

Utilization of Academic Applications to Support the Education Administration System at the Academic Hospital of Gadjah Mada University

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ABSTRACT

Keywords:

digitalization, app, administration, education hospital

Digitalization in academic hospital settings is essential to improve the efficiency and quality of educational administrative services. Teaching hospitals face challenges in developing innovative, user-friendly, and efficient systems that can support clinical education processes. In response to this need, the Academic Hospital of Gadjah Mada University (RSA UGM) developed a mobile-based application called “Akademik” to facilitate student registration and administrative processes. This research aims to evaluate the utilization of the “Akademik” application in supporting the educational administration system at RSA UGM. A descriptive quantitative method was used, with simple random sampling involving 47 respondents. Data were collected through questionnaires and analyzed using descriptive statistics with SPSS. The results show that 95.7% of respondents stated that the application instructions were clear and easy to understand, 95.7% perceived the application as easy to use, 89.4% expressed satisfaction with the application, and 87.2% reported that the student registration process became faster. These findings indicate that the “Akademik” application contributes positively to improving administrative efficiency and user experience. In conclusion, the “Akademik” application effectively enhances the educational administration process at RSA UGM by making it more efficient, user-friendly, and environmentally sustainable through reduced paper usage. However, continuous system development and integration are necessary to further optimize its performance and support the broader clinical education system.

INTRODUCTION

The development of digital technology in the era of Society 5.0 has significantly transformed various aspects of human life, including education and health services. Information and communication technology (ICT) plays an important role in improving efficiency, accessibility, and quality in institutional management (Rehman et al., 2023; Teryima & Sunday, 2015). In the education sector, digitalization is no longer limited to classroom learning but has expanded into administrative systems, data management, and service delivery. The use of digital systems enables institutions to process information more quickly, accurately, and systematically, thereby supporting better governance and service quality (Das, 2024; Hasan & Akter, 2022; Milakovich, 2021).

In educational institutions, digitalization has been widely recognized as an effective strategy for improving the efficiency of administrative processes (Kasmia & M’hamed, 2023; Kryshtanovych et al., 2023; Marginingsih et al., 2025). Digital-based systems can reduce

manual procedures, minimize errors, shorten service time, and enhance user satisfaction. In the context of higher education and academic institutions, the implementation of digital systems has contributed to more effective management of student records, academic schedules, and communication processes. Previous studies have shown that academic information systems can improve the effectiveness and efficiency of academic management, reduce paper-based administration, and minimize human error in data processing. Purwanto (2017), for example, found that the implementation of academic information systems improved administrative efficiency and supported more effective academic management. Likewise, studies on digital public services indicate that digitalization has a positive influence on institutional performance and service quality (Ilyas & Bahagia, 2021).

However, while digitalization in schools and universities has been widely discussed, the utilization of digital applications in teaching hospitals—particularly to support educational administration—has received limited scholarly attention (Khafizova et al., 2023; Mhlongo et al., 2023; Timotheou et al., 2023). This issue is important because teaching hospitals have a dual role, namely as health service providers and as educational institutions for clinical students. Consequently, teaching hospitals require administrative systems that are not only efficient and accurate but also responsive to the specific needs of clinical education. Compared with general educational institutions, the educational administration process in teaching hospitals is more complex because it involves coordination among academic institutions, hospital units, and students engaged in practical and clinical learning (Alsiö et al., 2019; van Rossum et al., 2016).

According to Khotimah et al., (2019) and Rahiem (2025), Gadjah Mada University Academic Hospital (RSA UGM), as a teaching hospital, has responded to this challenge by developing a mobile-based educational administration system called Akademik, available on Android and iOS platforms. This application was designed to simplify and accelerate the registration process for students undertaking clinical practice at RSA UGM. In addition to supporting administrative efficiency, the application also aligns with the hospital's commitment as a Green Hospital, as it reduces paper use and promotes more environmentally friendly administrative practices. The existence of this application reflects an institutional effort to integrate digital innovation into educational services within the hospital setting (Bevere & Faccilongo, 2024; Sheikh et al., 2021; Srivastava & Shainesh, 2015).

Several previous studies have emphasized the role of digital systems in education administration and user satisfaction. Research on academic information systems has shown that digital platforms can enhance service efficiency, improve data processing accuracy, and contribute to organizational effectiveness. Other studies also indicate that user satisfaction is influenced by system clarity, ease of use, and the ability of the application to meet users' service expectations. Nevertheless, most of these studies focus on schools or general higher education institutions, while evidence from academic hospitals remains limited. Therefore, there is still a gap in understanding how digital academic applications function in the specific context of teaching hospitals and how users perceive their usefulness in supporting educational administration.

The novelty of this study lies in its focus on the use of a mobile academic application in a teaching hospital setting, particularly in evaluating its role in supporting the student administration system at RSA UGM. Unlike previous studies that mainly addressed academic Utilization of Academic Applications to Support the Education Administration System at the Academic Hospital of Gadjah Mada University

information systems in schools or campus settings, this study examines digitalization within a hospital-based educational environment, where administrative efficiency directly affects the continuity of clinical education services. This makes the study relevant both academically and practically.

