ISSN No:-2456-2165

Effectiveness and Application of the Data Collection and Evaluation Application Model (AP-PENDANELSI) Results of Web-Based Networking in Improving the Quality of School Dental Health Business Programs in Elementary Schools in the Jepara Region

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Abstract:- UKGS is the first level program at the Community Health Center to improve the level of dental health in the school environment. So far, the implementation of the UKGS program has not been effective, because there is still a high rate of tooth decay among students, dental health examinations are carried out once a year in each semester, there is no special examination format, dental health data is stored in hard files, there is no treatment plan, and there is no Efforts to evaluate the results of dental health examinations. The WEB-based Data Collection and Evaluation Application Model (Ap-Pendanelsi) can be used to report the results of dental health examinations, determine plans and treatment directly,carry out evaluation and follow-up plans, and store and search for data. Objective: Implementation of the Data Collection and Evaluation Application Model (Ap-Pendanelsi) of WEB-based Networking Results in improving the quality of the school dental health business program (UKGS) to monitor the development of school students' dental health. Research Method: This research uses the Research and Development (R&D) model test method using a pre-experimental design with a one-group pre-post test design. There were 22 respondents consisting of 1 Puskesmas dentist and 21 teachers, to assess the quality of UKGS management, system quality, and user quality. The data analysis model uses the Intraclass correlation coefficient, and Wilcoxon. Results: The expert validation test for the application (Ap-Pendanelsi) obtained a score of 93.62% and p<0.043 in the very good category. The quality of UKGS management, system quality, and overall quality of Application users (Ap-Pendanelsi) increased significantly after treatment compared to before Application treatment (Ap-Pendanelsi) p<0.005. Conclusion: Implementation of the Data Collection and Evaluation Application Model (Ap-Pendanelsi) provides a significant improvement in the quality of UKGS management, system quality, and user quality. Supporting the achievement of the UKGS monitoring program in data collection, planning, and evaluating the dental health of school students.

Keywords:- *Data Collection and Evaluation, UKGS.*

I. INTRODUCTION

Health is one of the factors that play an important role in investing in the development of quality human resources[1]. Dental and oral health is an important part of general health and well-being and is an important factor influencing a person's quality of life[2]. Dental and oral health is a healthy condition of the hard and soft tissues of the teeth as well as the elements associated with the oral cavity, which allows individuals to eat, speak, and interact socially without dysfunction, aesthetic disturbances, and discomfort due to disease, occlusion deviation, and loss. teeth so that they can live socially and economically productive lives[3].

A person's dental and oral health status is influenced by four important factors, namely heredity, environment (physical and socio-cultural), behavior, and health services. Based on these four factors, behavior directly influences and plays an important role in dental and oral hygiene[4]. Behavior in maintaining healthy teeth and mouth needs to be done from an early age/ because teeth have important functions such as chewing, speaking, and maintaining facial shape[5].

Dental and oral health problems, especially cavities (caries), are still widely complained about by both children and adults[6]. Based on The Global Burden of Disease Study 2016, dental and oral health problems, especially dental caries, are diseases experienced by almost half of the world's population (3.58 billion people). Basic Health Research (Riskesdas) in 2018 stated that the largest proportion of dental problems in Indonesia was damaged/caved/sick teeth (45.3%), while the oral health problems experienced by the majority of the Indonesian population were swollen gums (abscesses) at 14%.[7].

57.6% of the Indonesian population experiences dental and oral health problems, of which only 10.2% receive treatment from medical dental personnel. Based on age group, the largest proportion of dental and oral problems was in the 5-9 year age group (67.3%) with 14.6% having received treatment by medical dental personnel. Meanwhile, the lowest proportion of dental and oral problems was aged 3-4 years (41.1%) with 4.3% having received treatment[7].

Children's dental and oral health is something that must be considered since the growth of milk teeth to avoid dental and oral problems such as dental caries, mouth ulcers, or bad breath in preschool children.[8]. Children's oral and dental health is generally found to be in poor condition with the presence of plaque and other deposits on the surface of the teeth[9]. Dental and oral health problems in elementary school children are cavities[10]. School-aged children are an age group that is vulnerable to dental and oral diseases because generally at that age they still have poor behavior in maintaining healthy teeth and mouth.

