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The Influence of Digital Education on the Alodokter Telemedicine Application On Knowledge And Satisfaction Of Use In Public Health Students Gorontalo State University

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ABSTRACT

The development of health technology encourages the use of telemedicine as an alternative to digital health services. Alodokter is one of the telemedicine applications that are widely used by Indonesian people. However, the results of initial observations show that the use of the application by students is still low even though most of them are familiar with the application. The formulation of the research problem is and whether there is an influence of digital education on the knowledge and satisfaction of using Kesmas UNG students using the Alodokter telemedicine application. This study aims to determine the influence of digital education of the Alodokter telemedicine application on knowledge and user satisfaction in Gorontalo State University Public Health students.
This type of quantitative research with a pre-experimental design uses a one group pretest-posttest approach. The research sample amounted to 30 students who had used the Alodokter application with purposive sampling techniques. The research instrument used a questionnaire on knowledge and usage satisfaction. Data analysis was carried out using the Wilcoxon test.
The results of the study showed that the average knowledge score before education was 8.20 and after education was 9.83, there was an increase of around 1.63. And the average satisfaction score of the respondents before education was 28.63 and after education was 34.1, there was an increase of around 5.47 with a knowledge p value of p = 0.000 (P ≤ 0.05), and a P value of usage satisfaction of P = 0.001 (P ≤ 0.05).
The conclusion of this study is that there is an increase in knowledge and user satisfaction after being given digital education), so that there is an influence of digital education on the knowledge and satisfaction of using the Alodokter telemedicine application in Public Health students of Gorontalo State University. It is suggested that further research can develop other variables such as sustainable use interest, user trust or sustainability effectiveness

INTRODUCTION

The development of information and communication technology in the health sector can be seen with the existence of E-health. E-health is a term used to encompass the use of various data processing applications, computer networks, and related technologies in the health sector. With E-health, healthcare providers can store or disseminate health information between medical workers, patients, and clinics, so as to improve patient services and care. The use of e-health is growing during the Corona virus Disease 2019 (COVID-19) pandemic. In an effort to reduce the risk of transmission in the practice setting, healthcare facilities and providers try to minimize face-to-face meetings by implementing telemedicine to protect the community, patients, and doctors (Azuri, et al 2022).

The term "telemedicine" itself first appeared in the 1970s and literally means "remote healing". Based on the definition from the World Health Organization (WHO) in 2022, telemedicine is the provision of health services by medical personnel that is carried out when geographical distance is an obstacle, by utilizing information and communication technology for valid and reliable data exchange. It supports diagnosis, treatment, disease

prevention, and ongoing research, evaluation, and education for medical personnel, with the ultimate goal of improving the health of individuals and communities.

In practice, health services in Indonesia still do not reach the optimal level, because there are still many basic health facilities that have not met the set service standards, the absence of standard guidelines for health services, lack of facilities, and incompleteness of facilities, drugs, tools, and health workers. In addition, there are still many people in Indonesia who do not get adequate health care, this is caused by several factors, such as the distance of health centers or hospitals that are far from where they live, as well as time constraints to queue to get good services at the hospital. To overcome this problem, the government needs to make various efforts to continue to improve health services in Indonesia (Arifa, et al 2025).

In Indonesia, Alodokter is one of the telemedicine applications that is famous among the general public. Alodokter is a health facility or online health consultation facility in the form of a virtual website and application that offers chat features, make appointments, articles, subscriptions to aloshop as a purchase of needed medicines. Since the beginning of Alodokter has been an increase, shown by the increase in the number of downloads of the Alodokter application. In 2019, the Alodokter application was downloaded by as many as 1 million people in Indonesia. By March 2024, Alodokter is listed as having downloaded as many as 10 million. This shows that many Indonesians have confidence in the Alodokter application (Assegaff, et al 2024).

