The evaluation of digital-based service policies using the website quality 4.0 method

Dewi Maharani
Faculty of social and Political Sciences, Universitas Majalengka, Indonesia
Email: dewimaharani212@gmail.com

Abstract---This study analyzes the evaluation of digital-based service policies using western quality (WebQual) 4.0. This research is intended that digital-based services at the Sindang Kasih Multi Usaha company have had Web-based services for more than one year; however, there has never been a performance evaluation of this digital-based service. Therefore, this study evaluates digital-based service policies to obtain actual data. This research method uses an evaluation research method with a quantitative data approach. This study uses an external evaluation research approach where this study provides a list of questionnaire questions distributed to a predetermined sample at the beginning of the study using quota sampling. This study found that the evaluation of digital-based service policies using WebQual 4.0 had relatively good results. However, several indicators need to be improved in this research, including I find the site easy to navigate, I find the site easy to navigate, Providing relevant information, Provides easy to understanding information, Making it easy to communicate with the organization, and I feel confident that good/services will be delivered as promised.

Keywords---Policy, Evaluation, Service, Website Quality 4.0 Method

Introduction

Indonesia is entering the era of the industrial revolution 4.0, an era where digital technology disruption is increasingly massive. Industry 4.0, or the fourth industrial revolution, is a term generally used for the level of development of the technology industry. For this level, focus on digital technologies. In this era, technology and digital systems such as cloud computing, the internet of things, and artificial intelligence are used as tools that can help facilitate daily activities. In this era, people want all management to be done quickly, effectively, and efficiently. That is why public service implementers are also required to be able to provide excellent service. The bureaucracy must have a spirit of service, towards a more flexible and dialogical direction and towards more realistic pragmatic ways
of working; this is in line with the mandate of Law Number 25 the Year 2009 concerning Public Services. In order to realize good governance, public services become a strategic and essential part, including community involvement. In the context of public services, innovation is usually the result or follow-up of the evaluation and improvement process for complaints, complaints, and input from the public as service users. This means that community participation dramatically impacts the potential for innovation carried out by service providers. The more proactive people care about improving public services, the greater the potential for providers to innovate their services.

Technology-based service innovation is one of the tools used to realize accountable and transparent services as the fundamental pillar of the paradigm and innovation of Good Governance (Wasistiono & Anggraini, 2019; Yustiari, 2019). The main component for the success of public accountability is an information transparency system. Transparency of this information is the primary capital that can be used to assess the performance of public sector services and to evaluate the accountability of public sector implementers for all their decisions and actions. There are several reasons why service providers must innovate:

1. There are so many regulations that regulate. These include Law 25 of 2009 concerning Public Services, Government Regulation Number 96 of 2012 concerning the Implementation of Law 25 of 2009 concerning Public Services, Minister of Administrative and Bureaucratic Reform Number 30 of 2014 concerning Guidelines for Public Service Innovation, and Presidential Regulation 95 of 2018 concerning SPBE, etc. So public service providers must continue to innovate.
2. They are entering the era of disruption or industry 4.0, which is all digital, while some public services are still in reality. Therefore, organizers must respond to the times.
3. The expectations of service users are increasing.

