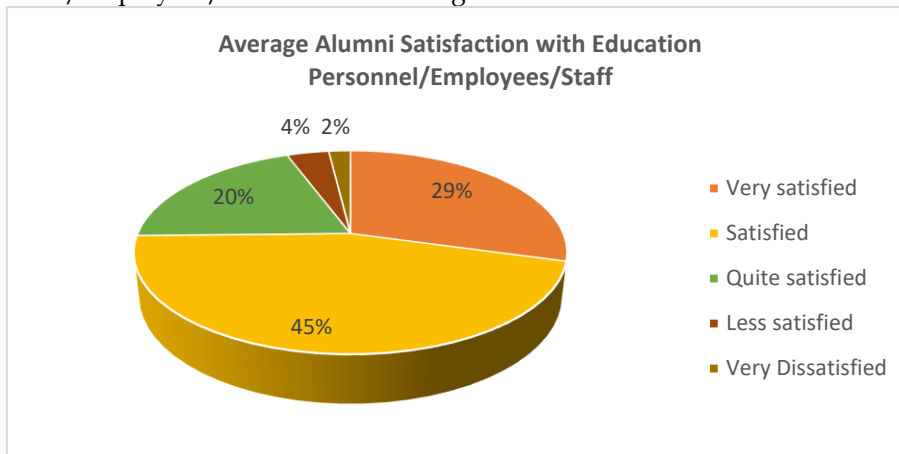


Figure 6. Average Level of Alumni Satisfaction with Administrative Services Performed by Education Personnel/Employees/Staff

This shows that the quality of administrative services carried out by educational staff/employees/staff at one of the faculties of an Islamic tertiary institution, according to alumni, is good, although there are still 6% of respondents who say it is not good.

The fourth alumni satisfaction is measured from facilities and infrastructure. In this aspect there are 10 questions related to the environment and facilities supporting the learning process. The level of alumni satisfaction with facilities and infrastructure is shown in Figure 7.

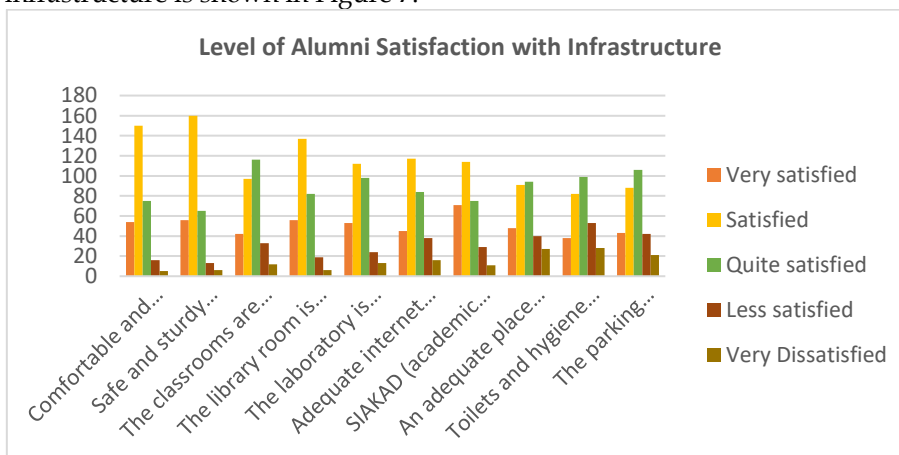


Figure 7. Level of Alumni Satisfaction with Facilities and Infrastructure

The percentage of alumni satisfaction levels with facilities and infrastructure is presented in Table 4 below.

Table 4. Percentage of Alumni Satisfaction Level with Facilities and Infrastructure

Statement	Score				
	5	4	3	2	1
Comfortable and clean environment.	18%	50%	25%	5,33%	1,67%
Safe and sturdy building.	18,67%	53,33%	21,67%	4,33%	2%
The classrooms are comfortable and have complete learning media.	14%	32,33%	38,67%	11%	4%
The library room is comfortable, and has a complete library collection, as well as easy access to information.	18,67%	45,67%	27,33%	6,33%	2%
The laboratory is complete and in accordance with the needs of the study program.	17,67%	37,33%	32,67%	8%	4,33%
Adequate internet facilities.	15%	39%	28%	12,67%	5,33%

