EXAMINING THE MODEL OF THE USE OF FACEBOOK EFFECTS ON INDIVIDUAL BEHAVIOR

(A Study to the Students of High Schools in Surakarta City)

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ABSTRACT

This research is aimed to examine how the use of facebook affects students' behavior. The objects of the research were SMK/SMU (high school) students in Surakarta City. Data were taken from a random sample comprising of 132 respondents. We used analysis tools such as: 1) Instrument Validity & Reliability test, 2) Descriptive Statistics analysis, and 3) Structural Equation Modeling (SEM) analysis. The instrument tests proved that all items in the questionnaire were valid and reliable. The descriptive analysis described our respondents characteristics such as: gender, internet apps used, their school internet facility. By using SEM analysis, we conclude that the use of facebook has significant effect on individual behavior which comprises of 4 indicators: attitude, personality, learning, and perception. T-test results shows that: 1) The use of Facebook has significant effect on individual attitude, 2) The use of Facebook has significant effect on individual personality, 3) The use of Facebook has significant effect on individual learning, 4) The use of Facebook has significant effect on individual perception. Thus, the use of Facebook has significant effects on individual behavior.

Keywords: facebook, attitude, personality, learning, perception.

INTRODUCTION:

Facebook is a web-based social media application which facilitates one to find new friends and to actively communicate with them anywhere and anytime. Facebook has been widely used by Indonesians since the year of 2007. Until now, Indonesia is one of the countries with the densest population of Facebook users. So far, it is proved that Facebook has greatly affect many of its users' life, either positively or negatively. Special to our concern is its effect on younger people behavior. As Facebook can be accessed by practically everyone, including the youngs, lack of parental advisory may lead to unwanted effects on the youngs' behavior. According to Gibson (1987), behavior has psychological and non-psychological variables. This research will examine the effect of the use of Facebook on the psychological aspects of individual behavior. Based on that, we choose the title "Examining the Model of The Use of Facebook on Individual Behavior".

The theoretical problems of this research are: 1) How is the effect of the use of Facebook on individual behavior (the study will be conducted on high school students in Surakarta city)? 2) Does the use of Facebook have significant effect on behavior, which comprises of 4 aspects: attitude, personality, learning, and perception?

MATERIALS AND METHODS:
LITERATURE REVIEW:

Internet is a term used for the connection established of computers from the whole world. The once stand alone computers in the world can now connect on line with other hosts or computers through the internet. Some define that the internet is a huge web comprised of computers in the whole world constantly communicating data with each others. Internet is required to run on a certain protocol. The most popular protocol is called web or "WWW". Web is a complex system of texts, visuals, audios, etc. which are kept in an internet webserver and presented in hypertext form. The most popular hypertext is HTML (Hypertext Markup Language) format.

Facebook is a web-based social media application founded by Mark Zuckerberg in February 4th 2004. Initially, under the name "The Facebook", it serves only as a communication medium exclusively for Harvard University students. As time goes by, the site became increasingly famous and begun to be used by others as well. It is now used by billions of people in every country, in every corner of the world. The use of Facebook, eventually, can bring impacts on the life of its users, either positively or negatively. The Facebook offers practical and instant way to create one's own network of friends, anywhere and anytime. The use of the social medium not only can affect the user, it also can indirectly affect others and their environments. As with most other things, the use of Facebook won't give bad effect if it is used properly. However, an overuse of Facebook will result on an unhealthy dependence on it. It also can negatively affect on behavior, especially children's. At worst, too much of using it will bring to addiction.

Facebook can affect an individual behavior. Gibson (1987) stated that psychological aspects that build up one's behavior is perception, attitude, personality, learning, and motivation. Attitude is an individual's evaluative statement or decision (beneficial or non-beneficial) about certain thing, person, and event. An attitude reflect how an individual feel and think about something/someone. Personality is way an individual react and interact with others. Personality is a product of nature and nurture (culture, norm, family, etc.), also situation. Personality is distinct and lasting characteristic which distinguish an individual with the others. We can name personalities such as: introvert, aggressive, passive, lazy, ambitious, loyal, etc. Learning is each relatively permanent change in behavior happened as an effect of increased experience. A learning process is a process of how behavior change through learning. Our hypotheses are:

H1 : The use of facebook has significant effect on attitude.
H2 : The use of facebook has significant effect on personality.
H3 : The use of facebook has significant effect on learning capacity.
H4 : The use of facebook has significant effect on perception.

