



---

## **The Influence of Academic Management Information Systems on Lecturer Work Effectiveness**

**Asraf<sup>1</sup>, Bakhtiar Abbas<sup>2</sup>, Arfin Bagea<sup>3</sup>**

STIE Enam Enam Kendari, Indonesia<sup>1,2,3</sup>

Corresponding Email: asrafyunus23@gmail.com\*

*Received: ..... Reviewed: ..... Accepted: .....*

### **Abstract**

This study aims to explain and determine the influence of Academic Management Information System (SIMAK) on the effectiveness of lecturers' work at the Faculty of Islamic Economics and Business, University of Muhammadiyah Kendari. A total of 30 lecturers were sampled using the census technique, where all lecturers who had SIMAK accounts in the faculty were involved in this study. Data analysis uses simple linear regression with t-test to test the influence of SIMAK on lecturers' work effectiveness. The results of the t-test show that SIMAK has a positive and significant influence on the effectiveness of lecturers' work. In addition, it is known that SIMAK affects most of the lecturers' work effectiveness, while the rest is influenced by other factors that were not studied in this study.

**Keywords:** Academic Management Information Systems, Effectiveness

### **Introduction**

Academic Management Information System (SIMAK) has become an integral part of higher education institutions in line with the rapid development of information technology (Gultom et al., 2021; Juansyah & Indah, 2023). SIMAK provides convenience in managing academic data while increasing operational efficiency and effectiveness in various aspects of educational institutions. With this system, student data management, lecture scheduling, assessment, and various other administrative activities can be carried out more organized. The implementation of SIMAK makes a significant contribution to improving the performance of academic staff, especially lecturers (Hu & Li, 2021; Logachev et al., 2022). Through this system, lecturers can access and manage important information more quickly and efficiently, which has a positive impact on their work effectiveness. This effectiveness is very important because it not only affects the achievement of the institution's academic targets, but also the quality of teaching and research conducted by lecturers (Budiharso & Tarman, 2020; Fomba et al., 2023).

The importance of SIMAK's role in supporting the effectiveness of lecturers' work is increasingly evident from various studies that have been conducted previously. Several studies have shown a significant relationship between the use of information technology in educational institutions and increased work productivity. For example, Setiawan et al. (2019) revealed that

the implementation of management information systems in various public agencies and educational institutions consistently shows a positive impact on the effectiveness of the work of staff, including lecturers. Therefore, a study on the influence of SIMAK on the effectiveness of lecturers' work is very important to ensure that the system implemented is really able to support the achievement of the strategic goals of higher education institutions.

SIMAK has a very important role in supporting various operational aspects in higher education. This system facilitates lecturers in managing teaching activities more efficiently through an integrated system, including lecture scheduling management, grade input, and access to student academic data (Dai et al., 2021; Febriyanti et al., 2022). Management information systems contribute to improving the effectiveness of staff work through improving the quality of information produced, ease of access, and transparency in academic operations. In this case, the effectiveness of lecturers' work becomes more measurable because of the existence of a system that makes it easier to manage administrative tasks. Thus, lecturers can focus more on their primary responsibilities in teaching and research.

The effectiveness of the lecturer's work itself is a very important variable in research on the implementation of SIMAK. Work effectiveness includes the ability of lecturers to achieve academic goals that have been set by the institution, which includes quantity, quality, and timeliness in the implementation of tasks. Zidane and Olsson (2017) defines effectiveness as how much the output contributes to the achievement of the expected goals. By using SIMAK optimally, lecturers can use their time more efficiently, reduce administrative burden, and improve the quality of teaching and research they conduct. Thus, the institution as a whole can better achieve its goals through increasing the effectiveness of lecturers' work.

However, although many studies have shown the benefits of management information systems on work effectiveness in various sectors, there is a gap in research that specifically discusses how SIMAK affects the work effectiveness of lecturers in the university environment. Most of the research, such as those conducted by Küskü (2003), generally focuses on administrative employees. Studies that discuss lecturers as the main users of SIMAK in the academic environment are still relatively limited. In fact, in the higher education sector, the need for lecturers to access academic data quickly and accurately is very important to support their teaching and research activities. Therefore, there is an urgent need to further explore how SIMAK can be optimized in order to have a maximum impact on lecturer performance.

