USER SATISFACTION ON ZOOM APPLICATION IN ONLINE-BASED STUDENT LEARNING USING WEBQUAL

Indira RACHMAWATI[1*], Dinda Riska AULIA[2]

[1]Doctoral in Management Study Program, School of Economics and Business, Telkom University, Jalan Telekomunikasi No. 1, Bandung, Indonesia
[2]Management Study Program, School of Economics and Business, Telkom University, Jalan Telekomunikasi No. 1, Bandung, Indonesia
Corresponding author: Indira Rachmawati
Email: indirarachmawati@telkomuniversity.ac.id

Abstract:

One of the impacts of the COVID-19 pandemic has affected the education system and economy worldwide. The learning crisis in Indonesia at the beginning of the COVID-19 pandemic has resulted in the suspension or closure of schools for an indefinite period. Students at the college and university levels are students who must be required to be able to carry out teaching and learning activities amidst the increasingly widespread spread of the coronavirus (COVID-19). Amid the COVID-19 pandemic, all schools in Indonesia are implementing Work or Study from Home by conducting online learning using the Zoom application. This study aims to determine the satisfaction of using the Zoom application in online-based student learning using Webqual. This study uses a quantitative method and measures using the WebQual dimensions (Usability, Information Quality, Service Interaction) and user satisfaction variables. The data analysis technique uses descriptive statistics with statistical calculations, and causal data processing is carried out using multiple regression. The research data is in the form of a questionnaire distributed to 405 respondents who use the Zoom application. The results of the study show that the Webqual (X) variable, consisting of Usability Quality (X1), Information Quality (X2) and Service Interaction (X3), has a positive and significant influence simultaneously on User Satisfaction with the Zoom Application.

Keywords: Usability, Information Quality, Service Interaction, User Satisfaction, WebQual.

INTRODUCTION

One of the impacts of the Coronavirus Disease (COVID-19)-19 pandemic has been its impact on education systems and economies worldwide. The learning crisis in Indonesia at the start of the COVID-19 pandemic led to the suspension or indefinite closure of schools. Schools were asked to facilitate online learning conducted from home. Online learning requires the community to facilitate the use of various digital platforms and applications to meet students' needs, one of which is Zoom (Populix, 2020).

In the online learning process, Zoom is found to be more widely used than other video conferencing applications. Based on user data, the Zoom system is very simple and easy to learn. Furthermore, it is easy to access, fast in every screen transition, and reliable for meetings or learning activities, so students do not need special skills to use it (Evandio, 2020).

Beyond academic use, students also use Zoom for non-academic activities such as organizational meetings, events, group discussions, and more. Satisfied users also intend to use Zoom in the future. The Zoom interface is very effective and efficient, despite its simplicity. The excellent service provided on Zoom increases user satisfaction (Hapsari, 2017).

The Web Quality (WebQual) method was used to explore the advantages of the Zoom application further. WebQual encompasses three dimensions: Usability, Information Quality, and

Service Interaction. The study measured the three WebQual dimensions in terms of user satisfaction. Usability refers to website usability, including ease of use, understanding, and navigation, attractive appearance, good user experience, good competence, and a positive new experience. Information Quality refers to website information that is accurate, reliable, up-to-date, relevant to the topic, easy to understand, detailed, and well-designed. Service Interaction Quality refers to website service interactions, including a sense of security during transactions, a good reputation, ease of communication, customer service, privacy, and fulfillment of promises (Hidayatullah et al., 2020).

Marketing is the act of identifying and meeting human and social needs. According to one good and short definition, market means "*to satisfy a need profitably*". Skilled marketers must seek to influence the level, timing, and composition of demand. Marketers are involved in marketing many types of entities: goods, services, events, experiences, people, places, property rights, organizations, information and ideas. They also operate in four different markets, namely, consumer, business, global, and non-profit.

The rapid development of ICT (Information and Communication Technology), especially the internet, allows an increase in information services in an educational institution to occur. In the university environment, for example, the use of ICT is realized in a system called an electronic university (*e-university*). The development of *e-university* aims to support the implementation of education, so that universities can provide better information services to the community, both inside and outside campus, through the internet.

WebQual is a method or technique to measure the quality of a website based on the perception of the end user. This method is a development of SERVQUAL, which was previously widely used to measure service quality. Since 1998, WebQual has been developed and experienced several iterations in the preparation of dimensions and questions. WebQual research instruments were developed using the Quality Function Development (QFD) method.