METHODS:
RESEARCH OBJECT, POPULATION, AND DATA COLLECTING TECHNIQUE:

The object of this research are High Schools students in Surakarta city. While the sources of data are as follow:
1) Primary Data : Data collected from interviews and questionnaires.
2) Secondary Data : Data collected from literatures related to research needs.
The data collecting methods are:
1) Questionnaire Method
2) Observation Method

3) Documentation Method

We took 100 high school students respondents as the sample from the population of entire high school students in Surakarta city.

DATA ANALYSIS:
INSTRUMENT TEST:

Data are collected by using questionnaires. The questionnaires use 5-point Likert scale and a set of questions related to variables examined. The tests used are as follow:

VALIDITY TEST:

According to Anderson and Gerbing in Ferdinand (2002 : 187), that a dimension indicator shows convergent validity if the indicator has a value of critical ratio twice its standard error value. In other words that the indicator is valid to measure what it has to measure if $CR \geq 2\ Se$. The value of Critical Ratio (identical with t-count in regression) can be determined by applying AMOS.

RELIABILITY TEST:

Reliability shows how each of the indicators can consistently identify phenomena of a construct (latent factor). Not all of the factor loading (observed variable) are directly measured with one item in the questionnaire. For the observed variables which should be measured from multiple questionnaire items, we need validity and reliability test using Pearson Product Moment and Alpha Cronbach. According to Santoso (2001 : 280): if r_{alpha} is positive and $r_{alpha} > r_{table}$ α 0.05, then the variable is reliable. However, if r_{alpha} positive and $r_{alpha} < r_{table}$ α 0.05, then the variable is not reliable.

DESCRIPTIVE STATISTICS ANALYSIS:

We used Frequency Distribution, a type of analysis known in Descriptive Statistics to describe characteristics of questionnaire respondents, e.g.: the sex of respondents.

SEM MODEL ANALYSIS:

Next, we used Structural Equation Modeling (SEM), considering that variables causality structure should be examined simultaneously and efficiently (Hair, 1998 : 167). Its Goodness-of-fit criteria are shown in this table :

Table 1: Goodness of Fit Index in SEM

Goodness of fit index	Cut-off-Value	Explanation
Chi-*Square*	Small is desirable	Acceptable only if all cut-off-value are meet.
Probability	$\geq$ 0.05	
CMIN/DF	$\leq$ 2.00	
GFI	$\geq$ 0.90	
AGFI	$\geq$ 0.90	
TLI	$\geq$ 0.95	
CFI	$\geq$ 0.95	
RMSEA	$\leq$ 0.08	

Source: Hair *et al*., (1995:182), Ferdinand (2006:134)

RESULTS:
THE RESULT OF DATA ANALYSIS:
THE RESULT OF INSTRUMENT TEST:

Validity is the extent to which an instrument may corresponds accurately with the main target of measurement carried out with the instrument. While Reliability shows how consistent a measurement measures what it attempt to measure. Our test shows that our collected data is valid & reliable, so we can proceed to next step of analyzing the data.

THE RESULT OF NORMALITY TEST:

Normality evaluation use Critical Ratio Skewness value of 2.58 at significance level of 0.01. We can say the data has normal distribution if the Critical Ratio Skewness is lower than absolute 2.58. AMOS-processed SEM data analysis result shows that our data has a normal distribution due to Critical Ratio skewness lower than 2.58.

OUTLIER TEST:

Degrees of freedom is at 25, in the significant level of $p<0.001$, thus the *Mahalanobis distance* valued 64.314. It means that all case with larger than 64.314 *Mahalanobis distance* is a multivariate outlier.

