

The Impact of Academic Information System to Students' Satisfaction in Higher Education

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ABSTRACT

Academic information systems reflect the quality of management of a college and are one of the efforts of educational institutions to provide quality services to provide convenience and comfort to students. There are obstacles such as the difficulty of controlling the scheduling of courses and information that is less updated on academic information systems. This study aims to determine how much influence the academic information system has on student satisfaction. This study uses a type of research based on a quantitative approach. The research subjects were bachelor and graduate school students from Universitas Negeri Yogyakarta. The data collection method used a questionnaire. Data processing techniques and data analysis using simple linear regression formulas. The results showed that (i) there was a significant influence between the implementation of academic information systems on the level of satisfaction of Universitas Negeri Yogyakarta bachelor and graduate school students amount 41% (ii) supporting and inhibiting factors perceived by students in the implementation of academic information systems found in speed, timeliness, and ease of access. This article has empirical contributions related to academic information systems in higher education and can be used as insights for policy holders in universities in making policies.

Keywords: *Academic Information Systems, Student's Satisfaction*

Introduction

Educational institutions have a very important function in society, especially their role in advancing national education. The services provided to students determine the quality of service that is college. Students in this case as users have an important role in providing an assessment of the quality of services provided by higher education. Good quality service will provide good feedback. College performance is not only reflected by graduates produced, lecturer performance,

and student achievement but also with the quality of services provided by the academic information system section.

The academic information system is an important resource that has strategic value. In the higher education states that 25% of academic institutions use technologies that promote communication (Akachi & Ayed, 2021). Academic information systems have a very important role in the survival of universities. The main activity of academic information systems is to produce information needed by educational institutions to make decisions, control systems, and analyse problems (Laudon & Traver, 2013). This activity includes four stages, namely the input, process, output, and feedback stages (Indrayani, 2013). Input means capturing or collecting raw data from within the organization or from an external environment (Barakat et al., 2011). The process means converting data into information (Gallagher, 2013). Output is an activity of transferring information that has been processed to people who will use it (Fawcett et al., 2008). Feedback is the output returned to educational institutions to help them evaluate the input stage.

Academic information systems reflect the quality of management of a higher education. The most important source of necessary information is management information system used by higher education (Erdei, 2021). Academic information systems are one of the efforts of educational institutions to provide quality services to provide convenience and comfort to students. A service is considered satisfactory if the service can meet the needs and expectations of the user. Quality is determined by user experience, in this case quality is closely related to customer satisfaction (Kivisto & Pekkola, 2017). Tangibility and empathy dimensions are the most important things in determining student satisfaction (Calvo-Porrall et al., 2013). In addition to the tangibility and empathy dimensions the responsive dimensions are positively related to student's satisfaction. User satisfaction is one form of evaluation of information systems. One method developed by information system experts to measure user system information satisfaction is to assess the desired characteristics of a system in the form of system quality, information quality, and service quality (Palli, 2012).

Universitas Negeri Yogyakarta is one of the state universities in Indonesia. In 2013 Universitas Negeri Yogyakarta renewed the academic information system to make it easier for students to obtain information. Academic information systems contain the overall higher education level and each faculty. This research focuses on bachelor and graduate school students in Universitas Negeri Yogyakarta.

In the process of organizing academic activities demands speed in managing student data. Management of student academic data starting from payment registration, Study Plan Card (KRS), Study Result Card (KHS), inputting, attendance, and test scores. There are obstacles in academic information systems such as the difficulty of controlling the scheduling of courses and information that is less updated on academic information systems. The difficulty of controlling the subjects taken by students so that information in other parts becomes imperfect. Information systems that have not been integrated so that the input system is carried out repeatedly.

Based on the phenomena described above, it is important to do this research to (i) find out the effect of the implementation of academic information systems on the level of satisfaction of

Universitas Negeri Yogyakarta bachelor and graduate school students (ii) the supporting factors and constraints felt by students in implementing academic information systems in Universitas Negeri Yogyakarta.

Academic information systems

The development of information technology has been responded by educational institutions by designing information systems based on computer technology or websites. Information systems provide added value to the processes of production, quality, management, decision making and problem solving and competitive advantages that are useful for educational institutions (Kroenke & McKinney, 2013). The management information system referred to in this study is the Study Plan Card, payment registration, attendance input, and information on Study Result Cards (KHS).