This study has a significant difference because it specifically assesses the influence of digital education interventions on knowledge and satisfaction with the use of the Alodokter telemedicine application in Public Health students of Gorontalo State University. Previous research did not focus on the educational aspect as an intervention variable and did not target health student groups as potential users of telemedicine services in the future, so this research provides a new contribution in the form of a direct evaluation of the effectiveness of digital education in improving health technology literacy and students' readiness to face the digital transformation of health services.

Based on the results of initial observations conducted on 64 Public Health students of Gorontalo State University, it was found that most of the respondents were familiar with the Alodokter telemedicine application, namely 61 students (96.9%). However, not all respondents used the application in practice. The results of the observation showed that only 30 students (48.4%) stated that they had used the Alodokter application, while 34 students (51.6%) had never used the application. The frequency of using the Alodokter application among students who have used it is also relatively low. A total of 12 respondents only used the application once, 14 respondents used it two to three times, and only 4 respondents used the application more than three times. In addition, the purpose of using the application is still dominated by searching for health information through articles, namely 19 respondents, searching for drug information for 6 respondents, and consulting with doctors for 5 respondents.

Based on the findings of these initial observations, it can be concluded that although Public Health students have a high level of introduction to the Alodokter application, comprehensive knowledge and satisfaction in the use of telemedicine applications have not been fully formed. This condition shows the need for intervention in the form of structured digital education regarding the use of the Alodokter telemedicine application. The education is expected to be able to increase student knowledge and encourage optimal use of applications, so as to have an impact on increasing satisfaction with the use of telemedicine services. Therefore, this study aims to evaluate the influence of educational interventions on the knowledge and satisfaction of using Alodokter in relevant UNG Kesmas students as an effort to support the implementation of health digital transformation policies at the education and primary service levels.

RESEARCH METHODS

This study uses a quantitative research method of *pre-experimental* design with *a one group Pretest-Posttest design type approach.* This design was used to determine the influence of digital education of the Alodokter telemedicine application on increasing student compliance and satisfaction with use by taking measurements before and after being given educational treatment. This research was carried out at the Department of Public Health, Faculty of Sports and Health, Gorontalo State University This research was carried out on February 23, 2026. Based on the results of initial observations, of the 64 students who became respondents, as many as 30 students (48.4%) stated that they had used the Alodokter application. Therefore, the number of samples in this study was set at 30 students who met the research inclusion criteria. Data were collected using a questionnaire that has been tested for validity and rehabilitation. Data analysis was carried out univariate and bivariate using the non-parametric Wilcoxon Test. If the value of $\alpha = >0.05$ indicates that digital education has an influence on increasing knowledge and satisfaction with using applications.

RESULTS

Respondent Characteristics

Characteristics of Respondents by Gender

Table 1 Distribution of Frequency of Gender and Force in Public Health Students of Gorontalo State University

Gender	Frequency	Presentase
Male- Male	4	10,0
Women	27	90,0

Total	30	100
Force	**Frequency**	**Presentase**
2022	14	46,7
2023	5	16,7
2024	6	20,0
2025	5	16,7
Total	30	100

Source : Primary Data, 2026

Based on Table 2 on Gender characteristics, out of a total of 30 respondents, most of them were female, namely 27 people (90.0), while male respondents amounted to 4 people (10.0). Based on the batch, the results were obtained that the most respondents came from the class of 2022, which was 14 people (46.7%). Furthermore, the class of 2024 is 6 respondents (20.0%), while the class of 2023 and 2025 are 5 respondents each (16.7%).

Univariate Analysis

Knowledge

Table 2 Knowledge of the Alodokter Application for Public Health Students of Gorontalo State University before, (Pre-test) and After (Post-test) Digital Education of the Alodokter Application

Knowledge	**Pre-test**		**Post-test**	
	n	**%**	**n**	**%**
Good	25	83,3	30	100
Less	5	16,7	0	0
Total	30	100	30	100

Source : Primary Data, 2026

Based on Table 2 concerning Knowledge of Alodokter Application in Public Health Students of Gorontalo State University before (pre-test) and after (post-test) digital education, it is obtained that before being given education, most of the respondents already had a level of knowledge in the good category, namely 25 people (83.3%), while 5 people (16.7%) were still in the poor category. After being given digital education about the Alodokter application, there was an increase in respondents' knowledge. All respondents, namely 30 people (100%), were in the category of good knowledge and there were no more respondents with the category of lack of knowledge (0%).

