



Marketing Mix Analysis In An Effort For Formulating Strategies To Increase The Number Of Students (High School Case Study)

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ABSTRACT

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Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have spiritual, religious, self-control, personality, intelligence, noble character and skills needed by themselves, society and the nation. The problem faced by the College of Informatics and Logic Management is that the 2017-2021 enrollment target is not achieved. So that if no real action is taken, it is feared that it will have an impact on this High School. This study aims to formulate policies and alternative strategies based on the marketing mix in order to improve the decision to choose a Logic College in the future. The independent variables studied were derived variables from the marketing mix strategy, namely Product, Price, Location, Promotion, People, Process and Service. As for the dependent variable, namely the Decision to Choose.

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1. Introduction

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have spiritual, religious, self-control, personality, intelligence, noble character and skills needed by themselves, society and the nation.

Education affects economic growth through increasing skills and labor productivity. The rapid economic growth in Asian countries and the progressive shift in production towards high-tech industries and services have resulted in increasing demands from the business world for the need for skilled and educated human resources. Human resources as workforce skills are needed in carrying out tasks, improving organizational quality and supporting economic growth.

Universities are no longer limited to providing knowledge to students, but more than that, universities are required to be able to provide added value to harmonize with increasing public interest in continuing their education to higher education. The quality, facilities and location of universities are believed to provide important points in influencing people's choice of a university.

In the period 2017 to 2021, there is a downward trend in the number of students obtained by the College, where the realization of acceptance of the number of students does not match the capacity available at the College of Management of Informatics and Computer Logic. So based on these problems, in addition to internal factors, external factors also affect the failure to achieve the number of students in accordance with their capacity, such as increasing the level of competition, pandemics, and the development of similar institutions.

Based on this phenomenon, if real action is not taken, it is feared that it will have an impact on the continuity of the College of Informatics Management and Computer Logic campus. Efforts that can be made to increase the number of students are through internal factors, so it is necessary to formulate an appropriate marketing strategy. The strategies undertaken include the use of technology by establishing

portalshttp://logic.ac.id. Through content, such as e-learning, e-library and e-academic, students are given convenience in obtaining lecture materials and schedules, academic information, and re-registration for each semester.

The marketing mix strategy in relation to the marketing of higher education services includes products, prices, locations, promotions, people, processes and services. Product is anything that can be offered to the market to satisfy a want or need (Kotler & Keller, 2009), in this case the educational services of the College of Informatics Management and Computer Logic offered to students along with the value of their benefits.

Student perceptions of the marketing mix at the College of Informatics and Computer Logic Management (product, price, location, promotion, people, process and service) in relation to the decision to choose the College of Informatics Management and Computer Logic can provide input for management to make programs marketing. The program is expected to be able to increase the number of students of the College of Informatics Management and Computer Logic, so that the number of students can be achieved in the future. Marketing is a societal process by which individuals and groups obtain what they need and want through creating, offering and freely exchanging products and services of value with others (Kotler & Keller, 2009).

Marketing is an activity to fulfill existing needs and wants through the creation of a mutually beneficial exchange process. These marketing activities include product planning, pricing policy, promotion, distribution, sales, service, making marketing strategies, marketing research, marketing information systems and others related to marketing (Boone & Kurtz, 2000). Theory About the Service Marketing Mix, The marketing mix is a combination strategy carried out by various companies in the marketing field. The combinations contained in the components of the marketing mix must be carried out in an integrated manner. This means that the implementation and application of these components must be carried out by taking into account that one component is closely related to each other in order to achieve company goals which are ineffective if carried out separately (Lupiyoadi & Hamdani, 2006).

Price is the amount of money that customers have to pay for a product/service. This element runs parallel to product quality, if the quality is good, then consumers are willing to pay higher (Kotler & Keller, 2009). Pricing strategies are very significant in providing value to consumers and influencing product tastes, as well as consumer decisions to buy. Pricing is also related to revenue and influences supply or marketing channels. However, the most important thing is that the decision in determining the price must be consistent and the overall marketing strategy (Lupiyoadi & Hamdani, 2006).