In addition, there is also a theoretical gap related to the understanding of how other factors, such as lecturers' competence in using information systems, affect their work effectiveness. Several studies mention the importance of training and developing information technology skills for lecturers, as stated by Mumtaz (2000), but there has been no research that specifically explores the relationship between technological competence and lecturer work effectiveness in the context of using SIMAK. Thus, there is a need to conduct further research on the role of user competencies in maximizing the benefits of SIMAK in the academic environment.

One example of the implementation of SIMAK can be seen at the University of Muhammadiyah Kendari (UMK), which has been using this system since 2012. SIMAK at UMK aims to improve the quality of academic services and the effectiveness of lecturers' work. This system provides easy access for lecturers in managing various administrative tasks such as grade input, student attendance monitoring, and lecture schedule management. However,

initial observations show that there are still several obstacles in the implementation of SIMAK in UMK, such as lack of information updates and inconsistencies in the implementation of the academic calendar. These constraints affect the effectiveness of lecturers in carrying out administrative tasks, which in turn affects their productivity in teaching and research.

The obstacles faced in the implementation of SIMAK require further attention. In this context, research conducted at UMK is important to evaluate the extent to which SIMAK has functioned in accordance with its original purpose and how this system can be optimized to be more effective in supporting lecturers' tasks. This study aims to identify factors that affect the effectiveness of SIMAK in increasing lecturer work productivity, including technical factors, user competence, and existing management support.

In addition, this study also aims to provide recommendations that can be implemented by other higher education institutions. This recommendation can be a guideline to improve lecturer performance through optimizing the use of SIMAK, which can ultimately improve the quality of teaching and research in the institution. With proper management of information technology, higher education institutions can ensure that their lecturers have enough time and resources to focus on their main academic tasks, without being distracted by excessive administrative burden.

In conclusion, the implementation of SIMAK has great potential to increase the work effectiveness of lecturers by reducing administrative burden and allowing them to focus on their main responsibilities, namely teaching and research. However, to maximize the benefits of SIMAK, it is important to pay attention to factors such as user competence, management support, and the quality of the system's implementation. Further research is needed to explore how SIMAK can be optimized in the academic environment so that it can have a positive impact on lecturer performance and support the achievement of strategic goals of academic institutions.

## **Research Method**

This study uses a quantitative approach with a survey method to collect data from lecturers at the Faculty of Islamic Economics and Business (FEBI) Universitas Muhammadiyah Kendari (UMK) who have an Academic Management Information System (SIMAK) account. The population in this study consisted of 42 lecturers who were registered as SIMAK users, but the number of samples used was 30 respondents. The sampling technique used is accidental sampling, which is a sampling method based on chance. This means that anyone who happens to meet the researcher and meets the criteria can be used as a sample (Sugiyono, 2004). The main criteria for the sample in this study are lecturers who have a SIMAK account at FEBI UMK.

The main instrument used in this study is a questionnaire prepared on a 5-point Likert scale, which includes questions about the frequency of use of SIMAK, lecturers' understanding of the features in SIMAK, and the influence of SIMAK use on their work effectiveness. The data collection process is carried out by distributing questionnaires to lecturers who meet the criteria. The collected data were then analyzed using descriptive statistical techniques to describe the characteristics of respondents and the use of SIMAK, as well as inferential analysis to test the relationship between the use of SIMAK and the effectiveness of lecturers' work

**Result**

**Simple Linear Regression Analysis**

A simple linear regression analysis was used in this study to test the hypothesis regarding the influence of the Academic Management Information System (SIMAK) on the effectiveness of lecturers' work. In the statistical calculation process, this regression analysis is carried out with the help of the SPSS for Windows program. The results of data processing using the SPSS program will be further explained in the table:

Table of Results of Simple Linear Regression Analysis

Variable	Unstandardized Coefficient (b)	t	Sig
X	0,273	12.972	0,000
a	: -1,139		
R	: 92,6		$t_{table} : 1,699$
R Square	: 85.7		