Customer satisfaction is a positive feeling that comes from the customer's experience when using a product or service, and the compatibility between customer expectations and product or service performance. Consumers can feel dissatisfied if the performance of the product does not match expectations. However, if the perceived performance is in line with expectations, the consumer will be satisfied, and if the product's performance exceeds expectations, the consumer will be very satisfied or happy.
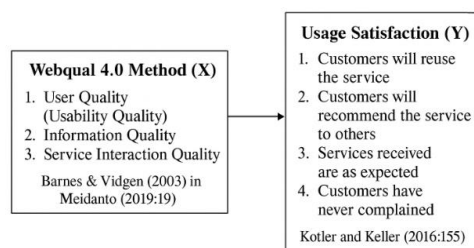

Figure 1. Conceptual Framework of the Research

METHODS

The population selected for research is a limitation of the research results. The population in this study was students of Telkom University, with a total of 400 respondents. This study uses a non-probability sampling technique. The analytical techniques used in this research are descriptive

statistical analysis, multiple regression analysis and hypothesis submission. The results of the analysis obtained are 85.0% of the ideal score. Therefore, from the results of the continuum, the respondent's perception of WebQual on the Usability dimension is in the very good category that can shown in Figure 2.
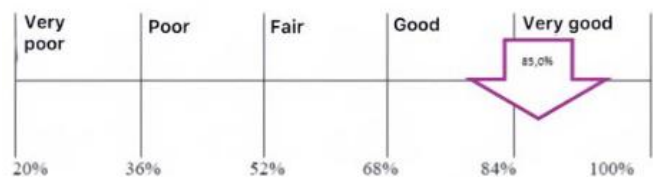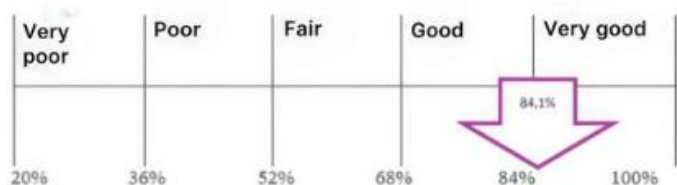

**Figure 2.** Webqual Continuum Line of Usability

The results of the analysis obtained are 82.5 from the ideal score. Therefore, from the results of the continuum line that can be seen in Figure 3, it can be concluded that the respondent's perception of WebQual on Information Quality is in the good category. Based on Figure 4, the results of the analysis obtained are 84.1% of the ideal score. Therefore, from the results of the continuum line, respondents' perception of Webqual on Service Interaction is in the very good category. According to Figure 5, the results of the analysis obtained were 84.7% of the ideal score. Therefore, from the results of the continuum line, respondents' perceptions of user satisfaction with the Zoom application are in the very good category.
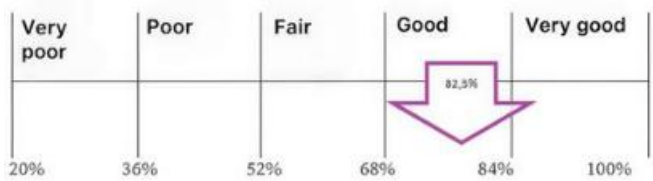
Figure 3. Webqual Continuum Line of Information Quality

Figure 4. Webqual Continuum Line of Service Interaction
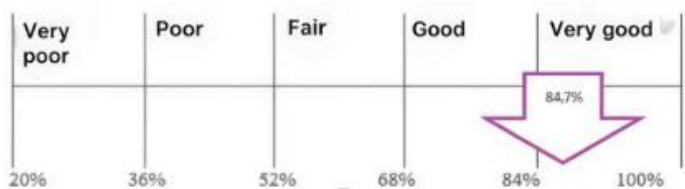
Figure 5. Continuum Line of User Satisfaction

RESULT AND DISCUSSION

Based on the results of the calculations in the regression analysis that can be seen in Table 1, the following multiple linear regression equations were obtained:

$$Y = -0.546 + 0.476X1 + 0.337X2 + 0.171X2 + e.$$

Table 1. Results of Multiple Regression Analysis

Coefficients[a]

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Correlations Zero-Order
1	(Constant)	-.546	.197		-2.769	.006	
	Usability	.476	.063	.371	7.606	.000	.623
	Information Quality	.337	.066	.261	5.105	.000	.589
	Service Interaction	.171	.054	.157	3.190	.002	.536
a. Dependent Variable: Satisfaction							

Satisfaction is not influenced by the three independent variables if the coefficient value is 0.546 with a negative slope. The regression coefficient of the X1 variable is 0.476, meaning that every one-unit increase in the Webqual dimension of *Usability Quality* (X_1) will increase the Zoom application user satisfaction (Y) by 0.476 units. The regression coefficient of the X_2 variable is 0.337, meaning that every one-unit increase in the Webqual dimension of *Information Quality* (X_2) will increase the Zoom application user satisfaction (Y) by 0.337 units. The regression coefficient of the X3 variable is 0.171, meaning that every one-unit increase in the Webqual dimension of *Service Interaction* (X_3) will cause an increase in User Satisfaction of the Zoom (Y) application by 0.171 units.

