Marketing Information Systems in the Context of Building WOM Marketing Through Service Quality, Institutional Image and Customer Satisfaction in Higher Education

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ABSTRACT

This study aims to construct word of mouth (WOM) marketing through service quality, institutional image, and customer satisfaction as variables influencing higher education institutions. The utility of the research is to help universities create word of mouth to support the sustainability and competitiveness of higher education. The population of this study are still active students at Semarang University. The number of samples is 100 and the selection of the sample ofis a conscious selection based on the criterion of respondents who are studying at least in the 4th semester. The analysis technique used is multiple linear regression and trajectory analysis.The results of the study indicate that the quality of the service and the image of the facility have a partially positive effect on customer satisfaction. The journey analysis, on the other hand, shows that customer satisfaction can neither reflect the relationship between service quality and PTO nor the relationship between image and PTO.

1. Introduction

Marketing activities experienced rapid development at that time. Marketers are getting more and more creative in marketing their products. One of the most effective forms of marketing today is WOM. As noted by Kertajaya, the most effective funding is through the WOM (Kertajaya, 2006). WOM marketing is an important part that engages makes the spokesperson company [25]. WOM marketing very important ensure sustainability of your business. Word of mouth is very important and influences consumer attitudes and behavior. WOM marketing is marketing that occurs when consumers talk about a company's products and services in everyday conversation. It can be said that it is a free advertisement triggered by the consumption experience. Customers who have a pleasant experience by consuming product or service or receive something that exceeded their expectations tend to tell others, be relatives, friends or others, the good things about the product. Consumers tend to trust their friends or family more than promotional materials. Thus, WOM marketing can be considered as one of the powerful forms of advertising that you can rely on to attract customers.

A phenomenon that is taking place in the digital information age is the free and fast flow of information over the Internet, especially social media such as WhatsApp, YouTube, Google, Facebook or Instagram. That's called word of mouth. This information can contain positive or negative messages. Positive information will bring many benefits to the company, while negative information will cause it great harm.Positive communication is an important part of the success of new businesses and established brands [24].

Several factors that can influence the success of WOM marketing are customer satisfaction with the product or service received, receiving a quality product or service, and having a good corporate image. Customer satisfaction is something a company must respect. Happy customers will give the company a positive reaction and even let others know about the good product or service they are receiving. This is called word of mouth (WOM). Ayuni, (2015) and [4] concluded that happiness has a positive effect on PTO.[13] shows that perceived service quality influences PTO. As a result, WOM will also be able to increase the number of customers, which ultimately ensures the future viability of the company.

2. Method

The data obtained in the field were subjected to a descriptive and quantitative analysis. Descriptive analysis that describes the variables studied. The quantitative analysis includes: 1) testing the validity and reliability of the tool, 2) testing for normality, collinearity, and heteroscedasticity. 3) Multiple linear regression analysis.The regression equation for Model I and Model II should be:

Model I: $Y1 = b1X1 + b2X2 + e$ (1)

Model II: $Y2 = b3X1 + b4X2 + b5Y1 + e$ (2)

Where:

X1 = Quality of service

X2 = Institutional Image

Y1 = Customer Satisfaction

Y2 = Word Of Mouth (WOM)

b1 – b5 = regression coefficient

e = residue

Path Analysis.

Trajectory analysis was used to test the power of intervening variables. Path analysis is an analysis method developed from multiple regression analysis. Path analysis is performed according to the following criteria: Using the aforementioned regression model, researchers want to get realistic answers to their hypotheses.

H1:Service Quality Impacts Customer Satisfaction

H2:The organization's image influenced customer satisfaction

H3:WOM Affects Quality of Service

H4:the organization's image influenced his WOM

H5:Customer Satisfaction Affects WOM

H6:Service quality, along with customer satisfaction as an intervening variable he influenced WOM

H7:Institutional image influenced WOM with customer satisfaction as an intervening variable

3. Results and Discussion

3.1. Validity Test

Validity test is done by comparing R count with R table. The magnitude of the R table with a sample size of 100 and df = 100-2 = 98, an alpha level of 0.05 both ways, is 0.1966.

Table 1.   Validity Test Results

Variable	Indicator	Rcount	RTable	Information
Service Quality	X1.1	0,682	0,1966	Valid

	X1.2	0,720	0,1966	Valid
	X1.3	0,718	0,1966	Valid
	X1.4	0,763	0,1966	Valid
	X1.5	0,782	0,1966	Valid
	X1.6	0,655	0,1966	Valid
	X1.7	0,650	0,1966	Valid
	X1.8	0,669	0,1966	Valid
	X1.9	0,579	0,1966	Valid
	X1.10	0,804	0,1966	Valid
	X1.11	0,863	0,1966	Valid
	X1.12	0,831	0,1966	Valid
	X1.13	0,727	0,1966	Valid
	X1.14	0,582	0,1966	Valid
	X1.15	0,775	0,1966	Valid
Institution Image	X2.1	0,747	0,1966	Valid
	X2.2	0,829	0,1966	Valid
	X2.3	0,748	0,1966	Valid
	X2.4	0,805	0,1966	Valid
	X2.5	0,746	0,1966	Valid
	X2.6	0,776	0,1966	Valid
Customer Satisfaction	Y1.1	0,838	0,1966	Valid
	Y1.2	0,788	0,1966	Valid
	Y1.3	0,837	0,1966	Valid
	Y1.4	0,792	0,1966	Valid
WOM	Y2.1	0,844	0,1966	Valid
	Y2.2	0,877	0,1966	Valid
	Y2.3	0,886	0,1966	Valid

Table 1, R value for all indicators is greater than the R table. This means that all question items are declared valid and can be used as accurate data collectors.

