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Student Needs Analiysis for SIPANDU-AKES Development to Improve Academic Information Service Quality

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Abstract

Accessible and integrated academic information services are needed to support the effectiveness of academic services in higher education. This study aimed to analyze students' needs for academic information services as a basis for developing the Digital Academic Guide Information System for Health Administration (SIPANDU-AKES). This study employed a descriptive quantitative approach with a cross-sectional design. Data were collected through a questionnaire from 145 students of the Health Administration Study Program and analyzed using frequency distributions and percentages. The results showed that 94.4% of students stated that academic information was still scattered across various media. Meanwhile, 98.6% of students needed a single medium containing all academic information, and 100% stated that a digital academic guide would facilitate access to information. Furthermore, 98.6% of students supported the development of SIPANDU-AKES. These findings indicate a high demand for integrated, accessible, and digital-based academic information services. Therefore, SIPANDU-AKES is relevant to be developed as a supporting medium for improving the effectiveness of academic information services in the Health Administration Study Program.

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INTRODUCTION

Academic information services are an important component in supporting the effective and student-oriented delivery of higher education. Students require academic information that is timely, accurate, comprehensive, easy to understand, and easily accessible to support decision-making and the implementation of various academic activities. The quality of academic information systems is closely related to students' perceptions of service quality, satisfaction, usability, and overall user experience (Azzahra & Hadiono, 2022; Al-Hunaiyyan et al., 2021). Information regarding the completion of the Study Plan Card (Kartu Rencana Studi/KRS), academic calendars, academic regulations, and student codes of ethics constitutes information that is directly related to students' academic activities. The availability of clear and timely information can assist students in fulfilling their academic obligations in accordance with applicable procedures and regulations. Therefore, academic information services need to be designed not only to provide information but also to ensure that the information is accessible, understandable, and aligned with students' needs.

The development of information technology has driven changes in the delivery of higher education services, including the provision of academic information. Digital transformation has encouraged higher education institutions to develop various digital solutions that facilitate communication, learning, administration, and access to information (Bygstad et al., 2022). The use of digital media enables information to be delivered more quickly and accessed regardless of time and place. However, the availability of various communication media does not automatically guarantee that academic information services are being delivered effectively. Information distributed across various media, such as documents, communication groups, social media, cloud-based storage, as well as direct communication from lecturers and administrative staff, may require students to search for information from multiple sources. Fragmented digital platforms can create communication and documentation challenges and may reduce the efficiency of academic services (Angelia & Tambotoh, 2024). Bygstad et al. (2022) similarly highlight that separate and unintegrated digital solutions may be experienced by students and teachers as fragmented digital tools rather than as a shared digital space. This condition may create difficulties in finding the required information, delays in obtaining information, and the recurrence of similar questions directed to study program administrators.

A similar condition has been identified in academic information services in the Health Administration Study Program. Information concerning various academic needs of students has not yet been fully integrated into a single information medium that can serve as a common reference. Students continue to obtain information through various communication channels, making access to academic information dependent on the source and medium used. These issues are particularly related to information needs concerning KRS completion, academic calendars, academic regulations, and student codes of ethics. The lack of integrated information delivery may affect the effectiveness of academic services because students require additional time and effort to obtain information that meets their needs. Previous studies of academic information systems have also demonstrated that usability, user experience, service quality, and student satisfaction are important aspects in evaluating the effectiveness of academic information systems (Rusdin et al., 2020; Nusantara et al., 2023; Widiawati et al., 2023). Thus, improving academic information services requires attention not only to the existence of an information system but also to how effectively the system responds to students' information needs.

