

# Evaluation Of User Experience And Recommendation Of Improvements To The Jember DISPENDUKCAPIL Service Information System With UEQ Method

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## ABSTRACT

SIP Dispendukcapil Jember is a mobile application released in 2019 by the Jember Regency Government to make it easier for the public to manage and register civil. This study uses the UEQ method which has 6 parameters with 26 items, the UEQ parameters include Attractive, Perspicuity, Efficiency, Dependability, Stimulation, and Novelty with the result being a recommendation for feature improvements to be improved again. This research started from data collection, literature study, respondent determination, instrument preparation, data collection strategy development, UEQ questionnaire distribution, evaluation data analysis using the UEQ method, compiling recommendations for improvement and the result is an Attractive value of 1.26 which is above the average criteria, Perspicuity 1.35 above the average criteria, Efficiency 0.97 below the average criteria, Dependability 0.89 included in the criteria. below the average criteria, 1.11 Stimulation is included in the below average criteria. the above average criteria, Novelty 1.19 is a good criterion.

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**Keyword:** User Experience, Service Information System, Dispendukcapil Jember, User Experience Questionnaire method

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## 1. Introduction

The development of the world of digital technology which is always progressing makes almost all levels of society inseparable from current technology [1]. The use of digital technology is certainly not only utilized by the community, but can also be utilized by a government agency. One of the government agencies that have taken advantage of the development of digital technology is the Department of Population and Civil Registration of Jember Regency.

The Department of Population and Civil Registration of Jember Regency is one of the government agencies in Jember Regency which has the authority to record and archive resident documents in Jember Regency, as well as serve Jember residents in managing official documents [2]. The Jember District Dispendukcapil service, of course, can now not only be submitted offline, but now it can also be submitted online, namely by making an innovation to improve the quality of information and population and civil registration services that can be accessed via a mobile-based smartphone, namely the Jember Dispendukcapil Service Information System.

The Jember Dispendukcapil Service Information System is a mobile-based information system that contains all information and services related to population and civil registration in Jember Regency. The Jember Dispendukcapil Service Information System is a product made by the Dispendukcapil of Jember Regency to meet the needs of users in accessing information related to population and civil registration information and services [3]. Therefore, it is hoped that a qualified Jember Dispendukcapil Service Information System has parameter functionality and also has a quality user experience. However, after observing the application, many users complained about various problems, namely difficulties in uploading requirements documents, difficulty in finding detailed information on each service that has been provided, each subtitle is not very visible, unresponsive test history table. After knowing the user complaints above, the problem is part of the user experience parameters so that it affects the user experience.

User experience questionnaire (UEQ) is one of the algorithms or methods used to measure the value of user experience in using an information system (Laugwitz et al., 2008) There are six parameters in using the UEQ method, namely the parameter of novelty or novelty, stimulation or stimulation, or attractiveness, attractiveness or attractiveness, accuracy or dependability, and efficiency or efficiency by having 26 questions with seven answer choices provided [4]. The UEQ data analysis tool is a tool used by the System to performed the calculation of the basic and average parameters of the collected UEQ questionnaire [4].

Judging from all the explanations above, it is very necessary to evaluate the Jember Dispendukcapil Service Information System. The initial stage that will be carried out begins with approaching 100 respondents. After all data has been collected from the questionnaire distribution process, the next process is design evaluation by using the user experience questionnaire method of improvement on the same respondents. After obtaining the results of the improvement design evaluation. In this study, it is expected to provide evaluation results about how far the level of user experience of the Jember Dispendukcapil Service Information System in the eyes of users and provide recommendations for improving user experience so that it is finally able to improve the quality of user experience design. In this study, it is hoped that it can provide the results of measuring user experience and also provide recommendations for improvements to the Information System Service Dispendukcapil Jember.

## 2. Research Method

The Jember Dispendukcapil Service Information System is an application system launched in 2019 by the Jember Regency Government to make it easier for the public to find information and services related to population and civil registration in the Regency. Jember [3]. The Dispendukcapil Service Information System version 1.0 was first released in 2018. This version of the application has been updated to the latest version after being removed from the Google Play Store. The SIP Dispendukcapil Jember application was re-released the latest version 2.0 on December 6, 2019 with a total of 35,704 users as of October 2021. The Jember Dispendukcapil Service Information System provides services in the form of Complaints/Assistance, Requests for Moving Come Reports, Requests for Making/Printing of MCH, Requests for Printing of Lost/Damaged KK, Requests for printing of New KK for new Family Members, New KK for newborn babies, New KK for newlyweds recently married (KTP split), Application for printing of Certificate of Recording of KTP, Application for lost/damaged EI KTP, Application for Printing of a New ID Card, Application for Making a Death Certificate, and Application for Making a Birth Certificate. User experience questionnaire is a method used in designing a questionnaire that is useful for measuring the value of user experience on a product effectively [5].

The research flow is a process or process in carrying out research that will be used as a research stage & starts from knowing the problem, searching for study literature, determining samples, evaluating user experiences, analyzing results, making improvement designs, and drawing conclusions.



### 3. Result and Analysis

The type of research that researchers want to use is a type of quantitative research. This type of quantitative research is one type of research whose flow is systematic, planned, and clearly structured from the beginning of the study to the end of the research and of course requires the use of numerical data to be analyzed [6]. The research to be carried out includes quantitative research, this is because this research uses a questionnaire data collection method. The results of the data obtained are parameters in the form of numeric numbers. After the data results are obtained, then the numerical data analysis process is carried out to obtain the measurement results for each UEQ parameter.