Student's satisfaction

The level of student's satisfaction referred to in this study is the assessment of students on academic services in delivering academic information in accordance with the timeliness, speed of access, and ease of access. Higher education is aware of the importance of student satisfaction, because of the increasingly competitive and dynamic educational environment, as well as numerous challenges (Arambewela & Hall, 2009). This attention to student satisfaction helps universities adapt and fulfil student need and to develop an academic information system (Sherifi, 2015).

The quality of academic information system is a factor that affects student's satisfaction in higher education (Darwis et al., 2021). Key points for the formation of overall service quality so that higher education can focus and allocate resources to achieve the best service performance and find the service quality that provides the highest student's satisfaction (Pham et al., 2019). The highest quality educational services ensure student satisfaction, leading to student loyalty (Martinez-Arguelles & Batalla-Busquets, 2016).

Methodology

Research location and subject

This research was conducted at Universitas Negeri Yogyakarta. This type of research is quantitative research. Quantitative research is a study that explains or describes a problem whose results can be generalized. This study uses a survey method. Survey is a research method that uses a questionnaire as an instrument for data collection. In this research, survey method uses to obtain information about several respondents who are considered to represent a particular population.

Sampling and procedure

The object in this study is the influence of the implementation of academic information systems on the level of student satisfaction Universitas Negeri Yogyakarta. The research subjects in this study were 78 bachelor and graduate school students from Universitas Negeri Yogyakarta. The research subjects were taken using proportionally random sampling technique. Questionnaire filled out online by students.

Result

In this research academic information systems analysed based on implementation of academic information systems (*siakad*) and description of the level of student satisfaction. Table 1 provides the SIAKAD implementation based on student condition.

Table 1. SIAKAD implementation based on student condition

	Absolutely appropriate	Appropriate	Neutral	inappropriate	Absolutely inappropriate
Registration of Payment in accordance with the stipulated time	60,3	33,3	3,8	2,6	0
Having difficulties in Registration Payments	1,3	5,1	7,7	44,9	41
Registration Payment for SPP is open in accordance with the stipulated time	34,6	39,7	12,8	5,1	7,7

Based on the results of the analysis of the payment registration category according to the specified time, it shows that as many as 47 students or 60.3% are satisfied with the academic information system. This shows that the payment system is on time. Based on the results of the analysis of the category experiencing difficulties in payment of registration as many as 35 or 44.9% students did not agree. This shows that students do not experience difficulties in paying for registration. Based on the results of the analysis of the payment category, the SPP registration was opened according to a predetermined time as many as 31 students or 39.7% said it was appropriate. This shows that tuition payments have been made according to schedule.

Table 2. KRS implementation based on student condition

	Absolutely appropriate	Appropriate	Neutral	inappropriate	Absolutely inappropriate
Maintain Online KRS according to the set time	59	35,9	3,8	1,3	0
Facilities provided in KRS Online Management make it easy to choose the courses offered	46,2	43,6	9	1,3	0
Availability of information in managing KRS Online i complete	32,1	42,3	20,5	5,1	0
Having difficulties in managing KRS online	2,6	10,3	7,7	34	28
SIAKAD in managing KRS Online	47,4	46,2	2,6	2,6	1,3
KRS Online Management makes it easy to choose the courses offered	34,6	52,6	9	2,6	1,3

Based on the analysis of the KRS Online category according to the specified time, 46 students or 59% said it was absolutely appropriate. This shows that KRS online has been opened according to schedule. Based on the analysis of the category of facilities provided at KRS Online Management, it is easy to choose the study program offered, as many as 36 students or 46.2% chose absolutely appropriate. This shows that the display in the academic information system makes it easier for students to choose the study program offered. Based on the analysis of the category of availability of information in the management of KRS Online, as many as 33 students or 42.3% said it was appropriate. This shows that KRS management is good. Based on the analysis of the category experiencing difficulties in managing KRS online, it showed that as many as 34

students or 34% said they did not agree. This shows that students have no difficulty in managing KRS. Based on the analysis of the SIAKAD category in managing KRS online, it shows that 37 students or 47.4% said it was absolutely appropriate. This shows that the SIAKAD system is good in management. Based on the analysis of the online KRS management category, which provides convenience in choosing the offered study program, it shows that as many as 41 students or 52.6% chose very suitable. This shows that KRS online makes it easier for students.