Dental and oral health in children in Indonesia still needs serious attention from health workers[10]. If a child's dental and oral health problems are not paid attention to, it can affect the quality of life, causing pain, discomfort, disability, acute and chronic infections, eating and sleeping disorders, and a high risk of being hospitalized, which causes high medical costs and reduced study time at school[6]. Efforts to maintain oral health and foster dental health in school group children need special attention because at this age children are undergoing a process of growth and development. The previous condition of the teeth will influence the development of dental health in adulthood[11].

The government has created various programs to improve dental and oral health, especially for children. The Community Health Center (Puskesmas) plans dental and oral health efforts aimed at certain groups on an ongoing basis in the promotive, preventive, curative, and rehabilitative fields through the Dental School Program/School Dental Health Business (UKGS). School Dental Health Business (UKGS) is a first-level program at the Community Health Center that aims to create a healthy generation in the school environment[12]. UKGS is divided into three stages consisting of UKGS stage 1 (minimum package), stage 2 (standard package), and stage 3 (optimal package)[13]. UKGS activities carried out include training teachers and minor doctors to promote dental and oral health among students, checking the condition of children's teeth and mouths, as well as limiting dental and oral care.[14].

The dental health maintenance program implemented in schools through the School Dental Health Business (UKGS) has not been able to change students' tooth brushing behavior to be better and more correct, because it is only implemented once a year.[15]. According to research conducted by Wirata (2015), it shows that oral hygiene and tooth decay scores in elementary school students with active UKGS are better than elementary school students with inactive UKGS.[16]. In contrast to research conducted by Abdullah (2018) which shows that schools with less active UKGS or inactive UKGS have no relationship with dental and oral hygiene status and tooth decay in students in several elementary and equivalent schools.[17].

Dental and oral health services for elementary school students aged 6 to 12 years are not yet optimal so their implementation has not been successful[18]. The success of the UKGS program with the use of teacher components is the best promoter in educational activities because they are familiar with methods of educating and motivating school students in increasing their knowledge of dental and oral health.[9]. The success of the elementary school children's health screening system is the role of community health center management in managing the program. The managerial role of the community health center related to the program is in planning, organizing, directing, and supervising[19]. Dental nurses as implementers of micro-management activities in dental health services, especially UKGS, carry out planning, implementation (promotive, preventive, and simple curative), monitoring, and evaluation activities.[20]. Monitoring and evaluating the implementation of UKGS is difficult because the UKGS reporting system has been done manually at the end of the year using a form combined with the health center report.[19].

Based on the results of fieldwork practice (PKL) by applied master's students in dental therapy postgraduate at the Semarang Ministry of Health Polytechnic in 2022 at the Pakis Aji Community Health Center, Jepara Regency, there is one dental and oral therapist who supervises the School Dental Health Business Program (UKGS) in 33 elementary schools. The periodic screening program carried out on 5737 elementary school students under the working area of the Pakis Aji Public Health Center, Jepara Regency, found that 3451 students needed dental and oral health care and 0 students did not receive dental and oral health care. The implementation of the school dental health business program (UKGS) still has many shortcomings, including the implementation of mass tooth brushing activities without any independent inspection by the school, there is no special monitoring format for students' dental health, the data storage system is still manual and dental health data is often lost. school students and no evaluation of examination results is carried out.

Problems that occur in the UKGS program require improvements and updates to the management of problem data obtained from networking, by following technological developments, so that it can support the success of the school dental health business program (UKGS). The development of the times with technology increasingly developing rapidly in all fields including the health sector, especially in increasing data processing that is more effective and efficient to support work productivity[21]. Technological developments in the health sector can make it easier for patients to obtain health services[22]. Information systems are very necessary to be able to support humans in processing data and producing accurate information[23].

