

The Design of a Tool to Measure the Effectiveness and Efficiency of Users Towards the Application of Polisiku Application

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ABSTRACT

Polisiku the application is used as a means of police service against masyarakat. A review of the utilization of my police application is necessary to measure the effectiveness and efficiency of the user. The purpose of this research is to design a tool measuring the effectiveness and efficiency of users of the Polisiku application. This study uses dimensions of effectiveness and efficiency based on ISO 2196 which is irrigated from five criteria consisting of Task Effectiveness, Error Frequency, Task Completion, Compliance, Resource Utilization. The measuring instrument used in this study was a questionnaire with the Measurement scale type used in this study is the likert scale. The system's effectiveness and efficiency measuring tool is based on the ISO 9126 model. This measuring instrument will be used in further research on measurement and analysis of the effectiveness and efficiency of the Polisiku application.

Keywords: *Polisiku Application, Tool, Users*

1. INTRODUCTION

Polisiku the application is used as a means of police service to the community. The app has also supported eleven police officers' priorities towards a professional, modern and well-known police service as well as a community-limited police service. [1]. A review of the utilization of my police application is necessary to measure the effectiveness and efficiency of the user. The effectiveness of a software can be measured by factors such as job effectiveness, error frequency, and job completion [2]. Effectiveness is the main element to achieve the goals or objectives that have been determined in each organization, activity or program [3]. In a nutshell the effectiveness of measurement in the sense of achieving a previously determined goal. Effectiveness is the relationship between output and goals to be achieved, operational activities are said to be effective if the process of achieving the objectives and the final goal of the policy [4]. While efficiency can be measured from time factor, resource utilization and suitability. Efficiency is closely related to the concept of productivity, efficiency measurement is carried out using a comparison between the output produced against the input used [5]. Efficiency is the best comparison between input and output (the result between profit and resources used), as are the optimal results achieved with limited use of resources [6].

Polisiku the application has never been measured before after this application was implemented. therefore researchers take measurements using variables of effectiveness and efficiency based on ISO 9126. The

application of Polisiku application with a degree of effectiveness and efficiency can determine the success of the application of Polisiku itself. The higher the level of effectiveness and efficiency, the more functionality and usability of the application [7]. This study uses variables used consisting of Task Effectiveness, Error Frequency, Task Completion, Compliance, Resource Utilization. Uses variable effectiveness and efficiency based on ISO 9126. The type of measurement scale used in this study uses likert scale. The likert scale is chosen because it is used to measure the attitude, opinion and perception of a person or group about a state [8]. This measuring instrument is used in subsequent research by measuring the effectiveness and efficiency of users of the Polisiku application.

2. METHODOLOGY

As for the methods that researchers used in this study, it can be seen in the following steps:

1. To observe the implementation of Polisiku application by the public as a respondent in this study.
2. Conduct a library study of effectiveness and efficiency based on ISO 9126.
3. Designing effectiveness and efficiency tools based on ISO 9126.
4. Conclude the results of the study and advise on further research in line with this research. In figure 1. Is a research flow.

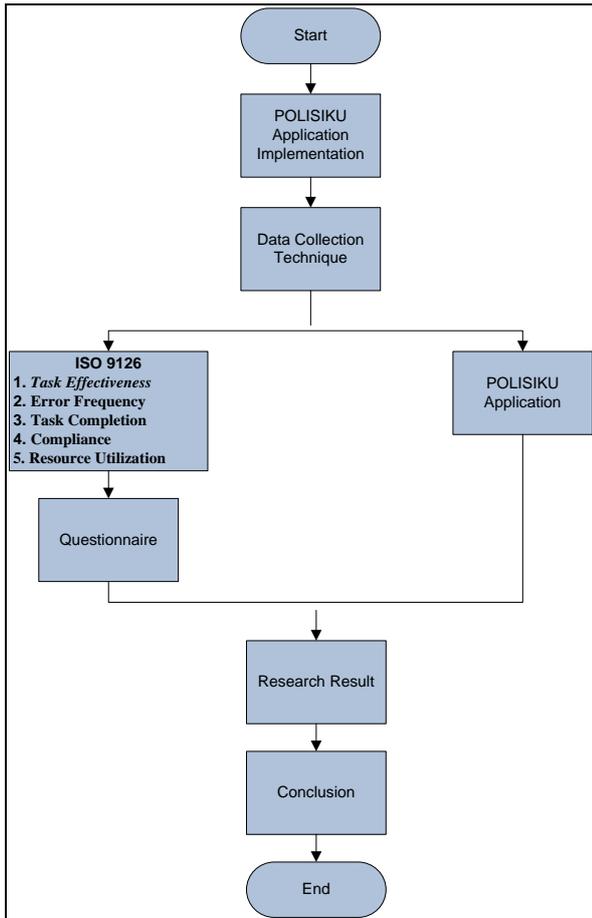


Figure 1. Flowchart

3. RESULT AND DISSCUSSION

The ISO 9126 model for effectiveness and efficiency dimensions consists of five criteria,