Statement	Score				
	5	4	3	2	1
SIAKAD (academic information system) facilities are good.	23,67%	38%	25%	9,67%	3,67%
An adequate place of worship.	16%	30,33%	31,33%	13,33%	9%
Toilets and hygiene facilities are adequate, clean and comfortable.	12,67%	27,33%	33%	17,67%	9,33%
The parking location is adequate, convenient and safe.	14,33%	29,33%	35,33%	14%	7%

Based on the test results in Table 4 regarding alumni satisfaction with facilities and infrastructure, it ranges from scores 3 and 4. If the percentages of satisfaction levels on scores 4 and 5 are added up, then the percentage ranges from 40% -60%. This shows that alumni are quite satisfied with the facilities and infrastructure available.

This is supported by the results of the average alumni satisfaction level with the facilities and infrastructure shown in Figure 8.

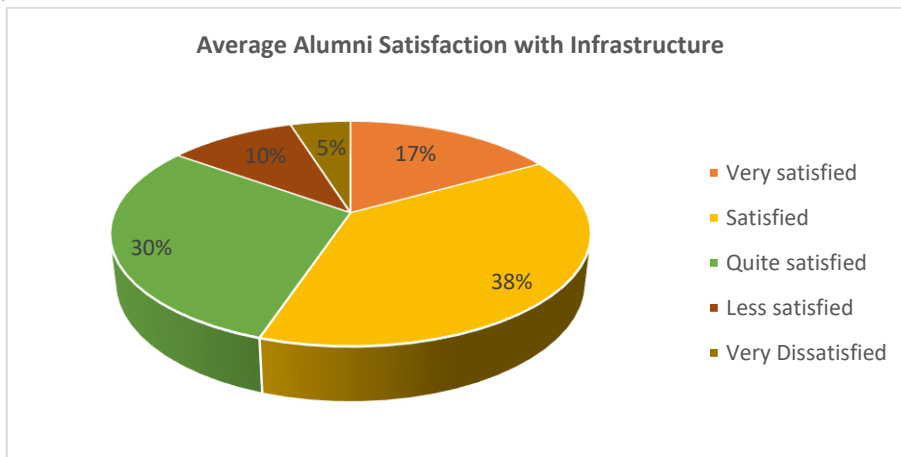


Figure 8. Average Level of Alumni Satisfaction with Facilities and Infrastructure

This shows that the quality of facilities and infrastructure in one of the faculties of an Islamic tertiary institution, according to alumni, is good, although there are still 15% of the respondents who say it is not good.

The fifth alumni satisfaction is measured from alumni organizations. In this aspect there are 2 questions related to alumni organizations that are directly related to alumni. The level of alumni satisfaction with alumni organizations is shown in Figure 9.

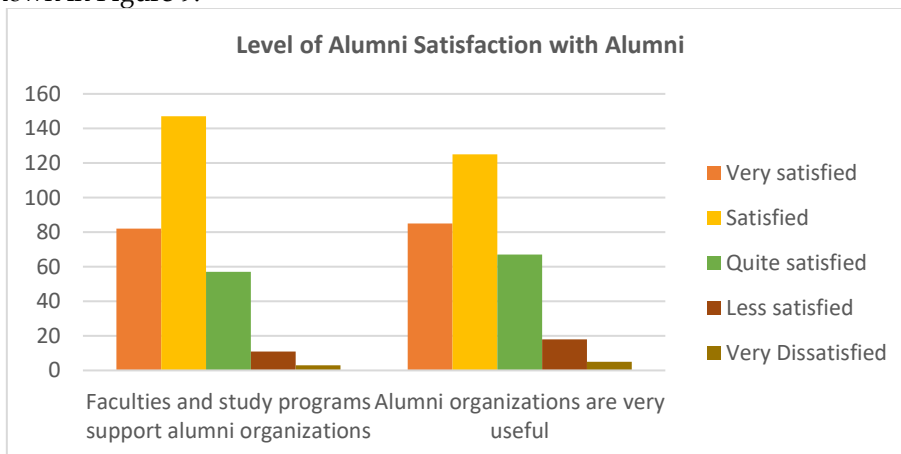


Figure 9. Level of Alumni Satisfaction with Alumni Organizations

The percentage of alumni satisfaction levels with alumni organizations is presented in Table 5 below.

