



## **Evaluation of the Implementation of the ASIK Program (a Health Application in Indonesia) for Child Immunization Report in the Ngoro Mojokerto Public Health Center**

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### **Abstract**

The evaluation implementation in this application aims to trial the ASIK Application program (a Health Application in Indonesia), one of which is an achievement from the Indonesian Ministry of Health on National Child Immunization (BIAN) 2022. The purpose of the research is to find out the results of implementing the use of the ASIK application in inputting and monitoring data on the development of patients or program participants for all health workers who are applied to immunization at the puskesmas. The method used in this study was quantitative. The samples were all users of the Ngoro Public Health Center ASIK application, with 102 respondents. Data analysis used simple linear regression analysis. The results obtained are five heuristic components, but the results that significantly influence variables with a significance value of  $<0.05$  are the Consistency and Standard components with a result of 0.0001. It can be concluded that the ASIK application is beneficial in work, but it still influences the application, which should be reassessed immediately.

### **How to Cite**

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## INTRODUCTION

In this era of globalization, information and communication technology has been progressing as needed by society. This technological advancement helps obtain fast and accurate information when making decisions. One is the use of the ASIK technology application in a health institution at Puskesmas, which can fulfill the presentation of reports in the form of information (Ngafifi, 2014). The Ministry of Health of the Republic of Indonesia (Kemenkes RI) launched the Digital Transformation Office to test the ASIK Application in the month of National Childhood Immunization (BIAN) 2022. The ASIK application is an extension of the Indonesian Ku Health Application, an Indonesian Ministry of Health, for centralized applications used for input and monitoring (Rosidin et al., 2023). Patient development data or program participants for all health workers in public health centers. The ASIK application aims to transform health services that were originally recorded manually, now helping health workers record patient data more efficiently and integrate them into one electronic database (Nasution et al., 2023).

The ASIK application can be used in two media, namely through web functions to edit and add individual profile data for the target community health center; monitor program achievements by the health center; and monitor the achievements of the health center or region by the Health Service (Dinkes) and the Ministry of Health, as well as for monitoring ASIK utilization. In carrying out activities outside the building, they still use a manual recording of information results, one of which is an immunization program in the stage of being used in activity programs at posyandu (Koda et al., n.d.).

Immunization is the most effective activity for providing health efforts in immunity or body immunity to prevent and overcome diseases that attack the human body from an early age. Notes on the results of this immunization are usually written in a particular immunization book, and each immunization book must be brought to determine the results of immunization checks every month. Those trials aimed to use the ASIK application program to make it easier for patients and to archive patient data at the puskesmas (Kairul et al., 2016).

Based on the launch of the ASIK application, in addition to facilitating data archiving, this digital program application can be accessed online or without the Internet. It helps make it easier for health workers in areas where it is difficult to access the Internet (Darwis et al., 2020).

However, based on the results of an interview with one of the Puskesmas officers, they stated that the ASIK application had not been used optimally, either from mobile applications or the web, because there has not been complete socialization of the use of the ASIK application to health workers and the community. The application is a helpful program, but implementing something new requires adjustments and evaluation to fully feel the application's functions and benefits (Aji et al., 2022).

The evaluation stage is the stage to assess whether each step of the activity is in line with development expectations or not. The evaluation phase was conducted during development (Mz, 2016). Revisions were conducted from each evaluation until all stages of development followed the objectives (Susanto et al., 2023). From these problems, the appropriate method is the Usability Guidelines or Heuristic method because this method produces qualitative data, namely recommendations or suggestions for improvement, and quantitative data, namely the product severity rating value (Sayono, 2021). Quantitative data analysis describes and explains research findings based on recommendations from predetermined problems (Rijali, 2019).