Based on the results of the simple linear regression analysis listed in the table above, a number of important information related to the influence of the Academic Management Information System (SIMAK) on the effectiveness of lecturers' work was obtained. The regression coefficient of 0.273 means that every increase in the implementation of SIMAK of 27.3% will be followed by an increase in the work effectiveness of lecturers by 27.3%. In other words, SIMAK has a significant contribution to improving the effectiveness of lecturers' work in carrying out their academic and administrative tasks. This figure shows that SIMAK plays a role in supporting the improvement of the quality and productivity of lecturers' work, especially in terms of more structured and efficient management of administrative tasks. The effectiveness of lecturers' work can be measured through various indicators such as timeliness in completing assignments, teaching quality, and productivity in research, all of which can be helped by an effective management system such as SIMAK.

In addition, the calculation results show that the value of the correlation coefficient (R) reaches 0.926. This means that there is a very close relationship between SIMAK and the effectiveness of lecturers' work, which is 92.6%. This high correlation indicates that SIMAK has a direct and strong influence on the effectiveness of lecturers' work. This very close relationship can be understood considering that SIMAK helps lecturers access various academic information quickly and efficiently, ranging from managing lecture schedules, grade input, to monitoring student attendance. With this convenience, lecturers can focus more on their core responsibilities such as teaching and research, without being burdened by complex and time-consuming administrative tasks. Technology support such as SIMAK has proven to be able to increase the productivity and performance of lecturers in higher education institutions.

The determination coefficient or R Square value of 85.7% also confirms that most of the variability in lecturers' work effectiveness can be explained by the use of SIMAK. In other words, 85.7% of the changes in lecturers' work effectiveness were influenced by the implementation of SIMAK, while the rest, namely 14.3%, was influenced by other variables that were not examined in this study. This high coefficient of determination value emphasizes the importance of SIMAK's role in supporting lecturers' academic activities, especially in improving their efficiency and accuracy in carrying out administrative tasks. However, there are still several other factors that may also affect the effectiveness of lecturers' work, such as

lecturers' competence in using technology, the level of support from management, and the available technological infrastructure.

Furthermore, the regression equation obtained from this analysis shows that before the implementation of SIMAK, the work effectiveness of lecturers was at a negative number (-1.139). This shows that without the support of a structured management information system, lecturers may experience difficulties in managing their academic tasks, which negatively impacts overall performance. However, with SIMAK, any increase in its use will have a significant positive impact on the effectiveness of lecturers' work. This provides evidence that SIMAK not only helps in terms of data management, but also has an important role in improving the efficiency and operational effectiveness of lecturers in educational institutions.

Overall, the results of this analysis show that the implementation of SIMAK has a significant influence on the effectiveness of lecturers' work. This system allows lecturers to manage their tasks more efficiently, so that they can make a greater contribution to the achievement of the institution's academic goals. This study provides strong evidence that the proper use of information technology, such as SIMAK, can provide great benefits for educational institutions, especially in supporting the improvement of the quality and productivity of lecturers. However, it is still important to consider other factors that may also affect the effectiveness of lecturers' work so that SIMAK can be better optimized in the future

## **Discussion**

Based on the results of the statistical test, it is known that the Academic Management Information System (SIMAK) has a positive and significant effect on the Lecturer's Work Effectiveness. This can be shown from the many responses that expressed their agreement and agreement with the statements in the questionnaire related to the Academic Management Information System/SIMAK. From these results, it was further obtained that the variables of the Academic Management Information System/SIMAK with four indicators, the results have a positive and significant influence on the Lecturer's Work Effectiveness.

The influence of the variables of the Academic Management Information System/SIMAK on work effectiveness is as follows, the results of the calculation in this study show that the variables of the Academic Management Information System/SIMAK have a positive and significant influence on work effectiveness (Ardiansyah et al., 2019; Oktaviani & Kuntadi, 2023; Yulianto et al., 2022). From the results of the calculation, it is known that in variable X, the information quality indicator is the one that has the strongest influence on work effectiveness. Especially in the statement that states The information system I use produces relevant information (Al-Mamary et al., 2019).