Table 5. Percentage of Alumni Satisfaction Level with Alumni Organizations

Statement	Score				
	5	4	3	2	1
Faculties and study programs support alumni organizations.	27,33%	49%	19%	3,67%	1%
Alumni organizations are very useful.	28,33%	41,67%	22,33%	6%	1,67%

Based on the test results in Table 5 regarding alumni satisfaction with alumni organizations ranging from a score of 4. If the percentage of satisfaction levels on scores 4 and 5 is added up, then the percentage ranges from 60% -70%. This shows that the alumni are satisfied with the alumni organization. However, judging from the results of the percentage scores 1 and 2 which range from 4% -7%, there are still some improvements that need to be made.

This is supported by the results of the average alumni satisfaction level with alumni organizations shown in Figure 10.

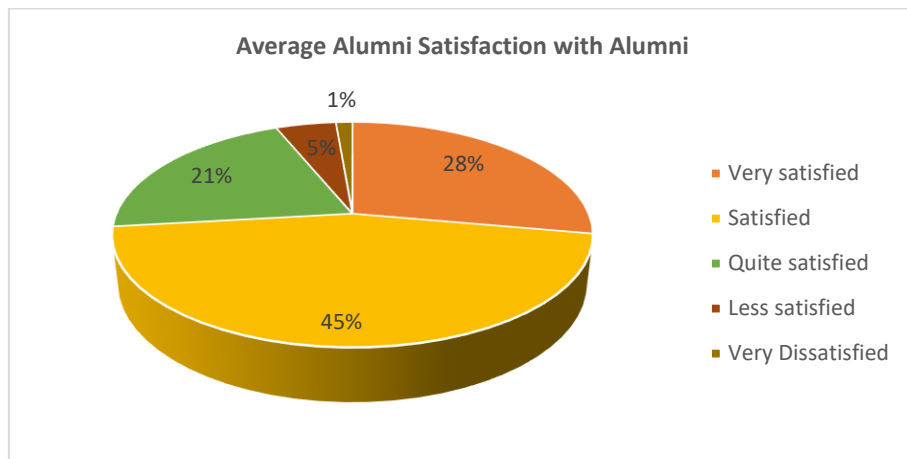


Figure 10. Average Level of Alumni Satisfaction with Alumni Organizations

This shows that the quality of the alumni organization in one of the faculties of an Islamic tertiary institution according to the alumni is good, although there are still 6% of the respondents who say it is not good.

Alumni satisfaction in this study is seen from the impact on alumni themselves. In this aspect, there are 3 statements related to the impact felt directly by alumni on the quality of leadership and policies, lecturers and the learning process, employees/staff and administrative services, facilities and infrastructure, and alumni organizations. The impact data on alumni is shown in Figure 11.

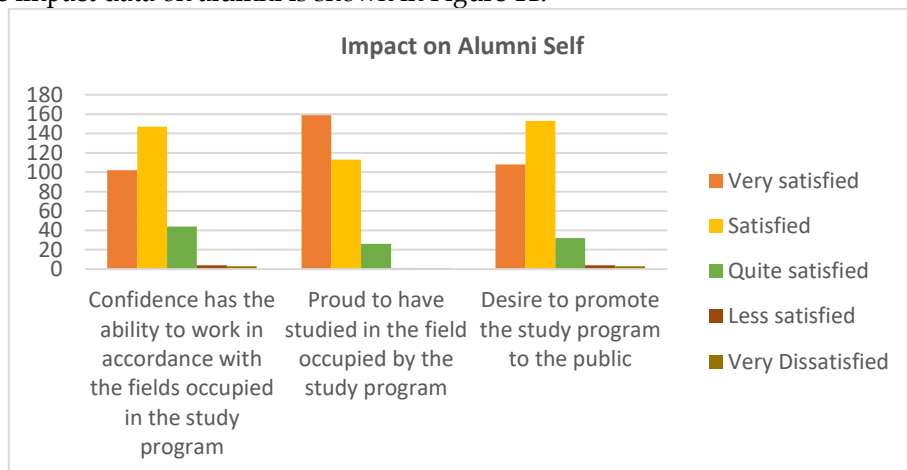


Figure 11. Impact on Alumni Self

The percentage of impact on alumni is presented in Table 6 below.