The website-based UKGS management model is an information system that can be used to report UKGS activities directly and monitor and evaluate UKGS activities so that they are in line with predetermined targets. Based on research by Suryo (2020), the information system-based UKGS SD management model provides a significant improvement in the quality of UKGS management[24]. The application of web-based data collection and evaluation applications is designed to support the success of school dental health programs. The use of this application functions as a support for collecting dental health data to monitor the development of children's dental health, evaluate treatment in cases found, and support the smooth running of screening

and periodic examination programs.

Based on the problems described above, namely by realizing improvements in the management of dental health data that will be useful in reducing the risk of dental caries in elementary school-aged children, researchers are interested researching web-based data collection and evaluation applications in monitoring dental health developments and evaluating the results of dental care. needed.

II. RESEARCH METHODS AND SAMPLES

The research model that will be carried out is the research and development (R&D) method. This research was conducted at SD 6 Lebak, SD 3 Bulungan and Miftahul Huda in the Pakisaji Community Health Center working area. The population in this study were dental and oral therapists or those in charge of the Pakisaji Community Health Center UKGS program, school teachers (homeroom teachers), and teachers in charge of the UKGS program. The sample in the study that met the inclusion and exclusion criteria was 22 people, there were 18 homeroom teachers, 3 teachers in charge of UKGS, and 1 health center dentist in charge of the UKGS program.

III. RESULTS AND DISCUSSION

A. Respondent Character

There were 22 respondents in this study, consisting of 3 UKGS teachers, 18 homeroom teachers, and 1 health center dentist. The results of the characteristics of the respondents in this study were used to determine the general description of the respondents which are presented in the following table:

Table 1: Respondent Characteristics Data

No	Characteristics		Respondent	
			Amount	**%**
1.	Gender :	a. Man	9	40.9
		b. Woman	13	59.1
2.	Age :	a. 25-35	7	31.8
		b. 36-45	7	31.8
		c. 46-55	8	36.4
		d. 56-60	0	0
3.	Education	a. JUNIOR HIGH SCHOOL	0	0
		b. SENIOR HIGH SCHOOL	0	0
		c. S1	22	100.0
		d. S2		
4.	Work:	a. Civil servants	22	100.0
		b. Honorary	0	0
5.	Length of work	a. 1-5 Years	6	27.3
		b. 6-15 Years	5	22.7
		c. 16-25 Years	11	50.0
		d. 26-30 Years	0	0
6.	Ability to operate Computer/laptop	a. Can	22	100.0
		b. Can't	0	0

The results of the respondent characteristics test showed that the gender of the male respondents was 40.9% with 9 people while the female respondents had 59.1% with 13 people. The number of respondents ages based on age categories was 7 people aged 25-35 years, 31.8%, 7 people aged 36-45 years, 31.8%, and 8 people aged 46-55 years 36.4%. The education level of the respondents based on the education level category was 100%, with 22 people with a bachelor's degree. Respondents in the job category had a 100% proportion of civil servants as many as 22 people. Respondents in the length of work category had a proportion of 1-5 years 27.3% as many as 6 people, a proportion of 6-15 years 22.7% as many as 5 people, and a proportion of 16-25 years 50% as many as 11 people. There were 22 respondents in the category of being able to operate a computer/laptop. There was a proportion of 100%, as many as 22 people.

Table 2: Average UKGS Management Quality Score Before and After Giving Ap-Pendanelsi

Variable		Statistics			
		Mean	**elementary school**	**Min**	**Max**
Data collection	*Pretest*	9.95	1,495	7	13
	Post-test	20.00	1,447	17	22
Planning	*Pretest*	8.05	1,704	5	11
	Post-test	14,18	0.795	13	16
Evaluation	*Pretest*	11.09	1,509	9	14
	Post-test	23.64	2,237	19	27
Total	***Pretest***	**29.09**	**4,708**	**21**	**38**
Total	***Post-test***	**57.82**	**4,479**	**49**	**65**

The average UKGS management quality score shows that the average value of the UKGS Management quality aspect before and after the application of the Ap-Pendanelsi application has overall increased with a total pretest score of 47.77 and a total post-test score of 39.14.