The public awareness of public services is increasing daily, as are the expectations of the community as service users, increasing daily and demanding the best service. Hence, service innovation is the primary key to improving performance (Kusumadewi & Karyono, 2019). The importance of public service innovation in this era of disruption has become the center of attention of researchers in achieving effective and efficient governance (Cárdenas López, 2012; Millard, 2017). Improving good, clean, and professional governance in public services is crucial in supporting and realizing strong and clean management and for realizing valid and reliable data and information management. In this era of disruption, digital transformation is a significant challenge that must be faced by every organization in maximizing the use of digital technology (Saarikko et al., 2020) by utilizing information and communication technology in the development of digital technology-based organizations so that it can affect services (Cholo et al., 2015; Nugraha & Siregar, 2019). In addition, public services carried out by government organizations and corporations are essentially able to strengthen democracy and human rights, promote economic prosperity and social cohesion, reduce poverty, increase environmental protection, be wise in the use of natural resources, and deepen trust in government and administration Public (Caldwell et al., 2018).
The Sindangkasih Multi-Business Regional Company (SMU) was established in 2009 based on the Majalengka Regency Regulation Number 3 of 2009 concerning the Sindangkasih Multi-Business Regional Company. The Sindangkasih Multi-Business Regional Company (SMU) was established with the following objectives: 1. To participate in encouraging the growth of the regional economy and the people of Majalengka Regency in particular and the development of the national economy in general in order to improve the welfare and fulfill the needs of the people, towards a developed and prosperous society; 2 and increasing the Regional Original Income (PAD) of the Majalengka Regency. One supporting these goals is improving the service system and carrying out business transformation toward digitalization. This is done to assist in carrying out business strategies achieved within one year or five years. One of the ways to provide digital services to regional companies is by implementing public information and digital marketing management to help speed up the process of delivering messages to stakeholders, business partners, and other communities. The achievement of the business change process towards digital cannot be separated from the ability of its human resources to innovate. Hence, employees need to improve their competence and understanding of technology so that employees can improve their human resources more professionally, and this is one of the missions. From PDSMU, they are increasing employees' competence as managers and drivers of BUMD to increase profitability every year.

Public services in the era of digitalization require every organization to make changes to digitalization in response to the demands and challenges of a dynamic era. PDSMU Majalengka Regency has answered this challenge by launching the PDSMU Majalengka Regency website, which is located at (https://ptsmu.co.id/). In measuring service quality performance in this digitalization era, it is essential to evaluate how much PDSMU customers receive quality and service performance in Majalengka Regency. This study's measurement of digitizing public services uses the WebQual 4.0 method. Webqual 4.0 is one method to measure website quality. This method was developed by Stuart Barnes and Richard Vidgen based on the concept of Quality Function Deployment (QFD), which focuses on the "voice of the customer." WebQual 4.0 has 3 (three) areas or variables, namely the variables of information quality, interaction quality, and usability (Barnes & Vidgen, 2003). This method is used in this study because WebQual 4.0 measures the quality of a website based on user or visitor perceptions (Josua Tarigan, 2008) to find out what factors can be improved on the website so that it can provide the best service to users.

Several studies have succeeded in identifying the factors that affect service quality in this era of disruption. Research conducted by (Putra, 2018) in his research, the factors that influence service quality in the disruption era adopted the indicators from Clayton M. Christensen consisting of information technology, value addition, sharing economy, and statistical technology. While research (Muliatatyi & Framesthi, 2020) on improving public services in the era of disruption, it focuses more on the ethical aspects of administration. Research (Supeno, 2018) states that in this era of disruption, quality services focus on integrating systems to achieve practicality, ease of access, convenience, and economic costs. Meanwhile, the research (Wardani, 2019) divides the factors that influence the quality of service in the disruption era consisting of internal and external factors. In his
research, he added that the internal factor in which there is success in performance is the success of a public agency in improving organizational processes. The process of a good organization will increase the organization's performance in achieving these goals, and efforts to realize several programs launched by the institution or organization will be more easily realized. As for external factors, there is something called technology. Advances in existing technology have made it easier for people's lives and even for the advancement of a public institution. Technological innovation in its implementation in the field of public administration has transformed conventional services into computerized ones. All input, process, and course output forms have been integrated with the computer.

Departing from the background regarding the need for digital-based public services, accompanied by the demands of users or the public who want information quickly and can be accessed anywhere, digital-based service innovation is the best solution in this era of disruption by utilizing technology and information effectively. Online, so that the demands and needs of users or the community can be fully met. Therefore, this research is focused on evaluating digital-based services using the WebQual method.