including: Task Effectiveness, Error Frequency, Task Completion, Compliance, Resource Utilization. these five criteria have strong values and are highly compliant to measure the level of effectiveness and efficiency.

1. Task Effectiveness
Task Effectiveness contained in ISO 9126 has a sense that the proportion of goals of a task is achieved correctly. The operational definition of task effectiveness is how much percent of tasks are achieved easily or correctly.
2. Error Frequency
Error Frequency contained in ISO 9126 has a sense of how many times the error or error of the system or application when input or uploading data.
3. Task Completion
The task completion contained in ISO 9126 has a sense that the percentage of data input has been completed.
4. Compliance
Internal metrics related to efficiency indicate a set of attributes to assess the feasibility of a software that meets user organization standards, conventions or regulations in relation to efficiency.
5. Resource Utilization
Built-in resources that demonstrate a set of attributes to predict the utilization of hardware resources with computer systems including software products during testing or operation.

The measuring instruments designed in this study are created by formulating questions or statements using existing references. Of the five criteria are spelled out again into sub criteria. The sub kriteria can be a question or question that is answered. Questions or alignment can be seen in table 1.

Table 1. Measuring Instrument Statement

No	Statement
1.	Task Effectiveness
1.1	PoliceKu application complaints service registration can be answered faster and on time
1.2	Public service registration on PolisiKu application can be done well
1.3	Public service registration on PoliceKu application can be done correctly
2.	Error Frequency
2.1	No link error in PoliceKu application
2.2	Clear message on any menu that errors
2.3	No menu that does not respond
2.4	No empty menu
3.	Task Completion
3.1	PoliceKu application page loading process faster
3.2	PoliceKu application menu loading process faster
3.3	Faster loading of registration forms
4.	Compliance
4.1	There is a Police Call Center menu
4.2	Service tools displayed in a decent format
4.3	The information presented on the PoliceKu application is clear
4.4	Polisiku the service menu is easy to understand
4.5	An interesting look at the Polisiku the application

- 5. *Resource Utilization*
 - 5.1 Be in GPS mode and connect to Google Map when accessing the PoliceKu application
 - 5.2 Gps location accuracy in good condition
 - 5.3 Users can activate GPS properly and can integrate with Google Map
- Description
- 1 Please Write down all complaints using the Polisiku application!
 - 2 What makes you want to stick with this application?
 - 3 Would you recommend this app to your friends and family? If so, give me a reason!
 - 4 Please Write suggestions to improve the quality of service in this app for its users!

The type of measurement scale used in this study is the likert scale. This scale is used because it can measure attitudes, opinions and perceptions of a person or group about a state. The design of this measuring instrument uses four alternative answers that feel pali right to show the respondent's original attitude. The type of answer option in the score. Table 2 is an assessment of the likert scale answer options.

Table 2. Likert Scale Answer Option Assessment

Context	Value
Very Agreeable	4 Point
Agree	3 Point
Disagree	2 Point
Strongly Disagree	1 Point

Researchers omitted the neutral question because it made it easier for researchers to see the attitudes of the actual respondents. If we use a likert scale with five alternative answers the results become err, which occurs in the field as a large :

number of respondents will fill in neutral, if not very understanding of the questions or statements asked. For such data includes independent or independent data, where the answers of one respondent have no influence or are not influenced by the answer of the other respondent. The result of the design of this measuring instrument is called kusioner. Kusioner is used as a primary data collection tool by using survey methods to obtain respondents' opinions [9]. In addition to containing questions and questions in this questionnaire, alternative answers are given this score and measuring instrument also contains, the intent and purpose made from this questionnaire, and the respondent's data as an analysis of the respondent's criteria data. This questionnaire will be spread using google form to respondents. The design of the effectiveness and efficiency measuring instrument can be found in the following image

Kuisiener Penelitian "Analisis Efektivitas dan Efisiensi Penerapan Aplikasi Polisiku di Kota Palembang"

Salam Hormat,
Kami memohon kesediaan Bapak/Ibu, Saudara/I untuk berpartisipasi dalam mengisi kuisiener terkait aplikasi Polisiku.
Tujuan Kuisiener : untuk mengukur efektivitas dan efisiensi penerapan aplikasi Polisiku di kota Palembang berdasar variabel yang diamati.