B. Average Respondent Value

Quality of UKGS Users Before and After Giving Ap-Pendanelsi

Table 3: Average UKGS System Quality Score Before and After Giving Ap-Pendanelsi

Variable		Statistics			
		Mean	**elementary school**	**Min**	**Max**
Convenience	*Pretest*	10.64	2,321	6	15
	Post-test	22.50	1,439	20	25
Accuracy	*Pretest*	6.23	1,572	4	9
	Post-test	13.05	0.848	12	15
Utility	*Pretest*	6.14	1,457	3	8
	Post-test	9.09	0.653	12	14
Security	*Pretest*	3.95	1,090	2	6
	Post-test	9.09	0.921	8	10
Total	***Pretest***	**26.96**	**6.44**	**15**	**38**
Total	***Post-test***	**53.73**	**3,861**	**52**	**64**

Shows that the average UKGS system quality score before and after administering the Ap-Pendanelsi Application as a whole has increased with a total pretest score of 26.96 and a total post-test score of 53.73.

Table 4: Average Quality Score of UKGS Users Before and After Giving Ap-Pendanelsi

Variable		Statistics			
		Mean	**elementary school**	**Min**	**Max**
Effectiveness	*Pretest*	4.14	1,424	2	6
	Post-test	7.68	1,323	6	10
Efficiency	*Pretest*	7.86	1,983	4	12
	Post-test	16.23	1,771	13	19
Total	***Pretest***	**12**	**3,407**	**6**	**18**
Total	***Post-test***	**23.91**	**3,094**	**19**	**29**

The average quality score of UKGS users before and after giving the Ap-Pendanelsi Application as a whole has increased with a total pretest score of 12 and a total post-test score of 23.91.

C. Non-parametric test

Normality and Homogeneity Test of Management Quality

Table 5: Normality and Homogeneity Test Results of UKGS Management Quality Before and After Giving Ap-Pendanelsi

Variable		**Shapiro-wilk**	*Levene*
		Normality	**Homogeneity**
Data Collection Quality	*Pretest*	0.433	0.890
	Post-test	0.013	
Planning Quality	*Pretest*	0.265	0.001
	Post-test	0.006	
Evaluation Quality	*Pretest*	0.106	0.147
	Post-test	0.068	

Normality test results were obtained for the quality of management group 1, pretest with a p-value of 0.433 (>0.05), which means the data is normally distributed, and post-test with a p-value of 0.013 (>0.05), which means the data is not normally distributed. The homogeneity test results show that the p-value is 0.890 (>0.05), which means the data is not homogeneous.

The results of the normality test on the quality of management group 2 pretest with a p-value of 0.265 (>0.05), which means the data is normally distributed, and the post-test with a p-value of 0.006 (>0.05), which means the data is not distributed normally. The homogeneity test results show that the p-value is 0.001 (>0.05), which means the data is homogeneous.

The results of the normality test on the quality of management group 3 pretest with a p-value of 0.106 (>0.05), which means the data is normally distributed, and the post-test with a p-value of 0.068 (>0.05), which means the data is normally distributed. The homogeneity test results show that the p-value is 0.147 (>0.05), which means the data is not homogeneous.

Some data is normally distributed, not normally distributed, and data that is homogeneous and non-homogeneous. To look for differences in the quality of UKGS management before and after administering the Ap-Pendanelsi application, the Wilcoxon non-parametric statistical test was carried out.

Table 6: Wilcoxon Test Results

Variable		P Value	Information
UKGS Data Collection quality assessment	*Pretest*	0,000	Ha rejected
	post-test		
UKGS Planning quality assessment	*pretest*	0,000	Ha rejected
	post-test		
UKGS Evaluation quality scores	*Pretest*	0,000	Ha rejected
	post-test		

This is the result of the Wilcoxon non-parametric test, the results show a p-value of 0.000 (p-value <0.05), which means there is a significant difference in the quality of management regarding the use of the Ap-Pendanelsi application. and quality management without using the Ap-Pendanelsi Application. Based on the test results above, it can be concluded that the use of the Ap-Pendanelsi Application can significantly improve the quality of UKGS management.