After making observations on the ASIK application at the Ngoro Mojokerto Public Health Center, we found several problems related to the use of the application. One of the problems got after conducting interviews was that ASIK application users complained because the application network was still unstable. There were several features for beginner ASIK application users who were still confused about using it, or even among the ASIK application users, there were already older adults, so it was not easy to input the results of achieving the immunization data. Evaluation using the heuristic method has ten aspects of assessment, namely visibility of system status: users always get the latest information about the system (Sulistiyono, 2017). Match with the real world: the system uses commonly used language (Islam and Rahayu, 2018), user control and freedom: when using the system the user is free to make decisions and perform tasks as desired (Rosita et al., 2021), consistency and standard: the system will respond to the browser used by the user (Fitri et al., 2020), error prevention: knowing how to deal with or handle when an error occurs or an error is made by the user (Supriyono et al., 2019), recognition than recall: make objects or choices more transparent (Resa and Wardani, 2022), flexibility and efficiency of use: system can work quickly and easily for both new and expert users (Dandi and Atika, n.d.), aesthetic and minimalist

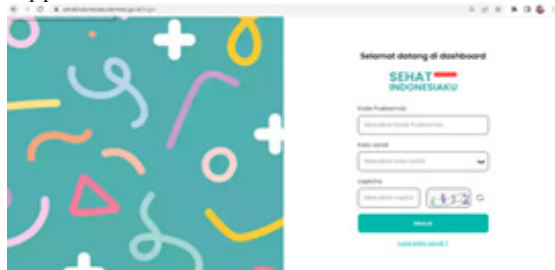
design: system only contains relevant dialogues and information contained in the dialogue according to the unit (Ependi et al., 2019), help users recognize diagnose and recover from errors: error notifications and suggestions for overcoming them (Ahsyar, 2019), and help and documentation: assistance and documentation of any information must be easy to find and specific to the user's task (Triesia et al., 2022).

**METHODS**

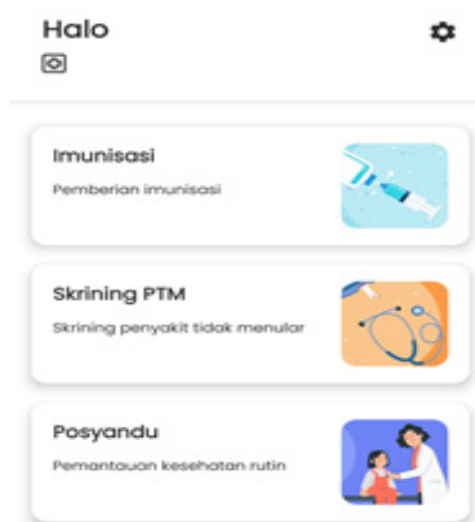
The initial step in this study was to identify problems with the ASIK application used in Puskesmas. This study was conducted at the Ngoro Public Health Center, which began in December 2022. The problems in this study could be addressed by observing and interviewing one of the health workers in the puskesmas or even users of the ASIK application, namely cadres at each posyandu in the Ngoro Mojokerto area. Data was collected using secondary data, supporting data from various studies. This article's literature search and library sources were retrieved and accessed by a Viagoogle scholar. Quantitative research methods have also been used. Data were collected by distributing questionnaires and using a Likert scale from a score of 1 (strongly disagree) to 7 (strongly agree) to measure respondents' ratings. The number of samples was 102 respondents. The data were analyzed with a simple linear regression test using SPSS, and the results were presented in a frequency table.

**RESULTS AND DISCUSSION**

The results that have been obtained regarding the use of the ASIK application are to fill in an immunization schedule according to their age and to find out toddlers who have entered Complete Basic Immunization (IDL) or who have been covered by rotavirus administration to toddlers. The application has also been adapted to the needs of existing age groups. The following **Picture 1 & Picture 2** is the appearance of the ASIK Application:



**Picture 1.** Dashboard Application ASIK



**Picture 2.** Application ASIK display

From the results of 100 respondent data with 20 questionnaires in the Evaluation Evaluation of the Use of the ASIK Application at the Ngoro Mojokerto Public Health Center, the following conclusions were obtained:

**Validity test**

The validity test is the main goal that must be performed to ensure that the questionnaire can be measured according to the criteria made for respondents (Zakariah and Afriani, 2021).

