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Quality Of SMK E-Rapor System Version 7.0.0 Using Webqual 4.0 Method at SMKS Manggala Tangerang City

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ABSTRACT

SMK Manggala Tangerang City is one of the schools that implements an independent curriculum and has implemented the e-Rapor application to process grades and print student report cards since the odd semester of the 2022/2023 Academic Year until now. The eRapor application has been implemented at SMK Manggala and is accessed by all teachers, homeroom teachers, and administrators both online and offline. Currently, the eRapor Application used by SMK Manggala is an eRapor Application with Version 7.0.0. One of the innovations launched by the Directorate of Vocational High Schools, Ministry of Education, Culture, Research and Technology to support the Independent Curriculum is eReport.

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INTRODUCTION

SMK Manggala Kota Tangerang is one of the schools that implements the independent curriculum and has implemented the e-Rapor application to process grades and print student report cards since the odd semester of the 2022/2023 Academic Year until now. The eRapor application has been implemented at SMK Manggala and is accessed by all teachers, homeroom teachers, and administration both online and offline. Currently, the eRapor Application used by SMK Manggala is the eRapor Application with Version 7.0.0.

One of the innovations launched by the Directorate of Vocational High Schools, Ministry of Education, Culture, Research and Technology to support the Independent Curriculum is eRapor. eRapor is a system that uses an electronic product application to provide information in the form of student transcripts with online media or the use of Localhost media. eRapor is also said to be a new method in conveying student grades by utilizing the sophistication of existing technology, eRapor is used by teachers to input student grades and admins to process the system. Currently, eRapor users still have many complaints about the use of the eRapor system in terms of content, appearance, and printing. [1]

The eRapor application version 7.0.0 has never been evaluated or researched, especially regarding the quality of the application and the level of user satisfaction at SMK Manggala, Tangerang City. The evaluation process is carried out to determine user expectations, so that targeted improvements can be made according to user expectations.

Quality analysis of the eRapor Application version 7.0.0 can be carried out by using measurements of the variables in the Webqual 4.0 method, so that.can be used as a basic material for further development and

improvement by its developers. Continuous improvements made by developers based on feedback from research will ultimately have a significant impact on improving the quality of the eRapor Application version 7.0.0, so that greater benefits will be felt by its users.

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Based on the explanation above, this study was conducted to determine whether the eRapor Version 7.0.0 application process flow is in accordance with the Assessment and Assessment Guidelines, whether the appearance and content of eRapor SMK version 7.0.0 make it easier for users to carry out the assessment process. This research was conducted at SMK Manggala in the 2023/2024 Academic Year. The population of this study were teachers of general subjects and vocational subjects. The scope of the study focused on the quality of eRapor SMK version 7.0.0 at SMK Manggala using a questionnaire based on the WebQual 4.0 method which includes aspects of *usability* (X1), *information quality* (X2) and *service interaction quality* (X3) which will produce *Overall/user statistics* (Y).

The evaluation was conducted using a questionnaire with indicators contained in 3 WebQual variables with a total of 32 questions that have been adjusted to the context of eRapor SMK version 7.0.0.

Based on the problem formulation above, the objectives to be achieved from this research are:

1. Analyzing system quality through user satisfaction from the aspects of usability , information quality , and service quality . Quality of the eRapor Application version 7.0.0 at SMK Manggala, Tangerang City.
2. Knowing the satisfaction of the performance of using the eRapor application version 7.0.0.

   Based on the explanation above, this study was conducted to determine whether the eRapor Version 7.0.0 application process flow is in accordance with the Assessment and Assessment Guidelines, whether the appearance and content of eRapor SMK version 7.0.0 make it easier for users to carry out the assessment process. This research was conducted at SMK Manggala in the 2023/2024 Academic Year. The population of this study were teachers of general subjects and vocational subjects. The scope of the study focused on the quality of eRapor SMK version 7.0.0 at SMK Manggala using a questionnaire based on the WebQual 4.0 method which includes aspects of *usability* (X1), *information quality* (X2) and *service interaction quality* (X3) which will produce *Overall/user statistics* (Y).