Table 7: Normality and Homogeneity Test Results of UKGS System Quality Before and After Giving Ap-Pendanelsi
Shapiro-wilk* Levene

Variable		Normality	Homogeneity
System quality Convenience	*Pretest*	0.710	0.230
	Post-test	0.028	
System quality Punctuality	*Pretest*	0.068	0.162
	Post-test	0.007	
System quality Utility	*Pretest*	0.036	0.091
	Post-test	0.007	
System quality Security	*Pretest*	0.032	0.764
	Post-test	0,000	

The results of the UKGS system quality normality test before and after administering the Ap-Pendanelsi Application in group 1 pretest with a p-value of 0.710 (>0.05) which means the data is normally distributed and in the post-test with a p-value of 0.028 (>0.05) which means the data is not normally distributed. The homogeneity test results show a p-value of 0.162 (>0.05), which means the data is not homogeneous.

The results of the UKGS system quality normality test before and after administering the Ap-Pendanelsi Application in the group 2 pretest with a p-value of 0.068 (>0.05) which means the data is normally distributed and in the post-test with a p-value of 0.007 (>0.05) which means the data is not normally distributed. The homogeneity test results show a p-value of 0.162 (>0.05), which means the data is not homogeneous.

The results of the UKGS system quality normality test before and after administering the Ap-Pendanelsi Application in group 3 pretest with a p-value of 0.036 (>0.05), which means the data is not normally distributed and in the post-test with a p-value of 0.007 (>0, 05) which means the data is not normally distributed. The homogeneity test results show a p-value of 0.091 (>0.05), which means the data is not homogeneous.

The results of the UKGS system quality normality test before and after administering the Ap-Pendanelsi Application in group 4 pretest with a p-value of 0.032 (>0.05), which means the data is not normally distributed and in the post-test with a p-value of 0.000 (>0, 05) which means the data is not normally distributed. The homogeneity test results show a p-value of 0.764 (>0.05), which means the data is not homogeneous.

Table 8: Wilcoxon Test Results

Variable		P Value	Information
Assess the quality of the UKGS convenience system	*Pretest*	0,000	Ha rejected
	post-test		
Assess the quality of the UKGS timekeeping system	*Pretest*	0,000	Ha rejected
	post-test		
Assess the quality of the UKGS usability system	*Pretest*	0,000	Ha rejected
	post-test		
UKGS security system quality rating	*Pretest*	0,000	Ha rejected
	post-test		

This is the result of the Wilcoxon non-parametric test, the results show a p-value of 0.000 (p value <0.05), which means there is a significant difference in system quality regarding the use of the Ap-Pendanelsi Application. and quality system without the use of the Ap-Pendanelsi Application. Based on the test results above, it can be concluded that the use of the Ap-Pendanelsi application can significantly improve the quality of the UKGS system.

Table 9: Normality and Homogeneity Test Results for the Quality of UKGS Users Before and After Providing the Ap-Pendanelsi Application

Variable		Normality	Homogeneity
Assess the quality of user effectiveness	*Pretest*	0.013	0.400
	Post-test	0.048	
Assess user efficiency quality	*Pretest*	0.314	0.911
	Post-test	0.048	

**Shapiro-wilk* Levene*

The results of the normality test, the quality of user effectiveness before and after administering the Ap-Pendanelsi application on the quality of user effectiveness in the pretest with a p-value of 0.013 (>0.05), which means the data is not normally distributed and in the post-test with a p-value of 0.048 (>0 .05) which means the data is not normally distributed. The homogeneity test results show a p-value of 0.400 (>0.05), which means the data is not homogeneous.

The results of the normality test for the quality of efficiency of UKGS users before and after administering the Ap-Pendanelsi Application on the quality of user efficiency with a p-value of 0.314 (>0.05), which means the data is normally distributed and in the post-test with a p-value of 0.048 (>0, 05) which means the data is not normally distributed. The homogeneity test results show a p-value of 0.911 (>0.05), which means the data is not homogeneous.