3.2. Reliability Test

Table 2.   Reliability test results

Variable	Cronbach's alpha	Information
Service Quality	0,934	Reliable
Institution Image	0,862	Reliable
Customer Satisfaction	0,823	Reliable
WOM	0,838	Reliable

1) Model 1 & II, Multicollinearity Test

The VIF value is below 10 and the tolerance value is above 0.10, so there is no multicollinearity in the regression model.

2) Model I & II, Heteroscedasticity Test

The heteroskedasticity test is a significant number greater than 0.05, meaning that the regression model does not have a heteroscedasticity problem. All independent variables included in this model have the same/uniform variance distribution.

3) Model I & II, Normality Test

The Kolmogorrov-Smirnov Test (K-S) with a significant number of 0.200 > t alpha 0.05. means the data is normally distributed

3.3. Multiple Linear Regression Analysis Model I & II

Customer Satisfaction = 0.027 Service Quality + 0.066 Institutional Image

WOM = 0.257 Service Quality + 0.236 Institutional Image + 0.332 Customer Satisfaction

1) Model I Hypothesis Testing

The impact of service quality on customer satisfaction is a significant number of $0.000 < 0.05$, which means hypothesis 1 is accepted, so there is a large impact between service quality and customer satisfaction.

Institutional images have a significant number < 0.001. 0.05, which means Hypothesis 2 is accepted, and institution image has a significant impact on customer satisfaction.

2)   Model 2 Hypothesis Testing

The significant probability number for quality of service is $0.024 < .0.05$ means that quality of service has a large impact on WOM. In that case, the hypothesis that there is a quality of service impact on WOM is accepted.

The significance number for institutional images is $0.036 < .0.05$ means that institutional image has a large impact on WOM. Therefore, the hypothesis that organizational image influences WOM is accepted.

The significant probability number for customer satisfaction is $0.001 < .0.05$ means that customer satisfaction has a large impact on WOM, so the hypothesis that customer satisfaction affects WOM is acceptable.

3)   Model I Accuracy Test

The F value is 55.611 and the probability number is 0.000. This means the regression model is good for prediction.

4)   Model II Accuracy Test

The F value is 38.720 and the significance number is 0.000, which is less than 0.05. This means the regression model is good for prediction.

5)   Coefficient of Determination of Model I

The adjusted square of R is 0.525. This means that 52.5% of the variation in customer satisfaction is explained by service quality and company image. The remaining 47.5�n can be explained by other factors outside the study.

6)   Coefficient of Determination of Model II

An adjusted R-squared of 0.533 means that 53.3% of PTO variability can be explained by service quality, institutional image and customer satisfaction, while the remaining 46.7% can be explained by factors other than outside the studio.

3.4. Path Analysis

The first path analysis consists of testing the variable customer satisfaction as an intermediate variable of the impact of service quality on the PTO. The regression model can be described as follows:
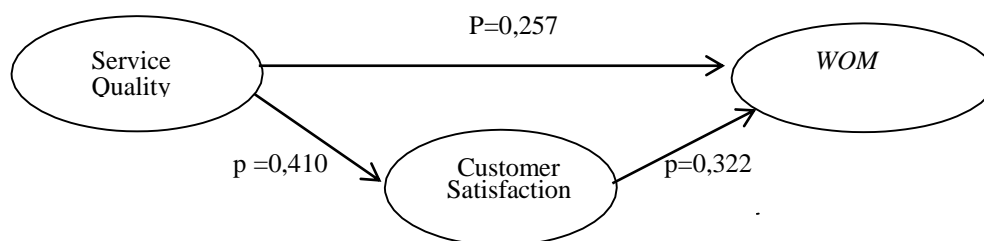

Fig. 1. The influence of service quality on WOM

The second analysis of the process consists in testing the variable customer satisfaction as an intervening variable from the influence of the institutional image on the WOM. The regression model can be described as follows:
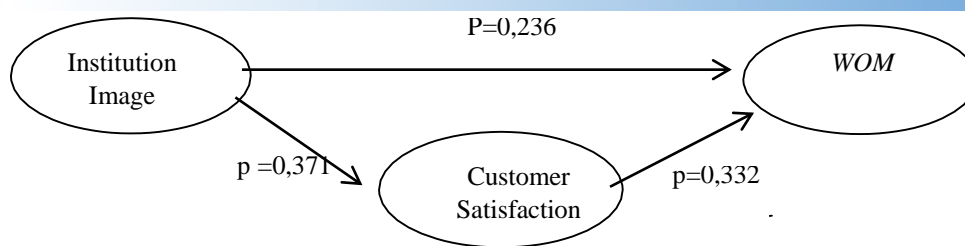
Fig. 2. The influence of institutional image on WOM

