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User Perceptions to the Quality of Apemkislamets Learning Application Management Service

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***Abstract* — This paper is aim to know specify the service attributes which should be improved or developed in Apemkislamets application. The approach used is WebQual. WebQual is a quality measurement approach for websites or applications through user perceptions based on three dimensions: Usability, information quality and services interaction quality. The population in this study is Apilikasi Apemkislamets users with the number of samples taken as much as 321 respondents by convinience sampling. The research method used is survey with questionnaire based on WebQual 4.0 that analyzed with IPA (Importance Performance Analysis) to know the level of user satisfaction which is gap between importance and performance. The results of validity and reliability test show the whole item questionnaire valid and reliable. The results showed that 18 items analyzed by IPA method were grouped into Quadrant I (1 item), Quadrant II (5 items), Quadrant III (9 items) and Quadrant IV (3 items). Items that are considered important and need to be located lies in the first quadrant is Design in accordance with the type of application of Learning Administration. The result of double correlation analysis also shows a strong correlation between independent variable and dependent in this research.**

Keywords* — *User Perceptions; Service Quality; Apemkislamets Application.

I. INTRODUCTION

A good learning process requires good planning. As understanding management according to James A.F. Stoner (2006)[1] "the process of planning, organizing and the use of other organizational resources so that organizational goals can be achieved in accordance with the established". Learning done by a teacher in the classroom is a great activity. In the learning process, there are many processes, namely the transfer of knowledge and guidance with a very clear purpose that is the change of knowledge, mental and mindset of learners. Therefore, planning in learning is very important. In addition to mental preparation, there are some things that teachers should prepare in planning an instruction that is administrative [2].

Purwanto (2006)[3] conducted research on the importance of instructional administration on the effectiveness and efficiency of the learning process. The study was conducted on physical education subjects in high school. The results of the study show that the success of the learning process is influenced by several factors, including the ability of the teachers in administering the physical and health education learning process,. Learning Administration is to include making learning tools such as RPP, Annual Program, Semester Program, Card Problem, and others. In the current digital era, the development of information technology is growing rapidly. The role of this information technology can facilitate the administrative work of learning, including the administration of learning in Vocational High School. It can improve the teacher competences and innovation[4]. In this study, researchers reviewed the administration of learning using Apemkislamets application. Apemkislamets is a work application that has been patented by researchers, Slamet Setiyono. This application is a means to facilitate the administration of learning for SMK teachers. Here is a menu overview of the Apemkislamets app [5].

Figure 1 Menu of Apemkislamets Aplication

Applications as a medium of information, communication, and publication can affect the perception of customers or the general public who visit the website. The results of Kuzic and Giannator's research (2010) show that visits and evaluations of a company's website may alter the customer's perception of the company's image. In line with that, Bailin and Pullinger (2009) stated that the perception of the organization is influenced by the customer experience in visiting the organization's website. Website user satisfaction is a key measure of website quality. The benefits of conducting a user satisfaction survey include (1) customer identification or demographic profile of the customer, (2) Identification of website strengths and weaknesses, (3) website improvement recommendations, (4) survey results can be used as input for strategic planning of the website, and (5) a better understanding of website performance through benchmarking with other websites. Based on the above explanation, this study aims to find out the specify the service attributes which should be improved or developed in Apemkislamets application.

II. METHODS

The method of Importance-Performance Analysis (IPA) was first introduced by Martilla and James (1977)[1] with the aim of measuring the relationship between consumer perceptions and priority of product/service quality improvement, also known as quadrant analysis (Brandt, 2000; Latu & Everett, 2000; Tjiptono, 2011). The two dimensional IPA model is divided into four quadrants with performance on the x-axis and importance on the y-axis. As a result of this, four quadrants are Concentrate Here, Keep up the Good Work, Low Priority, and Possible Overkill are created. The quadrants can be used to generate suggestions for e-government managers by differentiating between them[6]. Quadrant I (High Importance/Low Performance) is labelled Concentrate Here. Attributes that fall into this quadrant represent key areas that need to be improved with top priority. Quadrant II (High Importance/High Performance) is labelled Keep up the good work. All attributes that fall into this quadrant are the strength and pillar of the organization, and they should be the pride of the organization. Quadrant III (Low Importance/Low Performance) is labelled Low Priority. Thus, any of the attributes that fall into this quadrant are not important and pose no threat to the organization. Quadrant IV (Low Importance/High Performance) is labelled as Possible Overkill. It denotes attributes that are overly emphasized by the organization; therefore, organization should reflect on these attributes, instead of continuing to focus in this quadrant, they should allocate more resources to deal with attributes that reside in quadrant I. An example of an IPA grid is shown in fig 2.