Table 6. Percentage of Impact on Alumni Self

Statement	Score				
	5	4	3	2	1
Confidence has the ability to work in accordance with the fields occupied in the study program.	34%	49%	14,67%	1,33%	1%
Proud to have studied in the field occupied by the study program.	53%	37,67%	8,67%	0,33%	0,33%
Desire to promote the study program to the public.	36%	51%	10,67%	1,33%	1%

Based on the test results in Table 6, the impact on alumni is in the range of scores 4 and 5. If the percentages of satisfaction levels on scores 4 and 5 are added up, then the percentage ranges from 70% -80%. This shows that alumni are satisfied with the existing educational process. However, judging from the results of the percentage scores 1 and 2 which range from 1% -2%, there are still some parts of the educational process that still need to be improved.

According to the results of an alumni satisfaction survey, leadership in faculties and study programs, learning processes, administrative services, facilities and infrastructure, and alumni organizations have an effect on the impact on alumni themselves. This can be seen from the percentage of alumni satisfaction with leadership in faculties and study programs, learning processes, administrative services, facilities and infrastructure, and alumni organizations which range from 40% -80% affecting the impact on alumni themselves which ranges from 70% -80%.

Before carrying out the multiple linearity test, it is checked first whether the data is normally distributed. The SPSS results show that the data is normally distributed because the significance value is more than 5% or 0.05, which is 0.194. This can be seen in the following table.

One-Sample Kolmogorov-Smirnov Test

		Unstandardize d Residual
N		300
Normal Parameters ^{a,b}	Mean	,0000000
	Std. Deviation	1,22937475
Most Extreme Differences	Absolute	,062
	Positive	,038
	Negative	-,062
Kolmogorov-Smirnov Z		1,080
Asymp. Sig. (2-tailed)		,194
a. Test distribution is Normal.		
b. Calculated from data.		

Next, it is examined whether the variables have a linear relationship or not significantly. The variables that were checked for linearity were between the variables X₁ and Y, X₂ and Y, X₃ and Y, X₄ and Y, X₅ and Y. The results of the linearity test between X₁ and Y using SPSS can be seen in the following table.

ANOVA Table

	Sum of Squares	df	Mean Square	F	Sig.	
Y * X1	Between Groups (Combined)	591.231	15	39.415	23.443	.000
	Linearity	517.027	1	517.027	307.516	.000
	Deviation from Linearity	74.205	14	5.300	3.153	.000
Within Groups	477.489	284	1.681			
Total	1068.720	299				

Measures of Association

	R	R Squared	Eta	Eta Squared
Y * X1	.696	.484	.744	.553

From the results above it can be seen that the significance value between the variables X_1 and Y in Linearity is 0.000. In other words, the significance is less than 5% or 0.05, so it can be concluded that between the variables X_1 and Y there is a linear relationship with a correlation coefficient of 0.696 and a coefficient of determination of 0.484 or 48.4%. It was concluded that variables X_1 and Y or leadership variables in faculties and study programs with alumni satisfaction levels have a positive and strong correlation. This means that the quality of leadership in faculties and study programs has a partial effect on alumni satisfaction levels of 48.4%.

The results of the linearity test between X_2 and Y using SPSS can be seen in the following table.

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Y * X2	Between Groups	(Combined)	614.567	31	19.825	11.699	.000
		Linearity	551.720	1	551.720	325.575	.000
		Deviation from Linearity	62.847	30	2.095	1.236	.192
Within Groups			454.153	268	1.695		
Total			1068.720	299			

Measures of Association

	R	R Squared	Eta	Eta Squared
Y * X2	.719	.516	.758	.575

From the results above it can be seen that the significance value between the variables X_2 and Y in Linearity is 0.000. In other words, the significance is less than 5% or 0.05, so it can be concluded that between the variables X_2 and Y there is a linear relationship with a correlation coefficient of 0.719 and a coefficient of determination of 0.516 or 51.6%. It was concluded that the variables X_2 and Y or the learning process variable with the alumni satisfaction level variable had a positive and strong correlation. This means that the quality of the learning process affects the level of alumni satisfaction partially by 51.6%.

The results of the linearity test between X_3 and Y using SPSS can be seen in the following table.

