

Social Media Marketing:

Empirical Investigation of Academic Information Needs

Yusuf Yusuf*

Department of Management
Universitas Terbuka
Pangkalpinang, Indonesia
*yusuf_se@ecampus.ut.ac.id

Abstract—An Instagram account with the username @utpangkalpinang is an Instagram that was built by UT Pangkalpinang. Its function is to provide information related to student activities, academic information and UT academic learning for UT Pangkalpinang students who are Instagram followers. UT Pangkalpinang assumed that UT information was effectively disseminated through Instagram, so UT information was always conveyed through social media, so students were required to update their academic knowledge. However, not everyone actively sees, comments, asks and responds to the information announced. Many also only see and use Instagram passively. The purpose of this research is to know the description of the use of social media marketing Instagram @utpangkalpinang, fulfill the academic information needs of UT Pangkalpinang students and to determine the effect of the use of social media marketing Instagram @utpangkalpinang on fulfilling the academic information needs of UT Pangkalpinang students both partially and simultaneously. The research method uses descriptive and verification approaches. The research sample was 243 respondents with primary data types. Data analysis techniques used multiple linear regression analysis. The results showed [1] All sub-variables had a high average value of 3,41-4,20 and information update sub-variables had the highest average value of 4,03. In general, the use of social media marketing Instagram variables and the fulfillment of information needs is considered high. [2] Partially, the overall sub-variable use of social media marketing Instagram has a significant effect on the fulfillment of students' academic information needs. significant effect on meeting the needs of student academic information.

Keywords: *academic, Instagram, social media, @utpangkalpinang*

I. INTRODUCTION

Social media is an important factor in the progress of the internet in Indonesia, based on a survey conducted by the global web index, Indonesia is a country that has the most active social media users in Asia. At present the internet is becoming a social social need, especially a student who is in dire need of information and needs to socialize with fellow students. Social media allows every individual to do two-way interaction without any time, distance or cost. Social media requires an internet connection to connect with each other. Conversations between users on Instagram often contain

random information, but can be used by 3rd parties. Unstructured data from Instagram can be searched by keywords and then processed for various purposes, one of which is as a medium for spreading information.

One Instagram account with username @utpangkalpinang is an Instagram account built by UT Pangkalpinang whose function is to provide information related to UT student activities, academic information and academic learning for UT Pangkalpinang students who are UT Pangkalpinang followers. UT information is always conveyed through social media, so students are forced to update their academic knowledge. However, not everyone actively sees, comments, asks and responds to the information announced. In fact, not all students using smartphones actively send and receive messages containing hundreds of characters. Because of the need, it is considered as a fast, effective and efficient information media. Instagram @utpangkalpinang is used as a medium of information for UT Pangkalpinang students as an academic information medium for students and students pursuing higher education at UT Pangkalpinang.

II. LITERATURE REVIEW

A. Use of Social Media

According to research by Chris Heuer, founder of Social Media Club and new media innovator, argues in the book *Engage: The Complete Guide for Brands and Businesses to Build Cultivate and Measure Success on The Web* [1] that there are 4Cs in the use of social media, including Twitter has: context, communication, collaboration, and connection. Theory from Chris Heuer explains that the 4C component is a component that must be present in every social media. It aims to make social media easy to use and can meet the goals of individuals who use it.

B. Uses and Gratification

The Uses and Gratification Theory is one of the communication theories proposed by McQuail, Blumler and Brown where the focus of this research is on audience satisfaction as a determinant of the media and message selection. Viewers are considered as active and purposeful individuals. They are responsible for choosing the media to

meet their needs and they know exactly their needs and how to meet them [2]. Blumer and Katz's uses and gratifications theory says that media users play an active role to choose and use the media. In other words, the media user is an active party in the communication process. That is, the uses and gratifications theory assumes that users have alternative choices to satisfy their needs. Uses and gratification is emphasized that the audience is active in choosing which media should be chosen to satisfy their needs.

C. Academic Information Fulfillment

Katz, Blumer and Gurevitch in Rakhmat, uses and gratification examines the origin of psychological and social needs, which raises certain expectations from the mass media or other sources, which leads to different patterns of media exposure (or involvement in other activities), and lead to the fulfillment of needs and other consequences, perhaps including what we don't want [3].

Naturally, the need for information will eventually lead to requests for information desired by the information user. Because, requests and needs are closely related, because what is asked by someone is certainly what is needed by that person. In this stage the search for information to meet their needs begins and the user begins to interact with existing channels and information systems [4].

D. New media

The new media discussed here are various communication technology devices that share the same characteristics, which in addition to being made possible by digitalisation and wide availability for personal use as a communication tool. Rossler in McQuail said that, in general, new media have been welcomed (including old media) with strong, positive interest and even euphoric expectations and forecasts, and excessive estimates of their significance [5].