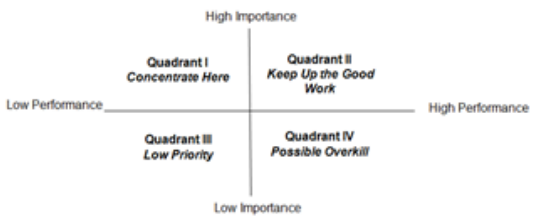

Figure 2 The original IPA framework. Source [30]

The IPA evaluation tool can help to evaluate e-government benefits and to provide guidance to formulate e- government strategy to allocate resources accurately to maximise a high ROI [7]. The IPA model is used to evaluate the level of importance citizens attach to each of the benefits and also to examine the level of satisfaction perceived by them in the delivery of those benefits. WebQual is one of the most widely used methods or techniques for measuring website quality based on user or visitor perception [8]. This method is the development of ServQual compiled by Parasuraman, which is widely used beforehand on the measurement of service quality. The research instrument on the WebQual was developed by the method of Quality Function Development (QFD). Actually, WebQual has been developed since 199 and has experienced several iterations in the preparation of dimensions and variables [9]. The results show that site quality analysis is categorized into three different focus areas: Site quality; Quality of information provided and Quality interaction offered by the service or otherwise known as WebQual 3.0. Advanced analysis of WebQual 3.0 resulted in the approach of the WebQual 4.0 model that eventually replaced the first dimension, ie the quality of the site into the Usability dimension [10]. In this study, however, only a total of 18 questions will be included in the questionnaire, which is tailored to the conditions or domains related to the application of instructional administration. Questionnaires built using LSR (Likert's Summated Rating) consisting of 4 scales to assess application quality are 1 = "Strongly Disagree", 2 = "Disagree", 3 = "Agreed" and 4 = "Strongly Agree". In addition, users are also asked to assess the importance of the quality of the website, also using 4 Likert scales consisting of 1 = "Very Unimportant". 2 = "Not Important", 3 = "Important" and 4 = "Very Important". Primary data were collected using questionnaires. The population in this study is, while the number of samples taken as many as 321 respondents in accidental sampling.

III. RESULT AND DISCUSSION

A. Result

1) Validity Test Results

In the analysis of the results of the validity test, the results of the calculation of the questionnaire, which is r-Calculate compared with r-Tables. In this study, r-Table (n = 321) at the 0.05 significance level, indicating r-Table of magnitude. Here is the result of r-Table counting. In the following table, all values of correlation or r-count each question over r-Table (). This means all Importance questions are valid.

Table 1 Validity Test Results Importance

Dimensions	No. Question	r-Count	Information
Usability	1	.582**	Valid
	2	.582**	Valid
	3	.726**	Valid
	4	.618**	Valid
	5	.682**	Valid
	6	.591**	Valid
	7	.737**	Valid
Information Quality	8	.769**	Valid
	9	.793**	Valid
	10	.810**	Valid

	11	.772**	Valid
	12	.829**	Valid
	13	.810**	Valid
Service Interaction Quality	14	.751**	Valid
	15	.791**	Valid
	16	.798**	Valid
	17	.693**	Valid
Overall Impression	18	.755**	Valid

In the analysis of the results of the validity test, the results of the calculation of the questionnaire, which is r-Calculate compared with r-Tables. In this study, r-Table (n = 321) at the 0.05 significance level, indicating r-Table of magnitude. Here is the result of r-Table counting. In the following table, the whole correlation or r-number of each question is more than r-Table (). This means all Performance questions are valid.

Table 2 Performance Validity Test Results

Dimensions	No. Question	r-Count	Information
Usability	1	.581**	Valid
	2	.592**	Valid
	3	.647**	Valid
	4	.667**	Valid
	5	.668**	Valid
	6	.633**	Valid
	7	.690**	Valid
	8	.742**	Valid
	9	.758**	Valid
	10	.698**	Valid
	11	.710**	Valid
	12	.753**	Valid
	13	.714**	Valid
Services Interaction	14	.741**	Valid
	15	.719**	Valid
	16	.720**	Valid
	17	.641**	Valid
Overall Impression	18	.722**	Valid

2) Reliability Test Results

Table 3 Test Reliability Question Importance

Reliability Statistics	
Cronbach's Alpha	N of Items
.765	19

Reliability test is done with Alpha Cronbach. The calculation results are compared with using Table r. From Table Cronbach Alpha known positive and greater results, ie 0.765. When compared with r-Table 0,600, then the instrument or question on Importance is stated reliable. Reliability Test Results Question Performance.