DESCRIPTIVE ANALYSES:

Table 2: Description of the Exogenous Variable: Facebook

DESCRIPTION	RESPONDENTS' ANSWERS SCORES										Mean
	1		**2**		**3**		**4**		**5**		
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	
Understanding	2	1,5	4	3,1	39	29,8	73	55,7	13	9,9	3,69
Int. Management Support	1	1,5	5	3,8	30	22,9	82	62,6	12	9,2	3,74
Investment Availability	4	3,1	7	5,3	13	9,9	55	42,0	52	39,7	4,10
Environmental Support	1	0,8	8	6,1	75	57,3	38	29,0	9	6,9	3,35
Facebook App	0	0	6	4,6	43	32,8	62	47,3	20	15,3	3,79

Source: processed primary data

Table 2 shows that majority of the respondents admit that school's internet availability is a major contributor to frequent use of Facebook. Moreover, smartphone owned by respondents gives easier access to Facebook.

Table 3: Description of Endogenous Variable: Attitude

DESCRIPTION	RESPONDENTS' ANSWERS SCORES										Mean
	1		**2**		**3**		**4**		**5**		
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	
Orientation	2	1,5	5	3,8	28	21,4	80	61,1	16	12,2	3,79
Intensity	4	3,1	13	9,9	35	26,7	71	54,2	8	6,1	3,50
Flexibility	2	1,5	16	12,2	31	23,7	76	58,0	6	4,6	3,52
Consistency	1	0,8	18	13,7	39	29,8	66	50,4	7	5,3	3,46
Spontaneity	2	1,5	5	3,8	36	27,5	71	54,2	17	13	3,73

Source: primary processed data

Table 3 shows that majority of the respondents feel that friends in the Facebook is very helpful in deciding a clear orientation. The interaction with other Facebook users give many thoughts and suggestions which in turn will give an orientation for individual to make choices.

Table 4: Description of Endogenous Variable: Personality

DESCRIPTION	RESPONDENTS' ANSWER SCORES										Mean
	1		**2**		**3**		**4**		**5**		
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	
Neurotic	3	2,3	11	8,4	50	38,2	52	39,7	15	11,5	3,50
Competitive	5	3,8	15	11,5	53	40,6	52	39,7	6	4,6	3,33
Perfectionist	0	0	4	3,1	9	6,9	76	58,0	42	32,1	4,19
Ambitious	0	0	4	3,1	9	6,9	71	54,2	47	35,9	4,23
Assertive	3	2,3	12	9,2	37	28,2	50	38,2	29	22,1	3,69

Source: processed primary data

Table 4 shows that the users tend to view themselves as becoming more ambitious. This shows that the use of Facebook may be able to make the user becoming more ambitious, as they feel more urged to reach their goals despite of hardships.

Table 5: Description of Endogenous Variable: Learning

DESCRIPTION	RESPONDENTS' ANSWER SCORES										Mean
	1		2		3		4		5		
	F	%	F	%	F	%	F	%	F	%	
Knowledge	1	0,8	6	4,6	8	6,1	66	50,4	50	38,2	4,21
Comprehension	1	0,8	4	3,1	24	18,3	91	69,5	11	8,4	3,82
Skill	0	0	3	2,3	35	26,7	70	53,4	23	17,6	3,86
Learning Attitude	0	0	7	5,3	33	25,2	78	59,5	13	9,9	3,74
Learning Interest	0	0	7	5,3	30	22,9	82	62,6	12	9,2	3,76

Source: processed primary data

Table 5 shows that majority of respondents feel that the use of Facebook significantly affect their knowledge. Respondents feel that through the use of Facebook, they can obtain rich informations about current issues going on.