New media is media that uses internet, technology-based online media, has a flexible character, has the potential to be interactive and can function privately or publicly [6]. New Media or online media is defined as a product of technology-mediated communication that is shared with digital computers [7].

III. RESEARCH METHODOLOGY

A. Data Types and Sources

The research method used is descriptive and verification approaches. The data used in this study is quantitative data with cross sectional design. While the source of data comes from primary data and secondary data. Primary data is obtained directly through observing the activities carried out by students, including the number of active students, asking questions and questions during intagram activities. Secondary data was obtained from students' comments on Intagram @utpangkalpinang followers, especially on questionnaire/questionnaire entries that were presented to students.

B. Population and Research Samples

This research was conducted at UT Pangkalpinang and the population was followers of Instagram @utpangkalpinang, totaling 2.458 students following Istagram @utpangkalpinang. (ICT data, 15 November 2018). As for the sample of researchers because the population is large so use the Isaac and Michael sample size tables to determine the sample size. Obtained a sample of 243 students.

C. Operational Thinking Framework

Based on a literature review, researchers conducted sub-variable variations in social media marketing Instagram use variables by dividing them into seven subvariable groups namely frequency of use, information update, information suitability, language/ sentence, understanding of information, completeness of information and appearance and variables of academic information fulfillment. The framework of the research concept used by researchers can be seen in Figure 1 below:

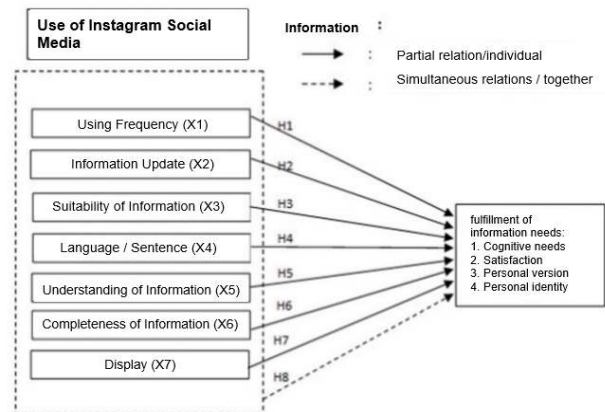


Fig. 1. Research conceptual framework.

IV. DISCUSSION

A. Descriptive Statistical Analysis

Following is the recapitulation of data processing of descriptive average values of each variable item of Instagram Social Media Marketing Use and Fulfillment of Information Needs as follows:

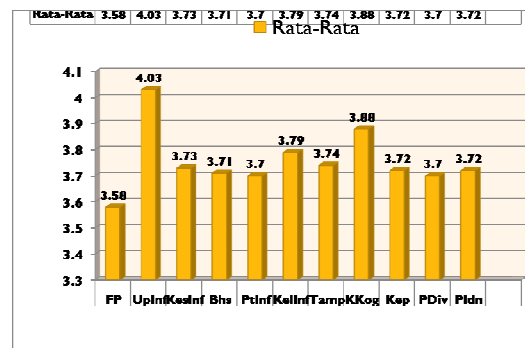


Fig. 2. Average value of descriptive test results.

Based on the scale category according to Sugiono [8] the results of the analysis above note that all subvariables in this study have high average values in the category of 3,41-4,20. And the information update sub-variable has the highest average value of 4,03. Thus the majority of respondents feel they often use Instagram social media to get information updates that can meet academic information needs.

B. Validity and Reliability Test

Validity test is used to measure the validity or validity of a questionnaire. The minimum requirement to be considered a valid instrument is the value of its validity index (Pearson Correlation value) $r_{count} > r_{table}$ which is 0,1058. The results of the validity test in this study all have value r_{count} which is greater than r_{table} so that the whole point of the research instrument is said to be valid.

TABLE I. VALIDITY TEST RESULTS

Declaration Item	R_{count}	R_{table}	Information
X1.1	0,768	0,1058	Valid
X1.2	0,616	0,1058	Valid
X1.3	0,766	0,1058	Valid
X2.1	0,676	0,1058	Valid
X2.2	0,736	0,1058	Valid
X2.3	0,523	0,1058	Valid
X3.1	0,851	0,1058	Valid
X3.2	0,857	0,1058	Valid
X4.1	0,857	0,1058	Valid
X4.2	0,771	0,1058	Valid
X5.1	0,862	0,1058	Valid
X5.2	0,838	0,1058	Valid
X6.1	0,747	0,1058	Valid
X6.2	0,841	0,1058	Valid
X7.1	0,858	0,1058	Valid
X7.2	0,843	0,1058	Valid
Y1.1	0,714	0,1058	Valid
Y1.2	0,755	0,1058	Valid
Y2.1	0,809	0,1058	Valid
Y2.2	0,797	0,1058	Valid
Y3.1	0,739	0,1058	Valid
Y3.2	0,749	0,1058	Valid
Y4.1	0,780	0,1058	Valid
Y4.2	0,792	0,1058	Valid

Reliability testing can be done by measuring the internal value of consistency that is known from the Cronbach Alpha (α) value. Cronbach Alpha (α) value is implied for a reliable instrument $\geq 0,60$ [9].