Table 4 Test Reliability Question Performance

Reliability Statistics	
Cronbach's Alpha	N of Items
.763	19

Reliability test is done with Alpha Cronbach. The calculation results are compared with using Table r. From Table Cronbach Alpha known positive and greater results, ie 0.763. When compared with r-Table 0,600, then the instrument or question on Performance stated reliable.

The results for Importance Performance Analysis (IPA) The results of the calculation of the average score of importance and level of performance are as follows:

No.	Question	Mean of Importance	Mean of Performance
Usability Category			
1	Apemkislamets is easy to learn	3.299065	3.233645
2	The interaction with Apemkislamets is clear	3.305296	3.233645
3	Apemkislamets easy to navigate or trace Item items	3.314642	3.214953
4	Display Menu Apemkislamets interesting	3.292835	3.202492
5	Design according to Application Type of Learning Administration	3.336449	3.249221
6	Apemkislamets creates a sense of ownership for users	3.17757	3.158879
7	Does Apemkislamets create a Positive experience for users	3.429907	3.386293
Information Quality Category			
8	Apemkislamets is an accurate service provider in learning?	3.330218	3.205607
9	ApemKislamtes is a trustworthy tool service	3.364486	3.233645
10	Apemkislamets provides relevant services	3.35514	3.221184
11	Apemkislamets is easy to understand	3.461059	3.246106
12	Apemkislamets provides the right level of administrative services	3.342679	3.146417
13	Apemkislamets displays the Administration service in the	3.336449	3.143302

	appropriate format		
Services Interaction Category			
14	ApemKslamets has a good reputation	3.305296	3.23053
15	Apemkislamets is safe and reliable complete administration services	3.383178	3.233645
16	ApemKislamtes makes users feel safe and reliable in terms of administrative completeness	3.389408	3.252336
17	Apemkislamets adds communication with the teacher community / MGMP	3.404984	3.286604
Category Overall Impressions			
18	Apemkislamets as a whole is very helpful to users	3.476636	3.361371

Cartesian diagram is used to determine the position of each marketing mix attribute, whether located in a position to be fixed or located in a defensible position (Supranto, 2006). Cartesian diagram is divided into four regions that are limited by the average value of appraisal level of service quality performance Apemkislamets Application of all attributes ( )equal to the X axis and the average assessment of the importance level of the marketing mix strategy Apemkislamets Application of all attributes ( ) equal to the axis Y.

The location of each attribute in each quadrant is shown in Figure 1 Cartesian diagram in Figure 1 explains the position of each marketing mix attribute divided into 4 quadrants:

B. Discussion

1) Quadrant I

Quadrant I is the Prime Priority quadrant to meet the Apemkislamets Application user satisfaction. This region contains attributes that are considered important by consumers, but the reality is not yet as expected by Apemkislamets Application users. Performance of attributes included in this quadrant should be increased. The trick is to make continuous improvements on the attributes so that the performance of these attributes increases and in accordance with consumer expectations. In this study the attributes contained in quadrant A are not implemented effectively yet. These attributes affect the quality of Apemkislamets Application service on and are deemed very important by Apemkislamets Application users, but Apemkislamets Applications have not been able to implement as intended and wishes of Apemkislamets Application users. Attributes that include Quadrant I are attribute number 5: Design according to Application Type of Learning Administration

2) Quadrant II

Quadrant II is a defensible quadrant. The following attributes have been successfully executed Apemkislamets Application, for it must be retained and deemed very important or has been in line with the interests or expectations of Apemkislamets Application users. Attributes that include Quadrant II are attributes number 7, 11,16, 17, 18

Attribute Number 7: Does Apemkislamets create a Positive experience for users Attribute Number 11: Apemkislamets is easy to understand. Attribute Number 16: ApemKislamtes makes users feel safe and reliable in terms of administrative completeness. Attribute Number 17: Apemkislamets adds communication with the teacher community / MGMP. Attribute Number 18: Apemkislamets as a whole is very helpful to users

3) Quadrant III

Quadrant III is a Priority quadrant. This quadrant contains attributes that are considered less important by Apemkislamets Application users and their performance is also not good. Increasing attributes included in this quadrant is not a priority agenda because of its impact on Apemkislamets Application users is small.