2. Methods

This type of research is action research with descriptive analysis, which emphasizes the discussion of data and research subjects by presenting data systematically. The data used in this study is primary data, namely data obtained from research conducted from the first source. The data was obtained directly from respondents who became the object of research by observation. There are several stages used, namely:

- a. Data collection stage At this stage, observations, interviews, document collection and literature methods will be used
- b. Information Needs Analysis Carry out data and process analysis activities
- c. Evaluation Method Planning for problem identification and analysis of interim process results
- d. Stage of Evaluation of the results of the process after testing.

2.1 Analysis Techniques

This qualitative descriptive analysis technique is needed in this study because it aims to provide an overview of the extent to which the administrative system in this high school can be utilized and useful for parties who have an interest, especially the employees themselves to improve individual performance and also as end users. This analysis is also an analysis that is not stated in quantitative calculations but processes and reveals and describes the problems one by one according to the PIECES Framework method, in the form of statements and conclusions.

Validity testing is carried out to measure whether the measuring instrument used is valid or not.

The research results are valid if there are similarities between the data collected and the actual data on the object under study, while the research results are reliable if there are similarities in the data at different times. By using valid and reliable instruments in data collection, it is hoped that the research results will be valid and reliable. A good instrument must be valid and reliable. A valid instrument must have internal and external validity. Research that has internal validity, if the data generated is a function of the design and instruments used. Research that has external validity if the research results can be applied to other samples or the research results can be generalized. (Sugiyono, 2009: 172-174). In addition to simple analysis, a different T-test (paired sample t test) is used, which is a test using a t-distribution to the significance of the difference in a certain mean value of two unrelated sample groups. As for the case of this study using a different test paired sample T-test. Paired sample T-test is a test conducted on two paired samples. Paired samples can be interpreted as samples with the same subject but experiencing two different treatments (Budi, 2006).

3. Results And Discussion

3.1 Description of Research Data

The object of this research is active students as many as 76 people. This chapter will discuss the results of the research, especially those related to the data obtained during the study. This study aims to find out whether there is a difference between the independent variable and the dependent variable. The method used in this study is a statistical analysis method using classical assumptions consisting of Normality, Multicollinearity, Autocorrelation and Heteroscedasticity Tests. In addition to the classical test, the methods used are Linear Regression Analysis, T-Test and F-Test. Data analysis begins with distributing questionnaires, then data collection on the results of the questionnaires is collected into SPSS 16 software. After the data from the independent variable is completed, then the data from the dependent variable is collected. Then these variables are entered into the SPSS (Statistical Product of Service Solution) application which is used to obtain statistical calculation results in accordance with the data analysis method that has been determined to obtain conclusions from the research results.

3.2 Descriptive Analysis of Respondents Characteristics

Before conducting statistical test analysis, it will first be discussed about the description of the data from the research variables regarding the identity of the respondents. The characteristics of the 70 respondents from the processed questionnaire are as shown in the following table:

Table 1.
Characteristics of Respondents by Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Man	46	60.5	60.5	60.5
	Woman	30	39.5	39.5	100.0
	Total	76	100.0	100.0	

Source: Primary data, processed by SPSS, 2021

Table IV.1 above shows that the respondents in this study were dominated by men as much as 60.5%, while women only amounted to 39.5%.

Table 2.
Characteristics of Respondents by Semester

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Semester 2	25	32.9	32.9	33
	Semester 4	35	46.1	46.1	79
	6th semester	16	21	21	100
	Total	76	100.0	100.0	

Source: Primary data, processed by SPSS, 2021

Table IV.2 above shows that the respondents in this study were dominated by the 4th semester by 46.1%, then the second semester by 32.9%, then the 6th semester by 21%.

3.2 Data Validity Test Results

Validity test is used to measure whether a questionnaire is valid or not. In this study, the validity test was carried out by looking at the correlation between the scores of each question item and the total score (item total correlation) of the variables. The calculation is done using the Pearson's Product Moment correlation formula in the SPSS program. The *r*table value is calculated using *df* (degree of freedom) analysis, namely the formula $df = nk$ where *n* is the number of respondents and *k* is the number of independent variables used. Based on the *r* product moment, the *r*table value is 0.34. The results of the validity test for each variable are shown in the following tables:

Table 3.
Results of the Validity Test of Respondents' Perceptions of the
Marketing Mix Strategy

