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**INFORMATION TECHNOLOGY INTEGRATION FOR ACADEMIC
ADMINISTRATION OPTIMIZATION**

I Made Sudana¹, Soedjono², Kamsidjo Budi Utomo³, Ghuftron Abdullah⁴, Iswan Riyadi⁵

Universitas PGRI Semarang, Semarang, Indonesia¹²³⁴

Universitas Widhya Dhrama, Klaten, Indonesia⁵

Universitas Veteran, Semarang, Indonesia⁵

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Abstract

The purpose of this research is to find an ICT integration system in academic administration, provide input in the form of recommendations to the Institute, especially the academic information system management unit that has been strengthened from the previous system. The research method used is quantitative descriptive research using questionnaires as the data collection technique. the sample in this study consisted of lecturers, students and managers of Academic Information Systems from three former IKIP Private Universities in Central Java, namely UPGRIS, Univet and Unwihda. Data analysis techniques used using descriptive analysis using percentage. In general, the integration of ICT in academic administration, UPGRIS 93.79% with a very good category and UNIVET 86.17% with a very good category while UNWIDHA still needs to be improved because it is still relatively simple. (60%), while UNWIDHA still needs to be improved because it is still relatively simple. Academic SIM sections that are often visited by users include; (a) lecture information, (b) lecture and exam schedules, (c) semester exam evaluation results, (d) scientific paper guidelines, (d) Lecturer Information. Most respondents stated that information related to academic issues was categorized as complete.

□ Correspondence Address: Universitas PGRI Semarang, Semarang, Indonesia

Institution Address: Jl. Sidodadi Timur Jalan Dokter Cipto No.24,

Karangtempel, Semarang Timur., Kota Semarang.

E-mail: sudana080556@gmail.com

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INTRODUCTION

The application of Information and Communication Technology (ICT) in the Management Information System in the academic field has become a necessity. The purpose of developing an Academic Management Information System in Higher Education is so that the campus community as the main user will find it easy to obtain information openly, which is rigorous and systematic, especially with regard to various types of data and information (Alfatul Hisabi et al., 2022). As with the academic Management Information System owned by a Higher Education, it is required to be able to provide various data and information, both for the academic community itself, and for the general public through various procedures and requirements to be able to access it (John W. Scott, 2013). The use of ICT is vital and determines the organizational progress of an educational institution in the face of global competition. A good higher education institution must certainly have a sufficient, even good, education management information system to provide excellent service to the entire academic community (students, teaching staff, managers and other stakeholders outside the Higher Education institution itself. The system is a set of elements that are interrelated or integrated as a unit intended to achieve a main goal (Arifin et al., 2022; Nasution et al., 2022)

There are many supporting units that must be managed in a management information system by universities. Especially in the academic field, starting from the new student registration system, study plans, supporting libraries, lecturer data, scientific work data of lecturers and students (Manik, 2023). Not to mention other supporting systems in the scope of student affairs such as community service collection systems, scholarships, judicium, and others. Some phenomena of problems in the management of Management Information Systems, especially in the Academic field are still like a mosaic (fragmentary), so that users (lecturers and students) experience difficulties such as the lecture attendance system, course offerings each semester, attendance validation systems for both lecturers and students, lecture schedules, judging the results of 3 semester exams, rules for taking the number of semester credit units (SKS) and so on (Zulkhairi, 2020). At first glance, this is due to: (a) management of management information systems that are still separated, (b) handled by lecturers appointed as technical personnel so that it is very dependent on free time, (c) not yet managed by a special unit with professional personnel, (d) each management information system unit requires its own password which is sometimes different, so that it will be constrained if you forget one of the passwords to access one of the systems.

Ex IKIP Universities as relatively large private universities in Central Java such as UPGRIS, UNWIDHA and UNIVET are also trying to provide excellent service. From the results of the initial discussions of the research team, it turned out that the university had implemented SIM in various fields, especially in the academic field. For this reason, if universities want to provide the best service to improve the quality of the institution in the future, it is time for the campus to have an integrated Management Information System (SIM) covering various supporting components, especially the Academic Information System (SIKAD).

