International Research Journal of Advanced Engineering and Science
ISSN(Online): 2455-9024

Analysis of School Website User Satisfaction Using Delone and Mclean Methods, and Structural Equation Modeling (Case Study of Smk Wisata Indonesia, Jakarta)

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Abstract— *In the current era of globalization, the development of technology and science is increasingly rapid and developing, an example is the development of technology in the field of education. One of the educational institutions is a school. The Indonesian Tourism Vocational School Lenteng Agung Jakarta website is an important information system for schools because it can support teaching and learning activities and help convey information to parents and the general public. The results of the author's observations show that the school also does not yet know whether the website is useful or not, because there is no data such as a survey to see whether the website has succeeded in helping the school convey information or not. Based on the problems above, research can be carried out to measure user satisfaction from the user's experience when using the website. Structural Equation Modeling with Partial Least Squares (SEM-PLS) is a multivariate analysis technique that combines factor analysis and regression (correlation) analysis. Meanwhile, the DeLone and McLean models can be used to measure the success of user satisfaction on the Indonesian Tourism Vocational School website. There are three independent variables, namely user convenience, which is proven to have no effect on user satisfaction; information quality, which influences user satisfaction; and interaction quality, which has no effect on user satisfaction. With this research, schools get accurate information to manage and improve the Indonesian Tourism Vocational School website.*

Keywords— *User Satisfaction Analysis, Indonesian Tourism Vocational School, Structural Equation Modeling, Partial Least Squares, DeLone and McLean Models.*

I. INTRODUCTION

In the current era of globalization, the development of technology and science is increasingly rapid and developing, an example is the development of technology in the field of education. Education is the foundation for a child's future development. The use of technology in the field of education is very important. When children undergo the educational process, children can use technology, so they can mature themselves. One of the educational institutions is a school.

The Indonesian Tourism Vocational School Lenteng Agung Jakarta website is an important information system for schools because it can support teaching and learning activities and help convey information to parents and the general public.

The results of the author's observations show that the school also does not yet know whether the website is useful or not, because there is no data such as a survey to see whether the website has succeeded in helping the school convey information or not. The author also conducted interviews with the head of the curriculum department, teachers, students and school principals. From the results of the interview it was also discovered that there was a lack of a feature to upload learning materials online via the website which should be able to increase its function. Another problem is the lack of relevance of information regarding learning materials from information on websites to the curriculum currently running in class. Thus, it strengthens the reason for the need to analyze user satisfaction on the website. To find out user satisfaction on the website, research is needed to see the level of satisfaction and the factors that influence it.

This research uses the DeLone and McLean Model (1992) conducted by McGill et al. (2003), who found that perceived information quality and perceived system quality were significant predictors of User Satisfaction. Meanwhile, User Satisfaction is also a significant predictor of intended use and perceived individual impact. Another study conducted by Livari (2005) showed the results that perceived system quality and perceived information quality were significant predictors of User Satisfaction, but not significant for the intensity of use of the system, and User Satisfaction was also a significant predictor of individual impact (Rizan Machmud, 2018).

Based on the problems above, research can be carried out to measure user satisfaction from the user's experience when using the website. Structural Equation Modeling with Partial Least Squares (SEM-PLS) is a multivariate analysis technique that combines factor analysis and regression (correlation) analysis, with the aim of testing the relationship between variables in a model, both between indicators and their constructs and the relationship between construct. Meanwhile, PLS (Partial Least Square) is a component or variant-based SEM structural equation model.

This research was conducted to determine user satisfaction with system quality, information quality, use, user satisfaction, individual impact, organizational impact, information available on the Website according to needs, and the results of user satisfaction evaluations can be useful for the school.

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II. Literature Review

A. Website

In terms of terminology, a website is a collection of site pages, which are usually summarized in a domain or subdomain, which is located on the World Wide Web (WWW) on the Internet.

B. School Website

The school website is an alternative for delivering Internet-based information (knowledge and news) issued by the school with the aim of making it easier to distribute information to the public, in this case: students, parents and the community. (Maqableh et. al., 2015).

C. Website Analysis

Website analytics is used as the basis of data-based marketing efforts. Website analytics is used as the key to understanding the impact of any website or digital marketing changes.

D. Indonesian Tourism Vocational School

Indonesian Tourism Vocational School is one of the educational units at the vocational school level in Kebagusan, Kec. Sunday Market, South Jakarta City, DKI. Jakarta. In carrying out its activities, the Indonesian Tourism Vocational School is under the auspices of the Ministry of Education and Culture. Jakarta Indonesian Tourism Vocational School is located at Raya Lenteng Agung Gg Langgar No.1, Kebagusan, Kec. Pasar Minggu, South Jakarta City, Dki Jakarta, with postal code 12520. SMK Wisata Indonesia Jakarta has A accreditation, based on certificate 288/BANSM-P/DKI/2018. Learning at the Indonesian Tourism Vocational School is carried out on a full day. In a week, learning is carried out for 5 days. Indonesian Tourism Vocational School is a vocational high school that has 3 skill competencies, namely culinary, hospitality, and computer network and telecommunications engineering. The number of teachers teaching at the Indonesian Tourism Vocational School is 35 people, and the number of students at the Indonesian Tourism Vocational School is 372 people. The existing infrastructure at this school itself is as follows: principal and deputy principal's room, teacher's room, administrative services, library, production unit room, prayer room, common room, toilet room, warehouse room, student dormitory, bp/bk room, room OSIS, cooperative room, UKS room, school guard room, classroom, practice/workshop room, computer practice room, hotel accommodation and catering service practice room.

E. Quality

Quality is defined as a presentation of a product or service according to the standards that apply in the place where the product is produced and delivery that is at least the same as what consumers want and expect. Quality is said to be good if the service provider provides services that are equivalent to what the customer expects. The concept of quality based on quality characteristics that should be consistent with each other. (Prasastono and Pradapa 2012).

F. Website Quality

A website is a collection of information in the form of text, script, still or moving images, animation or sound, and/or a combination of all of them which are statistical or dynamic in nature which forms a series of interrelated systems, each of which will make it easier for customers to reach conclusions about features and benefits of a product. (Permana 2020).