Question Items	Rcount	rtable	Conclusion
1	1,000	0.349	Valid
2	0.561	0.349	Valid
3	0.974	0.349	Valid
4	0.415	0.349	Valid
5	0.561	0.349	Valid
6	0.439	0.349	Valid
7	0.468	0.349	Valid
8	0.373	0.349	Valid
9	1,000	0.349	Valid
10	1,000	0.349	Valid
11	1,000	0.349	Valid
12	0.561	0.349	Valid
13	0.561	0.349	Valid
14	0.561	0.349	Valid
15	0.403	0.349	Valid
16	0.354	0.349	Valid
17	0.468	0.349	Valid
18	0.373	0.349	Valid
19	1,000	0.349	Valid
20	0.468	0.349	Valid
21	0.373	0.349	Valid
22	0.561	0.349	Valid
23	0.561	0.349	Valid
24	0.561	0.349	Valid
25	0.403	0.349	Valid
26	0.354	0.349	Valid
27	0.468	0.349	Valid
28	0.373	0.349	Valid
29	1,000	0.349	Valid
30	0.561	0.349	Valid
31	0.974	0.349	Valid
32	0.415	0.349	Valid
33	0.561	0.349	Valid
34	0.439	0.349	Valid
35	0.468	0.349	Valid
36	0.373	0.349	Valid
37	1,000	0.349	Valid
38	1,000	0.349	Valid

Source: Primary data, processed, 2021

Table IV.4 above shows the Pearson correlation (*r*count) value for each question item which is greater than the *r*table value. The significance level for the item is at the 0.05 level. This means that all indicators/question items that measure the mix variable are valid.

3.3 Data Reliability Test Results

Testing the reliability of the data was carried out by using Cronbach's Alpha statistical test. The

results of the questionnaire reliability test are shown in the following table:

Table 4.

Reliability Statistics

Cronbach's Alpha	N of Items
.941	38

Source: Primary data, processed, 2021

Table IV.6 above shows that the value of Cronbach's alpha for the leadership variable is 0.941. This figure is > 0.80. This means that the construct of questions that are designed to measure leadership is reliable.

3.4 Data Test Results

From the research data obtained in the form of primary data regarding marketing mix analysis, the research variables will be described by testing the Classic Assumption Test, Multiple Linear Analysis, Hypothesis Testing, and Coefficient of Determination Test (R2).

Classic assumption test, The classical assumption test in this study consisted of Normality, Multicollinearity, Heteroscedasticity and Autocorrelation.

a. Normality test

Normality test of data which is intended to show the data generated from the regression has been normally distributed or not. The method that is often used to determine whether a model is normally distributed or not, can be used with the Kolmogorov Smirnov one sample test, the histogram approach and the PP Plot approach.

Normal P-P Plot of Regression Standardized Residual

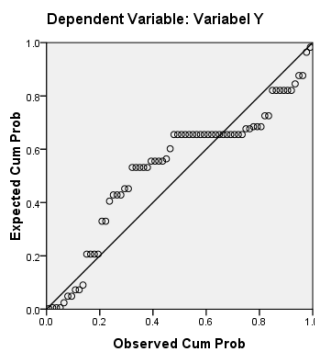


Figure 1 P – P Plot

Judging from Figure IV.1 PP normality test plot, this study is feasible to use because it meets the assumption of normality. The scatter plot shows the points that follow the data along the diagonal line and no points move away independently. This means that the data is normally distributed. Thus, it can be ascertained that the data is good enough to be used in research.

b. Multicollinearity Test

Multicollinearity test is a condition in which the regression model found a perfect or near perfect correlation between the independent variables. To find out a regression model free from multicollinearity, which has a VIF (Variance Inflation Factor) value of less than 10 and has a Tolerance number of more than 0.1

Table 5.
Multicollinearity Test Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.992	.933		1.064	.291		
Product	-.062	.058	-.095	-1.069	.289	.471	2,123
Price	-.124	.046	.256	2,673	.009	.409	2.444
Location	.128	.062	.231	2.058	.043	.299	3.346
Promotion	.029	.055	.053	.525	.601	.374	2,677
Person	.073	.049	.132	1,490	.141	.478	2,091
Process	.223	.067	.272	3.311	.001	.557	1,796
Service	.067	.032	.211	2.115	.038	.379	2,636

a. Dependent Variable: Choice_Decision

Source: Primary data, processed, 2021

From the output above, it can be seen that the Tolerance value of the three variables is more than 0.10 and the VIF value is less than 10. So it can be concluded that there is no multicollinearity problem. This means that it can be said that the data deserves to be studied.

c. Heteroscedasticity Test

Heteroscedasticity is a condition where in the regression model there is an inequality of variance from the residuals from one observation to another. A good regression model is that there is no heteroscedasticity. Various kinds of heteroscedasticity tests, one of which is by testing the glacier. If the significance value is > 0.05 , then there is no heteroscedasticity.