Several existing studies related to the management of Academic SIM, found that there is still a very simple web-based management, so that the information is easily obtained by the academic community and the community outside the campus (Amin & Siahaan, 2016). To what extent the Academic SIM has been managed, and how the management system is, an in-depth study is needed through a comprehensive portrait to

find out the response and assessment given by the campus community as the main user, especially for the academic field. From the results of the study that will be carried out, the results if obstacles are still found, the weaknesses of the existing Academic SIM management can be used as input to the relevant institutions in the form of better directions.

METHOD

This research uses a descriptive quantitative approach with a survey method (Afif et al., 2023). The aim is to describe systematically and accurately the perceptions of the academic community towards the integration of information technology in optimizing academic administration.

The population in this study included all academicians at the institutions studied, namely at UPGRIS, UNWIHDA, and UNIVET consisting of students, lecturers, and education staff. The sample was taken using purposive sampling technique by considering the respondents' direct involvement in the academic administration process. The number of samples consisted of: Students: 50 people, Lecturers: 30 people, and Education Personnel: 10 people.

The instrument used in this study is a closed questionnaire in the form of a Likert scale (Rahman et al., 2024) with four answer options, namely:

1. Strongly Agree (SS)
2. Agree (S)
3. Disagree (TS)
4. Strongly Disagree (STS)

This questionnaire is designed to measure perceptions of several aspects, including: service speed, system efficiency, ease of access, and user satisfaction with information technology-based administrative systems.

Data was collected through distributing questionnaires to respondents directly or online. The collected questionnaires were then processed to obtain the total percentage of each indicator assessed.

The data analysis technique uses quantitative descriptive analysis. The score of each respondent was converted into a percentage. Furthermore, the percentage results were interpreted based on the norm categories as follows:

Table 1. Category Table Norm Score Percentage

| No | Percentage Range | Category |
|----|------------------|------------------|
| 1 | 0% - 20% | Very unfavorable |
| 2 | >20% - 40% | Not good |
| 3 | >40% - 60% | Fair |
| 4 | >60% - 80% | Good |
| 5 | >80% - 100% | Very Good |

RESULTS AND DISCUSSION

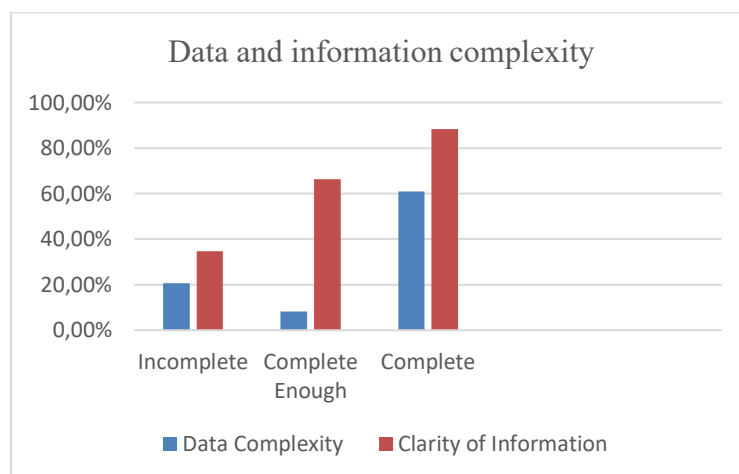
Results of Using ICT-based Academic Management Information System Using SSO

In general, the three universities that are the scene of this research have developed ICT-based Academic Management Information Systems using SSO which 79.33% in general respondents stated that the system is very simple and 81% stated that it is easy to

access very clear, because it is specialized and 89.66% have clear instructions. UPGRIS and UNNIVET Academic management information systems show a high level of complexity, covering a variety of features and comprehensive information. Lecturers and students revealed that the system is considered complete (88.33%), while UNWIDHA's system is still relatively simple.