This study aims to evaluate the utilization of the Akademik application in supporting the educational administration system at the Academic Hospital of Gadjah Mada University. Specifically, this study seeks to identify users' perceptions of the clarity of application instructions, ease of use, level of satisfaction, and the extent to which the application accelerates the student registration process. The findings are expected to provide practical benefits for RSA UGM in improving the quality of educational administrative services and to offer academic contributions to the growing literature on digitalization in teaching hospitals.

METHOD

This research employed a descriptive quantitative design. Descriptive quantitative research is a type of research that describes, examines, and explains a phenomenon using numerical data as it is, without the intention of testing a specific hypothesis (5). The population consisted of all subjects, individuals, and other elements studied in the research; in this study, the population included all clinical practice students who had used the Academic application.

The sample was a subset of the population used to obtain information representing the entire population. The respondents in this study were students sent by educational institutions collaborating with RSA UGM, who had undertaken clinical education placements at RSA UGM and had used the Academic application in 2023. All respondents had registered through the Academic application before starting their clinical rotations by following the procedures provided in the application.

Out of 300 students who had used the Academic application, simple random sampling was applied, resulting in 47 students being selected as respondents in this study. These 47 respondents were given an evaluation questionnaire regarding the use of the Academic application to assess its role in supporting their educational administration processes.

Quantitative data analysis was used to process and organize the data and to produce results that could be read and interpreted. The data analysis technique employed SPSS with univariate analysis.

RESULT AND DISCUSSION

Respondent Characteristics

Table 1. Characteristics they respond

Respondent Characteristics	f	%
Gender		
Male	12	25.5
Female	35	74.5
Education level		
Bachelor (S1)	11	23.4
Professional	21	44.7
Master (S2)	1	2.1
Specialist (PPDS)	14	29.8

Source: Primary data obtained from research questionnaires, 2023

Based on the table above, it can be seen that the largest percentage of female sex (74.5%) is compared to male sex. Meanwhile, the percentage of respondents' education level in the Professional group was more than two-fifths of the total number of respondents (44.7%), which was greater than the level of education in other groups.

Univariate Analysis

Table 2. Analysis Univariate

Univariate Analysis	Yes		No	
	f	%	f	%
Clarity of Application	45	95.7	2	4.3
Ease of Use of the App	45	95.7	2	4.3
User Satisfaction	42	89.4	5	10.6
Faster Student Registration Process	41	87.2	6	12.8

Source: Primary data from questionnaires of “Akademik” application users at RSA UGM, 2023

Based on the table, it can be obtained that the largest percentage of clarity of how to use applications is clear (95.7%) compared to the clarity of how to use applications is not clear. Furthermore, the largest percentage is the ease of use of the application (95.7%) compared to the ease of use of the application. The percentage of satisfaction with using the app contributes more to satisfaction (89.4%) than dissatisfaction. The table shows that the percentage of practical student registration service processes is faster (87.2%) than not.

Digitalization is defined as the change from a manual system to a technology-based digital system. RSA UGM as a teaching hospital that serves clinical learning activities has begun to develop a digital application to support the administrative activities of practical students. An application named "Academic" was created to make administrative services for students much easier and faster. The presence of the Academic Application has had a significant impact both in terms of effectiveness and efficiency for practical student services.

As a Green Hospital, the Academic Application is one of the support systems for RSA UGM to realize an environmentally friendly hospital. The use of paper is much reduced after the Academic Application, which means that along with this it can also save the Hospital expenses on paper purchases. Student data will be stored in a digital storage room, so that there is no document retention at RSA UGM. This is in line with previous research that said that the use of Academic Information Systems reduces operational costs (low cost and paper less) and reduces human error in the processing of student grades (6).

Based on the survey results, 89.4% of Academic Application users are satisfied with the performance of the application. The basic concept of satisfaction refers to the experience felt by users after using a product (7). The content and appearance of the product that meets the user's expectations will provide satisfaction for the product used (8).

There are several other factors that also affect user satisfaction with academic applications. Based on the survey results, it shows that (95.7%) users of academic applications feel that the tutorials on using the application are clear or easy to understand and (95.7%) application users also feel that the application is easy to use. Ease of use is a way to know the

extent to which a product can be used by a particular user to achieve a certain goal efficiently, effectively and the user becomes more satisfied when using the tool (9).

As many as 87.2% of respondents said that the presence of academic applications made the registration process for practical students much faster. This is in line with previous research that proves that Academic Information Systems make the process of managing school academic data much faster (6).

CONCLUSION

Based on the results and discussion about the use of the "Academic" Application used by practical students at RSA UGM, it can be concluded that the instructions on how to use the application are clear, the application is easy to use, the application user is satisfied, and the student registration service process is faster. Thus, the "Academic" App shortens the administrative process and enhances educational services in hospitals. However, further improvements are recommended, including enhancing system features, strengthening integration with other information systems, and providing regular user training. Future research should involve a larger sample and examine broader aspects such as usability and the impact on clinical education outcomes.

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