Problems in academic information services are not only related to the availability of technology but also to the extent to which services correspond to user needs. Information systems or media developed without considering user needs may provide information and features that are less relevant. From the perspective of information system success, system quality, information quality, and service quality are important dimensions that influence system use and user satisfaction (DeLone & McLean, 2003; Petter et al., 2008). Empirical studies have further demonstrated the relevance of these dimensions at the individual level of information system use (Iivari, 2005; Petter et al., 2009). Therefore, user needs analysis is an important stage prior to the development of an academic information service. Needs analysis can be used to identify the types of information that are most needed, problems experienced

by users, the expected form of information presentation, and the characteristics of media considered easy to use. A user-oriented approach enables service development to be based on students' actual problems and needs, thereby increasing the relevance and benefits of the resulting system. This perspective is also consistent with the human-centered design approach, which emphasizes usability, accessibility, and user experience in the development of academic information systems (Angelia & Tambotoh, 2024).

The development of integrated academic information media can also serve as a strategy for improving service efficiency at the study program level. A medium that functions as an information center can help students obtain various types of academic information through a single, more structured source. For study program administrators, information integration can facilitate the process of disseminating information, reduce the repetition of providing the same information, and help ensure that the information received by students originates from an established source. The integration of digital solutions can also support the development of a more coherent digital environment within higher education institutions (Bygstad et al., 2022). In addition, evidence from studies of academic information systems indicates that service quality and student satisfaction are associated with the effectiveness of system use (Oktariani et al., 2025). Therefore, the development of academic information services should be directed not only toward digitalization but also toward improving service quality and accessibility based on user needs.

In response to these problems, SIPANDU-AKES (Digital Academic Guide Information System for Health Administration) was developed as a digital-based medium for academic information services. SIPANDU-AKES is designed to integrate various types of information required by students, including KRS completion guidelines, academic calendars, academic regulations, and student codes of ethics into a single medium. This integration is expected to provide an alternative means of accessing information that is more structured than the dissemination of information through various separate media. The development of an integrated academic information medium is particularly relevant because previous research has identified fragmentation of platforms and ineffective communication as challenges that can be addressed through a purposefully designed academic information system (Angelia & Tambotoh, 2024). However, the effectiveness of an information medium is strongly influenced by the extent to which its content and features correspond to user needs. Previous studies have also emphasized the importance of usability and user experience in academic information systems (Al-Hunaiyyan et al., 2021; Rusdin et al., 2020; Widiawati et al., 2023). Therefore, the development of SIPANDU-AKES needs to begin with the identification of students' needs as the primary users of the service.

Several studies on the development and evaluation of academic information systems generally emphasize digitalization, system quality, usability, service quality, user satisfaction, and user experience as important aspects of academic information service delivery (Buditjahjanto, 2020; Azzahra & Hadiono, 2022; Al-Hunaiyyan et al., 2021). Other studies have examined the use of human-centered approaches in developing academic advising information systems, demonstrating the importance of addressing user needs, accessibility, usability, and communication challenges in system development (Angelia & Tambotoh, 2024). Research on academic information systems has also examined usability and human-computer interaction to understand students' experiences when interacting with academic information systems (Nusantara et al., 2023; Widiawati et al., 2023). However, the development of information media at the study program level that specifically focuses on student needs analysis as the basis for developing an integrated academic guide still needs to be strengthened. This gap provides the basis for the present study, which positions students as the primary users in the process of identifying information needs prior to the development of SIPANDU-AKES. This approach is expected to produce an information medium that is not only digitally available but also relevant to user needs and the problems encountered by students in academic information services.

Although the university provides an Academic Information System (SIAKAD) to support academic administration, the availability of this system has not been fully complemented by digital academic guidance at the study program level. In the Health Administration Study

Program, guidance on completing Study Plan Cards (KRS), academic regulations, and academic administrative procedures is still primarily disseminated manually through student WhatsApp groups. This approach may make it difficult for students to retrieve previously shared information, particularly first-year students who are not yet familiar with academic procedures and regulations. This situation highlights a gap between the availability of a university-wide academic administration system and students' need for centralized, accessible, and continuously available academic guidance. To address this gap, SIPANDU-AKES is proposed as a digital academic guidance platform integrated into the Health Administration Study Program website. Unlike SIAKAD, which primarily supports academic administrative processes, SIPANDU-AKES is intended to provide practical guidance on KRS completion, academic regulations, and academic service procedures that students can access independently. Therefore, this study aims to analyze students' needs for academic information and guidance services as a foundation for developing SIPANDU-AKES, ensuring that its content and service characteristics are aligned with students' needs, particularly those of first-year students.