D. Effectiveness Test

- *Analysis of UKGS Management Quality Assessment Before and After Providing the Ap-Pendanelsi Application*

Table 10: UKGS Management Quality Analysis Results Before and After Providing the Ap-Pendanelsi Application

Variable	Statistics			
	before	**after**	**Delta (Δ)**	***p-value***
Data collection				
Mean ± SD	9.95±1.495	20.00±1.447	10.05	0,000
Planning				
Mean ± SD	8.05 ± 1.704	14.18 ± 0.795	6.13	0,000
Evaluation				
Mean ± SD	11.09 ± 1.509	23.64 ± 2.237	12.55	0,000

Wilcoxon

Shows the results of data analysis on the quality of UKGS data collection management before and after the application of the Ap-Pendanelsi application of 0.000 (p<0.05), which means there is a significant difference in the quality of UKGS management. shows the p-value of the quality of UKGS planning management before and after the Ap-Pendanelsi Application is 0.000 (p<0.05), which means there is a significant difference in the quality of UKGS management. shows the p-value of the quality of UKGS evaluation management before and after the application of the Ap-Pendanelsi application is 0.000 (p<0.05), which means there is a significant difference in the quality of UKGS management.

Table 11: Results of UKGS System Quality Assessment Analysis Before and After Providing the Ap-Pendanelsi Application

Variable	Statistics			
	Before	After	Delta (Δ)	P-Value
Data collection				
Mean ± SD	10.64 ± 2.321	22.50 ± 1.439	11.86	0,000
Punctuality				
Mean ± SD	6.23 ± 1.527	13.05 ± 0.848	6.82	0,000
Utility				
Mean ± SD	6.14 ± 1.457	9.09 ± 0.653	2.95	0,000
Security				
Mean ± SD	3.95±1.090	9.09 ± 0.921	5.14	0,000

The p-value of the quality of the UKGS data collection system before and after the Ap-Pendanelsi Application is 0.000 (p<0.05), which means there is a significant difference in the quality of the UKGS data collection system. The p-value of the quality of the UKGS timekeeping system before and after the Ap-Pendanelsi Application is 0.000 (p<0.05), which means there is a significant difference in the quality of the UKGS timekeeping system. Shows the p-value of the quality of the usability of the UKGS system before and after administering the Ap-Pendanelsi Application of 0.000 (p<0.05) which means there is a significant difference in the usability of the UKGS system. This shows the p-value of the quality of the UKGS security system before and after administering the Ap-Pendanelsi Application of 0.000 (p<0.05), which means there is a significant difference in the quality of the UKGS security system.

Table 12: Analysis of UKGS User Quality Assessment Before and After Providing the Ap-Pendanelsi Application

Variable	Statistics			
	Mean ± SD, Before	Mean ± SD After	Delta (Δ)±SD	*p-value*
Effectiveness	4.14 ± 1.424	7.68 ± 1.323	3.54	0,000
Efficiency	7.86 ± 1.983	16.23 ± 1.771	8.37	0,000

Wilcoxon

Showing the value of the quality of effectiveness of UKGS users before and after giving the Ap-Pendanelsi Application, it received a score of 0.000 (p-value <0.05), which means there is a significant difference before and after giving the Ap-Pendanelsi Application to the UKGS program. Showing the efficiency value of UKGS users before and after giving the Ap-Pendanelsi Application, it received a value of 0.000 (p-value <0.05), which means there is a significant difference before and after giving the Ap-Pendanelsi Application to the UKGS program.

IV. DISCUSSION

A. Effectiveness and Application of the Ap-Pendanelsi Application from the UKGS Program Screening Results

School Dental Health Bsiness (UKGS) is the first level program of community health centers to create a healthy generation in the school environment[12]. The implementation of the UKGS program is a public health effort aimed at maintaining and improving the dental and oral health of all students in target schools which is supported by individual health efforts in the form of curative efforts for individuals (students) who need dental and oral health care.[17].