Hormat kami Peneliti : Eko Setiawan, S.Kom., M.Kom.
Wiza Yuni'fa, S.Kom., M.Kom.

*** Wajib**

Identitas responden
Mohon diisi sebagai kelengkapan penelitian kami

Jenis kelamin *

Laki-laki
 Perempuan

Pendidikan terakhir *

SD
 SMP
 SMA
 S1
 S2
 S3

<p>Pekerjaan *</p> <p><input type="radio"/> Tidak bekerja</p> <p><input type="radio"/> PNS</p> <p><input type="radio"/> Karyawan</p> <p><input type="radio"/> Wiraswasta</p> <p><input type="radio"/> Lainnya</p> <hr/> <p>Usia *</p> <p><input type="radio"/> < 18 tahun</p> <p><input type="radio"/> 18-28 tahun</p> <p><input type="radio"/> 28-38 tahun</p> <p><input type="radio"/> > 38 tahun</p>	<p>Polsek terdekat (wilayah tempat tinggal) *</p> <p><input type="radio"/> Polresta Palembang (Jahabering)</p> <p><input type="radio"/> Polsek Talang Kelapa</p> <p><input type="radio"/> Polsek Ilir Barat I</p> <p><input type="radio"/> Polsek Gandus</p> <p><input type="radio"/> Polsek Seberang Ulu I</p> <p><input type="radio"/> Polsek Kalidoni</p> <p><input type="radio"/> Polsek Kemuning</p> <p><input type="radio"/> Polsek Kertapati</p> <p><input type="radio"/> Polsek Pajaj</p> <p><input type="radio"/> Polsek Sako</p>
<p>1. Task Effectiveness (Efektivitas)</p> <hr/> <p>Registrasi layanan pengaduan aplikasi PolisiKu dapat dijawab lebih cepat dan tepat waktu *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak setuju</p> <p><input type="radio"/> Sangat tidak setuju</p> <hr/> <p>Registrasi layanan publik pada aplikasi PolisiKu dapat dikerjakan dengan baik *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p>	<p>Registrasi layanan publik pada aplikasi PolisiKu dapat dikerjakan dengan benar *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p> <hr/> <p>2. Error Frequency (Efektivitas)</p> <hr/> <p>Tidak ada link yang error pada aplikasi PolisiKu *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p>
<p>Pesan jelas pada setiap menu yang error *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p> <hr/> <p>Tidak ada menu yang tidak memberikan respon *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p>	<p>Tidak ada menu yang kosong *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p> <hr/> <p>3. Task Completion (Efektivitas)</p> <hr/> <p>Proses loading halaman aplikasi PolisiKu lebih cepat *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p>

<p>Proses loading menu aplikasi Polisiku lebih cepat *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p> <hr/> <p>Proses loading form registrasi lebih cepat *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p>	<p>4. Compliance (Efisiensi)</p> <hr/> <p>Terdapat menu Call Center Polri *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p> <hr/> <p>Tools layanan ditampilkan dalam format yang layak *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p>
<p>Informasi yang disajikan pada aplikasi Polisiku jelas *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p> <hr/> <p>Menu layanan Polisiku mudah dipahami *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p>	<p>Tampilan aplikasi Polisiku yang menarik *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p> <hr/> <p>5. Resource Utilization (Efisiensi)</p> <hr/> <p>Berada pada mode GPS dan terhubung dengan Google Map pada saat mengakses aplikasi Polisiku *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p>
<p>Tingkat akurasi lokasi GPS dalam keadaan baik *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p> <hr/> <p>User dapat mengaktifkan GPS dengan baik dan dapat terintegrasi dengan Google Map *</p> <p><input type="radio"/> Sangat setuju</p> <p><input type="radio"/> Setuju</p> <p><input type="radio"/> Tidak Setuju</p> <p><input type="radio"/> Sangat Tidak Setuju</p>	

Figure 2. Instrument Statement

4. CONCLUSION

The system's effectiveness and efficiency measuring tool is based on the ISO 9126 model. This measuring instrument will be used in further research on measurement and analysis of the effectiveness and efficiency of the Polisiku application.

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