**Literature Review**

**Digitalization Service Quality**

Innovation and governance cannot be separated as two things related. Likewise, public services cannot be separated from the quality of services and policies. Policies that favor the community are expected to improve services to the community as service customers. The community is also expected to benefit from the policy as a legal umbrella to regulate and control the implementation of public services. According to Robi C.K, public service is the provision of services (serving) the needs of people or communities who are interested in the organization following the basic rules and procedures set (Supangat, 2016). Thus, the performance of public services is carried out following applicable policies. Public services are also an indicator of service providers' success, especially government institutions, in terms of performance. Performance is an indicator and determinant of the government's success in its efforts to administer professional governance and fulfill aspects of the community's service needs. The public bureaucracy must be able to provide public services that are more professional, effective, simple, transparent, open, timely, responsive, and adaptive and, at the same time, can build human qualities in the sense of increasing the capacity of individuals and society to determine their future actively.

Measuring the success of services in the digital era requires proper evaluation to obtain an accurate picture of the evaluation. The WebQual method is one method that is considered relevant in measuring the evaluation and performance of digital-based services (Andry et al., 2019; Jundillah et al., 2019). WebQual is a method or technique for measuring website quality based on user perceptions (Faqih et al., 2020). WebQual has been developed since 1998 and has experienced several interactions in formulating dimensions and questions, up to the current version 4. This method is a development of ServQual, widely used before in
measuring service quality. WebQual 4.0 is a measurement to measure the quality of a website based on research instruments that can be categorized into four variables: Usability, Information Quality, Service Interaction Quality, and Overall (Cárdenas López, 2012; Supeno, 2018). Everything is a measurement of User Satisfaction (user satisfaction) on the quality of the website. From the measurement results, it is hoped that it can be used to increase the website’s popularity and also bring up recommendations for developers and managers to improve the quality and development of the university's academic information system website. Based on Levis et al., one definition of quality is the totality of characteristics of an entity that bears its ability to satisfy stated and implied needs (Barata et al., 2013).

**Service Performance**

Performance is a general term used for part or all of the actions or activities of an organization in a period concerning several standards such as past or projected costs, based on efficiency, accountability or management accountability, and the like (Bahrul, 2015, p. 3). Meanwhile, according to Suyadi (Prawirosuntono, 2008), performance is the result of work that can be achieved by a person or group of people in an organization following their respective authorities and responsibilities to achieve the goals of the organization concerned legally, not violating the law and following morals or ethics. Meanwhile, according to Anwar Prabu, performance (work achievement) is the result of work in quality and quantity achieved by an employee in carrying out his duties following the responsibilities given to him (Anwar Prabu Mangkunegara, 2015); it can be concluded that performance is a condition that must be known and confirmed to certain parties to determine the level of achievement of the results of an agency associated with the vision carried out by an organization or company and to know the positive and negative impacts of an operational policy.

Performance is an indicator in determining the effort to achieve a high level of productivity in an organization or agency. Service is an activity or benefit offered by one party to another and is essentially intangible and does not result in ownership of anything. The production process may also not be associated with a physical product. Meanwhile, according to Lovelock, service is an intangible product that lasts for a short time and can be felt or experienced. This means that service is a product with no form or form so that no form can be owned, lasts for a moment, or does not last long but can be experienced and felt by service recipients. From this understanding, service can be interpreted as an activity to help prepare and manage whether in goods or services from one party to another.
According to Moenir, service is to meet the needs of human life by trying, either through their activities or indirectly through the activities of others (Moenir, 2006). Activity here is a process of using the mind, mind, five senses, and limbs and or without tools that a person does to get something he wants in the form of goods or services. This process of fulfilling needs through the activities of others is called service. The process referred to in the sense of service is the definition of a limited process in management activities to achieve organizational goals. Therefore, the service in question is a series of management organizations. However, in a broad sense, the process involves all the efforts made by a person in order to achieve the goal. In this case, public or public services will be discussed further. The definition of public service is based on the Decree of the Minister for Empowerment of State Apparatus No. 81 of 1993, which was later refined by the Decree of the Minister of Empowerment of State Apparatus No. 63 of 2003 as follows: Public services are all forms of services carried out by central, regional, and regional government agencies, or State-Owned Enterprises, or State-Owned Enterprises in the form of goods and services, both in the context of efforts to meet the needs of the community and in the context of implementing the provisions of the legislation.