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   Based on the research, the following hypothesis can be formulated:

   H1 : Testing how variable X1 (*Usability Quality*) partially influences variable Y (*User Satisfaction*).

   H2 : Testing how variable X2 (Information Quality) partially influences variable Y (*User Satisfaction*).

   H3 : Testing how variable X3 (Service Interaction Quality) partially influences variable Y (*User Satisfaction*).

RESEARCH METHOD

According to Sugiono (2022:39) Independent Variables are variables that influence or cause changes or the emergence of variables. This study consists of 2 variables, namely independent variables and dependent variables. According to Sugiono (2022:39) Independent Variables are variables that influence or cause changes or the emergence of dependent variables.

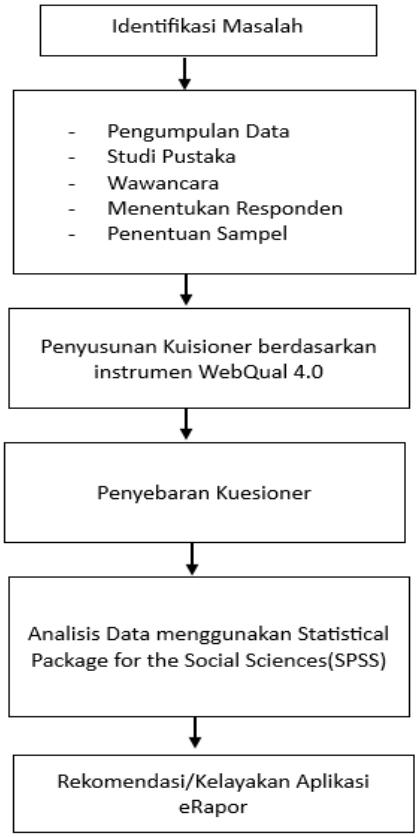

Figure . 1Research Stages

The independent variables used are *Usability* (X1), *Information Quality* (X2), *Service Interaction Quality* (X3).

According to Sugiono (2022:39) the Dependent Variable is a variable that is influenced or becomes a result or impact, due to the presence of an independent variable. The dependent variable used in this study is *Overall Imperession / User Saticfaction* . Collecting data in the field is done systematically and measurably based on the stages and plans that have been made. After the data is collected, the information will be studied quantitatively using measurements with the aim that we can see

Data Collection Stage

1. Literature review
   Searching for data related to research based on other references.
2. Interview
   Direct interviews with curriculum, general subject teachers, and vocational teachers.
3. Determining Respondents
   random simplification technique with a population of 40 people (data based on the number of active teachers). Then to calculate the number of samples using the *Slovin formula.* The number of respondents or samples used in the questionnaire distribution process. The *Slovin formula* is as follows,

$$n = \frac{N}{1 + Ne^2}$$

n = sample size
N = population size
e = percentage of inaccuracy due to sampling error, for example 5% (0.05)
So :

$$n = \frac{40}{1 + (60x0{,}05)^2}$$
$$n = \frac{40}{1 + (40x0{,}0025)}$$
$$n = \frac{40}{1{,}1}$$
$$n = 36{,}36$$

So the number of samples used in this study was 36 people.

The technique or method of data collection used is by distributing a questionnaire consisting of several statements that have been made. With the hope that all respondents will find it easier to determine their answers. The questionnaire was made using the *Likert scale answer technique* using four available answer choices and a range of values between one and five, such as:

Strongly Agree (SS) = value 5
Agree (S) = value 4
Neutral = value 3
Disagree (TS) = value 2
Strongly Disagree (STS) = value 1

Then the answer results will be converted using the successive interval method which will be attached. The collection of data or facts is theoretical in nature which is taken from several existing literatures and obtained from several research journals that are related to the problems taken in this study.