**Table 1.** Validity Test Results

Variable	Statement	R. Count	R. Table	annotation
VSS	1	0,716127	0,195	Valid
	2	0,847548	0,195	Valid
MBS	1	0,668545	0,195	Valid
	2	0,444277	0,195	Valid
UCF	1	0,726381	0,195	Valid
	2	0,686811	0,195	Valid
CS	1	0,454296	0,195	Valid
	2	0,471011	0,195	Valid
EP	1	0,508803	0,195	Valid
	2	0,451337	0,195	Valid
RRTR	1	0,359333	0,195	Valid
	2	0,650526	0,195	Valid
FEU	1	0,737542	0,195	Valid
AMD	1	0,69737	0,195	Valid
HUR	2	0,787177	0,195	Valid
	1	0,696684	0,195	Valid
HD	2	0,539906	0,195	Valid
	1	0,515433	0,195	Valid
	2	0,471011	0,195	Valid

From the results of the **Table 1.** Validity Test, ten variables must be looked for by comparing the R.Count value with R.Table, namely:

- If the  $r \text{ count} > r \text{ table} =$ , then the result is declared Valid
- If the  $r \text{ count} < r \text{ table} =$ , then the result is declared Invalid

For the table value obtained in the table value distribution using a significance of 5%, which has a total of 100 respondents, the rtable value was 0.195. So it can be concluded that the questionnaire that has been made is declared valid by assessing the validity test (Rosita et al., 2021)

**Reliability Test**

The reliability test is an instrument to find out which questionnaires are obtained to get reliable results in an assessment (Ovan and Saputra, 2020).

**Table 2.** Reliability Test

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VSS1	91,47	275,969	0,673	0,888
VSS2	92,01	268,677	0,819	0,883
MBS1	91,67	276,668	0,628	0,899
MBS2	92,91	290,931	0,373	0,899
UCF1	92,02	276,383	0,686	0,898
UCF2	92,31	277,327	0,631	0,889
CS1	93,38	280,379	0,347	0,900
CS2	92,33	288,163	0,425	0,899
EP1	92,37	285,569	0,442	0,899
EP2	92,11	293,149	0,405	0,899
RRTR1	93,02	291,111	0,266	0,900
RRTR2	92,12	274,834	0,589	0,899
FEU1	92,21	273,056	0,673	0,887
AMD1	92,21	268,612	0,636	0,898
AMD2	91,81	272,378	0,750	0,886
HUR1	91,77	274,906	0,644	0,898
HUR2	92,72	274,951	0,445	0,896
HD1	92,07	278,773	0,464	0,899
HD2	92,33	288,163	0,425	0,899

From the results of the **Table 2.** Reliability Test, ten variables must have the following testing criteria:

- When the valueCronbach's alpha > significant level = then declared Reliable
- When the valueCronbach's alpha < signi-

ficant level = then stated Not Reliable

The value of Cronbach's alpha in the table is above 0.897, with 19 questions said to be reliable (consistent) (Erida, 2021).

**Simple Linear Regression Test**

**Visibility of system status influencing Usability**

With the simple linear regression test results, a significance value was obtained with a value of  $p = 0.002 < 0.05$ ; therefore, H0 was rejected, which means it affects the visibility of the system status independent variable on the usability dependent variable. This case is because the user feels they do not understand the information in the application, and the information is not updated over time.

**Match between the system and the real world influencing Usability**

Based on the results of the simple regression test, it was found that the significance value was  $p = 0.623 > 0.05$ ; therefore, H0 was accepted, which means that it has no influence on the independent variable match between the system and the real world with the dependent variable Usability. Because the application provided already has quite good satisfaction with the language used in the application, users are easy to use the application.

**User control and freedom influencing Usability**

Based on the simple linear regression test results, a significance value was obtained with a value of  $p = 0.009 < 0.05$ , so H0 was rejected, which means it affects the independent variables of user control and freedom with the dependent variable of Usability. Those are due to the lack of use of applications related to freedom of access to control the buttons in the application, so the buttons or icons in the application have not run perfectly.

**Consistency and standards influencing Usability**

With the simple linear regression test results, a significance value is obtained with a value of  $p = 0.0001 < 0.05$ ; then, H0 is rejected, which means that it affects the independent variable user consistency and standard with the dependent variable Usability. According to respondents or users of the application, the appearance is still not consistent or stable with existing regulations.