Research Method

This study uses an evaluation research method with a quantitative data approach. Evaluation is one of the applied research that is used to evaluate programs, policies, and projects. The evaluation study used in this study is an external evaluation. Here the researcher has no attachment either administratively or organizationally. The evaluation research here uses questionnaire data distributed to all PT customers. Sindang Kasih Multiasih (Perseroda) consists of two customer divisions: the MSME Division and the Agribusiness Division. The MSME Division consists of Grand Jogja Majalengka, Indomaret, Alfamart and trusmi batik craftsmen, while the Agribusiness Division is PT. Helwa, Mulya Farmer's Shop, Berkah Tani's Shop, Independent Farmer's Shop, and Mekar Utama Tani's Shop. Determination of the sample in this study Quota Sampling this is because the number of customer populations is unknown, so in this study, the number of sampling was determined as the research target, with each unit of analysis as many as ten research samples consisting of elements of leadership to implementers who have used the website PT. Sindang Kasih Multiasih (Perseroda) online, so that the total number of samples in this study consisting of 9 units of analysis was set at 90 research samples to be asked for their perceptions of digital-based service quality measurements used by customers.

Data collection techniques are methods used in research to obtain and collect the necessary data. The data collection technique used in this research is perception data on digital-based service performance assessment by all customers of PT. Sindang Kasih Multiasih (Perseroda) through questionnaires and observations. Data analysis is an activity that is carried out after data from all data sources is collected. The data analysis technique used in this study uses descriptive statistical analysis without making general conclusions or generalizations. The steps taken by the researcher in analyzing the data were calculating the amount of data obtained from the questionnaire/questionnaire and observation data. The
data obtained were analyzed in percent form. If there is a discrepancy in the data from the research results, the data is tracked continuously until the truth of the data is found. So if this study found questionnaire data and observations, which are not the same, then tracking is carried out until the correct data is obtained. Through this analysis, it can also be seen whether the data between questionnaires and observations complement or contradict each other.

**Research Results and Discussion**

Company PT. Sindang Kasih Multi Usaha Majalengka Regency, one of the regional companies in charge of SMEs and other businesses, has a website as an online-based information center at the address (https://ptsmu.co.id/). The website display of PT. Sindang Kasih Multi Usaha Majalengka Regency can be seen in the following figure:

In evaluating the public services provided by PT. Sindang Kasih Multi Usaha Majalengka Regency in this study uses WebQual 4.0. WebQual is used to measure the quality of a website based on end-users (Barnes & Vidgen, 2002). This method is a development of ServQual, widely used to measure service quality. The development of the WebQual 4.0 instrument is based on the concept of Quality Function Development (QFD), a process whose development and implementation are based on the "voice of the customer." Website users carry out website quality measurements with WebQual 4.0, so the measurements made will be assistance and input for website managers to adjust the website according to user perceptions (Alhasanah, Kertahadi, & Riyadi, 2014). WebQual 4.0 is the latest model offered and has 3 (three) measurement variables with 22 questions (Santoso & Anwar, 2015). The three variables are usability, information quality, and service interaction quality. The results of the research on the three variables are described below.
a. Usability
This variable is related to the design or design of the website. The website's appearance, the ease of users when using the website, website navigation, and user experience (Tarigan, 2008). In addition, usability also focuses on how users receive and interact with the website (Jabar, Usman & Awal, 2013). In addition, a website's design must also follow user needs and ensure that users are satisfied when completing work using the website without any obstacles (Yan & Guo, 2010).