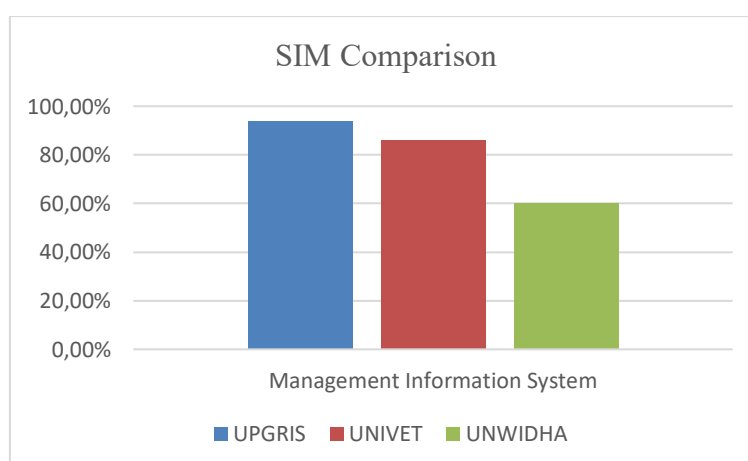
Data Complexity Understanding Results

Figure 1. Data and information complexity



Based on Figure 1, in terms of understanding the complexity of the data, about 61% stated that the data was complete, while those who stated that the data was quite complete were 8.33%, and the remaining 20.67% still categorized the data as insufficient. Judging from the clarity of information, most stated that it was complete at 88.33% and the certainty of information which stated that it was quite complete at 66.33% and there were still around 34.67% who considered it incomplete, especially in relation to the scope of the information system.

Figure 2. Comparison of three Universities in management information system



When viewed from the attendance system and system adequacy, 100% stated that it was complete. Academic Management Information System related to lecturer duties, UNWIDHA seems to get the lowest assessment of 60% with a sufficient category because

the presentation of information is mainly seen from the structure of the system, presentation of data, elements presented, and instructions for use. Meanwhile, UPGRIS 93.79% with a very good category and UNIVET 86.17% with a very good category.

DISCUSSION

In general, the former IKIP University which is the object of this research has developed SIM, especially related to academics. Therefore, in its management system requires a special team, so that it can provide optimal services for its users. Ease of access to academic SIM is a demand for its users so that each University has tried to carry out a management system both in the form of UPT (UPGRIS), Agency (UNIVET) and still managed by another forum LP2M (UNWIDHA).

In terms of accessing the Academic SIM, 99.38% of lecturers and students generally stated that the use of passwords for login purposes was relatively simple. This means that the use of the Academic SIM password prepared for lecturers and students in accessing it is not complex (form / combination) and not separated, because it is enough to use one password that implements Single Sign On (SSO), meaning that only with one password and one login, users will be able to access all existing system components.

The complexity of the system managed by the existing container, depending on the type of unit handled, so that almost every higher education institution managed components will have SIM very varied, according to the information to be presented. Therefore, the part that handles the SIM of the institution (university) depends on the wishes of each leader, especially the Quality Assurance Agency. The Quality Assurance Agency of the Institution (University) will be very interested in meeting the needs of various information that is generally needed when there is External Monitoring and Evaluation (Monev) and the need for accreditation needs both at the University level, Faculty to the Study Program managed (Setiawan et al., 2024).

The information presented by the three universities targeted by this research, the management system is not the same, such as UPGRIS in the form of UPT, UNIVET in the form of an Agency while UNWIDHA is still under LP2M. In general, each of these universities prepares a container to convey all information from their institutions, all of which are ICT-based, which are integrated into one container known as the Management Information System (SIM). This condition is in line with the findings of (Salim et al., 2020) which state that a complete Academic SIM arrangement will provide convenience for its users.

Especially for UPGRIS, there is still one system that is still in the process of unification, namely SIJITU with other systems, so specifically it still uses a separate system which will soon be unified. The number of Faculties and Study Programs managed by each institution will show the potential complexity of the Academic SIM owned by each University, because more complex data presentation will be needed.