G. Definition of The DeLone and McLean Model for is Success

A good model is a complete but simple model. This kind of model is called a parsimony model. Based on the theories and results of previous research that had been reviewed, DeLone and Mclean (1992) then developed a parsimony model which they called the DeLone and Mclean information systems success model (D & M Success Model).

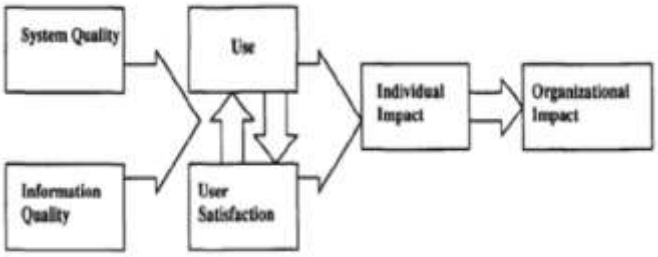

Figure 1. The DeLone and McLean Model For Is Success

H. Observation

Observation is a data collection technique where researchers go directly to the field, then observe the symptoms being studied. After that, the researcher can describe the problems that occur which can be linked to other data collection techniques such as surveys with questionnaires or interviews, and the results obtained are connected to theory and previous research (Syafrida Hafni Sahir, 2021).

I. Questionnaires and Interviews

A questionnaire is a series of question instruments prepared based on measuring instruments for research variables. Interviews are a data collection technique by asking a number of questions related to research to predetermined sources

J. Population

Population is a generalized area consisting of objects/subjects that have certain qualities and characteristics determined by the researcher to be studied and then conclusions drawn. So population is not only people, but also objects and other natural objects. Population is not just the number of objects or subjects, but includes all the characteristics possessed by the object or subject.

K. Sample

The sample is part of the number and characteristics of the population. If the population is large and it is impossible for researchers to study everything in the population, because they have limited funds, energy and time, then researchers can use samples taken from a representative population. Determining the sample size uses the population results from the Slovin formula with an error process from sampling of 10%. The sample size, namely student population, is taken using the following Slovin formula:

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$$n = 1 + N(e)^2$$

Information:
n = Sample size
N = Population size
e = Percent sampling error (10%)

L. Measurement Scale

The Likert scale is a psychometric scale that is commonly used in questionnaire analysis, and is the scale most widely used in research in the form of surveys.

Positive questions are given a score of 4, 3, 2, and 1 while negative questions are given a score of 1, 2, 3, and 4. The Likert scale answer form consists of strongly agree, agree, disagree, and strongly disagree. (Dryon Taluke, Ricky S. M Lakat & Amanda Sembel, 2019).

M. Structural Equation Modeling – Partial Least Square (SEM PLS)

Structural Equation Modeling, which in this research is called SEM, is a statistical modeling technique that is very cross sectional, linear and general. SEM consists of factor analysis, path analysis and regression.

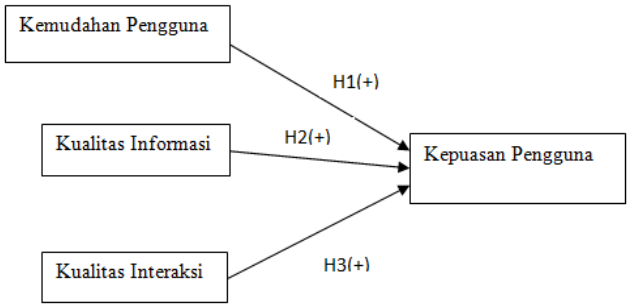

Figure 2. Theoretical Thinking Framework

N. Smart PLS Software

Smart PLS or Smart Partial Least Square is statistical software which has the same aim as Lisrel and AMOS, namely to test the relationship between variables, both among latent variables and with indicator or manifest variables.

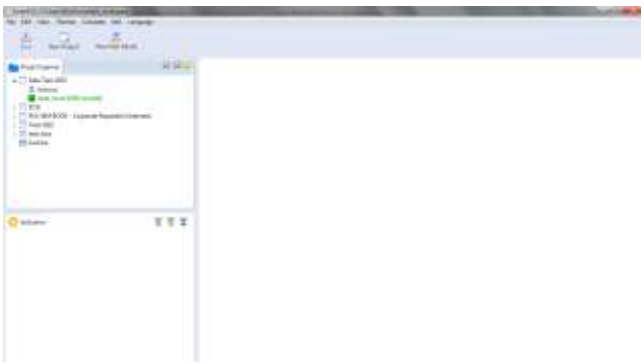

Figure 3. Smart PLS display

O. Descriptive statistics

Descriptive statistics is used as a tool with the function of producing descriptions of the objects studied in the form of authentic samples or populations or according to actual conditions. Data in this statistic is seen in the form of mean, median, minimum and maximum deviation values.

P. Validity test

Validity according to Sugiyono (2016: 177) shows the degree of accuracy between the data that actually occurs on the object and the data collected by the researcher. To find the validity of an item, the correlation between the item score and the total of these items is calculated. If the coefficient between the item and the total items is equal to or above 0.3 then the item is declared valid, but if the correlation value is below 0.3 then the item is declared invalid.

$$r\ hitung = \frac{n\sum XY - (\sum X.\sum Y)}{\sqrt{\{n\sum X2 - (\sum X2)\}\{n\sum Y2 - (\sum Y)2\}}}$$

Information:
r xy = Correlation coefficient
n = Number of samples
ΣXY = Number of multiplications of variables x and y
Σ = Number of values of variable x
Σ Y = Number of variable y values
ΣX2 = Sum of the powers of the value of the variable x
ΣY2 = Sum of powers of variable y values

Q. Reliability Test

According to (Sugiyono, 2019) reliability is an index that shows the extent to which a measuring instrument can be trusted or relied upon (consistent). The purpose of the reliability test is to see whether the questionnaire has consistency if measurements are carried out repeatedly. An instrument is said to be reliable if the Cronbach' Alpha value is greater than 0.6 which is formulated:

$$A = \frac{K.r}{1+(K-1).r}$$

Information:
A: Reliability coefficient
K: Number of reliability items
R: Average correlation between items
1: Constant number

R. Previous Research

Several studies related to website quality analysis using the SEM Smart PLS method have been carried out by previous researchers. The research study is explained as follows.

