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Pilot Investigation on Assessing the Quality of Banyuasin Disdukcapil Online Services and its Impact on User Satisfaction

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ABSTRACT

This study focuses on evaluating the quality of online services provided by Banyuasin Disdukcapil and its relationship with user satisfaction. Through a pilot investigation, the efficiency and performance of these services were meticulously examined, covering usability, response time, data accuracy, and information security. The study aimed to understand user perspectives and their satisfaction levels to establish correlations between service quality and user sentiment. Methodologically, nine research stages were executed, culminating in the development of a questionnaire based on the WebQual 4.0 method, exploring Usability Quality, Information Quality, Service Interaction Quality, and User Satisfaction. The validity and reliability tests ensured the credibility of the instruments used. The investigation revealed strong positive correlations across all studied aspects: Usability Quality demonstrated high correlations (r count) ranging from 0.703 to 0.785, emphasizing ease of use, clarity, and positive user experience. Information Quality and Service Interaction Quality showed correlations from 0.545 to 0.783, indicating reliability, accuracy, security, and ease of communication. User Satisfaction exhibited correlations between 0.604 and 0.741, highlighting factors influencing user contentment. Validity testing confirmed the suitability of all indicators without the need for removal, while reliability analysis (Cronbach's Alpha) established consistency across variables.

1. Introduction

The advent of online services has significantly revolutionized administrative processes, particularly in governmental institutions, aiming to streamline and enhance user experiences. In this context, the Pilot Investigation focuses on evaluating the quality of the Banyuasin Disdukcapil online services and gauging its correlation with user satisfaction. Banyuasin Disdukcapil, the civil registry office in the Banyuasin region, has embraced

digitalization to offer essential services like civil registration, identification, and vital document issuance through their online platform.

The primary objective of this pilot study is to meticulously examine the efficiency, accessibility, and overall performance of the online services provided by Banyuasin Disdukcapil. This assessment delves into various facets, including the user interface's usability, response time for service requests, data accuracy, and the platform's reliability in safeguarding sensitive information [1], [2]. By conducting this investigation, a comprehensive understanding of the strengths and potential areas for improvement within the online service infrastructure can be obtained.

The digital platform provided by the Banyuasin Regency Population and Civil Registration Service serves as a hub for information concerning the agency itself, alongside various other details, primarily oriented towards delivering population administration services to residents. Notably, in 2021, the Banyuasin Dukcapil Department underwent evaluation by the Ministry of Administrative and Bureaucratic Reform of the Republic of Indonesia. This assessment scrutinized the department's execution of public services, including the examination of the public service information system, which encompasses online services. Despite this evaluation, the perspectives of Banyuasin's residents regarding this specific online service have not been assessed. The primary objective of evaluating the online service quality is to enable managers or service providers to ascertain the extent to which these online services align with the requirements and expectations of their users.

Furthermore, this study aims to ascertain the direct relationship between service quality and user satisfaction. It intends to gather user feedback, opinions, and experiences concerning the online services offered by Banyuasin Disdukcapil. Analyzing user perspectives, their level of contentment or grievances, and the factors influencing their satisfaction will be pivotal in drawing correlations between service quality and user sentiment. The findings from this pilot investigation will serve as a foundational step toward enhancing the efficiency and effectiveness of Banyuasin Disdukcapil's online services. It will provide actionable insights to refine and optimize the digital platform, ensuring a seamless and satisfactory experience for its users while contributing to the broader discourse on digital governance and service delivery [3], [4].

2. Method

There exist nine distinct phases within the research process: problem identification, delineation of research objectives, review of existing literature, conducting interviews and crafting research tools, validating the instruments, gathering data, processing and analyzing the acquired information, presenting findings along with discussions, and finally, drawing conclusions and providing recommendations. The subsequent Table 1 will elaborate on these stages of research.