From the results of the analysis of the data obtained, it seems that the systems owned by the two UPGRIS and UNIVET institutions are almost equivalent to the completeness of the academic components managed and the information presented, except for UNWIDHA which still has a very limited system, considering that this institution has not been supported by representative staff and does not have its own management forum. The substance of the display of Academic SIM, both UPGRIS and UNIVET, is generally classified as complete, only in the main menu of the Academic SIM owned by UNIVET,

it seems that it is still being improved, because from the results of the last tracking, it turns out that the appearance has undergone improvements and improvements.

Attributed to the impression of the users, especially among lecturers, the ease of accessing the system both in the use of passwords, ease of access, generally gives the impression of easy and practical, because they tend to give a positive value in accessing Academic SIM. This shows that the three groups of lecturers from the three institutions have similar assessments of the use of passwords in accessing the Academic SIM. The system implemented is using Single Sign On (SSO) which means that with only one password and one login, the user will be able to access all the contents of the existing system. This condition is in line with the findings of (Purwanto, 2017), that the presentation of a complete Academic SIM will provide satisfaction for its users.

To search for the intended address, users must have knowledge and accuracy in identifying it. Because in the home page menu there does not seem to be a complete display in one complete page, because users still have to track the address menu with the search model again. Among the three institutions, UNWIDHA Klaten has the simplest looking web institution, while UPGRIS and UNIVET have a more comprehensive and representative main menu.

The main menu display on the SIM in general from each institution displays information that is considered the most hot at that time, so that it has an attraction for its users to listen to the contents of the information presented. Specifically for academic information, the most frequently accessed information is information related to the organization of lectures, such as schedules, lecture rooms and lecture times, exam schedules and exam result information, especially among lecturers and students. General matters accessed are related to teaching assignments, attendance, and lecture rooms. In addition, many lecturers also access LP2M such as: journal information, research and community service, HAKI / Patent.

Among students, information related to lecturers' information, lecturers' scientific works, especially writings in scientific journals, is not so interesting for students to know more about, so they rarely access it. Respondents from among students generally access the Academic SIM, especially those mostly related to routine lectures. They apparently rarely access the library, lecturers' publications and students' own works, looking for guidelines for scientific papers, especially journals, except for students who will complete their final project (Thesis or Thesis). The low number of students accessing the library is due to the ease with which they can find reading sources in the form of information on the required material via the internet. This is because it is easy to get it on the internet, has a low tendency in terms of reading literacy, but strong mastery of technological literacy (Sumarto & Harahap, 2021).

Aspects that are considered to be a problem by Academic SIM managers are frequent network disruptions, so that it becomes a complaint faced by users, causing information that must be accessed to experience obstacles. Regarding matters of service by Academic SIM managers, almost all respondents gave a good assessment, especially in the nature of complaints, speed of handling, and response by officers. Regarding facility support, the managers stated that it was good and met the minimum standards required. Attention from the head of the institution is good, especially those related to the atmosphere of the workplace, the completeness of space needs, comfort is adequate. However, from the manager's side, complaints that still need attention are welfare issues, which according to them still need to be improved (Alhadi, 2022).

In general, it can be emphasized that the management of Academic SIM from the user's assessment, the presentation system, both from lecturers and students, generally gives appreciation to the management team, because complaints that are technical in nature can be understood by users, so that the delays experienced do not make them negatively assess the results of the presentation of academic information. It can be underlined that the Academic SIM presented by managers is good, because technical matters are quickly responded to by the managers while still dealing with them professionally.

CONCLUSIONS

The conclusion in this study is that the Academic SIM of the three former Private IKIP Universities in Central Java which are the target of this research activity, UPGRIS is classified as good and quite complete, but still needs a more comprehensive presentation, especially information related to accreditation information for study programs, Quality Assurance information, especially accreditation status and validity period.

The novelty of information presented by an Academic SIM, makes the Academic SIM more attractive to its users to get information, especially in the academic field which is the target, especially students at the institution. Therefore, the complexity of the information presented in the Academic SIM is determined by the ability of the management team to present the aspects that will be informed to its users.

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