METHODS

This study employed a descriptive quantitative approach with a cross-sectional survey design to identify students' needs for integrated digital academic information services. A needs assessment approach was applied to identify gaps between existing academic information services and students' needs as a basis for developing SIPANDU-AKES (Digital Academic Guide Information System for Health Administration) (Prasittichok & Klaykaew, 2022).

The study was conducted in the Health Administration Study Program in 2026 and involved 145 students from the 2025 cohort. Participants were recruited using a non-probability convenience sampling technique based on their willingness to complete the questionnaire. The inclusion criteria were active students enrolled in the Health Administration Study Program from the 2025 cohort who voluntarily agreed to participate. This cohort was selected because first-year students require academic guidance, particularly regarding Study Plan Card (KRS) completion, which has traditionally been assisted by academic administrative staff.

Data were collected using a 20-item questionnaire designed to assess students' academic information needs. The questionnaire covered information related to KRS completion, academic calendars, academic regulations, student codes of ethics, existing information sources, ease of accessing academic information, difficulties encountered in obtaining information, and students' needs for and support of SIPANDU-AKES development. The questionnaire was pilot-tested among 10 students from the 2023 cohort to assess its validity and reliability before administration to the main study participants. These students were not included in the main study sample.

Data were analyzed descriptively using frequency distributions and percentages. Percentages were calculated based on the number of valid responses for each questionnaire item. The findings were used to identify existing academic information service conditions and students' needs to inform the development of SIPANDU-AKES as an accessible digital academic guidance platform integrated into the Health Administration Study Program website.

RESULTS AND DISCUSSION

This study involved 145 students from the 2025 cohort of the Health Administration Study Program to identify their needs for digital academic information services. The research instrument consisted of 20 statements with Yes and No response options. The findings revealed variations in students' experiences in accessing academic information, alongside a high level of demand for integrated, accessible, and digitally delivered academic guidance.

The results of the needs identification are presented in **Table 1.** These findings were subsequently synthesized into specific development requirements and their implications for SIPANDU-AKES, as presented in **Table 2.** The two tables complement each other: Table 1 describes students' experiences and perceived needs, while Table 2 translates these findings into priorities for developing a digital academic guidance platform.

Table 1. Results of the Identification of Students' Needs for Academic Information Services

Statement	Yes (%)	No (%)
Difficulty obtaining academic information	43,40%	56,60%
Academic information is still distributed across various media	94,40%	5,60%
KRS completion guidelines need to be provided digitally	97,20%	2,80%
Need for clearer information on the stages of KRS completion	93,80%	6,20%
Academic calendar information needs to be easily accessible	98,60%	1,40%
Have experienced delays in receiving academic schedule information	46,90%	53,10%
Student regulations need to be provided in a single medium	97,20%	2,80%
Students need to understand the applicable code of ethics	100%	0%
Student code of ethics documents need to be easily accessible	99,30%	0,70%
Digital academic guidelines will make it easier for students	100%	0%
Digital media can accelerate the dissemination of academic information	99,30%	0,70%
Need for a single medium containing all academic information	98,60%	1,40%
Digital-based academic information can reduce information errors	86,80%	13,20%
Digital academic guide systems need to be designed according to students' needs	98,60%	1,40%
Development of digital academic guidelines is important	100%	0%
A simple system interface facilitates use	99,30%	0,70%
Digital academic guidelines need to be accessible through mobile phones	98,60%	1,40%
Academic procedural information needs to be organized more systematically	98,60%	1,40%
Digital academic guidelines can improve academic services	98,60%	1,40%
Support the development of SIPANDU-AKES	98,60%	1,40%

As shown in **Table 1**, 94.4% of respondents reported that academic information was still distributed across various media. However, students' experiences in obtaining information were not entirely consistent. While 43.4% reported difficulties accessing academic information, 56.6% did not experience such difficulties. These findings suggest that the distribution of information across multiple channels does not necessarily create accessibility problems for all students. Some students may already be able to obtain the information they need through existing communication channels, whereas others continue to encounter difficulties.