The object of this research is the Jember Dpendukcapil Service Information System version 2.0 which has a total of 35 thousand application downloaders with a review value of 3.2 on the Google Play Store. The research flow is a stage or process in carrying out research that will be used as a research stage & begins with determining problem identification, searching for literature studies, determining samples, evaluating user experience, analyzing results, making improvement designs, and drawing conclusions. The time and location of the research was in Jember Regency. This research will be carried out for four months, starting from December 2021 to April 2022.

### 4. Conclusion

Based on the results of the evaluation using the UEQ method for users of the SIP Dpendukcapil Jember application that has been carried out, it can be concluded that the measurement of user experience in the SIP Dpendukcapil Jember application gets the measurement results for each UEQ parameter, the Attractive value of 1.18 is included in the above average criteria, Perspicuity 1.35 is included in the above average criteria, Efficiency 0.97 is included in the below average criteria, dependability 0.89 is included in the below average criteria, Stimulation 1.11 is included in the above average criteria, Novelty 1.24 is included in the good criteria. Based on the list of problems and recommendations for improvement obtained from 100

research respondents, the researchers determined that there were 3 recommendations for improvement for the application of the SIP Dispendukcapil Jember.

From the results & discussion above, it is known that the average parameter value for each respondent, the results of the average value for each UEQ statement item below are the results of the average value for each UEQ statement item presented in table 1

Table 1. Rerata Tiap Item Pernyataan UEQ

Item	Mean	Kiri	Kanan	Parameter
1	0,9	Menyusahkan	Menyenangkan	<i>Attractiveness</i>
2	1,6	Tak Dapat Dipahami	Dapat Dipahami	<i>Perspiciuity</i>
3	1,1	Kreatif	Monoton	<i>Novelty</i>
4	1,3	Mudah Dipelajari	Sulit Dipelajari	<i>Perspiciuity</i>
5	1,3	Bermanfaat	Kurang Bermanfaat	<i>Stimulation</i>
6	1,2	Membosankan	Mengasyikkan	<i>Stimulation</i>
7	1,0	Tidak Menarik	Menarik	<i>Stimulation</i>
8	-0,1	Tak Dapat Diprediksi	Dapat Diprediksi	<i>Dependability</i>
9	0,7	Cepat	Lambat	<i>Efficiency</i>
10	1,5	Berdaya Cipta	Konvensional	<i>Novelty</i>
11	1,7	Menghalangi	Mendukung	<i>Dependability</i>
12	1,6	Baik	Buruk	<i>Attractiveness</i>
13	1,2	Rumit	Sederhana	<i>Perspiciuity</i>
14	1,8	Tidak Disukai	Menggembirakan	<i>Attractiveness</i>
15	1,2	Lazim	Terdepan	<i>Novelty</i>
16	1,3	Tidak Nyaman	Nyaman	<i>Attractiveness</i>
17	1,7	Aman	Tidak Aman	<i>Dependability</i>
18	0,9	Memotivasi	Tidak Memotivasi	<i>Stimulation</i>
19	0,3	Memenuhi Ekspektasi	Tidak Memenuhi Ekspektasi	<i>Dependability</i>
20	-0,2	Tidak Efisien	Efisien	<i>Efficiency</i>
21	1,3	Jelas	Membingungkan	<i>Perspiciuity</i>
22	1,7	Tidak Praktis	Praktis	<i>Efficiency</i>
23	1,7	Terorganisasi	Berantakan	<i>Efficiency</i>
24	1,0	Atraktif	Tidak Atraktif	<i>Attractiveness</i>
25	0,9	Ramah Pengguna	Tidak Ramah Pengguna	<i>Attractiveness</i>
26	0,9	Konservatif	Inovatif	<i>Novelty</i>

The picture below shows the results of the UEQ benchmark obtained from the analysis of the results of the questionnaire of 100 respondents to the SIP application of the Dispendukcapil Jember. The attractiveness parameter is at the below average level, the perspicuity parameter is at the above average level, the efficiency parameter is at the below average level, the dependability parameter is below average, the stimulation parameter is at the above average level and the novelty parameter is at a good level.

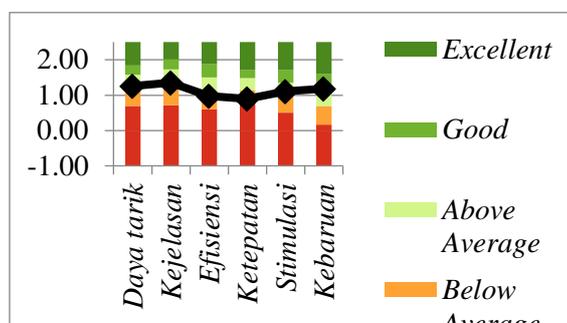


Image 1 Hasil Perbandingan Benchmark Tiap Parameter UEQ

Table 2. Hasil Benchmark UEQ

Parameter	Mean	Kategori
<i>Attractiveness</i>	1,26	<i>Above average</i>
<i>Perspicuity</i>	1,35	<i>Above Average</i>
<i>Efficiency</i>	0,97	<i>Below Average</i>
<i>Dependability</i>	0,89	<i>Below Average</i>
<i>Stimulation</i>	1,11	<i>Above Average</i>
<i>Novelty</i>	1,19	<i>Good</i>

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In this study, when respondents answered neutral to negative assessment parameters, there would be additional questions regarding the features referred to in the assessment. The Jember Dispenduttering application has 9 features, namely login, change profile, settings, application for certificates, application for family cards, application for identity cards, application for SKPWNI, technical assistance and news. From the final results of the UEQ method in the explanation of the benchmark table comparison chapter that needs to be improved, the Attractive parameters, Efficiency parameters and Dependability parameters that need to be improved.

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