From the explanation above, it can be concluded that the Academic Management Information System/SIMAK has a positive and significant impact on the effectiveness of the work of lecturers. Even though from these indicators, there are still some things that still need to be improved, especially for the parties involved in managing SIMAK itself. So that the problems that arise, which can affect the Effectiveness of Lecturers' Work can be minimized. Because the Academic Management Information System/SIMAK greatly affects the work of lecturers, where SIMAK is currently a necessity for every work unit, both in a company, agency and not least universities which in carrying out their management need an integrated system. Without ignoring other variables that may also affect work effectiveness (Simons, 2005).

The results of this study are in line with the results of research from Dewi (2013) students from Pasundan University Bandung Public Policy Concentration Master Program in

Administrative Sciences, Faculty of Postgraduate Studies with the research title "Analysis of the Influence of Management Information Systems on Employee Work Effectiveness in the Field of Health Resources, West Java Provincial Health Office" This study uses quantitative analysis through the use of the Path Analysis Method (*Path Analysis*) which is intended to determine the amount of influence of the Management Information System variable on the Work Effectiveness of Employees in the Health Resources Sector of the West Java Provincial Health Office simultaneously and partially. The results of the study show that simultaneously, the influence of the Management Information System on the Work Effectiveness of Employees.

## **Conclusion**

Based on the results of the research and analysis carried out, it can be concluded that the Academic Management Information System (SIMAK) has a positive and significant influence on the effectiveness of lecturers' work at the Faculty of Islamic Economics and Business, University of Muhammadiyah Kendari. SIMAK has been proven to help lecturers in carrying out academic and administrative tasks more efficiently, especially in terms of academic data management, scheduling, and grade input. The use of SIMAK allows lecturers to reduce administrative burdens, so they can focus more on key tasks such as teaching and research. Although the results of this study show that SIMAK as a whole has a positive impact, there are still some areas that need improvement, especially related to the ease of use of the system by lecturers.

This research provides several important implications for the management of the Academic Management Information System and higher education institutions, especially at the University of Muhammadiyah Kendari. First, the results of this study emphasize the importance of the existence of SIMAK as a supporting tool that can increase the effectiveness of lecturers' work. With an integrated information system, lecturers can access the necessary academic information quickly and on time, so that their performance can be more optimal. Therefore, the faculty and university need to ensure that SIMAK continues to be updated and improved in quality so that it can function optimally. Second, this study also shows the importance of training and improving lecturers' skills in using SIMAK. Although SIMAK is designed to make administrative tasks easier, not all lecturers feel comfortable using this technology. Therefore, a more intensive training program is needed for lecturers, especially for those who are less familiar with information technology. With proper training, lecturers are expected to better understand the features of SIMAK and use them more efficiently in their daily activities.

This research has several limitations that need to be considered. First, this study only measured the influence of one independent variable, namely the Academic Management Information System (SIMAK), on the effectiveness of lecturers' work. Meanwhile, the effectiveness of lecturers' work can be influenced by many other factors, such as management support, available technological infrastructure, and lecturers' competence in using technology. By measuring only one variable, the results of this study may not reflect the overall factors that affect the effectiveness of lecturers' work. Second, this research was conducted only at the Faculty of Islamic Economics and Business, University of Muhammadiyah Kendari, which means that the results may not be generalized to other educational institutions. The conditions and technological infrastructure in each faculty or university may be different, so the influence of SIMAK on the effectiveness of lecturers' work may be different in other institutions. In

addition, the limited number of samples is also one of the limitations in this study, which may affect the representativeness of the results.

For future research, it is recommended that researchers add other independent variables that can affect the effectiveness of lecturers' work. Some variables that can be considered include lecturer technology competence, management support, availability of IT infrastructure, and other external factors that may affect lecturer performance. By adding these variables, future research can provide a more comprehensive picture of the factors that affect the effectiveness of lecturers' work. In addition, future research is also recommended to involve more samples from various faculties or other higher education institutions. By involving more institutions, the results of the research will be more representative and can be generalized to various academic settings. This cross-institutional research can also provide broader insights into how SIMAK affects the effectiveness of lecturers' work in a variety of different contexts. That way, future research can provide richer and more comprehensive recommendations for the development of SIMAK and other academic information systems in higher education.