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Y * X3	Between Groups	(Combined)	510.595	17	30.035	15.176	.000
		Linearity	430.558	1	430.558	217.545	.000
		Deviation from Linearity	80.037	16	5.002	2.527	.001
Within Groups			558.125	282	1.979		
Total			1068.720	299			

Measures of Association

	R	R Squared	Eta	Eta Squared
Y * X3	.635	.403	.691	.478

From the results above it can be seen that the significance value between variables X_3 and Y in Linearity is 0.000. In other words, the significance is less than 5% or 0.05, so it can be concluded that between the variables X_3 and Y there is a linear relationship with a correlation coefficient of 0.635 and a coefficient of determination of 0.403 or 40.3%. It was concluded that variables X_3 and Y or administrative service variables with alumni satisfaction levels have a positive and strong correlation. This means that the quality of administrative services affects the level of alumni satisfaction partially by 40.3%.

The results of the linearity test between X_4 and Y using SPSS can be seen in the following table.

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Y * X4	Between Groups	(Combined)	455.820	35	13.023	5.610	.000
		Linearity	341.721	1	341.721	147.193	.000
		Deviation from Linearity	114.099	34	3.356	1.445	.059
Within Groups			612.900	264	2.322		
Total			1068.720	299			

Measures of Association

	R	R Squared	Eta	Eta Squared
Y * X4	.565	.320	.653	.427

From the results above it can be seen that the significance value between variables X_4 and Y in Linearity is 0.000. In other words, the significance is less than 5% or 0.05, so it can be concluded that between the variables X_4 and Y there is a linear relationship with a correlation coefficient of 0.565 and a coefficient of determination of 0.320 or 32%. It was concluded that the variables X_4 and Y or the variables of facilities and infrastructure with the variable level of alumni satisfaction have a positive and quite strong correlation. This means that the quality of facilities and infrastructure affects the level of alumni satisfaction partially by 32%.

The results of the linearity test between X_5 and Y using SPSS can be seen in the following table.

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Y * X5	Between Groups	(Combined)	472.602	8	59.075	28.838	.000
		Linearity	425.961	1	425.961	207.936	.000
		Deviation from Linearity	46.642	7	6.663	3.253	.002
Within Groups			596.118	291	2.049		
Total			1068.720	299			

Measures of Association

	R	R Squared	Eta	Eta Squared
Y * X5	.631	.399	.665	.442

From the results above it can be seen that the significance value between the X_5 and Y variables in Linearity is 0.000. In other words, the significance is less than 5% or 0.05, so it can be concluded that between the variables X_5 and Y there is a linear relationship with a correlation coefficient of 0.631 and a coefficient of determination of 0.399 or 39.9%. It was concluded that the variable X_5 and Y or the variable of alumni organization with the variable of alumni satisfaction level had a positive and strong correlation. This means that the quality of the alumni organization has an effect on the level of alumni satisfaction partially by 39.9%.

Furthermore, it is necessary to check whether there is multicollinearity. The multicollinearity test is used to determine whether or not there is a linear relationship between the independent variables in the regression model. The results of the multicollinearity test using SPSS are shown as follows.

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	2.887	.525		5.496	.000		
X1	.129	.042	.223	3.110	.002	.280	3.574
X2	.084	.020	.334	4.235	.000	.231	4.327
X3	.035	.035	.068	1.003	.317	.309	3.234
X4	.000	.014	-.001	-.015	.988	.411	2.431
X5	.253	.065	.220	3.893	.000	.449	2.228

a. Dependent Variable: Y

From the above results it can be seen that the value of the variance inflation factor (VIF) of the variables X₁, X₂, X₃, X₄, and X₅ is less than 10 and the tolerance is more than 0.100 so it can be concluded that there is no multicollinearity problem, which means there is no correlation between the independent variables.

Furthermore, a heteroscedasticity test was carried out to find out whether in the regression model there was an inequality of variance from the residual value of one observation to another. The results of the heteroscedasticity test using SPSS are shown as follows.