RESULTS AND DISCUSSION

Data analysis

In this study, the method used is Webqual 4.0. Utilizing survey techniques in the form of questionnaires is the Webqual 4.0 method applied. The questionnaire was distributed to the SMKS Manggala Teachers Council. To find out how many minimum samples should be used, the *Slovin formula is used* to calculate it. Based on the calculation of the *Slovin formula* in chapter 3, it is known that the minimum number of samples in this study based on the population of 40 SMK eRapor Users Version 7.0.0, is 36 respondents. To increase the validity value of the questionnaire results in this study, the number of respondents has been obtained that exceeds the minimum number of *Slovin formula calculations* in chapter 3, namely 38 respondents.

Based on the questions asked to 38 respondents, it can be seen that SMK Manggala. The classification of respondent identities is carried out to determine the description of respondents, who are the objects of research accurately. Based on the population of the SMK Manggala teacher council, only a few samples were taken to represent the large number of existing populations. Where the number of respondents has exceeded the minimum number of respondents that must be obtained

Table . 1Respondent Characteristics

Respondent Characteristics

No	Position	Number of Respondents	Percentage
1	General Subject Teacher	18	47.37%
2	Vocational Teacher	10	26, 32%
3	Homeroom teacher	10	26, 32%
	TOTAL	**38**	**100%**

Source: SPSS Version 29 Output Results

Based on the data description in the table above, the calculation for calculating the percentage is as follows:

$$\textbf{Persentase} = \frac{\textbf{Jumlah Responden}}{\textbf{Total Keseluruhan Responden}} \times \mathbf{100}$$

Based on the calculations and descriptions in the table above, it can be concluded that general subject teachers are the majority of research respondents, 47.37% or 18 respondents out of a total of 38 respondents.

Defining variables

The variables used to create the questionnaire are based on the Webqual 4.0 method, namely;

a. *Usability Quality* Usability *Quality* is the quality related to the SMK eRapor system Version 7.0.0, starting from the appearance, ease of navigation, information layout, and suitability of the appearance.
b. *Information Quality* (Information Quality) Information Quality is seen from whether or not the information displayed in the SMK eRapor Application Version 7.0.0 is appropriate, whether the information displayed is reliable and has the right accuracy.
c. *Service Interaction Quality* (Service Interaction Quality) Service Interaction Quality received by users when accessing the eRapor Application version 7.0.0. in the form of trust and empathy.

The technique or method of data collection used is by distributing a questionnaire consisting of several statements that have been made. With the hope that all respondents will find it easier to determine their answers. The questionnaire was made using the *Likert scale answer technique* using four available answer choices and a range of values between one

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Then the answer results will be converted using the successive interval method which will be attached. The collection of data or facts is theoretical in nature which is taken from several existing literatures and obtained from several research journals that are related to the problems taken in this study.

The data analysis technique used is quantitative data analysis technique. Where in this technique is done by processing numerical data obtained from respondent *survey data* . Which is then processed with the help of SPSS statistical *software* . *SPSS software* is *software* used in processing statistical data. There are several stages carried out in processing respondent answer data, such as:

1. Editing
   This is a process carried out to re-check the answers to the statements given to respondents.
2. Coding
   The technique of providing symbols in the form of letters or numbers to respondents' answers to facilitate data processing.
3. Tabulation (*tabulating*)
   The procedure for compiling and verifying information is the result of coding and encoding which is then.
   introduced into the composition structure.