Table 1. Evaluation of Service Performance on Usability Aspects

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I find the site easy to learn to operate</td>
<td>0</td>
<td>0</td>
<td>5.6</td>
<td>42.2</td>
<td>52.2</td>
<td>4.466</td>
</tr>
<tr>
<td>2</td>
<td>My interaction with the site is clear and understandable</td>
<td>0</td>
<td>0</td>
<td>4.4</td>
<td>32.2</td>
<td>63.3</td>
<td>4.588</td>
</tr>
<tr>
<td>3</td>
<td>I find the site easy to navigate</td>
<td>0</td>
<td>2.2</td>
<td>11.1</td>
<td>31.1</td>
<td>55.6</td>
<td>4.400</td>
</tr>
<tr>
<td>4</td>
<td>I find the site easy to use</td>
<td>0</td>
<td>0</td>
<td>8.9</td>
<td>24.4</td>
<td>66.7</td>
<td>4.577</td>
</tr>
<tr>
<td>5</td>
<td>The site has an attractive appearance</td>
<td>0</td>
<td>0</td>
<td>8.9</td>
<td>20.0</td>
<td>71.1</td>
<td>4.622</td>
</tr>
<tr>
<td>6</td>
<td>The design is appropriate to the type of site</td>
<td>0</td>
<td>0</td>
<td>5.6</td>
<td>22.2</td>
<td>72.2</td>
<td>4.667</td>
</tr>
<tr>
<td>7</td>
<td>The site conveys a sense of competency</td>
<td>0</td>
<td>0</td>
<td>13.3</td>
<td>25.6</td>
<td>61.1</td>
<td>4.477</td>
</tr>
<tr>
<td>8</td>
<td>The site creates a positive experience for me</td>
<td>0</td>
<td>3.3</td>
<td>14.4</td>
<td>27.8</td>
<td>54.4</td>
<td>4.333</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.516</td>
</tr>
</tbody>
</table>

Source:
Based on table 1 data on service performance evaluation on usability aspects using eight indicators as a measure, it was found that the distribution of data from each respondent showed an average value of 4,516, which was included in the excellent category. The findings of this study indicate that the evaluation of service performance gets good results, especially in the evaluation of The design that is appropriate to the type of site which is considered to provide high satisfaction to its users. Meanwhile, other findings that need to be improved are that I find the site easy to navigate with an average value of 4,300, and still, 3.3% of respondents answered that they were not satisfied. In addition, the indicator that The site creates a positive experience for me also needs to be improved because there are still 2.2% unsatisfied perceptions from users.

b. Information Quality
Information quality is the quality of the content contained on the website and the appropriateness of the information to be presented to users (Barnes & Vidgen, 2002). In the information quality variable, measurements are made based on information accuracy, reliable information, up-to-date information, ease of information to understand, information appropriate to the topic of discussion, and the format of information presentation (Al Baiti, Suprapto & Rachmadi, 2017). The questions that were asked and developed on this variable were built
based on the literature focusing on the quality of data, information, and systems (Arifin, Nugroho & Hantono, 2015). Information quality is often measured based on information relevance, accuracy, and timeliness (Nugroho, 2017). The relevance of information relates to how the information is presented, whether it follows the topic of discussion, and is easy to understand. Accuracy relates to the trustworthiness and validation of the information provided, while timeliness relates to how up-to-date information is presented.

Table 2. Evaluation of Service Performance on Information Quality Aspects

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator</th>
<th>Answer (%)</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>Provide accurate information</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Provides believable information</td>
<td>0</td>
<td>2.2</td>
</tr>
<tr>
<td>3</td>
<td>Provides timely information</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Provides relevant information</td>
<td>0</td>
<td>3.3</td>
</tr>
<tr>
<td>5</td>
<td>Provides easy to understand information</td>
<td>0</td>
<td>5.6</td>
</tr>
<tr>
<td>6</td>
<td>Provides information at the right level of detail</td>
<td>1.1</td>
<td>2.2</td>
</tr>
<tr>
<td>7</td>
<td>Presents the information in an appropriate</td>
<td>1.1</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>4.304</td>
<td></td>
</tr>
</tbody>
</table>