Correlations

			X1	X2	X3	X4	X5	Unstandardized Residual
Spearman's rho	X1	Correlation Coefficient	1.000	.798**	.722**	.620**	.616**	-.007
		Sig. (2-tailed)	.	.000	.000	.000	.000	.899
		N	300	300	300	300	300	300
X2		Correlation Coefficient	.798**	1.000	.802**	.665**	.616**	.000
		Sig. (2-tailed)	.000	.	.000	.000	.000	.999
		N	300	300	300	300	300	300
X3		Correlation Coefficient	.722**	.802**	1.000	.669**	.546**	-.011
		Sig. (2-tailed)	.000	.000	.	.000	.000	.850
		N	300	300	300	300	300	300
X4		Correlation Coefficient	.620**	.665**	.669**	1.000	.632**	-.024
		Sig. (2-tailed)	.000	.000	.000	.	.000	.675
		N	300	300	300	300	300	300
X5		Correlation Coefficient	.616**	.616**	.546**	.632**	1.000	.007
		Sig. (2-tailed)	.000	.000	.000	.000	.	.897
		N	300	300	300	300	300	300
ABS_RES		Correlation Coefficient	-.007	.000	-.011	-.024	.007	1.000
		Sig. (2-tailed)	.899	.999	.850	.675	.897	.
		N	300	300	300	300	300	300

** . Correlation is significant at the 0.01 level (2-tailed).

It is obtained that the value of sig. (2-tailed) for the X₁ variable of 0.899, the X₂ variable of 0.999, the X₃ variable of 0.850, the X₄ variable of 0.675, the X₅ variable of 0.897. The value of the five independent variables is more than 5% or 0.05 so it can be concluded that there is no heteroscedasticity problem. That is, there is no difference

in the variance of the residual value from one observation to another.

After the classic assumption test of multiple linear regression was carried out, it was concluded that the research data fulfilled the classic assumption test of multiple linear regression, namely the data were normally distributed, there was a linear relationship between the independent and partially dependent variables, no multicollinearity and no heteroscedasticity. Therefore, data analysis was continued with multiple linear regression tests. The correlation coefficient is shown in the following SPSS results.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.760 ^a	.577	.570	1.240

a. Predictors: (Constant), X5, X3, X4, X1, X2

The SPSS results above show that the resulting correlation coefficient is 0.760 and the determination coefficient is 0.577 or 57.7%. It was concluded that the five independent variables and the dependent variable or leadership variable at the faculty and study program level, the learning process carried out by lecturers, educational services carried out by employees or staff or educational staff, facilities and infrastructure or facilities obtained by students, as well as alumni institutions accommodate alumni with a variable level of alumni satisfaction has a positive and strong correlation level. This means that the quality of leadership at the faculty and study program levels, the learning process carried out by lecturers, educational services carried out by employees or staff or educational staff, facilities and infrastructure or facilities obtained by students, as well as alumni institutions that accommodate alumni affect the level of alumni satisfaction as a whole. simultaneously by 39.9%.

Then the data analysis continued with the simultaneous test obtained using SPSS showing the following results.

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	616,823	5	123,365	80,260	,000 ^a
	Residual	451,897	294	1,537		
	Total	1068,720	299			

a. Predictors: (Constant), X5, X3, X4, X1, X2

b. Dependent Variable: Y

The simultaneous test significance value is 0.000 or less than 0.05. Based on the results of the simultaneous test, it can be stated that there is sufficient evidence to state that at least one β_i is not equal to zero or in other words, at least there is at least one independent variable that has a significant effect on variable Y so that a regression equation can be made which is shown in the following SPSS results.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,887	,525		5,496	,000
	X1	,129	,042	,223	3,110	,002
	X2	,084	,020	,334	4,235	,000
	X3	,035	,035	,068	1,003	,317
	X4	,000	,014	-,001	-,015	,988
	X5	,253	,065	,220	3,893	,000

a. Dependent Variable: Y

Judging from the results of the coefficients, the regression equation in this study is as follows.

$$Y = 2,887 + 0,129X_1 + 0,084X_2 + 0,035X_3 + 0,000X_4 + 0,253X_5$$

From the multiple linear regression equation above, it shows that the constant value has a positive value of 2.887. The positive sign means that it shows a unidirectional influence between the independent and dependent variables. This shows that if all the independent variables include leadership at the faculty and study program level, the learning process carried out by lecturers, educational services carried out by employees or staff or educational staff, facilities and infrastructure or facilities obtained by students, as well as alumni institutions accommodate alumni with a value of 0% or no change, then the alumni satisfaction level is 2,887.

The regression coefficient value for the leadership variable at the faculty and study program level is 0.129. This value indicates a positive (unidirectional) effect between leadership variables at the faculty and study program

levels and the level of alumni satisfaction. This means that if the leadership variable at the faculty or study program level increases by 1%, the alumni satisfaction level will increase by 0.129. Assuming that other variables remain constant.