Usage Satisfaction

Table 3 Satisfaction with the Use of the Alodokter Application for Public Health Students at Gorontalo State University

Satisfaction Usage	**Pre-test**		**Post-test**	
	n	**%**	**n**	**%**
Puas	18	60,0	24	80,0
Dissatisfied	12	40,0	6	20,0
Total	30	100	30	100

Source : Primary Data, 2026

Based on Table 3 on satisfaction with the use of the Alodokter application in Public Health students at Gorontalo State University, an overview of the level of satisfaction of respondents was obtained before being given digital education on the Alodokter application (pre-test), most respondents stated that they were satisfied with the use of the application, namely 18 respondents (60.0%), while respondents who stated dissatisfaction were 12 people (40.0%). After being given digital education on the Alodokter application (post-test), there was an increase in the number of respondents who stated that they were satisfied to 24 people (80.0%). Meanwhile, respondents who expressed dissatisfaction decreased to 6 people (20.0%).

Bivariate Analysis

Knowledge

Table 4. Analysis of the Influence of Digital Education on Knowledge and Usage Satisfaction in Gorontalo State University Public Health Students Before (Pre-Test) and After (Post-Test)

Knowledge	**n**	**Mean**	**Min**	**Max**	D **(selilish)**	r
Before Education	**30**	8.20	4	10	1,63	0.000

After Education	**30**	9.83	9	10		

Source : Primary Data, 2026

Based on table 4, the average knowledge of the Alodokter *telemedicine application* before being given education via video is 8.20 with a minimum score of 4 and a maximum score of 10. Meanwhile, after being given education through video, it was 9.83 with a minimum score of 9 and a maximum score of 10.

Usage Satisfaction

Table 4 Analysis of the Influence of Digital Education on Knowledge and Usage Satisfaction in Gorontalo State University Public Health Students Before (Pre-Test) and After (Post-Test).

Satisfaction Usage	**n**	**Mean**	**Min**	**Max**	D **(selilish)**	r
Before Education	**30**	28.63	22	36	5,47	0.001
After Education	**30**	34.10	30	40		

Source : Primary Data, 2026

Based on table 5, the average satisfaction with using the Alodokter *telemedicine application* before being given education via video is 28.63 with a minimum score of 22 and a maximum score of 36. Meanwhile, after being given education through video, it was 34.10 with a minimum score of 30 and a maximum score of 40.

DISCUSSION

Overview of UNG health students' knowledge before and after digital education of alodokter telemedicine application

Based on the results of the research in Table 4.2, it is known that before being given digital education (pre-test), most of the Public Health students of Gorontalo State University had a level of knowledge in the good category, namely as many as 25 respondents (83.3%), but there were still 5 respondents (16.7%) with the poor category. This shows that there are still some students who do not understand optimally the use of the Alodokter telemedicine application related to the mechanisms, features, and benefits of using the Alodokter application. This can be seen in several question items that are still answered incorrectly by respondents at the pre-test stage, especially in questions regarding mild health monitoring through follow-up consultations, application usage requirements in the form of internet access, the "Make an Appointment" feature, the availability of 24-hour doctor consultation services, and the security and confidentiality of user data. In addition, some respondents also do not understand that health articles on the Alodokter application are reviewed by medical personnel and that user data can only be accessed if there is permission from the user.