Based on the above provisions, the F-count is 117.999 and degrees of freedom (n-k-1) or 405-3-1 = 401; the F-table number is 2.63 while the F-count is 117.999. So F-count > F-table, which means H0 is rejected, and Ha is accepted, or there is a significant influence between the Webqual variables (X) consisting of *Usability Quality* (X_1), *Information Quality* (X_2) and *Service Interaction* (X_3) on satisfaction.

The influence of Webqual on user satisfaction is obtained from the F-count of 117.999, and the F-table number is 2.63, so it can be concluded that the F-count is greater than the F-table. It means that there is a simultaneous significant effect between the variables (X) of Webqual, which consists of *Usability Quality (X1)*, *Information Quality (X2)* and *Service Interaction (X3)* on User Satisfaction of the Zoom application. The effect of *Usability Quality* on User Satisfaction is shown by the results of the t-count at 7.606 and the t-table figure of 1.97, so that the t-count is greater than the t-table. It is what makes *Usability Quality* have a partial, positive and significant influence on User Satisfaction of the Zoom application. The effect of *Information Quality* on User Satisfaction is revealed by the results of the t-count of 5.105 and the t-table of 1.97, so that the t-count is greater than the t-table. It makes Information Quality have a partial, positive and significant influence on User Satisfaction of the Zoom application. The effect of Service Interaction on User Satisfaction is obtained from the t-count of 3.190 and the total t-table of 1.97. Thus, t-count is greater than t-table, and there is a partial, positive and significant effect of *Service Interaction* on User Satisfaction of the Zoom Application.

Based on the table above, it can be seen that the value of the simultaneous correlation coefficient is 0.685 and the coefficient of determination (R^2) is 0.469. It means that the total influence of the Webqual variable on Zoom application user satisfaction is 46.9% while the remaining 53.1% is the influence of other variables that the researcher did not involve in this study.

WebQual consists of *usability quality*, *information quality* and *service interaction*, which function as independent variables or also called variables that affect or cause changes or the emergence of dependent variables, with dimensions of user satisfaction. Based on the results of testing the first

hypothesis, it can be concluded that Webqual (X), consisting of *Usability Quality (X₁), Information Quality (X₂)* and *Service Interaction (X₃)*, has a positive and significant influence on user satisfaction of the Zoom application. It is indicated by gaining a very good category for overall respondent responses and a percentage score of 84.7% for the user satisfaction variable. The statement having the highest score is "I am willing to recommend the Zoom Application to friends and relatives for online-based daily learning" with a percentage of 88% and in the Very Good category. This result shows that customers are satisfied with the service quality of the Zoom Application and are willing to recommend it to their friends and relatives.

It is in line with Hasanov and Khalid (2015) in Kurniawati et al (2018:1159), who used the WebQual 4.0 model to examine the influence of website quality on customer satisfaction and willingness, and found that website quality had a positive impact on customer satisfaction.

Effect of *Usability Quality* on User Satisfaction; based on the results of testing the second hypothesis, it can be concluded that the webqual dimension of Usability Quality has a positive and significant effect on user satisfaction of the Zoom application. It is indicated by obtaining a very good category for the overall respondent's response with a percentage score of 85.0% for the Webqual Variable dimension of *Usability Quality*. The statement having the highest score is "I find the Zoom site easy to learn and operate," with a percentage of 91% and in the Very Good category. These results show that the Zoom site is easy to learn and operate.

It is in line with Barnes & Vidgen (2003) in Meidianto (2019: 19) that the quality of information includes things such as accurate information, reliable information, up to date or current information, information that is in accordance with the topic of discussion, information that easy to understand, very detailed and in-depth information, and information presented in an appropriate design format.

Effect of *Information Quality* on User Satisfaction; based on the results of testing the third hypothesis, it can be concluded that the webqual dimension of *Information Quality* has a positive and significant effect on user satisfaction of the Zoom application. It is indicated by the overall respondents' responses, which are included in the Good category, and the percentage score of 82% obtained by the Webqual Information Quality variable. The statement with the highest score is "Zoom provides accurate information," with a percentage of 85% and is included in the Very Good category. These results indicate that the Zoom Application provides accurate information. According to Barnes & Vidgen (2003) in Meidianto (2019:19), *Information Quality* in information systems research is the quality of the content of an application involving whether or not the information is appropriate for user purposes based on accuracy, format and relevance.

The Effect of *Service Interaction* on User Satisfaction; based on the results of testing the fourth hypothesis, it can be concluded that the webqual dimension of Service Interaction has a positive and significant effect on user satisfaction of the Zoom application. It is indicated by obtaining a very good category for the overall respondent's response with a percentage score of 84.1% for the Webqual *Service Interaction* variable.