Attributes that enter in Quadrant III is attribute number 1,2,3,4,6,8,12,13,4

Attribute Number 1: Apemkislamets is easy to learn. Attribute Number 2: The interaction with Apemkislamets is clear. Attribute Number 3: Apemkislamets easy to navigate or trace Item items. Attribute Number 4: Display Menu Apemkislamets interesting. Attribute Number 6: Apemkislamets creates a sense of ownership for users. Attribute Number 8: Apemkislamets is an accurate service provider in learning. Attribute Number 12:Apemkislamets provides the right level of administrative services. Attribute Number 13: Apemkislamets displays Administration services in the appropriate format. Attribute Number 14: Apemkislamets has a good reputation

4) Quadrant IV

Quadrant IV is an Excessive Quadrant. The attributes in the following quadrant have satisfied Apemkislamets Application users but they are over-implemented and considered less important by Apemkislamets Application users. This quadrant contains attributes that are considered unimportant by the consumer and are over-sensed. The attributes included in this quadrant can be reduced so that the company can save costs.

The attribute that includes this IV quadrant is attribute number 9,10,15

Attribute Number 9: ApemKislamtes is a trustworthy tool service. Attribute Number 10: Apemkislamets provides relevant services. Attribute Number 15: Apemkislamets is safe and reliable complete administration services Double Correlation Between Variables. In this study also wanted to see whether there is a relationship or correlation between independent variables (X1, X2 and X3) to the dependent variable (Y) by using double correlation. Double correlation is

an analytical technique to test the relationship of two or more independent variables with one dependent variable simultaneously. Variable X1 in this research is usability, X2 variable is information quality and X3 variable is service interaction quality whereas variable Y is overall (overall impression). The size of the relationship between variables is expressed in numbers called the correlation coefficient (R) that is between -1 to +1. The results of multiple correlation test can be seen in Table 6 below:

Table 5 Correlation Coefficient Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.705[a]	.497	.492	.358
a. Predictors: (Constant), x3, x1, x2				

Based on Table 6, it can be seen that the coefficient of double correlation in this research is 0.705. Based on Sarwono (2006), based on the correlation coefficient indicator, then the correlation coefficient obtained shows a strong relationship> 0.5 - 0.75. with the direction of a positive or one-way relationship. This means that if the independent variables (X1, X2 and X3) have a high value, then the value of the dependent variable (Y) will also be high.

IV. CONCLUSIONS

Based on the result of research, it is found that: 1) "Design according to the type of application administration administration" is an attribute that is a top priority. This attribute is considered important, but not yet in accordance with the wishes of the user. 2). The following attributes "ApemKislamets create a positive user experience", "ApemKislamets is easy to understand", "ApemKislamtes makes users feel secure and trustworthy in terms of administrative completeness", "ApemKislamets adds communication with the teacher community / MGMP", and "ApemKislamets as a whole is very help users "has been implemented. Therefore it must be maintained and considered very important or has been in accordance with the interests or expectations of users. 3) In Quadrant III, it contains the following attributes, which are considered less important by Apemkislamets Application users and their performance is also not good. Increasing attributes included in this quadrant is not a priority agenda because of its impact on Apemkislamets Application users is small. These attributes include: "Apemkislamets easy to learn", "Interaction with ApemKislamets is clear", "ApemKislamets easy to navigate or trace items Item", "ApemKislamets menu display interesting", "ApemKislamets create a sense of ownership for users", "ApemKislamets is an accurate service provider in learning "," ApemKislamets provides the right level of detailed administrative services "," ApemKislamets displays services ","Administration of the appropriate format "and" ApemKislamets has a good reputation ".4).Attributes in the following quadrant 4 have satisfied Apemkislamets Application users but their implementation is too excessive and is considered less important by Apemkislamets Application users. This quadrant contains attributes that are considered unimportant by the consumer and are over-sensed. The attributes included in this quadrant can be reduced for more effective and efficient applications. The attributes are: "ApemKislamtes is a trustworthy tool service", "ApemKislamets provides relevant services" and "ApemKislamets is safe and reliable completes the administrative service". 5). The results of double correlation analysis indicate a strong relationship between independent variables: X1 (Usability), X2 (information quality) and X3 (service interaction quality) to Y (overall impression) with direct relationship.

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