Table 3. SIAKAD implementation based on student attendance

	Absolutely appropriate	Appropriate	Neutral	inappropriate	Absolutely inappropriate
Presence attendance is input according to student attendance	24,4	56,4	14,1	3,8	1,3
Percentage of attendance determined by Universitas Negeri Yogyakarta	23,1	52,6	19,2	3,8	1,3

Based on the analysis of the attendance category inputted according to student attendance shows that as many as 44 students or 56.4% said it was appropriate. This shows that the attendance input system is good. Based on the analysis of the attendance percentage category, 41 people or 52.6% said it was appropriate. This shows that the attendance percentage system is good.

Table 4. KHS implementation based on student condition

	Absolutely appropriate	Appropriate	Neutral	inappropriate	Absolutely inappropriate
KHS online makes it easy to shop credits for the upcoming semester	37,2	50	10,3	2,6	0
SIAKAD in managing KHS online at Universitas Negeri Yogyakarta	39,7	53,8	5,1	1,3	0
Process information values on the portal often experience obstacles	7,7	26,9	24,4	30,8	10,3
Inputting values according to time	9	25,6	39,7	16,7	9

Based on the analysis of the online KHS category to facilitate credit for the coming semester, it shows that as many as 39 people or 50% said it was appropriate. This shows that KHS makes it easier for students. Based on the analysis of the SIAKAD category in managing KHS online at Universitas Negeri Yogyakarta, 42 people or 53.8% said they agreed. This shows that the managed KHS is good. Based on the analysis of the information value process category on the portal, 24 students or 30.8% said it was inappropriate. This shows that the information value process does not experience problems. Based on the analysis of the category of accuracy of value input as many as 31 students or 39.7% answered neutral. This indicates an indication of a delay in inputting the value of.

Description of the Level of Student Satisfaction

The following is the data on the level of student satisfaction with the academic information system. The data is displayed in tabular form with details of the level of student satisfaction.

Table 5. Ease of accessing KRS & KHS online

	Absolutely appropriate	Appropriate	Neutral	inappropriate	Absolutely inappropriate
Easy of accessing KRS online	46,2	51,3	2,6	0	0
Ease of accessing KHS online	43,6	51,3	3,8	1,3	0
Ease of obtaining academic information regarding attendance	17,9	38,5	32,1	6,4	5,1

Based on the analysis of the category of ease of accessing KRS online, it shows that as many as 40 students or 51.3% chose to be satisfied. This shows that KRS is easily accessible. Based on the analysis of the category of ease of accessing KHS online, it shows that as many as 40 students or 51.3% said they were satisfied. This shows that KHS is easily accessible. Based on the analysis of the category of ease of obtaining academic information regarding the attendance of 30 students or 38.5% said they were satisfied. This shows that students easily access attendance information.

Table 6. Timeliness in managing online

	Absolutely appropriate	Appropriate	Neutral	inappropriate	Absolutely inappropriate
Timeliness in managing online KRS according to the schedule	28,2	57,7	12,8	1,3	0
Timeliness in inputting values on academic portals	14,1	35,9	28,2	17,9	3,8
Timeliness in inputting student attendance by staff	12,8	52,6	21,8	11,5	1,3

Based on the analysis of the punctuality category in managing the online KRS according to a schedule, 45 students or 57.7% chose to be satisfied. This shows that the online KRS is managed properly. Based on the analysis of the punctuality category in inputting grades on the academic portal, 28 students or 35.9 chose to be satisfied. This shows that students are satisfied with the timeliness of inputting grades. Based on the analysis of the punctuality category in inputting student attendance by staff, 41 students or 52.6% said they were satisfied. This shows that students are satisfied with the performance of the staff.