After compiling the data in tabulation, the testing process for data processing is continued, including:

1. Validity test.
   Data validity test is used to determine the validity of the data. Validity test is very necessary to be done by looking at the correlation between the total score obtained from the sum of all question scores on each question indicator with the score of each question item. Data will be declared valid if the significance value is less than 5% or 0.05. If the data has a significance value of more than 5% or 0.05 then the data is declared invalid. In addition to being seen from its significance value, data can be seen from how much the calculated r value is obtained during data processing. If the calculated r value is greater than the table r value, the data can be said to be valid. If the calculated r value is smaller than the table r value, the data cannot be said to be valid. The table r value can be seen in the distribution of the table r based on the significance value of 5% and on the number of respondents or (N) [1] .

2. Reliability test.
   Reliability testing is a test on data or on question items in a research *instrument* . According to Sekaran in [2] decision making in reliability testing is to look at the *Cronbach's Alpha value* , if *the Cronbach's Alpha value* is less than 0.60 then the reliability value is said to be less good, while if *the Cronbach's Alpha value is* 0.7 the reliability value is acceptable, and if *the Cronbach's Alpha value* is more than 0.80 then the reliability value can be said to be good.
3. Normality test.
   The normality test is used to test whether the distribution of the data to be analyzed is normally distributed or not. This normality test is intended to test whether the data in this study is normally distributed or not, both multivariately and univariately. The normality test in this study also tests the residual value that has been standardized in a regression model that is normally distributed or not. If the significance value is greater than 0.05, then the residual value can be said to be normally distributed, if the significance value is less than 0.05, then the residual value is not normally distributed. The normal probability plot graph analysis method is another option for conducting data normality tests. The residual value is said to be normally distributed if the dotted line that describes the data follows and merges with the diagonal line in the normal distribution approach. On the other hand, if the dotted line moves away from the diagonal line, then the value is not normally distributed [3]
4. Correlation Test
   Correlation test is a test that aims to determine the level of closeness of the relationship between variables expressed by the correlation coefficient. The correlation test functions to see how big the relationship is between variables before testing the influence between variables.

5. Multiple linear regression (T test, F test)
   Multiple linear regression test is a regression testing model that involves more than one independent variable. Multiple linear regression analysis functions to determine the direction and how much influence the independent variables in this case have on *Usability* (X1), *Information Quality* (X2), *Service Interaction Quality* (X3) on the Quality of the SMK eRapor System Version 7.0.0.
6. Determination test
   Determination test or R square (R^2) or also known as the coefficient of determination is a measure of the magnitude of the variance of the dependent variables (Y) that will be explained by the independent variables (X1), (X2), (X). The value resulting from the calculation of the coefficient of determination is a measure that shows how much contribution the explanatory variables make to the response variable.

CONCLUSION

This study is intended to determine and analyze the suitability of the SMK eRapor Application.

Version 7.0.0 and user satisfaction with the SMK eRapor Application Version 7.0.0. Where these factors are obtained from two

independent variables with their relationship to one dependent variable. Or with a statement about the relationship between *Usability, Information Quality and Service Interaction* on user satisfaction of eRapor Version 7.0.0 at SMKS

Manggala. Based on the discussion of the research, it can be concluded as follows:

1. The results of this study were obtained from a questionnaire to respondents who were taken randomly from eRapor Version 7.0.0 users at SMKS Manggala, Tangerang City with a total of 38 respondents.
2. The results of the data testing in this study have also been tested for their level of validity. So that each selected variable has met the level of validity. Where this is proven by the calculated r value of each variable is greater than the r table (0.1956) then it is said to be valid, and the overall significance value of each indicator in the variable is less than 5% or 0.05.
3. Based on the results of the F test in the study above, it can be concluded that *usability, information quality, and service interaction quality* in e-report Version 7.0.0 have a good level of quality based on user experience using e-Report Version 7.0.0, where this is indicated by the results of the calculated F>

F table of (84.759> 2.87).

From the results of the significance test in the partial and simultaneous tests, it can be concluded that it can be said that only

1 variable can affect the level of customer satisfaction. Where there is 1 variable, namely, variable H1 *(service*

interaction quality) Customer Satisfaction variable (Y) is 0.882 or 88.2%.

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