TABLE II. RELIABILITY TEST RESULTS

Variable	(α)	Information
Frequency of Use	0,724	Reliable
Information Update	0,788	Reliable
Suitability of information	0,629	Reliable
Language / Sentence	0,690	Reliable
Understanding of Information	0,616	Reliable
Completeness of Information	0,716	Reliable
Display	0,618	Reliable
Meeting Information Needs	0,755	Reliable

Based on Table 1 where the reliability test results show that all variables have a Chronchbach Alpha coefficient that is large enough that is above 0,60 so that it can be said that all measuring concepts of each variable from the questionnaire are reliable which means that the questionnaire used in this study is a questionnaire the reliable.

C. Classic Assumption Test

Normality test is done by looking at the chart of Normal Probability Plots or graphs of the distribution of dependent variables, or it can also be a residual histogram. If the data spreads around the diagonal line then the data is normally distributed, so it can be said that multiple linear regression meets the normality assumption.

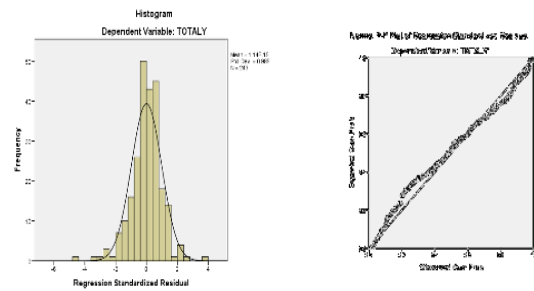


Fig. 3. Normality test results.

Based on Figure 3 normal plot graph display presented above can be concluded that the histogram graph gives a normal distribution pattern. Whereas in the normal plot graph, visible points spread around the diagonal line, and the spread follows the direction of the diagonal line. Both of these graphs show that the regression model is feasible because it meets the normality assumption.

Regression model does not experience multicollinearity problems or it can be said there is no correlation between the independent variables if the VIF value does not exceed 10.

TABLE III. MULTICOLLINEARITY TEST RESULTS

Model	Colinearitu Statistics	
	Tolerance	VF
1 (Constant)		
User Frequency	.584	1.712
Information Update	.899	1.112
Suitability of Information	.561	1.782
Language / Sentence	.496	2.014
Understanding of Information	.431	2.320
Information Completion	.361	2.772
Display	.445	2.248

Table 3 shows that the results of the calculation of the tolerance value shows that the tolerance value > 0.10 which means there is no correlation between the independent variables that are more than 95%, the calculation of VIF values, of the independent variables tested there is no VIF value of more than 10, it can be concluded that there is no

multicollinearity between independent variables in the regression model.

This heteroscedasticity test has a hypothesis, namely: reject H_0 or accept H_1 if $P_{value} < \alpha$ and accept H_0 or reject H_1 if $P_{value} > \alpha$. H_0 is homogeneous variance while H_1 is non-homogeneous variance.

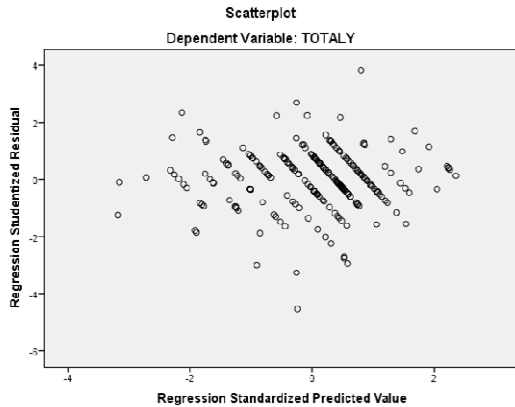


Fig. 4. Heteroscedasticity test results.

Figure 4 shows that the results of the Scatterplot graph presented above show the points spread randomly and scattered above or below the number 0 on the y axis, and do not have a clear pattern or form a pattern. So it can be concluded that there is no heteroscedasticity problem in the regression model.

D. Multiple Linear Regression Analysis

The equation above shows that if the independent variables are assumed to be in a fixed or zero state, then the dependent variable fulfillment of students' academic information needs will increase by 1,729. This shows that the increasing use of social media marketing Instagram is good from the frequency of use, information updates, suitability of information, language/sentences, understanding of information, completeness of information and appearance will affect the fulfillment of students' adematic information needs. Here, we present the Results of Multiple Linear Regression Analysis.