The UKGS program seeks to carry out the stages of health promotion, dental health checks, limited dental care, and training of minor doctors and UKGS teachers. The implementation of a dental and oral health program requires monitoring efforts to improve the quality of the UKGS program such as data collection, planning, and evaluation.[18]. Implementation of the UKGS program with three monitoring efforts is needed to increase the coverage of dental health services and improve the quality of the UKGS program.

The development of a data collection and evaluation application (Ap-Pendanelsi) as a result of the UKGS program screening will be assessed in 3 aspects, namely management quality (data collection, planning, and evaluation), system quality (ease, accuracy, usability, security), and user quality (effectiveness). , efficiency).

The expert validation results show the average score of the three experts with a score of 96% in the very good category, which means that the data collection and evaluation application (Ap-Pendanelsi) is suitable for improving the quality of the UKGS program management.

This research uses the research and development (R&D) method with system development using the system development life cycle (SDLC)61. This research process was carried out with stages of application socialization (Ap-Pendanelsi) as well as usage training, examination training, and input of examination result data independently by UKGS teachers and homeroom teachers.

B. UKGS Program Management Quality Analysis

➢ *Data collection*

Data collection management in implementing the UKGS program is very necessary in recording the dental health of school students, data collection influences on the effectiveness of a program[25]. The success of the UKGS program in the data collection stage requires adjustments to

technological developments to support an effective procurement process. Data collection on dental health examination results is carried out manually and does not yet have a special dental health examination format.

The quality of UKGS data collection management before and after the application of the Ap-Pendanelsi application obtained a p-value of 0.000, which means there is a significant difference in the quality of UKGS management data collection. The data collection process carried out systematically can make it easier for workers to search for data, report data, and process data. That health data collection is carried out systematically can make it easier to store data, search for data, and manage data easily, as well as simplify the performance of officers in health monitoring.[26].

➢ *Planning*

The UKGS program in the dental health screening program for school students requires a health planning stage based on the dental health examination results of school students who attempt to resolve the findings of dental health problems resulting from the health examination. Efforts in determining dental health care planning can support the success of the UKGS program. The results of dental health examinations have not yet carried out treatment planning efforts aimed at supporting the resolution of school students' dental health problems.

UKGS program planning before and after giving the Ap-Pendanelsi Application found a p-value of 0.000, which means there was a significant difference in the quality of UKGS management planning before and after giving the Ap-Pendanelsi Application. This is in line with Rusniati's research that planning is a strategy that is an indicator of completing a solution.

➢ *Evaluation*

Evaluation is a stage in program implementation that can measure the success or failure of a program[27]. Evaluation of the UKGS program as a result of dental health screening seeks to support the success of the data collection and planning stages in resolving problems obtained from the results of dental health examinations. The evaluation stage supports the preparation of a follow-up plan so that a program can achieve success[28]. There has been no effort to evaluate the results of dental health examinations, and limited time and personnel for implementation have created obstacles in evaluation efforts.

Evaluation of dental health examination results has a significant impact on improving the quality of UKGS management. Based on Table 4.18, the results of the UKGS management evaluation before and after giving the Ap-Pendanelsi Application show a p-value of 0.000, which means there is a significant difference in the UKGS management evaluation before and after giving the Ap-Pendanelsi Application. Evaluation can determine the success or failure of a management program so that it is implemented according to the vision and mission of a program to achieve success[29].

C. System Quality Analysis

➢ *Quality of data collection system*

A WEB-based data collection system is a systematic data input process with support for data storage, data searching, and efficient data reporting[30]. A WEB-based data collection system attempts to present data more efficiently in terms of storage, data processing, and accurate data reporting[31]. Analysis of the quality of the UKGS data collection system before and after the application of the Ap-Pendanelsi Application shows a p-value of 0.000, which means there is a significant difference in the quality of the UKGS data collection system before and after the application of the Ap-Pendanelsi Application. In line with Bella Regita Dewi's research, a web-based data collection system is a system that can collect data on dental health examinations, report the results of dental health examinations, and archive, and record medication, medical notes, and medical records efficiently.[32].