Research by Zimmy Fernando Gurning (2017) used a questionnaire, with a population of BPJS Employment employees using the BPJS Employment website in implementing information systems on organizational performance through integrated systems and information quality using the SEM method. The results obtained in this research are that Information Technology Implementation (x) has a significant effect on system integration (y2). Implementation of Information Technology (x) has no significant effect on information sharing (y1). Sharing integration (y2) has a significant effect on information quality (y1). System integration (y2) has a significant effect on information quality (y3). System integration (y2) has a significant effect on organizational performance (z).

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Information sharing (y1) has a significant effect on information quality (y3). Information quality (y3) has a significant effect on organizational performance (z).

Research by Besse Arnawisuda Ningsi, and Lucia Agustina (2018) took a customer population regarding purchases of Bleached Cotton products among customers in the international market who were permanent and active for more than 1 year as many as 33 customers. The results obtained in this research are that product quality influences customer satisfaction, which means that not all customers will feel satisfied if only with product quality, but there must be other factors. In this research, the indicators that have the most positive influence on production quality so that customer satisfaction can be achieved are performance indicators. Meanwhile, indicators that have less influence on production quality, resulting in less customer satisfaction, are design indicators. Service quality influences customer satisfaction, which means that the higher and better the quality of service provided, it is certain that customer satisfaction can be achieved. The indicator that has the most positive influence on service quality so that customer satisfaction can be achieved is the assurance indicator. The indicator that has less influence on production quality, causing less customer satisfaction to be achieved, is the empathy indicator. Product quality and customer service can simultaneously influence customer satisfaction so that if these two variables are prioritized, maximum customer satisfaction will be achieved. Product quality and customer service as measured using indicators of design, performance, conformance, tangibility, empathy, responsiveness, reliability, assurance are factors that influence customer satisfaction.

Research conducted by Adnan Sauddin, M. Ichsan Nawawi, and Yanti Kumaladewi (2021) had a population of 393 students at Alauddin State Islamic University, Makassar. The results obtained in this research are indicators-indicators of the system dimensions, namely the ease with which the Alauddin State Islamic University Makassar Academic Information System Website is operated, the appearance of the website and the ease of the website to be accessed are significant and the system dimensions have an influence on user satisfaction with a path coefficient value of 0.247. The information dimension has the highest influence compared to other dimensions on user satisfaction with a path coefficient value of 0.270 and all indicators are significant for information. The interaction dimension has the lowest influence on user satisfaction with a path coefficient value of 0.170 and all indicators are significant. The service dimension significantly influences satisfaction with a path coefficient value of 0.253 with the following mathematical model: k = 0.247t1 + 0.2690t2 + 0.16890t3 + 0.253t4.

Research by Medyantiwi Rahmawita, Riswandi, Idria Maita, Zarnelly, and Eki Saputra (2022) used a questionnaire with a total of 99 respondents from the Tarbiyah and Teacher Training Faculty of UIN Suska Riau. Siasy is a website that is used to manage correspondence using online media. The results obtained in this research were that 3 of the 5 research hypotheses were accepted, namely: Content (CON) had a significant positive effect on End User Computing Satisfaction (EUCS) with a t value of 5.168, Ease of Use (EAS) had a significant positive effect on End User Computing Satisfaction (EUCS) with a t value of 2.752, Timeliness (TIM) has a significant positive effect on End User Computing Satisfaction (EUCS) with a t value of 2.674. And the research that was rejected was: Accuracy (ACC) had a significantly negative effect on End User Computing Satisfaction (EUCS) with a t value of 1.429, Format (FOR) had a significantly negative effect on End User Computing Satisfaction (EUCS) with a t value of 0.848. Content influences user satisfaction with Siasy. Ease of use influences user satisfaction with Siasy. Timeliness influences user satisfaction with Siasy.

Research by Indah Setyaning A, Sakina Zakaria, Farhan Eka P, M.Aqshal BI, and M. Arsy Arrizal (2023) used a total of 267 respondents as customers of a goods and services company. The results obtained in this research are that the proposed SEM model has met the minimum Goodness of Fit requirements so that the model can be accepted to describe the relationship between latent variables. Based on the proposed model, service quality and customer trust can significantly influence customer loyalty in the company

III. Research Methods

A. *Data analysis method*

The analysis used in this research is Partial Least Square (PLS) calculated by the Smart PLS software application program. The reason for using this model is because there is a tiered relationship structure between variables, and this software suits researchers' needs. The data used is primary data, namely by distributing questionnaires using a Likert Scale with 31 questions to 100 respondents. PLS model evaluation is carried out by evaluating the outer model and inner model. The outer model is a measurement model to assess the validity and reliability of the model. Through an algorithm iteration process, measurement model parameters (convergent validity, discriminant validity, composite reliability and Cronbach alpha) are obtained, including the R2 value as a parameter for the accuracy of the prediction model (Jogiyanto and Willy, 2015). Meanwhile, the Inner Model is a structural model to predict causal relationships between latent variables, through a bootstrapping process. The T-statistic test parameters were obtained to predict the existence of a causal relationship.

B. *Validity test*

The validity test consists of external validity and internal validity. External validity shows that the results of a study are valid and can be generalized to all different objects, situations and times. Internal validity shows the ability of a research instrument to measure what a concept should measure (Jogiyanto and Willy, 2015). The following is a tabulation of validity test parameters in Partial Least Square (PLS).

C. *Reliability Test*

After the validity test, PLS also carried out a reliability test to measure the internal consistency of the measuring instrument. Reliability shows the accuracy, consistency and precision of a measuring instrument in making measurements. Reliability testing in PLS can use two methods, namely Cronbach's Alpha and Composite Reliability. The Alpha or

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Composite Reliability value must be > 0.7, although a value of 0.6 is still acceptable. In fact, internal consistency testing is not absolutely necessary if construct validity has been met, because a valid construct is a reliable construct, whereas a reliable construct is not necessarily valid (Jogiyanto and Willy, 2015).