**Error prevention influencing Usability**

Based on the results of the simple regression test, it was found that the significance value was  $p = 0.111 > 0.05$ ; therefore, H0 was accepted, which means that it has no effect on the indepen-

dent variable error prevention with the dependent variable Usability. The application already has an appropriate and straightforward design, so it can minimize errors in application users.

With the simple linear regression test results, a significance value is obtained with a value of  $p = 0.001 < 0.05$ ; therefore,  $H_0$  is rejected, which means that it affects the independent variable recognition rather than recall with the dependent variable Usability. According to respondents, there is no completeness related to information satisfaction in the system that can help this information become more explicit, so that users can understand it more quickly.

#### **Flexibility and efficiency of use influencing Usability**

Based on the results of the simple regression test, it was found that the significance value was  $p = 0.926 > 0.05$ , so  $H_0$  was accepted, which means that it did not affect the independent variable flexibility and efficiency of use with the dependent variable Usability. Because the application's appearance can help respondents work faster and more efficiently, they are satisfied with the application that has been provided.

#### **Aesthetic and minimalist design influencing Usability**

With the simple linear regression test results, a significance value is obtained with a value of  $p = 0.005 < 0.05$ ; therefore,  $H_0$  is rejected, which means that it affects the independent variables' aesthetic and minimalist design with the dependent variable Usability. Those are because no system displays information following existing needs, so that information is still unclear.

#### **Help users recognize, diagnose, and recover from errors influencing Usability**

Based on the results of the simple regression test, it was found that the significance value was  $p = 0.153 > 0.05$ ; therefore,  $H_0$  was accepted, which means that it does not affect the independent variables that help users recognize, diagnose, and recover from errors with the dependent variable Usability. In the application display are messages about errors related to using language that is easy for users to understand.

#### **Help and documentation influencing Usability**

Based on the simple regression test results, a significance value of  $p = 0.265 > 0.05$  indicates that  $H_0$  is accepted, which means that it does not affect the independent variable help and documentation with the dependent variable Usability. Those are because, in the application's appearance, there is already documentation that can help when the user needs it.

Therefore, based on the results of the SPSS table for the ten variables, it is known that there are some fundamental or significant influences between the independent and dependent variables. Decision-making is made by looking at the significance value of each table. To determine whether the variable is significant, we can use judgment p-value, which has a 0.05 or 5% value on  $H_0$  and  $H_a$ . If the significance value is  $> 0.05$  (5%), then  $H_0$  is accepted, and  $H_a$  is rejected; thus, there is no effect between the independent variables on the dependent variable. Whereas if the significance value is  $< 0.05$  (5%), then  $H_0$  is rejected and  $H_a$  is accepted, so there is an influence between the independent variable and the dependent variable (Rahayu et al., n.d.)

It is known that five independent variables have a significant effect on the dependent variable by producing a significance value of  $< 0.05$ . Some of the variables that affect them are visibility of system status, which has a significant value of  $0.002 < 0.05$ ; user control and freedom, which has a significant value of  $0.009 < 0.05$ ; consistency and standard, which has a significant value of  $0.0001 < 0.05$ ; recognition rather than recall, which has a significant value of  $0.001 < 0.05$ ; and aesthetic and minimalist design, which has a significant value of  $0.005 < 0.05$ . Of the five variables,  $H_0$  was rejected, and  $H_a$  was accepted, which means it influences the dependent variable. Those are following research (Fitri et al., 2020), which shows a relationship between the value of the application and the value of using the application that has a highly significant value so that it is very influential in the future if it is not managed regarding the results it has obtained.

## **CONCLUSION**

Based on the research that has been done, it can be concluded that there is an influence of the independent variable with the dependent variable on the 5 Heuristic components with a significance value of  $< 0.05$ , namely the independent variable user consistency and standart with a result of 0.0001. According to the results of the respondents, because the appearance of the application has not run perfectly and is not consistent, so according to the application users, they must continue to evaluate the ASIK application at the UPT Puskesmas Ngoro Mojokerto.

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