Based on table 2 of the data on the evaluation of service performance on the aspect of information quality using seven indicators as a measure, it was found that the distribution of data from each respondent showed an average value of 4.304, which was included in the excellent category. The findings of this study indicate that the evaluation of service performance in the aspect of information quality gets a good response, especially in the evaluation of providing accurate information with an average value of 4,500. This means that the indicator provides accurate information on the measurement of website service performance evaluation at PT. Sindang Kasih Multi Usaha is considered to provide high satisfaction to its users. Meanwhile, other findings that need to be improved are providing relevant information with an average value of 4.227, and there are still respondents who answered that they were not satisfied as much as 3.3%. In addition, other indicators, namely Provide easy to understand information, also need to be improved because there are still 5.6% unsatisfied perceptions from users.

c. Service Interaction Quality
This service interaction quality variable is related to providing a sense of security during transactions, having a good website reputation, facilitating the communication process, having confidence in providing personal information, and providing confidence to users that promises will be kept (Sastika, 2016). This variable is also the user's perception of all service processes that can be completed online and alternative means of interaction with better security (Wicaksono, Susanto & Winarno, 2012). This variable focuses on how the quality of service interactions experienced by users when they understand more deeply about the websites they visit, in this case, related to trust and empathy, how
users feel safe when interacting, providing and storing personal information, and being able to create more personal emotional feelings (Tarigan, 2008).

Table 3. Evaluation of Service Performance on the Aspect of Service Interaction Quality

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator</th>
<th>Answer (%)</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Has a good reputation</td>
<td>0 1.1 4.4</td>
<td>55.6</td>
</tr>
<tr>
<td>2</td>
<td>It feels save to complete transaction</td>
<td>0 0 5.6</td>
<td>37.8</td>
</tr>
<tr>
<td>3</td>
<td>My personal information feels secure</td>
<td>0 1.1 4.4</td>
<td>25.6</td>
</tr>
<tr>
<td>4</td>
<td>Creates a sense of personalization</td>
<td>0 0 7.8</td>
<td>28.9</td>
</tr>
<tr>
<td>5</td>
<td>Convey a sense of community</td>
<td>0 0 8.9</td>
<td>23.3</td>
</tr>
<tr>
<td>6</td>
<td>Makes it easy to communicate with the organization</td>
<td>0 3.3 27.8</td>
<td>40.0</td>
</tr>
<tr>
<td>7</td>
<td>I feel confident that goods/services will be delivered as promised</td>
<td>0 14.4 21.1</td>
<td>34.4</td>
</tr>
</tbody>
</table>

Based on table 3 data on the evaluation of service performance on the aspect of Service Interaction Quality using seven indicators as a measure, it was found that the distribution of data from each respondent showed an average value of 4.398, which was included in the excellent category. The findings of this study indicate that the evaluation of service performance on the Service Interaction Quality aspect gets a good response, especially in the evaluation of My personal information feels secure with an average value of 4.611. That is the indicator. My personal information feels secure in measuring the performance evaluation of website services at PT. Sindang Kasih Multi Usaha is considered to provide high satisfaction to its users. While other findings that need to be improved are Making it easy to communicate with the organization with an average value of 3.944, and still 3.3% of respondents answered dissatisfied. In addition, other indicators, namely I feel confident that goods/services will be delivered as promised, also need to be improved because 14.4% of users are still unsatisfied.

Conclusion

Based on the analysis and discussion of the evaluation of digital-based service policies using the Quality 4.0 website method, users perceive to assess the effectiveness of the website owned by PT. Sindang Kasih Multi Usaha provides services to its customers online using three measures of which variables usability, Information Quality, and Service Interaction Quality. Usability research found that the highest indicator was found in the evaluation of The design appropriate to the site type. In contrast, the lowest indicator was found when I found the site easy to navigate, which created a positive experience for me. Evaluation of the Information Quality variable found that the indicator that provides accurate information is the highest. In contrast, other findings found that Providing relevant information and Providing easy to understanding information is the lowest indicator of this variable. Research on Service Interaction Quality found
that My personal information feels secure is the highest indicator. At the same time, it makes it easy to communicate with the organization, and I feel confident that good/services will be delivered as promised and still needs to be improved by the organization so service performance can improve.

References