## **References**

- Al-Mamary, Y. H. S., Al-Nashmi, M. M., Shamsuddin, A., & Abdulrab, M. (2019). Development of an integrated model for successful adoption of management information systems in Yemeni telecommunication organizations. *International Journal of Scientific & Technology Research*, 8(11), 3912-3939.
- Ardiansyah, D., Winantu, A., Muzakkar, M., Praptomo, Y., & Nurudin, I. (2019). Effect of information waste and technostress on users satisfaction and productivity in STMIK El Rahma Yogyakarta. *Journal of Physics: Conference Series*,
- Budiharso, T., & Tarman, B. (2020). Improving quality education through better working conditions of academic institutes. *Journal of Ethnic and Cultural Studies*, 7(1), 99-115.
- Dai, L., Wang, W., & Zhou, Y. (2021). Design and research of intelligent educational administration management system based on mobile edge computing internet. *Mobile Information Systems*, 2021(1), 9787866.
- Dewi, H. S. R. (2013). Analisis pengaruh sistem informasi manajemen terhadap efektivitas kerja pegawai pada bidang sumber daya kesehatan dinas kesehatan provinsi jawa barat. *Universitas Pasundan*, 1-134.
- Febriyanti, R. H., Usman, H., Lustyantje, N., Iasha, V., & Setiawan, B. (2022). Utilizing Learning Management System in Online Writing Instruction in Higher Education: Indonesian Faculty Member Perspectives. *Journal of Higher Education Theory and Practice*, 22(10).
- Fomba, B. K., Talla, D. N. D. F., & Ningaye, P. (2023). Institutional quality and education quality in developing countries: Effects and transmission channels. *Journal of the Knowledge Economy*, 14(1), 86-115.
- Gultom, S. A., Gea, D., Muda, I., & Soemitra, A. (2021). Quality Of Human Resources, Supporting Facilities And Infrastructure, Compliance With Regulations, Application Of Saiba, And Leaders' Commitment To The Quality Of Financial Reports (Case Study of State Universities Public Service Agency, North Sumatra State Islamic University and Medan State University). *Turkish Online Journal of Qualitative Inquiry*, 12(5).
- Hu, J., & Li, H. (2021). Composition and optimization of higher education management system based on data mining technology. *Scientific Programming*, 2021(1), 5631685.
- Juansyah, F., & Indah, D. R. (2023). Application of Design Thinking Method in Redesigning the Ui/Ux of Simak (Academic Information System) of Sriwijaya University Based on

- a Mobile Platform. *Jurnal Teknologi Informasi Universitas Lambung Mangkurat (JTIULM)*, 8(1), 61-72.
- Küskü, F. (2003). Employee satisfaction in higher education: the case of academic and administrative staff in Turkey. *Career Development International*, 8(7), 347-356.
- Logachev, M. S., Laamarti, Y. A., Rudneva, S. E., Ekimov, A. I., Zemlyakov, D. N., & Barkov, A. (2022). Information System for Monitoring and Management of the Quality of Educational Programs: Development of Functioning Algorithms. *International Journal of Instruction*, 15(3), 429-450.
- Mumtaz, S. (2000). Factors affecting teachers' use of information and communications technology: a review of the literature. *Journal of information technology for teacher education*, 9(3), 319-342.
- Oktaviani, T. A. N., & Kuntadi, C. (2023). Impact of State-Owned Goods Sources, State-Owned Goods, and Absorption Accounting Information Systems of State Ownership Quality of Financial Reporting. *Dinasti International Journal of Education Management And Social Science*, 4(4), 542-553.
- Setiawan, R., Kurniadi, D., Aulawi, H., & Kurniawati, R. (2019). Asset management information system for higher education. *Journal of Physics: Conference Series*,
- Simons, R. (2005). *Levers of organization design: How managers use accountability systems for greater performance and commitment*. Harvard Business Press.
- Yulianto, A., Ahmad, S., Lelly, A., & Nobia, S. (2022). Ease of use technology as a dominant factor in technology acceptance hospital information system by officers at the Jambi provincial government hospital. *Proceedings of the 5th European international conference on industrial engineering and operations management Rome, Italy*,
- Zidane, Y. J.-T., & Olsson, N. O. (2017). Defining project efficiency, effectiveness and efficacy. *International Journal of Managing Projects in Business*, 10(3), 621-641.