TABLE IV. RESULTS OF MULTIPLE LINEAR REGRESSION ANALYSIS

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
1 (Constant)	1.729	.563	
User Frequency (X1)	.141	.036	.139
Information Update (X2)	.104	.040	.065
Suitability of Information (X3)	.477	.051	.325
Language / Sentence (X4)	.218	.064	.124
Understanding of Information (X5)	.286	.059	.192
Information Completion (X6)	.517	.074	.303
Display (X7)	.184	.056	.127

Based on Table 4 the linear regression equation model is obtained as follows.

$$Y = 1,729 + 0,141X_1 + 0,104X_2 + 0,477X_3 + 0,218X_4 + 0,286X_5 + 0,517X_6 + 0,184X_7 + e$$

Likewise, if there is an increase of 1% in the independent variable, the dependent variable, namely the fulfillment of student academic information needs, will increase by the coefficient value of each independent variable.

E. Partial Regression Coefficient Test (t Test)

The t test is used to test the constants of each independent variable. This means that the t test can find out whether the independent variable individually has a significant effect on the response variable. The t test results are as follows.

TABLE V. TEST RESULTS T

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.729	.563		2.206	.021
User Frequency (X1)	.141	.036	.139	3.137	.003
Information Update (X2)	.104	.040	.065	2.382	.018
Suitability of Information (X3)	.477	.051	.325	9.399	.000
Language / Sentence (X4)	.218	.064	.124	3.382	.001
Understanding of Information (X5)	.286	.059	.192	4.855	.000
Information Completion (X6)	.517	.074	.303	7.016	.000
Display (X7)	.184	.056	.127	3.273	.001

Partially the entire sub variables (frequency of use, update information, appropriateness of information, language/sentences, understanding of information, completeness of information and appearance) have a positive and significant effect on meeting the academic needs of students. This is evidenced by the t_{count} greater than t_{tabel} is 2,304 and the significance value is smaller than 0,05.

F. Simultaneous Regression Coefficient (Test F)

Simultaneous testing is used to simultaneously test whether the use of social media marketing Instagram is seen from the frequency of use, information updates, suitability of information, language/ sentences, understanding of information, completeness of information influencing together to fulfill the academic information needs of UT Pangkalpinang students.

TABLE VI. TEST RESULTS F

ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	R	Sig.
1	Regression	930.000	7	132.85	178.892	.000 ^b
	Residual	174.527	235	7		
	Total	1104.527	242	.743		

^a Dependent Variable: Y
^b Predictors: (Constant), X₇, X₂, X₅, X₄, X₁, X₃, X₆

Based on data from Table 6. The results of the F test calculation, it can be seen that F_{count} is 178,892 and F_{table} with $df_1 = k-1$ and $df_2 = n - k$, where n is the number of samples and k is the number of independent and dependent variables. So the value of F_{table} is 2,049 and the significance level is 0,05. Means $F_{count} > F_{table}$ is $132,885 > 2,049$ and the value of $p =$

$0,000 < 0,05$. Then H_0 is rejected and H_8 is accepted, which means the variable use of social media marketing Instagram with sub-variables of frequency of use, information update, suitability of information, language/ sentence, understanding of information, completeness of information and appearance have a positive and significant effect simultaneously on meeting the academic information needs of UT students Pangkalpinang.

G. Coefficient of Double Determination

The coefficient value of multiple determination is used to measure the amount of contribution of the independent variable under study to the dependent variable. When R^2 approaches number one it can be said that the contribution of the independent variable to the dependent variable is getting greater. This means that the model used is getting stronger to explain the variation of the dependent variable.

TABLE VII. DETERMINATION COEFFICIENT TEST RESULTS

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.918 ^a	.842	.837	.862	.842	178.892	7	235	.000

Seen from Table 7. the coefficient of determination (R^2) shows the Adjusted R Square number 0,837 or 83,7%, which means that the variable variation in meeting students' academic information needs can be explained by the use of social media marketing Instagram variables, namely frequency of use, update information, suitability of information, language/ sentence, understanding of information, completeness of information and appearance of 83,7%, the remaining 16,3% is explained by other variables outside of the research variables.

V. CONCLUSION

Based on the data and discussion of the research entitled "The Influence Use of Social Marketing Instagram Media on Fulfilling Information Needs Academic Students", it can be concluded 1) that all sub-variables have a high average value, namely at categories 3,41-4,20 and the information update sub variable has the highest average value of 4,03. In general the variable use of social media marketing Instagram and fulfillment of information needs is highly valued. 2) partially, the overall sub-variable use of social media marketing Instagram significantly influences the fulfillment of students' academic information needs. 3) simultaneously, all sub-variables of the use of social media marketing Instagram

significantly influence the fulfillment of student academic information needs.

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