After being given digital education (post-test), all 30 respondents (100%) were in the category of good knowledge and there were no more respondents in the category of lack. This shows an increase in knowledge after being educated. Judging from the average score, there was an increase in the knowledge score from 8.20 to 9.83 with a difference of 1.63. This shows that digital education not only improves the categories of knowledge, but also improves the understanding of respondents better. This increase in knowledge occurs because digital education is able to convey information clearly and easily understandable, so that respondents better understand the mechanisms, benefits, and features contained in the Alodokter application. Thus, digital education can be said to be effective in increasing student knowledge.

Overview of the satisfaction of using Kesmas UNG students before and after digital education of the alodokter telemedicine application

Based on Table 4.3, before being given digital education (pre-test), most respondents stated that they were satisfied with the use of the Alodokter application, namely 18 people (60.0%), while 12 people (40.0%) stated that they were not satisfied. This shows that there are still respondents who are not satisfied with using the application. After being given digital education (post-test), the number of respondents who were satisfied increased to 24 people (80.0%), while those who were dissatisfied decreased to 6 people (20.0%). This shows an increase in satisfaction after being educated.

Increased satisfaction occurs in several main aspects, namely the perception of benefits, the perception of convenience, and the attitude of use. In terms of the perception of benefits, before being educated, there were still respondents who gave a "disagree" answer to the statement that the Alodokter application helps obtain health information and speed up consultation services. After being given digital education, most respondents gave "agree" and "strongly agree" answers, which shows that respondents are beginning to understand the benefits of apps in obtaining health services quickly and practically.

The Effect of Digital Education on Alodokter Telemedicine Application Knowledge

The results of the bivariate analysis show that there is an influence of digital education on improving student knowledge. This is evidenced by the results of the Wilcoxon Signed Rank Test which shows a significance value (ρ-value) of 0.000 (<0.05) so that it can be concluded that there is an influence after being given digital education. In addition, the increase was also seen from the average value of the knowledge score which increased from 8.20 (before education) to 9.83 (after education). The minimum score also increased from 4 to 9, indicating that there were no more respondents with low levels of knowledge after the intervention.

These results indicate that digital education has a significant influence on increasing student knowledge about the use of the Alodokter telemedicine application. Education provided through digital media is able to clarify information, increase understanding of concepts, and help respondents remember the material presented.

The Effect of Digital Education on the Satisfaction of Using the Alodokter Telemedicine Application

The results of the analysis show that digital education has an effect on the level of satisfaction with using the Alodokter application. This is shown by the results of the Wilcoxon test with a significance value (ρ-value) of 0.001 (<0.05), which means that there is a significant difference between the level of satisfaction before and after education. This increase is also seen from the average satisfaction score which rose from 28.63 to 34.10 with a difference of 5.47. In addition, the proportion of respondents who felt satisfied increased from 60.0% to 80.0%.

Theoretically, this increase in satisfaction is influenced by the increased user understanding of the application. After being educated, respondents became more aware of the benefits of the application, how to use it, and the ease of access to features, so that the user experience became more positive. Digital education also plays a role in shaping the perception of benefits, the perception of convenience, and a better attitude of use. These three aspects are important factors in determining the level of user satisfaction with an application.

CONCLUSION

Digital education has an effect on increasing student knowledge, which is shown by an increase in the average knowledge score from before to after education and the results of statistical tests that show significant values ($p < 0.000$). The digital education provided has proven to be effective not only in increasing knowledge, but also in forming positive perceptions, ease of use, and a better attitude towards the use of telemedicine applications. Digital education also has an effect on increasing satisfaction with application use, which is shown by an increase in average satisfaction scores and significant statistical test results ($p < 0.001$), there is an effect of digital education on satisfaction with the use of the Alodokter telemedicine application on Gorontalo State University Public Health students, so that digital education can be an effective strategy in increasing the use of technology-based health services.

ADVICE

It is hoped that further research can develop other variables such as interest in sustainable use, user trust, or effectiveness of use in the long term. In addition, it can use a wider range of research methods with a larger number of samples to make the research results more representative.

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