Table 6: Description of Endogenous Variable: Perception

DESCRIPTION	RESPONDENTS' ANSWER SCORES										Mean
	1		2		3		4		5		
	F	%	F	%	F	%	F	%	F	%	
Outlook	0	0	8	6,1	34	26,0	75	57,3	14	10,7	3,73
Importance	0	0	8	6,1	30	22,9	81	61,8	12	9,2	3,74
Experience	0	0	7	5,3	38	29,0	71	54,2	15	11,5	3,72
Expectation	0	0	5	3,8	25	19,1	83	63,4	18	13,7	3,87
Environment	0	0	12	9,2	42	32,1	68	51,9	9	6,9	3,56
Personal Interests	0	0	13	9,9	39	29,8	66	50,4	13	9,9	3,57

Source: processed primary data

Table 6 shows that the Expectation factor has the highest mean. This shows that the user expects to accomplish or obtain something by using Facebook.
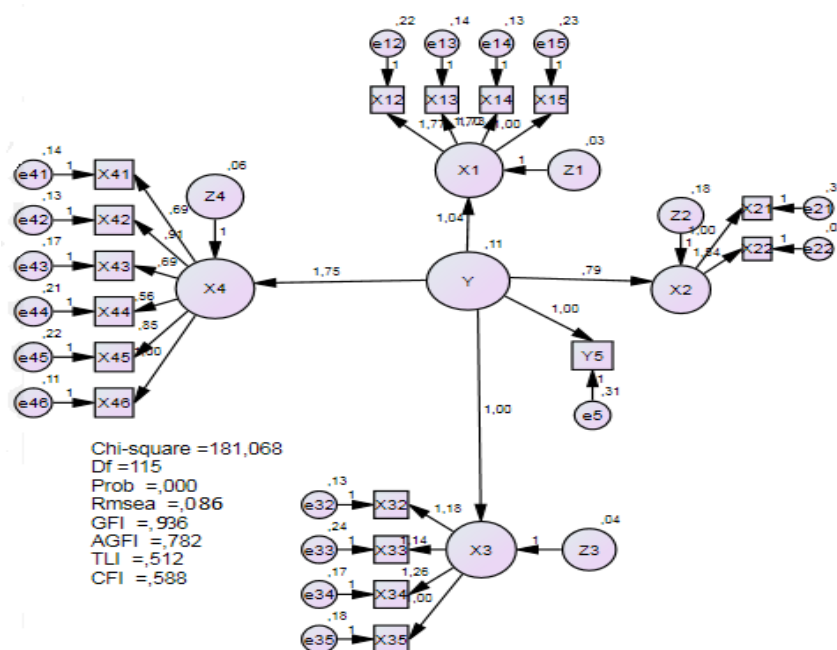
Structural Equation Modeling (SEM)

Chi-square =181,068
Df =115
Prob =,000
Rmsea =,086
GFI =,936
AGFI =,782
TLI =,512
CFI =,588

Figure 1: SEM Analysis Result on the Research Model
Facebook(Y), Attitude(X1), Personality(X2), Learning(X3), Perception(X4)

Table 7: The Goodness-of-Fit Test on the SEM Model

Criteria	Goodness of fit	cut-off value	Evaluation
Chi-square	181.068	As small as possible	Not met
Probabilitas	0.000	$\geq$ 0.05	Not met
RMSEA	0.086	$\leq$ 0.08	Good
GFI	0.936	$\geq$ 0.90	Good
AGFI	0.782	$\geq$ 0.90	Not met
TLI	0.512	$\geq$ 0.90	Not met
CFI	0.588	$\geq$ 0.90	Not met

Source: processed primary data

Refering to Hair (2006) and Arbuckle & Wothke (1995) who stated that a model is good if at least a criterion or two met the cut-off value expected, we evaluate the SEM model above. It turns out that two criteria meet the cut-off value, hence the model has form endogenous unidimensionality well. In other words, the model is acceptable to be used as a tool to analyze an effect. Based on the result of data processing, we are able to know the factor loadings of each of the variables, both endogenous and exogenous.