TABLE 1. Validity Test Parameters in the PLS Measurement Model

Validity test	Parameter	Criteria
Convergent	Loading factor	>0.7
	Average Variance Extracted (AVE)	>0.5
	Communality	>0.5
Discriminant	AVE Roots and Correlation of latent variables	AVE Root > Latent Variable Correlation
	Cross loading	> 0.7 in one variable

D. Structural Model (Inner Model)

The structural model in PLS is evaluated using R2 for the dependent construct, path coefficient values or T-values for each Path to test the significance between constructs in the structural model. The higher the R2 value means the better the prediction model of the proposed research model. The path or inner model coefficient value shows the level of significance in hypothesis testing. The path coefficient score or inner model indicated by the T-Statistic value must be above 1.96 for a two-tailed hypothesis and above 1.64 for a one-tailed hypothesis for hypothesis testing at 5% alpha and power 80% (Jogiyanto and Willy, 2015). According to Ghozali (2018), the structural model or inner model uses 2 (two) steps, namely:

a) R-Square. This test is used to explain the magnitude of the exogenous latent variable which is able to explain the endogenous latent variable. The R-Square value categories are 0.75 (strong model), 0.50 (moderate model), and 0.25 (weak model).
b) Bootstrapping. This test is to determine significant values to see the influence between the variables carried out. Ghozali used a bootstrapping procedure with the entire original sample to carry out resampling. The recommendation according to Heir and Henier in Ghozali (2018) is for a bootstrapping sample number of 5,000, noting that this number must be greater than the original sample.

E. Research Object

Indonesian Tourism Vocational School is one of the educational units at the vocational school level in Kebagusan, Kec. Sunday Market, South Jakarta City, DKI Jakarta. In carrying out its activities, the Indonesian Tourism Vocational School is under the auspices of the Ministry of Education and Culture. Jakarta Indonesian Tourism Vocational School is located at Raya Lenteng Agung Gg Langgar No.1, Kebagusan, Kec. Pasar Minggu, South Jakarta City, Dki Jakarta, with postal code 12520. SMK Wisata Indonesia Jakarta has A accreditation, based on certificate 288/BANSM-P/DKI/2018. Learning at the Indonesian Tourism Vocational School is carried out on a full day. In a week, learning is carried out for 5 days. Indonesian Tourism Vocational School is a vocational high school that has 3 skill competencies, namely culinary, hospitality, and computer network and telecommunications engineering. The number of teachers teaching at the Indonesian Tourism Vocational School is 35 people, and the number of students at the Indonesian Tourism Vocational School is 372 people. The existing infrastructure at this school itself is as follows: principal and deputy principal's room, teacher's room, administrative services, library, production unit room, prayer room, common room, toilet room, warehouse room, student dormitory, bp/bk room, room OSIS, cooperative room, UKS room, school guard room, classroom, practice/workshop room, computer practice room, hotel accommodation and catering service practice room.

F. Research sites

Distribution of questionnaires for this research was carried out online via WhatsApp and came directly to the school. Respondents can fill in from anywhere, as long as there is an internet connection.

G. Research time

Research starts from early May 2023 to December 2023.

H. Research Population

The population of this study were users of the Indonesian Tourism Vocational School website, Lenteng Agung Jakarta, namely Indonesian Tourism Vocational School students. The following research table can be seen in table 2.

TABLE 2. Users of the Indonesian Tourism Vocational School website, Lenteng Agung Jakarta

No	Major	Force	Total Population
1	Hospitality	2022/2023	110
2	Cullinary art	2022/2023	129
3	Computer network Engineering	2022/2023	77
Total			316

I. Research Samples and Sampling Techniques

Determining the sample size using the population results from the Slovin formula with an error process from sample withdrawal of 10%. The sample size, namely student population, was taken using the following Slovin formula:

$$n = 1 + (e)2$$

Information:

n = Sample size
N = Population size
e = Percent sampling error (10%) (Agung, 2012)
n = 316 / (1 + (316x0.102))
n = 316 / (1+(316x0.01)
n = 316 / (1+3.16)
n = 316 / 4.16
n = 75.96

Based on the formula above and the values entered, the sample size in this study was rounded to 100 people. So 100 is considered as variable A. The number of sample calculations can be concluded based on table 3 below:

TABLE 3. Calculation of Sample Number

No	Major	Total Population	Number of Samples
1	Hospitality	110	30
2	Cullinary art	129	63
3	Computer network Engineering	77	7
Total		316	100

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J. Data Type

The type of data in this research is quantitative data, namely data in the form of numbers, the sources required come from:

1. Primary Data, namely data obtained directly by respondents through questionnaires distributed from Google Form
2. Secondary data, namely data obtained from documents, money reports made by the Lenteng Agung Jakarta Indonesian Tourism Vocational School. What this report requires are Indonesian Tourism Lenteng Agung Jakarta Students.

K. Data Collection Methods/Data Collection Instruments

The data collected in this report was taken using a Google form, then filled in by students via the Google form. The questionnaire distributed is a closed questionnaire, namely a questionnaire distributed in such a form that respondents are asked to choose one correct answer from a scale of 1 - 5 using a linear scale. The assessment given in each answer to the questionnaire question in the research is as follows:

TABLE 4. Table of Respondent Question Value Weightings

Answer	Mark
Strongly agree	1
Agree	2
Doubtful	3
Don't agree	4
Strongly Disagree	5

L. Research variable

A variable is anything that differentiates or brings variation in a value. This variable consists of a dependent variable, which is a variable that changes so that a dependent variable arises which becomes a cause and effect due to the existence of the independent variable.

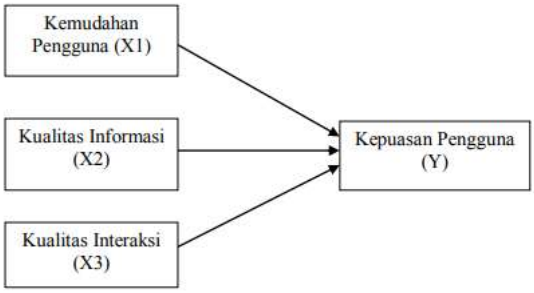

Figure 4. Path diagram in SEM PLS

Information:
X1 = Convenience variable (independent)
X2 = Information quality variable (independent)
X3 = Interaction quality variable (independent)
Y = User satisfaction variable (dependent)

M. Determining Models and Hypotheses

1. User Ease (Usability)

User-friendliness (usability) can make it easier for website users to be able to learn, understand, explore, have an attractive website, a pleasant interface, have good competence in providing new and enjoyable experiences.