The regression coefficient value for the learning process variable carried out by the lecturer is 0.084. This value indicates a positive (unidirectional) effect between the learning process variables carried out by the lecturer and the level of alumni satisfaction. This means that if the learning process variable carried out by the lecturer increases by 1%, the alumni satisfaction level will increase by 0.084. Assuming that other variables remain constant.

The regression coefficient value for the education service variable performed by employees or staff or educational staff is 0.035. This value indicates a positive (unidirectional) effect between educational service variables performed by employees or staff or educational staff and the level of alumni satisfaction. This means that if the educational service variable performed by employees or staff or educational staff increases by 1%, the alumni satisfaction level will increase by 0.035. Assuming that other variables remain constant.

The regression coefficient value for the variables of facilities and infrastructure or facilities obtained by students is 0.000. This value shows that the effect is not too much. This means that if the variables of facilities and infrastructure or facilities obtained by students increase by 1%, then the level of alumni satisfaction will remain the same or not increase or decrease. Assuming that other variables remain constant.

The regression coefficient value for the variable of the alumni institution that accommodates alumni is 0.253. This value indicates a positive (unidirectional) effect between the variables of the alumni institutions that accommodate alumni and the level of alumni satisfaction. This means that if the variable of the alumni organization that accommodates alumni increases by 1%, the alumni satisfaction level will increase by 0.253. Assuming that other variables remain constant.

Conclusion

Variables that have a positive and strong relationship to the level of alumni satisfaction are leadership at the faculty and study program levels, the learning process carried out by lecturers, educational services carried out by employees or staff or educational staff, facilities and infrastructure or facilities obtained by students, and institutions alumni that embodies alumni. Meanwhile, the variables that have a positive and fairly strong relationship are facilities and infrastructure. All variables have a positive relationship to the level of alumni satisfaction, which means that if alumni satisfaction with leadership in faculties and study programs, learning processes, administrative services, facilities and infrastructure, and alumni organizations increases, the impact on alumni themselves will also increase.

In addition, it can also be seen the relationship between leadership in faculties and study programs, learning processes, administrative services, facilities and infrastructure, and alumni organizations as a whole and the level of alumni satisfaction. The correlation coefficient is 0.76 and the determination coefficient is 57.7%. This means that leadership in faculties and study programs, learning processes, administrative services, facilities and infrastructure, and alumni organizations simultaneously or together have a positive and strong relationship to the alumni satisfaction level of 57.7%, while 42.3% is determined by another factor.

Reference

- Appleton-Knapp, S. L., & Krentler, K. A. (2006). Measuring student expectations and their effects on satisfaction: The importance of managing student expectations. *Journal of Marketing Education*, 28(3), 254–264. <https://doi.org/10.1177/0273475306293359>
- Douglas, J., Douglas, A., & Barnes, B. (2006). Measuring student satisfaction at a UK university. *Quality Assurance in Education*. <https://doi.org/10.1108/09684880610678568>
- Elliott, K. M., & Shin, D. (2002). Student satisfaction: An alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management*, 24(2), 197–209. <https://doi.org/10.1080/1360080022000013518>
- Mukhtar, U., Anwar, S., Ahmed, U., & Baloch, M. A. (2015). Factors effecting the service quality of public and private sector universities comparatively: an empirical investigation. *Researchers World*, 6(3), 132.
- Napitupulu, D., Rahim, R., Abdullah, D., Setiawan, M. I., Abdillah, L. A., Ahmar, A. S., Simarmata, J., Hidayat, R., Nurdiyanto, H., & Pranolo, A. (2018). Analysis of student satisfaction toward quality of service facility. *Journal of Physics: Conference Series*, 954(1), 12019. <https://doi.org/10.1088/1742-6596/954/1/012019>
- Sojkin, B., Bartkowiak, P., & Skuza, A. (2012). Determinants of higher education choices and student satisfaction: the case of Poland. *Higher Education*, 63(5), 565–581. <https://doi.org/10.1007/s10734-011-9459-2>
- Wilkins, S., & Balakrishnan, M. S. (2013). Assessing student satisfaction in transnational higher education. *International Journal of Educational Management*. <https://doi.org/10.1108/09513541311297568>