Facebook App = 1.000 x facebook

a. Factor loadings which describe Attitude variable are as follow:

1) Intensity = 1.770 x attitude
2) Flexibility = 1.698 x attitude
3) Consistency = 1.732 x attitude
4) Spontaneity = 1.000 x attitude

b. Factor loadings which describe Personality variable are as follow:

1) Neurotic = 1.000 x personality
2) Competitive = 1.542 x personality

c. Factor loadings which describe Learning variable are as follow:

1) Comprehension = 1.183 x learning
2) Skill = 1.135 x learning
3) Learning Attitude = 1.257 x learning
4) Learning Interest = 1.000 x learning

d. Factor loadings which describe Perception variable are as follow:

1) Outlook = 0.688 x perception
2) Importance = 0.913 x perception
3) Experience = 0.686 x perception
4) Expectation = 0.561 x perception
5) Environment = 0.850 x perception
6) Personal Interest = 1.000 x perception

Based on the factor loading of each variables, both endogenous and exogenous, we can conclude that the use of Facebook significantly affects behavior which is characterized by 4 main indicators:

a. Intensity, that is an individual vigorous attitude in decision-making.
b. Competitive, that is an individual's capability to compete.
c. Learning attitude, that is how an individual take proper attitudes in learning process.
d. Personal interest, that is an individual interest in exploring new/unknown things.
e. Table.8 Structural Equating Result

No	Endogenous Variable		Exogenous Variable	*Unstand ardized Coeff.*	CR		T tabel ($\alpha/2=0,02 5$; Df=130)	Prob.		α	De sc.
1	Attitude	←	Facebook app	1,043	4,387	>	1,968	0,000	<	0,05	S
2	Personality	←	Facebook app	0,795	2,981	>	1,968	0,003	<	0,05	S
3	Learning	←	Facebook app	0,996	4,046	>	1,968	0,000	<	0,05	S
4	Perception	←	Facebook app	1,748	4,756	>	1,968	0,000	<	0,05	S
Explanation: S = Significant effect TS = No effect											

Source: processed primary data

Based on table 8, we can see that the SEM shows that:
a. Facebook has significant effect on individual attitude.
b. Facebook has significant effect on individual personality.
c. Facebook has significant effect on individual learning.
d. Facebook has significant effect on individual perception.

HYPOTHESES TESTING:

a. Hypothesis 1 stated that the use of Facebook has significant effect on individual's attitude. The result of analysis shows that the probability of CR (that is 0.000) is lower than α 0.05. So we can conclude that the hypothesis is **True**.

b. Hypothesis 2 stated that the use of Facebook has significant effect on individual's personality. The result of analysis shows that the probability of CR (that is 0.003) is lower than α 0.05. We can conclude that the hypothesis is **True**.

c. Hypothesis 3 stated that the use of Facebook has significant effect on individual's learning. The result of analysis shows that the probability of CR (that is 0.000) is lower than α 0.05. We can conclude that the hypothesis is **True**.

d. Hypothesis 4 stated that the use of Facebook has significant effect on individual's perception. The result of analysis shows that the probability of CR (that is 0.000) is lower than α 0.05. We can conclude that the hypothesis is **True**.

DISCUSSION:

Based on the descriptive analysis from respondents' answers, it is known that the use of Facebook affect individual behavior, especially these aspects of behavior :

1. Orientation. The use of Facebook can improve the user's ability to decide an orientation to take.
2. Ambition. The use of facebook tend to make user becoming more ambitious. The user feel urged to take means to fulfill his/her ambition, either positive or negative ambition.
3. Knowledge. The use of Facebook can increase the user's knowledge on certain things. Other users' shares of beneficial information on Facebook will increase the knowledge of the user.
4. Expectation. By using Facebook, the user may expect to find a new friendship, a potential relationship, a desired good, or business opportunity, etc.

Based on the results above, we can conclude that: 1) Facebook has significant effect on individual attitude, 2) Facebook has significant effect on individual personality, 3) Facebook has significant effect on individual learning, 4) Facebook has significant effect on individual perception, and 5) overall, Facebook has significant effect on individual behavior which is indicated by 4 indicators: individual attitude, personality, learning, and perception.

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