Table 7. Speed to access of online KRS

	Absolutely appropriate	Appropriate	Neutral	inappropriate	Absolutely inappropriate
Speed to access anywhere within 24 hours of online KRS	37,2	50	11,5	0	1,3
Speed of access anywhere in 24 hours KHS online	35,9	52,6	11,5	0	0

Based on the analysis of the KRS access speed category within 24 hours, 39 students or 50% said they were satisfied. This shows that the system is compatible to be accessed anytime and anywhere. Based on the analysis of the KHS access speed category within 24 hours, 41 students or 52.6% said they were satisfied. This shows the KHS system can be accessed easily anytime and anywhere.

Table 8. Benefits provided Academic information systems

	Absolutely appropriate	Appropriate	Neutral	inappropriate	Absolutely inappropriate
Benefits provided Academic information systems in managing KRS online	35,9	55,1	7,7	1,3	0
Benefits provided by the academic information system in making KHS online	35,9	59	3,8	1,3	0

Based on the analysis of the categories of benefits provided by the academic information system in managing KRS online, 43 students or 55.1% said they were satisfied. This shows that KRS is beneficial for students. Based on the analysis of the categories of benefits provided by the academic information system in making KHS online, 46 students or 59% said they were satisfied. This shows that the academic information system is useful for students.

Table 9. Academic information systems at Universitas Negeri Yogyakarta

	Absolutely appropriate	Appropriate	Neutral	inappropriate	Absolutely inappropriate
Academic information systems at Universitas Negeri already meet information needs	24,4	59	12,8	3,8	0
The process of inputting the attendance of academic information systems is satisfactory	15,4	56,4	23,1	5,1	0
Assessment of academic information system services	19,2	61,5	15,4	2,6	1,3
Satisfaction of payment registration with a specified time	24,4	62,8	10,3	2,6	0
The inputting process for KHS values is satisfactory	14,1	67,9	14,1	3,8	0

Based on the analysis of the category of academic information systems at Universitas Negeri Yogyakarta, 46 students or 59% answered satisfied information needs. This shows that the academic information system already covers information needs. Based on the analysis of the student attendance input process category, 44 students or 56.4% said they were satisfied. This shows that the student input process has been managed properly. Based on the analysis of the academic information system service assessment category, 48 students or 61.5% said they were satisfied. This shows that the assessment of academic information system services has been managed properly. Based on the analysis of the payment registration satisfaction category, 49 students or 62.8% answered satisfied. This shows that the payment process is carried out in a timely manner. Based on the analysis of the input process category, the KHS score satisfactorily as many as 53 students or 67.9% answered satisfied. This shows that the process of inputting KHS values has been done well.

Simple regression analysis test

This analysis is used to analyse the effect of the implementation of the academic information system (X) on the level of student satisfaction in Universitas Negeri Yogyakarta (Y). The results of these calculations are as follows:

Table 10. Implementation of academic information systems on satisfaction levels student

Model	t	Sig.
Academic information systems	3.421	.001
to student satisfaction	7.283	.000

From the statistical results above, the significance is 0.000. This shows that the application of academic information systems influences student satisfaction. The quality of an academic information system will have an impact on students' assessment of the university system. A good information system will have an impact on university performance.

Table 11. The impact of academic information systems to students' satisfaction

Model	R Square	R Square Change	Sig. F Change
Academic information systems to student satisfaction	.411	.411	.000

Based on the independent variable percentage, the implementation of academic information systems can explain the value of the dependent variable, namely the level of student satisfaction. In the calculation results in the SPSS program, the magnitude of the determination coefficient (R^2 / R Square) is 0.411. This states that 41% of the satisfaction level of Universitas Negeri Yogyakarta students can be explained by the variables of academic information system implementation, the remaining 59% is caused by other variables not included in the model. This proves that there are still many other variables that affect the level of student's satisfaction.

Conclusion

From the results of the study concluded that the influence given to the level of student satisfaction through the implementation of academic information systems by 41% this can be categorized that the influence given is still low. This is contrary to the results of research conducted by Hidayah which found that the current level of end-user satisfaction is at a satisfactory level. This shows that a good academic information system will affect student satisfaction. if students are not satisfied with the academic information system of higher education, it means that the quality of the academic information system needs to be improved. Although there are several factors that cause the level of student satisfaction beyond the discussion of researchers but in the governance of the implementation of academic information systems must be increased so that the contribution to student satisfaction increases.

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