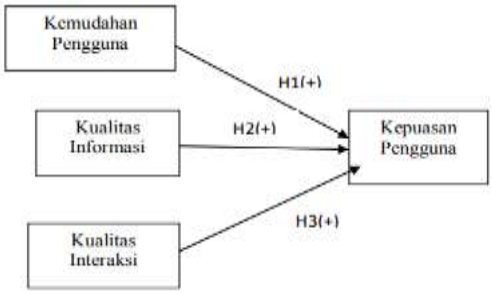

Figure 5. SEM PLS model

2. Information Quality (Information Quality)

Information quality can provide accurate information to users that is reliable, up to date and the information provided is in accordance with the topic of discussion. Apart from that, it is easy to understand the information, the detail of the information, and the relevance of the information provided.

3. Interaction Quality (Interaction Quality)

Interaction quality is able to provide comfort when making transactions, has a good reputation, makes communication easier, creates a more personal emotional feeling, has a sense of trust in providing personal information, can create a specific community, and gives users confidence that the information conveyed will be fulfilled

4. User Satisfaction

Meanwhile, the variable user satisfaction or overall impression (Y1) is the dependent variable. The model in this study uses 3 variables. The following are the hypotheses that researchers put forward in this study as follows:

H1: ease of use influences user satisfaction.
H2: Information quality influences user satisfaction.
H3: interaction quality influences user satisfaction.

IV. Results and Discussion

In this chapter, the results of the research will be explained, namely measuring the level of satisfaction of users of the Indonesian Tourism Vocational School website using the SEM PLS method.

A. Data Collection Results

The research data collection technique was carried out by distributing questionnaires indirectly to respondents. Indirect distribution (via online questionnaire) was carried out using Google Forms. The population in this study were Indonesian Tourism Vocational School students who used the website, namely 316 students. From this population, only 100 students filled out the questionnaire, which will be used as sampling in this research.

B. Respondent Criteria Based on Major

In the department choice section, there are three options that respondents can choose from, namely culinary arts, hospitality, and computer and network engineering.

Based on table 5, it can be seen that there were 30 respondents majoring in hospitality with a percentage of 30%, culinary majors totaling 63 respondents with a percentage of 63%, and computer network engineering majors totaling 7

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respondents with a percentage of 7%. Figure 6 shows the percentage of respondents based on major.

TABLE 5. Respondents by Department

No	Major	Number of Respondents	Percentage (%)
1	Hospitality	30	30%
2	Cullinary art	63	63%
3	Computer network Engineering	7	7%
Total		100	100%

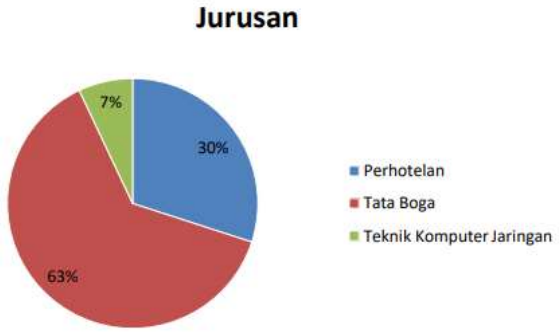

Figure 6. Pie chart of percentage of respondents based on major

C. Questionnaire Collection Results

The data in this research was collected through a questionnaire distributed via electronic media using the facilities of Google Form. The questionnaire via the Google Form facility is not only fast and can be used anywhere, it is considered that the data produced is right on target because respondents are required to choose the answer to each question given and only respondents who meet the criteria can answer the question as a whole.

D. PLS Test Results

This research uses the SEM (Structural Equation Modeling) method with the Smart PLS analysis tool. Meanwhile, according to Ghozali (2018), in SEM analysis there are 2 stages to assess the fit of a model, namely testing the measurement model and the structural model. Based on the model that has been built in this research.

Partial Least Square (PLS) analysis is carried out in 3 (three) stages, namely:

a. Outer model analysis/measurement model
b. Inner model analysis/structural model
c. Hypothesis test

The following are the results of the Partial Least Square (PLS) test in this research:

1. Outer Model Analysis Outer model analysis is carried out to ensure that the measurements used are suitable for measurement (valid and reliable). The outer model specifies the outer model analysis which can be seen through several indicators, namely:

a) Convergent Validity, with a value > 0.7. Convergent validity testing is carried out by looking at the loading factor value for each indicator ≥ 0.7, meaning that the indicator is declared ideal. Thus, this indicator is valid in measuring the construct it forms.

TABLE 6. Measurement Model (Outer Model)