The statement with the highest score is "Zoom has a good reputation," with a percentage of 87% and is in the Very Good category. These results show that the Zoom application has a good reputation and users feel safe using it. It is in accordance with Barnes & Vidgen (2003) in Meidianto (2019: 19) that the quality of service interaction is the quality of interaction experienced by users when they delve deeper into the site, manifested by trust and empathy, for example, issues of transaction and information security, product delivery, personalization and communication with website owners.

CONCLUSION

Referring to the results of data processing and discussion, several conclusions can be drawn to answer the research questions described in this study, as follows:

1. **Effect of Webqual on User satisfaction;** Webqual, when viewed from the results of hypothesis testing in the table *coefficients* of the Webqual variables (X), which consists of *Usability Quality (X_1), Information Quality (X_2)* and *Service Interaction (X_3)*, has a positive and significant influence simultaneously on User Satisfaction of the Zoom Application. It proves that customers are satisfied with the service quality of the Zoom application and are willing to recommend the Zoom application to their friends and relatives.

2. **Effect of *Usability Quality* on User Satisfaction;** when viewed from the results of the hypothesis test in the *coefficients* table, *Usability Quality* has a positive and partially significant influence on User Satisfaction of the Zoom Application. It proves that the Zoom site is easy to learn and operate.

3. **Effect of *Information Quality* on User Satisfaction;** when viewed from the results of the hypothesis test in the *coefficients* table, Information Quality has a positive and partially significant influence on user satisfaction with the Zoom application. It proves that the Zoom application provides accurate information.

4. **The Effect of *Service Interaction* on User Satisfaction;** when viewed from the results of the hypothesis test in the *coefficients* table, *Service Interaction* has a positive and partially significant effect on user satisfaction of the Zoom Application. It proves that the Zoom application has a good reputation, and users feel safe using it.

Theoretical Aspects for Further Research. As this research uses the WebQual method to determine the quality of the website on user satisfaction, further research is recommended to use other methods or modify the method by combining the Webqual 4.0 method with the *E-Service* (E-S-qual) method as in the journal (Dr. Ganesh Dash & Dr. Sourabh sharma, 2015) or combining the Webqual 4.0 method with the IPA (Importance Performance Analysis) method as in the journal (Ben, Chen, Agus & Shuyan, 2016). In addition, further research is also recommended to broaden the scope. As this research is only intended for Telkom University students, further research can develop and expand the scope of the research in order to get better results in the future.

Practical Aspects for the Company. The results of this study using the WebQual method are expected to be a source of information to maintain customer satisfaction in using the Zoom application for academic and non-academic activities or other activities. Based on the distributed WebQual variables, the statements with the lowest scores were "Zoom provides reliable information" and "My personal information feels safe". Referring to the statement, the researchers suggest that the company further improve its security system so that users can feel safe using Zoom and trust the application. In addition, Zoom must continue to develop the features and security of its application to be able to maintain or even increase the number of users both during this COVID-19 pandemic and in the future.

REFERENCES

Barnes, S. J., & Vidgen, R. (2003). Measuring Website Quality Improvements: A Case Study of the Forum on Strategic Management Knowledge Exchange. *Industrial Management & Data Systems, 103*(5), 297-309. https://doi.org/10.1108/02635570310477352

Elsunatri. (2020). Efektifitas Pembelajaran Online Menggunakan Media Zoom Cloud Meeting terhadap Motivasi dan Hasil Belajar Siswa Kelas V SD Negeri 37 Pekanbaru. Universitas Islam Negeri Sultan Syarif Kasim Riau.

Hasanov, Jasur, & Khalid, Haliyana. (2015). The Impact of Website Quality on Online Purchase Intention of Organic Food in Malaysia: A WebQual Model Approach. *ProcediaComputer Science* 72 (2015) 382 - 389. https://doi.org/10.1016/j.procs.2015.12.153

Hidayatullah, S., Khouroh, U., Windhyastiti, I., Patalo, R. G., & Waris, A. (2020). Implementasi Model Kesuksesan Sistem Informasi DeLone and McLean terhadap Sistem Pembelajaran Berbasis Aplikasi Zoom di Saat Pandemi Covid-19. *Jurnal Teknologi dan Manajemen Informatika*, *6*(1), 44-52. https://doi.org/10.26905/jtmi.v6i1.4165

Indrawati. (2015). *Metode Penelitian Manajemen dan Bisnis Konvergensi Teknologi Komunikasi dan Informasi*. Aditama.

Kotler, P., & Keller, K. L. (2016). *Manajemen Pemasaran* (13 ed.). Erlangga.

Meidianto, D. S. (2019). *Analisis Pengaruh Kualitas Website Melalui Metode Webqual 4.0 terhadap Kepuasan Pelanggan BLIBLI.COM di Bandung*. Universitas Telkom.