A similar pattern was observed regarding the timeliness of academic information. Approximately 46.9% of respondents reported experiencing delays in receiving academic schedule information, while 53.1% did not. This indicates that existing communication practices may adequately serve some students but do not consistently provide the same experience for all respondents.

Despite these differences, students expressed a strong preference for integrated academic information services. A total of 98.6% indicated the need for a single platform containing academic information, while 97.2% required digital guidelines for completing the Study Plan Card (Kartu Rencana Studi/KRS). Furthermore, 93.8% expressed the need for clearer explanations of the KRS completion process. Other frequently identified needs included

accessible academic calendars (98.6%), centralized student regulations (97.2%), and easily accessible student code of ethics documents (99.3%).

Regarding system characteristics, 99.3% of respondents believed that a simple interface would facilitate system use, while 98.6% indicated that digital academic guidelines should be accessible through mobile phones. In addition, 98.6% supported the proposed development of SIPANDU-AKES.

Based on these findings, a synthesis was conducted to identify priority requirements and their implications for the proposed digital academic guidance platform.

Table 2. Synthesis of Students' Needs as a Basis for Developing SIPANDU-AKES

Needs Aspect	Main Finding	Implication for SIPANDU-AKES Development
Information integration	94.4% stated that information was still distributed across various media	Provide a single academic information center
KRS	97.2% needed digital KRS guidelines and 93.8% needed clearer stages	Provide systematic and easy-to-understand KRS guidelines
Academic calendar	98.6% needed easy access to the academic calendar	Provide the academic calendar within a single medium
Student regulations	97.2% needed student regulations in a single medium	Provide easily accessible student regulation documents
Code of ethics	100% stated that students need to understand the code of ethics and 99.3% needed easy access	Provide the code of ethics digitally and make it easily accessible
Information speed	99.3% stated that digital media accelerate information dissemination	Use digital media as the primary information channel
Accessibility	98.6% needed a single information medium	Integrate all academic information
Ease of use	99.3% wanted a simple interface	Develop a simple user interface
Device accessibility	98.6% needed access through mobile phones	Optimize access through mobile devices
Information structure	98.6% needed more structured procedures	Organize information according to users' needs
Service improvement	98.6% considered digital guidelines capable of improving academic services	Position SIPANDU-AKES as a supporting medium for academic services
System acceptance	98.6% supported the development of SIPANDU-AKES	Indicates a high level of user acceptance

Table 2 demonstrates that the requirements for SIPANDU-AKES development extend beyond the digitalization of academic documents. Students' needs encompass information integration, procedural clarity, accessibility, usability, mobile compatibility, and information quality. The synthesis translates the quantitative findings in Table 1 into proposed content and functional characteristics for SIPANDU-AKES.

Importantly, the findings indicate that the need for an integrated academic guidance platform is not solely associated with students experiencing difficulties accessing information. Instead, the proposed development also reflects students' preferences for more organized, centralized, and convenient access to academic guidance.

Existing Academic Information Services and Variations in Students' Perceptions

The finding that 94.4% of respondents perceived academic information as being distributed across various media suggests that information fragmentation remains an important consideration in academic service delivery. However, students' experiences in obtaining academic information varied. While 43.4% reported difficulties accessing academic information, 56.6% did not. This indicates that information distributed through multiple channels does not necessarily result in accessibility barriers for all students. Some may

already be familiar with existing communication practices, while others may require more structured access to academic information.

Similar variations were observed in the timeliness of academic schedule information. Approximately 46.9% of respondents had experienced delays, whereas 53.1% had not. These findings suggest that current information delivery practices may adequately meet the needs of some students, although certain limitations remain for others. Nevertheless, the study did not specifically investigate the factors explaining these differences; therefore, any interpretation of their underlying causes should be treated cautiously.