Table 6.
Heteroscedasticity Test

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.611	2,623		.233	.817
Product	-.102	.163	-.207	-.622	.539
Price	-.136	.134	-.315	-1.019	.317
Location	.115	.173	.282	.673	.507
Promotion	.030	.131	.072	.228	.821
Person	.191	.129	.492	1.475	.152
Process	-.151	.209	-.244	-.722	.476
Service	-.008	.074	.038	-.109	.914

a. Dependent Variable: Choice_Decision

Based on the heteroscedasticity test in the table above, the significant value (Sign.) > 0.05 , so that the variable is not affected by heteroscedasticity

d. Autocorrelation Test

The autocorrelation test is used to test whether in a linear regression model there is a correlation between the confounding error in period t and the error in period t-1 (previous). To test the autocorrelation, it can be seen with the Durbin Watson (DW) value, namely:

- 0 < DW < dL : means there is autocorrelation
- dL < DW < dU : means there is no conclusion (hesitating)
- dU < DW < 4-dU : means there is no autocorrelation
- 4-dU < DW < 4-dL : means there is no conclusion (hesitating)
- 4-dL < DW < 4 : means there is autocorrelation

To find out the value of Durbin-Watson in discussing and testing, it can be seen in Table IV.9 below:

Table 7.
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.906a	.821	.818	1.1933	2.227

a. Predictors: (Constant), Variable X

b. Dependent Variable: Variable Y

From the output above, the DW value generated from the regression model is 2.227. Meanwhile, from the DW table with a significance of 0.05 and the amount of data (n) = 70, and k = 1 (k is the number of independent variables), the dL value is 1.5834 and dU is 1.6413 (see attachment). Because the DW value of 2.227 is in the area between dU and 4-dU or 1.6413 < 2.227 < 4 - 1.6413, it can be concluded that there is no autocorrelation in the linear regression.

3.5 Hypothesis testing

F Uji test, Simultaneous testing was conducted to see the effect of the independent variables on the dependent variable simultaneously. Where the statistical hypothesis proposed significance level = 0.05.

Ho : 1 = 2 = 3 = 4 = 0

Ha : 1 2 3 4 0

Formulation of Hypothesis Testing Criteria:

If F count < F table then Ho is accepted, meaning that the independent variable simultaneously has no effect on the dependent variable.

If F count > F table then Ho is rejected, meaning that the independent variable simultaneously affects the dependent variable.

Table 8.
ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.149	7	11,307	28.262	.000a
	Residual	27,206	68	.400		
	Total	106,355	75			

a. Predictors: (Constant), Variable X

b. Dependent Variable: Variable Y

From the Anova table above, it can be seen that the calculated F value = 28.262 and when viewed at Residual 68 and Regression df 7 in F table is 2.148, this means Ho is Rejected and Ha is Accepted, it can be concluded that simultaneously all variables have an effect on the decision to choose.

3.6 Coefficient of Determination Test (R2)

The coefficient of determination (R2) is used to measure how far the regression model explains the variation of the dependent variable. The value of the coefficient of determination is between zero and one. A small value of R2 means that the ability of the independent variables is very limited. A value close to one means that the independent variables provide almost all the information needed to predict the

variation of the dependent variable (Ghozali, 2009: 87). Based on the calculation of SPSS 16.0 to produce the coefficient of determination is as follows:

Table 9.
ANOVA^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.863a	.744	.718	.633	2008

a. Predictors: (Constant), Variable X

b. Dependent Variable: Variable Y

Based on the SPSS Model Summary output above, the R Square value is 0.744 which shows that 74.4 % of the decision to choose (Y) is explained by the variables of product (X1), price (X2), location (X3), promotion (X4), people (X5), process (X6), and service (X7). while the remaining 25.6% is explained by variables outside the study.

4 Conclusion

The marketing mix can explain the decision to choose and have a positive and significant effect on the decision to choose the College of Management Informatics and Computer Logic. Policies and alternative strategies that are effective to increase the number of students are to improve the quality of the variables that have a positive and significant effect, namely the process.

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