➢ *Timeliness system quality*

Timeliness in reporting a program can measure satisfaction with using the system and measure the extent to which a program is implemented. Internet-based technology systems support making work easier in coordination, reporting, and administrative procedures[33].

Analysis of the quality of the UKGS timekeeping system before and after giving the Ap-Pendanelsi Application shows a p-value of 0.000, which means there is a significant difference in the quality of the timekeeping system before and after giving the Ap-Pendanelsi Application. In line with Zunaidi's research, there is an influence of a system on the impact of user satisfaction which can impact timeliness, relevance, and accuracy in system use.[34].

➢ *Usability system quality*

Internet-based technology is designed to make it easier for humans to work. The use of a technology system can adapt to problems or deficiencies, and the use of a system can support success in program achievement[35]. The results of the analysis of the quality of the UKGS usability system before and after giving the Ap-Pendanelsi Application show a p-value of 0.000, which means there is a significant difference in the quality of the usability system before and after giving the Ap-Pendanelsi Application. That system quality can influence user perceptions in making work easier to become more efficient[36].

➢ *Security system quality*

The security system of a technology describes efforts to protect data from misuse, the security of a system is formed to maintain data confidentiality[37].

The results of the analysis of the quality of the UKGS security system before and after administering the Ap-Pendanelsi Application show a p-value of 0.000, which means there is a significant difference before and after administering the Ap-Pendanelsi Application. That the

success of a system can be measured by the level of system security in protecting data and providing user comfort with a good level of system security[38].

D. User Quality Analysis

➢ *Effectiveness*

The effectiveness of a system has a big influence on success in facilitating the implementation of recording, data processing, and reporting. The higher the quality of the system, the greater the influence on satisfaction with its use[39]. The results of the analysis of the effectiveness of UKGS users before and after implementing the Ap-Pendanelsi Application show a p-value of 0.000, which means there is a significant difference before and after administering the Ap-Pendanelsi Application to the UKGS program. The technology system can support management success by providing good system quality to facilitate user performance[40].

➢ *Efficiency*

The success of a system in program implementation can make it easier to process data and report data, and the efficiency of a system can have an impact on achievements. Implementing the UKGS program once a year cannot be said to be effective, because there are still obstacles in implementing the program.

The results of the UKGS user efficiency analysis before and after giving the Ap-Pendanelsi Application show a p-value of 0.000, which means there is a significant difference before and after giving the Ap-Pendanelsi Application to the UKGS program. Resolving limitations in program implementation can be supported by providing an information system that seeks to facilitate the performance of officers[41].

V. CONCLUSION

Based on the research results, it can be concluded that:

- The data collection and evaluation application model (Ap-Pendanelsi) resulting from WEB-based screening is feasible and effective in improving program quality (UKGS) in an effort to monitor the development of school students' dental health, as evidenced by the p-value of 0.043
- Effectiveness and application of the data collection and evaluation application model (Ap-Pendanelsi) in improving the quality of the UKGS program:

✓ The data collection and evaluation application model (Ap-Pendanelsi) is effective as an effort to improve program quality (UKGS) in monitoring the dental health of school students in the dental health screening examination program, proven by a p-value of 0.000
✓ The data collection and evaluation application model (Ap-Pendanelsi) is effective as an effort to collect data on WEB-based network examination results, as evidenced by the p-value of 0.000
✓ The data collection and evaluation application model (Ap-Pendanelsi) is effective as an effort to determine a treatment plan for the results of WEB-based screening examinations, as evidenced by the p-value of 0.000
✓ The data collection and evaluation application model (Ap-Pendanelsi) is effective as an effort to prepare a follow-up plan for WEB-based program success (UKGS), as evidenced by the p-value of 0.000
✓ The data collection and evaluation application model (Ap-Pendanelsi) is effective as an effort to support the availability of students' dental health data.

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