In the Health Administration Study Program, academic guidance related to KRS completion, academic regulations, and administrative procedures has primarily been provided through WhatsApp groups and assistance from academic administrative staff. Although these communication practices allow students to receive information, they do not provide a dedicated, centralized digital reference for academic procedures at the study program level.

As synthesized in Table 2, the fragmentation of academic information provides a rationale for developing SIPANDU-AKES as a digital guidance platform that complements the university's existing Academic Information System (SIAKAD). Unlike SIAKAD, which primarily facilitates academic administrative transactions, SIPANDU-AKES is intended to provide practical guidance and reference materials to help students understand academic procedures.

These findings are consistent with Azzahra and Hadiono (2022), who examined academic information services in relation to student satisfaction and service quality. Similarly, Al-Hunaiyyan et al. (2021) highlighted the importance of user experience in student information systems. Therefore, improving academic information services requires attention not only to information availability but also to how information is organized, accessed, and experienced by students.

The findings suggest that SIPANDU-AKES should not replace existing academic communication channels but complement them by providing a centralized, structured, and accessible source of academic guidance.

Information Integration and the Need for Digital KRS Guidelines

The results showed that 98.6% of respondents required a single platform containing academic information. Interestingly, this proportion was considerably higher than the percentage reporting difficulties obtaining information (43.4%). This difference indicates that students' demand for integrated information services cannot be explained solely by their reported difficulties. Students may prefer a centralized information platform for convenience and efficiency even when they can obtain information through existing channels.

However, because the study employed descriptive analysis of individual questionnaire items, the relationship between students' reported difficulties and their preferences for an integrated platform cannot be established at the individual level without additional analysis.

The demand for digital KRS completion guidelines was also substantial, with 97.2% of respondents supporting their provision and 93.8% requiring clearer procedural explanations. These findings are particularly relevant because the respondents were students from the 2025 cohort, who were still in the early stages of their university education and required guidance in understanding academic administrative procedures.

At the Health Administration Study Program, KRS completion has traditionally involved assistance from academic administrative staff. Consequently, providing digital, step-by-step KRS guidelines through the study program website may help students understand academic procedures and access relevant instructions independently.

As presented in Table 2, the identified needs support the development of structured KRS guidelines using clear language and an accessible digital format. These findings are consistent with Rusdin et al. (2020), who examined usability in academic information systems, and Widiawati et al. (2023), who evaluated academic information system usability using the USE Questionnaire.

Furthermore, Angelia and Tambotoh (2024) highlighted the relevance of a human-centered design approach in developing academic advising information systems. Bygstad et al. (2022) also discussed the challenges of fragmented digital solutions in higher education,

emphasizing the broader importance of integrating digital services into academic environments.

Thus, SIPANDU-AKES should be designed not merely as a collection of digital documents but as an organized academic guidance resource that supports students in understanding academic procedures, particularly during their transition into higher education.

Academic Calendars, Student Regulations, and Codes of Ethics

Students' information needs extended beyond KRS completion to include academic calendars, student regulations, and codes of ethics. Approximately 98.6% of respondents required easy access to academic calendar information, while 97.2% wanted student regulations to be available through a single platform. Furthermore, all respondents (100%) acknowledged the importance of understanding the applicable student code of ethics, and 99.3% required easy access to related documents.

These findings indicate that academic information needs include both administrative and regulatory dimensions. Academic calendars provide important references for planning academic activities, while student regulations and codes of ethics help students understand the rules and expectations governing their academic responsibilities.

As summarized in Table 2, these needs support integrating academic calendars, student regulations, and codes of ethics into SIPANDU-AKES. Centralized access to these materials may allow students to retrieve official academic documents without repeatedly searching through messages or files distributed across different communication channels.