X1 (Kemudahan Pengguna)	X1.1	Konten yang terdapat pada Sistem Informasi Website SMK Wisata Indonesia sesuai dengan yang dibutuhkan
	X1.2	Sistem Informasi Website SMK Wisata Indonesia ramah pengguna
	X1.3	Sistem Informasi Website SMK Wisata Indonesia mudah digunakan
	X1.4	Sistem Informasi Website SMK Wisata Indonesia memberikan waktu yang efisien bagi pengguna
	X1.5	Format informasi yang terdapat dalam Sistem Informasi Website SMK Wisata Indonesia jelas
	X1.6	Sistem memberikan informasi tepat waktu
	X1.7	Sistem Informasi Website SMK Wisata Indonesia memberikan informasi terup to date
	X1.8	Sistem Informasi Website SMK Wisata Indonesia telah memenuhi ekspektasi
	X1.9	Sistem Informasi Website SMK Wisata Indonesia menghemat waktu
	X1.10	Website SMK Wisata Indonesia menghasilkan informasi yang tepat
	X1.11	Informasi pada Website SMK Wisata Indonesia bermanfaat bagi pengguna
X2 (Kualitas Informasi)	X2.1	Isi informasi yang ada dalam Sistem Informasi Website SMK Wisata Indonesia sesuai dengan yang dibutuhkan
	X2.2	Sistem Informasi Website SMK Wisata Indonesia memberikan laporan yang sesuai dengan kebutuhan yang pengguna butuhkan
	X2.3	Sistem Informasi Website SMK Wisata Indonesia memberikan informasi yang cocok dengan kebutuhan pengguna
	X2.4	Sistem Informasi Website SMK Wisata Indonesia memberikan informasi yang akurat
	X2.5	Sistem Informasi Website SMK Wisata Indonesia memberikan informasi yang nyata
	X2.6	Semua menu yang ditampilkan sudah berguna untuk pengguna
	X2.7	Ketersediaan pelatihan sistem sudah cukup
	X2.8	Tampilan pada Website SMK Wisata Indonesia menarik bagi pengguna
	X2.9	Setiap menu yang terdapat pada Website SMK Wisata Indonesia menampilkan halaman yang sesuai
	X2.10	Penggunaan menu pada Website SMK Wisata Indonesia mudah dipahami
	X2.11	Website SMK Wisata Indonesia mudah digunakan
	X2.12	Website SMK Wisata Indonesia dapat merespon dengan cepat
	X2.13	Tampilan Website SMK Wisata Indonesia mudah dipahami
	X2.14	Website SMK Wisata Indonesia layakdigunakan
X3 (Kualitas Interaksi)	X3.1	Sistem Informasi Website SMK Wisata Indonesia memberikan kepuasan terhadap pengguna
	X3.2	Output/Hasil disajikan dalam format yang bermanfaat
	X3.3	Penyampaian materi pelatihan sudah dapat dipahami
	X3.4	Pemahaman pengguna terhadap pelatihan sudah jelas
	X3.5	Dukungan Teknologi Informasi setelah pelatihan sudah cukup
Y (Kepuasan Pengguna)	Y	Pengguna puas dengan kinerja Sistem Informasi Website SMK Wisata Indonesia

b) Discriminant Validity, this value is a factor cross loading value which is useful for finding out whether a construct has adequate discriminants, namely by comparing the loading value on the targeted construct which must be greater than the loading value on another construct.

c) Composite Reliability, with a value > 0.7 Composite reliability to determine internal consistency reliability, namely with the condition of having high reliability that the limit value is ≥ 0.8, which is very satisfactory.

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International Research Journal of Advanced Engineering and Science
ISSN(Online): 2455-9024

d) Average Variance Extracted (AVE), with a value of 0.5. Describes the amount of diversity or observed variables that latent variables can have.
e) Cronbach Alpha, with a value > 0.6. To determine the reliability of a construct by requiring a value > 0.7 for all constructs. The following is a structural model of Partial Least Square (PLS) testing.

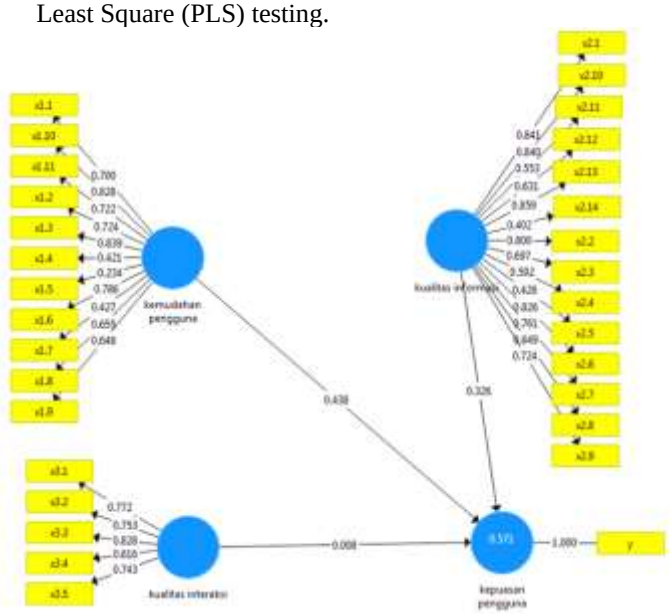

Figure 7. Overall Measurement and Structural Model of Stage 1 Partial Least Square (PLS).

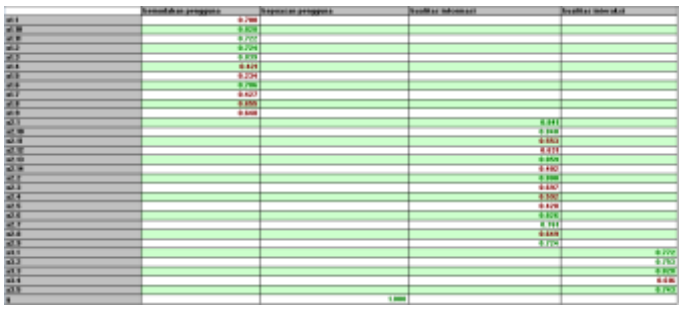

Figure 8. Overall Outer Loading Results

From table 7, it can be seen that all indicators of each variable user convenience (X1), information quality (X2), interaction quality (X3) and user satisfaction (Y) have met convergent validity, because all of them have a value of > 7.0.