Table 1 – Research stages

No	Stages	Description
1	Problem identification	At this stage the author searches for and determines the main problem to be researched by conducting interviews and distributing questionnaires to respondents.
2	Delineation of research objectives	Determine the objectives to be achieved from this study.
3	Review of existing literature	Literature study is used to obtain knowledge related to the research to be carried out. At this stage, various searches were carried out on related literature, research and publications which will be used as references in this research. The literature study in this research was obtained from various sources including journals, books, articles and other scientific works.
4	Instrument preparation	At this research stage, a search and preparation of each observation result was carried out according to the variables in the WebQual 4.0 method [5]-[7] and their indicators. Then each indicator is entered into a questionnaire which will then be tested on the instrument.
5	Validating the instruments	In this case, researchers carry out validity and reliability testing to determine which indicators are valid and which are invalid, as well as whether the variables used are reliable or not.
6	Gathering the data	The data comes from questionnaires that have been distributed to respondents.
7	Data processing and analysis	The data processing stage is processing or analyzing data collected from questionnaires that have been answered by respondents. The tool used to process this research data is SPSS statistical software.
8	Result and discussion	The results of data processing in the previous stage are discussed comprehensively. Information on the results of the analysis is presented in tables, diagrams or pictures.
9	Conclusions and suggestions	After all stages have been carried out, the next step is to draw conclusions and suggestions based on the research results that have been obtained.

A summary of variables, indicators and questionnaire questions was prepared based on the WebQual 4.0 method. This questionnaire is used to obtain data from participants. Questions for all indicators in each variable can be seen in Table 2

(Usability Quality), Table 3 (Information Quality), Table 4 (Service Interaction Quality), and Table 5 (User Satisfaction).

Table 2 – Usability Quality

Variable	Indicator	Question
Usability Quality (X1)	X1.1	User found it easy to learn how to operate the Banyhuasin Disdukcapil online service
	X1.2	Interaction with the Disdukcapil online service is clear and easy to understand
	X1.3	It is easy to navigate the Banyuasin Disdukcapil online service
	X1.4	The Banyuasin Disdukcapil online service is easy to use
	X1.5	The Banyuasin Disdukcapil online service has an attractive appearance
	X1.6	Banyuasin Disdukcapil online service design according to its type
	X1.7	Banyuasin Disdukcapil online services create a positive experience for users

Table 3 – Information Quality

Variable	Indicator	Question
Information Quality (X2)	X2.1	The Banyuasin Disdukcapil online service provides accurate information
	X2.2	The Banyuasin Disdukcapil online service provides reliable information
	X2.3	The Banyuasin Disdukcapil online service provides timely information
	X2.4	The Banyuasin Disdukcapil online service provides relevant information
	X2.5	The Banyuasin Disdukcapil online service provides information that is easy to understand
	X2.6	The Banyuasin Disdukcapil online service provides detailed information

Table 4 – Service Interaction Quality

Variable	Indicator	Question
Service Interaction Quality	X3.1	The Banyuasin Disdukcapil online service has a good reputation
	X3.2	The Banyuasin Disdukcapil online service provides room for personalization
(X3)	X3.3	Banyuasin Disdukcapil online services are safe for personal information
	X3.4	Banyuasin Disdukcapil's online service makes it easy to communicate with the Banyuasin Population and Civil Registration Service

Table 5 – User Satisfaction

Variable	Indicator	Question
User Satisfaction (Y)	Y1	Users like the appearance of the Banyuasin Disdukcapil online service
	Y2	Users like the services available on the Banyuasin Disdukcapil online service
	Y3	The Banyuasin Disdukcapil online service is running according to its function
	Y4	Loading Banyuasin Disdukcapil's online service does not take a long time
	Y5	The information on the Banyuasin Disdukcapil online service is useful for users
	Y6	Banyuasin Disdukcapil online services can be accessed using a gadget device

3. Result and Discussion

The results of this pilot investigation focused on two tests, namely the validity test and the reliability test.