From an information systems perspective, DeLone and McLean (2003) identified information quality as an important dimension of information system success. Petter et al. (2008) further examined information system success dimensions and their measurement. Similarly, Iivari (2005) investigated the DeLone and McLean model of information systems success, providing additional support for considering information quality in system evaluation.

These perspectives highlight the importance of ensuring that SIPANDU-AKES provides information that is relevant, accurate, understandable, and regularly updated. Therefore, the proposed platform should not only centralize academic documents but also establish clear procedures for maintaining the quality and reliability of its content.

Usability, Accessibility, and System Interface Requirements

The results revealed strong demand for a simple and accessible digital academic guidance platform. Approximately 99.3% of respondents believed that a simple interface would facilitate system use, while 98.6% required access through mobile phones. Additionally, 98.6% indicated that academic procedures should be presented more systematically.

These findings demonstrate that developing SIPANDU-AKES requires attention not only to the availability of academic content but also to how the information is presented and accessed. Even comprehensive academic information may be difficult to use if the system has complicated navigation or poorly organized content.

As presented in Table 2, these requirements suggest that SIPANDU-AKES should incorporate a simple user interface, clear navigation, organized information categories, and a mobile-responsive design. Integrating the platform into the Health Administration Study Program website may provide a more direct access point for students seeking academic guidance.

These findings are consistent with Nusantara et al. (2023), who examined human-computer interaction and user experience in academic information systems, and Widiawati et al. (2023), who investigated usability in academic information systems.

Alghannam and Al-Shaher (2021) also addressed user experience in student information systems, reinforcing the relevance of designing academic information services around users' interaction needs. Furthermore, Suaryana et al. (2017) examined information quality and user satisfaction in web-based academic information systems, highlighting the relevance of information quality to students' experiences.

Accordingly, SIPANDU-AKES development should prioritize usability and accessibility, particularly because the intended users include first-year students who may still be adapting to university academic procedures.

Perceived Benefits of Digitalization and Academic Information Quality

The findings demonstrated strong student acceptance of digital academic guidance. All respondents (100%) believed that digital academic guidelines would facilitate academic activities and considered their development important. In addition, 99.3% perceived that digital media could accelerate the dissemination of academic information.

Nevertheless, responses concerning the potential of digital information to reduce errors were more varied. While 86.8% of respondents believed that digital academic information could reduce information errors, 13.2% did not agree with this statement.

This variation suggests that although most respondents recognized the potential benefits of digitalization, not all perceived digital platforms as inherently capable of improving information accuracy. Therefore, the effectiveness of digital academic information services should not be assumed to depend solely on technological availability. Appropriate information management, verification, and regular updates remain necessary.

Bygstad et al. (2022) emphasized that digital transformation in higher education involves more than introducing digital technologies; it also requires changes in how digital solutions are incorporated into academic practices. In the context of SIPANDU-AKES, this implies that transforming manual academic guidelines into digital resources should involve improvements in information organization, accessibility, and management rather than merely converting documents into electronic formats.

This interpretation is also consistent with the information quality dimension of the DeLone and McLean model (DeLone & McLean, 2003). Related research by Iivari (2005) and Petter et al. (2009) further supports the importance of considering multiple dimensions when evaluating information system success.

As reflected in Table 2, SIPANDU-AKES should therefore incorporate information verification procedures, clearly identified official sources, and regular content updates to maintain the accuracy and relevance of academic guidance.

Students' Support for SIPANDU-AKES Development

The study found that 98.6% of respondents supported the development of SIPANDU-AKES, while 1.4% did not select the affirmative response. In addition, 98.6% believed that digital academic guidelines could improve academic services, and the same proportion considered it necessary to design the platform according to students' needs.

These findings indicate strong positive perceptions of the proposed SIPANDU-AKES development. However, the results should be interpreted carefully. The reported percentages represent students' expectations and perceived needs rather than empirical evidence that the platform has already improved academic service quality.

The findings support the relevance of a user-centered development approach. Angelia and Tambotoh (2024) emphasized the importance of incorporating user needs into academic information system development. Buditjahjanto (2020) examined academic information systems from the perspective of service quality and user satisfaction, highlighting the importance of considering users' experiences in academic service provision.