TABLE 7. Stage 1 Convergent Validity Test Results

Variabel	Indikator	Nama Indikator	Nilai Loading Factor	Keterangan
X1 (Kemudahan Pengguna)	X1.1	Konten yang terdapat pada Sistem Informasi Website SMK Wisata Indonesia sesuai dengan yang dibutuhkan	0.700	Tidak Valid
	X1.2	Sistem Informasi Website SMK Wisata Indonesia ramah pengguna	0.724	Valid
	X1.3	Sistem Informasi Website SMK Wisata Indonesia mudah digunakan	0.839	Valid
	X1.4	Sistem Informasi Website SMK Wisata Indonesia memberikan waktu yang efisien bagi pengguna	0.421	Tidak Valid
	X1.5	Format informasi yang terdapat dalam Sistem Informasi Website SMK Wisata Indonesia jelas	0.234	Tidak Valid
	X1.6	Sistem memberikan mformasi tepatwaktu	0.786	Valid
	X1.7	Sistem Informasi Website SMK Wisata Indonesia memberikan mformasi ter *up to date*	0.427	Tidak Valid
	X1.8	Sistem Informasi Website SMK Wisata Indonesia telah memenuhi ekspektasi	0.655	Tidak Valid
	X1.9	Sistem Informasi Website SMK Wisata Indonesia menghemat waktu	0.648	Tidak Valid
	X1.10	Website SMK Wisata Indonesia menghasilkan mformasi yang tepat	0.828	Valid
	X1.11	Informasi pada Website SMK Wisata Indonesia bermanfaat bagi pengguna	0.722	Valid
X2 (Kualitas Informasi)	X2.1	Isi mformasi yang ada dalam Sistem Informasi Website SMK Wisata Indonesia sesuai dengan yang dibutuhkan	0.841	Valid
	X2.2	Sistem Informasi Website SMK Wisata Indonesia memberikan laporan yang sesuai dengan kebutuhan yang pengguna butuhkan	0.800	Valid
	X2.3	Sistem Informasi Website SMK Wisata Indonesia memberikan mformasi yang cocok dengan kebutuhan pengguna	0.697	Tidak Valid
	X2.4	Sistem Informasi Website SMK Wisata Indonesia memberikan informasi yang akurat	0.592	Tidak Valid
	X2.5	Sistem Informasi Website SMK Wisata Indonesia memberikan informasi yang nyata	0.428	Tidak Valid
	X2.6	Semua menu yang ditampilkan sudah berguna untuk pengguna	0.826	Valid
	X2.7	Ketersediaan pelatihan sistem sudah cukup	0.761	Valid
	X2.8	Tampilan pada Website SMK Wisata Indonesia menarik bagi pengguna	0.649	Tidak Valid
	X2.9	Setiap menu yang terdapat pada Website SMK Wisata Indonesia menampilkan halaman yang sesuai	0.724	Valid
	X2.10	Penggunaan menu pada Website SMK Wisata Indonesia mudah dipahami	0.840	Valid
	X2.11	Website SMK Wisata Indonesia mudah digunakan	0.553	Tidak Valid
	X2.12	Website SMK Wisata Indonesia dapat merespon dengan cepat	0.631	Tidak Valid
	X2.13	Tampilan Website SMK Wisata Indonesia mudah dipahami	0.859	Valid
	X2.14	Website SMK Wisata Indonesia layak digunakan	0.402	Tidak Valid
X3 (Kualitas Interaksi)	X3.1	Sistem Informasi Website SMK Wisata Indonesia memberikan kepuasan terhadap pengguna	0.772	Valid
	X3.2	Output Hasil disajikan dalam format yang bermanfaat	0.753	Valid
	X3.3	Penyampaian materi pelatihan sudah dapat dipahami	0.828	Valid
	X3.4	Pemahaman pengguna terhadap pelatihan sudahjelas	0.616	Tidak Valid
	X3.5	Dukungan Teknologi Informasi setelah pelatihan sudah cukup	0.743	Valid
Y (Kepuasan Pengguna)	Y	Pengguna puas dengan kinerja Sistem Informasi Website SMK Wisata Indonesia	1.000	Valid

Average Variance Extracted (AVE), describes the amount of diversity or variance of observed variables that latent variables can have. The criteria for assessing AVE is a minimum of 0.5, meaning that the latent variable can describe an average of more than half of the variance of the indicators.

TABLE 8. Evaluation of Discriminant Validity with Square Root Average Variance Extracted (AVE)

	User satisfaction (Y)	User-friendliness (X1)	Information Quality (X2)	Interaction Quality (X3)
User satisfaction (Y)	1000			
User-friendliness (X1)	0.739	0.805		
Information Quality (X2)	0.757	0.832	0.832	
Interaction Quality (X3)	0.645	0.812	0.754	0.789

Evaluation of the measurement model with root square Average Variance Extracted (AVE) is by comparing the root value of AVE with the correlation between constructs. If the AVE root value (diagonal) is greater than the correlation between latent variables, then discriminant validity is met. Based on table 4.3, it appears that the root square AVE value for variables X3 (0.789), X1*Y (0.1000) and Y (1.000). Greater than the correlation between the latent variables, so that variables X3, X1*Y, X2 and X3 have met Discriminant Validity.

TABLE 9. Composite Reliability and Cronbach'a Alpha

	User satisfaction (Y)	User-friendliness (X1)	Information Quality (X2)	Interaction Quality (X3)
Composite Reliability	1,000	0.902	0.940	0.868
Croncbachh'a Alpha	1000	0.865	0.925	0.811

Evaluation of the measurement model using Composite Reliability and Cronbach's Alpha is to determine whether the construct has high reliability or not. Composite Reliability and Cronbach'a Alpha values greater than 0.700 indicate that the construct is reliable.

Based on table 4.5, it can be seen that the value*Composite Reliability*and Cronbach'a Alpha of each latent variable is more than 0.700, so it can be said that the latent variable has high reliability.

Inner Model Analysis

Inner model or structural model analysis is carried out to ensure that the structural model being built is robust and accurate. Evaluation of the inner model can be seen from several indicators

a) Coefficient of Determination (R2)

TABLE 10. R-Square results

Variable	R-Square
Y	0.612

Determinant coefficient (R-square) obtained from the model, variablesease of use (X1), quality of information (X2), quality of interaction (X3) and user satisfaction (Y)amounting to 0.612 states that user satisfaction can be explained by variablesease of use (X1), quality of information (X2), quality of interaction (X3)with Y of 61.2%.

b) Bootstrapping

This test is to determine the significance value to see the influence between the variables carried out. Ghozali (2018) used a bootstrapping procedure with the entire original sample to carry out resampling. The significance level for bootstrapping is 0.05. The bootstrap results in this research are:

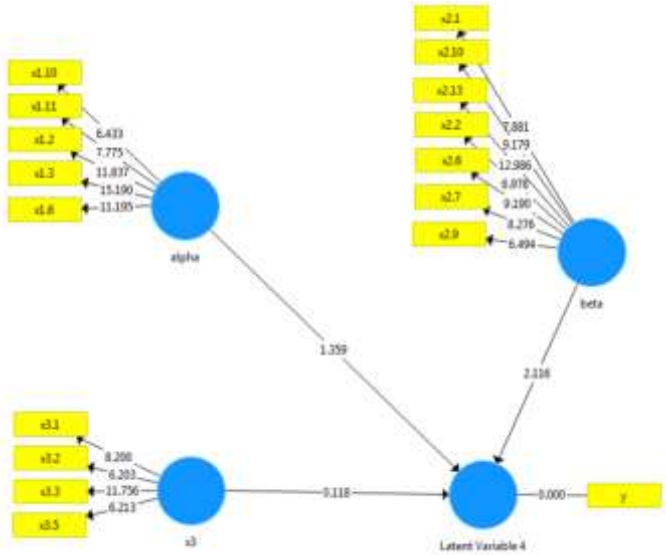

Figure 9. Measurement and Structural Model of Partial Least Square (PLS) Bootstrapping