3.1. Validity test

Validity testing is carried out by measuring the correlation between statement items on each variable indicator [8]-[10]. Data was obtained from questionnaires that had been distributed. The r table value in this study with a confidence level of 0.05 is 0.361. So if there is an indicator that has a value <0.361 (less than 0.361) it will be deleted from the research instrument. The results of the validity test from the pilot study instrument trial questionnaire data that have been carried out shown in Table 6:

Table 6 – Validity test

Variable	Indicator	r count	r table	Description
Usability Quality	X1.1	0.761	0.1793	Valid
	X1.2	0.765		Valid
	X1.3	0.726		Valid
	X1.4	0.737		Valid
	X1.5	0.742		Valid
	X1.6	0.703		Valid
	X1.7	0.785		Valid
Information Quality	X2.1	0.695		Valid
	X2.2	0.642	0.1793	Valid
	X2.3	0.641		Valid

	X2.4	0.545		Valid
	X2.5	0.660		Valid
	X2.6	0.670		Valid
Service Interaction Quality	X3.1	0.760	0.1793	Valid
	X3.2	0.727		Valid
	X3.3	0.742		Valid
	X3.4	0.783		Valid
User Satisfaction	Y1	0.741	0.1793	Valid
	Y2	0.692		Valid
	Y3	0.687		Valid
	Y4	0.636		Valid
	Y5	0.691		Valid
	Y6	0.604		Valid

It is shown that in the results of the validity test calculations, there are no indicators whose correlation is <0.1793, therefore there are no indicators that will be removed from this pilot study instrument.

3.2. Reliability Test

This reliability test uses the Cronbach's Alpha coefficient [11], [12]. The Cronbach's Alpha coefficient is the most frequently used because this coefficient is used to describe variations in items. If the alpha coefficient value is greater than 0.6 then it is concluded that the research instrument is reliable [13]-[15]. The reliable test results from the pilot investigation instrument questionnaire data that have been carried out can be seen in Table 7.

Table 7 – Reliability Test

Variable	Cronbach Alpha	Description
Usability Quality	0.865	Reliable
Information Quality	0.713	Reliable
Interaction Quality	0.746	Reliable
User Satisfaction	0.739	Reliable

It shows that all items in each variable show a Cronbach Alpha value $\geqslant$ 0.6, so it can be stated that all variable items are declared reliable or consistent.

4. Conclusion

The study effectively assessed the efficiency, accessibility, and overall performance of the Banyuasin Disdukcapil online services. It extensively examined various facets, including usability, information quality, service interaction, and user satisfaction. All indicators under usability quality (X1.1 to X1.7) demonstrated strong positive correlations (r count) ranging from 0.703 to 0.785, indicating a high level of usability within the online services. These factors encompass ease of learning, clarity, navigation, attractiveness, design suitability, and the creation of a positive user experience.

The information quality indicators (X2.1 to X2.6) exhibited correlations between 0.545 and 0.695. While these correlations were slightly lower than usability quality, they still reflected a significant association between providing accurate, trusted, timely, relevant, understandable, and detailed information through online services. Service interaction quality indicators (X3.1 to X3.4) displayed correlations ranging from 0.727 to 0.783. These aspects, including maintaining a good reputation, personalization space, information security, and ease of communication with the department, showed strong positive associations with the online service quality. User satisfaction indicators (Y1 to Y6) depicted correlations between 0.604 and 0.741, highlighting the importance of factors such as interface appeal, available services, functionality alignment, loading time, usefulness of information, and accessibility across devices in influencing user satisfaction.

The study's validity testing demonstrated that all indicators met the predefined threshold (r table) for validity, indicating that none of the indicators needed removal from the research instrument. Additionally, the reliability (Cronbach's Alpha) of the variables was established, showing values above 0.6 for usability, information quality, service interaction quality, and user satisfaction, signifying consistency and reliability across their respective items. In essence, the investigation illustrated a strong correlation between the quality aspects of the online services provided by Banyuasin Disdukcapil (usability, information, service interaction) and user satisfaction. These findings can serve as a fundamental groundwork for enhancing the online service infrastructure, providing actionable insights to refine and optimize the digital platform for an improved user experience.

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