Similarly, Zakiyyah (2020) investigated academic information system service quality in relation to student satisfaction using the WebQual 4.0 approach. These studies provide relevant perspectives for considering information accessibility, service quality, and user expectations during the development of SIPANDU-AKES.

The synthesis in Table 2 indicates that strong student support provides a rationale for proceeding with the proposed development. Nevertheless, subsequent implementation should be accompanied by usability testing and evaluation of information accessibility, content clarity, and user experiences.

Therefore, the present study provides an empirical basis for planning SIPANDU-AKES development but does not establish its effectiveness in improving academic services.

Overall Synthesis and Implications for SIPANDU-AKES Development

Overall, the integrated findings from Tables 1 and 2 demonstrate that the development requirements for SIPANDU-AKES encompass two closely related dimensions: students' experiences with existing academic information services and their expectations regarding digital academic guidance.

The findings indicate that not all students experienced difficulties accessing academic information. A majority of respondents (56.6%) reported no difficulties obtaining information, while 53.1% had not experienced delays in receiving academic schedule information. Nevertheless, 43.4% reported difficulties accessing academic information, and 46.9% had experienced delays. These differences demonstrate the importance of considering variations in students' experiences when planning academic information services.

At the same time, most respondents expressed strong demand for integrated academic information, digital KRS guidelines, accessible academic documents, systematic information presentation, and a simple mobile-accessible interface. Therefore, the rationale for SIPANDU-AKES development is not limited to addressing existing accessibility problems. It also reflects students' preferences for more organized and convenient academic information services.

The findings are consistent with previous studies highlighting the relevance of service quality, usability, user experience, and student satisfaction in academic information systems (Azzahra & Hadiono, 2022; Al-Hunaiyyan et al., 2021; Oktariani et al., 2025).

The principal contribution of this study lies in providing an empirical needs assessment among students from the 2025 cohort of the Health Administration Study Program as a basis for determining the content and service characteristics of SIPANDU-AKES. Unlike the university-wide Academic Information System (SIAKAD), which primarily supports academic administrative transactions, SIPANDU-AKES is intended to serve as a complementary digital academic guidance platform. Its proposed content includes KRS completion guidelines, academic calendars, academic regulations, student codes of ethics, and academic service procedures accessible through the study program website.

However, several limitations should be considered. The study employed convenience sampling and involved only students from the 2025 cohort within a single study program. Consequently, the findings primarily reflect the needs and perceptions of the participating respondents and should not be generalized to all students. Furthermore, the study assessed perceived needs and expectations rather than the actual effectiveness of SIPANDU-AKES after implementation.

Considering these findings and limitations, the study provides a preliminary empirical foundation for developing a user-oriented digital academic guidance platform. Future research should evaluate the usability, accessibility, information quality, and effectiveness of SIPANDU-AKES following its implementation to determine whether the proposed system improves students' access to academic guidance and supports more efficient academic information services.

CONCLUSION

This study concludes that students of the Health Administration Study Program have a high need for integrated, accessible, and digital-based academic information services. The identified needs include centralized information on KRS procedures, academic calendars, student regulations, and codes of ethics, supported by a simple, structured, and mobile-accessible interface. The strong student support for the development of SIPANDU-AKES (98.6%) indicates that the proposed system is well aligned with the needs and expectations of the respondents. Therefore, SIPANDU-AKES is relevant to be developed as an integrated digital platform to support academic information services that are accessible, user-friendly, and responsive to students' needs. However, this study was limited to 145 students from the 2025 cohort of a single study program, recruited through convenience sampling, which may limit the generalizability of the findings. Future research should involve students from different cohorts and conduct usability testing and user experience evaluations after the SIPANDU-AKES prototype has been developed to assess its accessibility, functionality, and effectiveness in supporting academic information services.

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AI USAGE STATEMENT

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CONFLICT OF INTEREST STATEMENT

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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