Table 3.   Summary of model parameter estimation results

Model	Path coefficient	t	Sig.	Adj R^2
Model 1				
p(Customer Satisfaction ☐Service Quality)	0,410	3,896	0,000	0.525
P(Customer Satisfaction ← Institution Image)	0,371	3,526	0,001	
Model 2				
P(WOM ← Service Quality)	0,257	2,298	0,024	0.533
P(WOM☐ Institution Image)	0,236	2,130	0,036	
P(WOM ← Customer Satisfaction)	0,332	3,301	0,001	

The magnitude of the direct QoS impact on PTO is 0.257. Meanwhile, the indirect impact the PTO via is 0.410 x 0.332 = 0.136. PTO service.The magnitude of the direct influence between the institution's image and the WOM is 0.236. Meanwhile, the size of the indirect influence between the institution's image and the WOM through customer satisfaction is 0.371 x 0.332 = 0.123. The size of the effect coefficient is larger than the indirect effect, is not able to convey the influence of the institution's image on the WOM.

Discussion

Effect of Service Quality to Customer Satisfaction

Services received by students, greater their satisfaction will be. Students who receive good service will be satisfied. Conversely, poor service leads to student dissatisfaction. A college's quality of service, including physical condition, reliability, responsiveness, trust, and empathy, that meets student expectations will increase student satisfaction.Service quality [10] is the action or actions taken by a person or an organization to ensure satisfaction of customers, colleagues and managers. Service quality can be created by first identifying customer needs and expectations and then matching these to the services to be provided. Previous research shows that quality service increases customer satisfaction.Customers who receive that exceeds their expectations will be satisfied. Several studies corroborating research impact, e.g. [14][15].

Effect of Institutional Image to Customer Satisfaction

Research results show that facility image influences customer satisfaction. Defined as impressions, impressions, feelings, or concepts that exist in society about an entity, or institution [1]. Images cannot be printed like factory production, but images are impressions from my own knowledge and understanding. Fram in [2] the image of the university is generally considered as an organization as a whole. The image of a university thus consists of ideas about the faculty (lecturers and scientific staff), the curriculum, the quality of teaching and the appropriate ratio of costs and quality of education. It can be concluded that a good image of the university brings satisfaction among students.Students who make a good impression what the universities offer will experience a high level of satisfaction. [15] found that corporate image affects

Effect of Service Quality on WOM

The quality of service affected the PTO. The higher the service quality, the higher the PTO gain will be. When students in higher education receive services that meet or exceed their expectations,

they will be satisfied. In addition, they will also be willing to tell others positive things about the quality of service they received.In a service there is usually an expectation and a reality in relation to the service they (customers) are receiving or receiving.Customer expectations are basically the same as the type of service a company should provide to its customers. These customer expectations are based on WOM, personal needs, past experiences and external communication (advertising and various other forms of business promotion). [27][22] who found that service quality affects PTO

Effect of Institutional Image on WOM

The institutional image has affected the WOM. A good corporate image spreads easily through of mouth on social media. The institutional image is created in of providing . Of the institution will contribute to the creation of a positive transfer of information to the recipients of services. In the universities, a good university image ensures that information is spread positively among students and the public, which significantly supports marketing success. A good corporate image is easily spread through on social media.

Effect of Customer Satisfaction to WOM

This means that as customer satisfaction increases, PTO increases. College students who receive that meets or exceeds expectations will be more than happy to others the community. According [8], customer satisfaction is a measure or indicator of how satisfied customers or users products services are they receive. Customer satisfaction can influence WOM marketing. Happy customers give a positive response to a company and may even inform others about the good products and services they have received.The results of this observation are reported in [18][11][4] say customer satisfaction can improve her WOM marketing. [19] Relationship between Student Satisfaction and PTO. Role of PTO based on past analysis, it is known that customer satisfaction does not affect the impact of service quality on PTO. WOM can arise from customer satisfaction, but satisfaction itself cannot be a mediating variable between her WOM.

Effect of Customer Satisfaction to the relationship between Institutional Image and WOM

Path analysis shows that customer satisfaction cannot influence the influence of the institution's image on the WOM. Corporate image is one of the factors affecting commercial success of WOM. A good corporate image is easily spread through on social media. In this study, institutional image has a direct impact on WOM and does not depend on customer satisfaction.

4. Conclusion

This study analyzes the impact WOM through. This means: The services and the image of the institution increases, customer satisfaction also increases. WOM can grow.The suitability of mediating variable connection WOM and in the connection between and WOM has not been proven.As mentioned above, one of the efforts that must be made to achieve competitiveness in higher education is to create positive word of mouth (WOM). Good quality of service can be achieved by improving the educational base, increasing the capacity of the staff to look after the students, improving the skills of the teachers, and adapting the program from time to time to suit changing times. The image of the institution should be structured in such a way that the students and the public get the impression that the university is good both in education and in performance.Meanwhile, customer satisfaction can be achieved by providing services according to the wishes of the customers, which in this case are the students and the community.

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