E. Hypothesis test

To find out the relationship and influence between variables, it is necessary to test the hypothesis. The results of hypothesis testing can be seen from the Tstatistics values and from the probability values. If the T-statistic value is greater than the T-table, then the hypothesis is accepted (Jogiyanto, 2015). For a 95% confidence level (alpha 5%), the T-table value for the two-tailed hypothesis is ≥ 1.96 and for the one-tailed hypothesis is ≥ 1.26 (Jogiyanto, 2015) . Meanwhile, hypothesis testing that uses probability can be seen from the P-Value value. If the P-Value value is smaller than 0.05 then the hypothesis is accepted. The Path Coefficients and P-Value values between variables resulting from hypothesis testing can be seen in the structural model image. The following is a table of hypothesis testing results in this research.

TABLE 11. Hypothesis Testing Results

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics (O/STDEV)	P-Values
X1 -> Y	0.340	0.309	0.250	1,359	0.175
X2 -> Y	0.455	0.420	0.215	2,116	0.035
X3 -> Y	0.025	0.075	0.212	0.118	0.906

Based on table 11, it can be seen that the decisions from testing the hypotheses that have been proposed in this research are:

Ease of use (X1), quality of information (X2), quality of interaction (X3) and user satisfaction (Y)

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1) The effect of user convenience (X1) on user satisfaction (Y) Hypothesis 1, namely user convenience (X1) has no effect on Y (user satisfaction) has been proven because with the Original Sample (O) value of 0.340, the Mean Sample value (M) is 0.309, the Standard Deviation (STDEV) is 0.250 and the T-Statistic (O/STDEV) value is 1.359, then the P-Value value is 0.175 > 0.05, so it is decided to accept hypothesis 1 which has been proposed, namely user convenience does not have a positive effect on user satisfaction (Y).
2) The influence of information quality (X2) on user satisfaction (Y). Hypothesis 2, namely that information quality (X2) has an influence on user satisfaction, is proven because the Original Sample (O) value is 0.455, the Mean Sample value (M) is 0.420, the Standard Deviation (STDEV) value is 0.215 and the T-Statistic value (O/STDEV) is 2,116, then the P-Value value is 0.035 <0.05, so it is decided to accept hypothesis 2 which has been proposed, namely that information quality (X2) has a positive effect on user satisfaction (Y).
3) The influence of interaction quality (X3) on user satisfaction (Y). Hypothesis 3, namely that the quality of interaction (X3) has no effect on Y (user satisfaction) has been proven because the Original Sample (O) value is 0.025, the Mean Sample (M) value is 0.075, the Standard Deviation (STDEV) value is 0.212 and the T-Statistic value (O/STDEV) is 0.118, then the P-Value value is 0.906 > 0.05, so it is decided to accept hypothesis 3 which has been proposed, namely that interaction quality has no effect on user satisfaction (Y).

F. Discussion

Based on the research results described above using the Partial Least Square (PLS) analysis method, the research results that will be discussed are as follows:

a. Ease of use towards user satisfaction. The research results show that the user convenience variable does not have a positive effect on user satisfaction.
b. Information quality on user satisfaction. The research results show that the information quality variable has a positive effect on user satisfaction.
c. Quality of interaction on user satisfaction. The results of this research indicate that the interaction quality variable has no effect on user satisfaction.

V. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusion

This research aims to analyze user satisfaction on the Indonesian Tourism Vocational School Lenteng Agung Jakarta website. The variables used are user convenience, information quality, interaction quality, and user satisfaction. This research uses Structural Equation Modeling (SEM) analysis using the Smart PLS analysis tool.

Based on the results of hypothesis testing and analysis described in the previous chapter, the following conclusions are given:

1. The effect of user convenience on user satisfaction, namely user convenience has no effect on user satisfaction, has been proven. The influence of information quality on user satisfaction, namely the influence of information quality on user satisfaction, has been proven. The influence of interaction quality on user satisfaction, namely that interaction quality has no effect on user satisfaction, has been proven.
2. The DeLone and McLean model can be used to measure the success of user satisfaction on the Indonesian Tourism Vocational School website. Apart from that, a proposed questionnaire was obtained which was prepared by adapting the variables in the DeLone and McLean model, which is then expected to be able to be used to evaluate the Indonesian Tourism Vocational School website. Next, we can find out the factors that influence the success and failure of implementing the Indonesian Tourism Vocational School website to make further improvements.
3. Users are satisfied with the Indonesian Tourism Vocational School website https://smkwisataindonesia.sch.id/.
4. One of the main factors that determines user satisfaction on the SMK Wisata Indonesia website is the user's perception of user satisfaction. Feelings of satisfaction or dissatisfaction arise from the gap between expectations and reality when users use the website.
5. With this research, schools get accurate information to manage and improve the Indonesian Tourism Vocational School website.

B. Suggestion

After the author provides conclusions from the results of research regarding User Satisfaction Analysis of the Indonesian Tourism Vocational School Lentang Agung Jakarta Website using the PLS SEM method, the author provides the following suggestions:

1. Operational Advice
   a. Providing training to school employees, principals and students regarding the use of information technology, especially the use of information systems, to better understand the features of the Lentang Agung Jakarta Indonesian Tourism Vocational School website.
   b. Carry out maintenance/repairs to applications used periodically so they can keep up with changes in technology and suit school needs.
2. Academic Advice

It is recommended that future researchers carry out the same research, by adding indicators, the same methods for analysis, different populations and samples in order to obtain conclusions that support and strengthen the theories and concepts that have been built previously, both by the researcher and previous researchers.

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