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ANALYSIS OF ONLINE ACADEMIC INFORMATION SYSTEMS (SIAKAD) USING COBIT 2019 FRAMEWORK (CASE STUDY OF STMIK DHARMA WACANA METRO)

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Abstract
STMIK Dharma Wacana Metro as a university that has implemented information technology in its business processes, with information technology it is hoped that it can advance and become a supporter in achieving business process goals. In supporting and carrying out its business processes, STMIK Dharma Wacana Metro City has used the Academic Information System (SIAKAD), which functions in managing academic services, finance and accounting, libraries, student services, collaboration, research and publications. Academic information system management that is not well managed will have an impact on low service quality, which can affect the level of stakeholder trust in the institution. Thus, there is a need for Information Technology Governance Analysis in Academic Information Systems (SIAKAD). The governance audit was carried out using the COBIT 2019 framework with the Delivery Support and Service (DSS) domain. Audit results using the COBIT 2019 framework are used to find out how SIAKAD performs in organizations which will later be able to provide recommendations to support business processes.

I. INTRODUCTION

The development of Information Technology (IT) is getting more advanced day by day, almost all sectors are experiencing changes from manual to digital. The development of Information Technology is a progress that is very helpful and supports various aspects. Information Technology (IT) is the most important thing for a company or organization that can advance and support the smooth running of existing business processes. One use of advances in information technology is the implementation of information technology in the education sector. So, with the implementation of information technology in the education sector such as universities, it is hoped that it can streamline business processes to achieve the business goals desired by the organization.

STMIK Dharma Wacana Metro as a university that has implemented information technology in its business processes, with information technology it is hoped that it can advance and become a supporter in achieving business process goals. In carrying out its business processes, STMIK Dharma Wacana Metro City has used Information Systems (SI), such as academic services, finance and accounting, libraries, student services, collaboration, research, Publications.

The implementation of information technology in managing academic services that has been carried out by STMIK Dharma Wacana Metro is by building an Academic Information System (SIAKAD). The Academic Information System (SIAKAD) is an information system that functions to manage academic services. Services at SIAKAD include the course registration process, reporting of student study results and student transcripts, financial administration, course scheduling each semester, and lecture attendance. SIAKAD users include students, lecturers, education staff and university leaders.

Along with the development of STMIK Dharma Wacana Metro, both in terms of programs and

activities, SIAKAD certainly also needs to develop. Therefore, SIAKAD, which has been operated to date, needs to be evaluated and reassessed to find out whether the system is still suitable for its functional role and in accordance with its needs in supporting academic services at STMIK Dharma Wacana Metro. So far, SIAKAD has never been thoroughly evaluated in order to assess the performance of information technology governance. Referring to the problems above, analysis is needed to assess the performance of information technology governance, especially in the implementation of SIAKAD at STMIK Dharma Wacana Metro.

One framework for measuring IT governance performance is the COBIT 2019 framework issued by ISACA [1]. The COBIT 2019 framework can be used to find out how an IS is performing in an organization or company which will then be able to provide recommendations to create strategic alignment, obtain value, manage risk and evaluate IS performance. Therefore, this research aims to examine the performance of IT governance in the implementation of SIAKAD at STMIK Dharma Wacana Metro so that good IT governance can be achieved.

II. LITERATURE REVIEW

2.1 Information Technology

Information Technology is a technology used to process data, including processing, obtaining, compiling, storing, manipulating data in various ways to produce quality information, namely information that is relevant, accurate and timely, which is used for personal, business and other purposes. government and is strategic information for decision making [1]. Information technology allows organizations to find new business strategies helping companies, organizations, schools and governments to face competition, and also increase productivity [2].

Understanding Information Technology (IT) According to Experts [3]:

1. Haag dan Keen (1996): The definition of information technology according to Haag and Keen is that information technology is a set of tools that help you work with information and carry out tasks related to information processing.
2. Williams dan Sawyer (2003): According to Williams and Sawyer, the definition of information technology is technology that combines computing (computers) with high-speed communication lines that carry data, voice and video.
3. Martin (1999): According to Martin, information technology is technology that is not only computer technology (hardware and software) that will be used to process and store information, but also includes communication technology to send or disseminate information.

Based on this description, it can be concluded that information technology is a technology with a set of hardware and software tools used to process data, including processing, obtaining, compiling, storing, manipulating data in various ways to produce quality information, which is used for personal purposes, business, and government and is strategic information for decision making.

2.2 COBIT 2019

Control Objective Information Technology or abbreviated as COBIT is a framework published by the ISACA organization which monitors the governance and management of information technology within an organization or Company [4], and is one of the top auditing frameworks which has become international best practice in auditing. COBIT provides a complete, enterprise-wide framework, providing the basis for effectively integrating with other frameworks, standards and practices [5].

COBIT 2019 is a development of COBIT 5, the COBIT 2019 Framework makes a clear distinction between governance and management, these differences have different activities, different structures, and different goals. Apart from that, COBIT 2019 also identifies components for building and supporting a governance system , processes, agency structure, policies and procedures, information flow, culture and behavior, as well as skills and infrastructure. COBIT 2019 consists of 4 modules:

1. COBIT 2019 Framework: Introduction and Methodology.
2. COBIT 2019 Framework: Governance and Management Objective.
3. COBIT 2019 Design Guide: Dedsigning an Information and Technology Governance Solution.
4. COBIT 2019 Implementation Guide: Implementing and Optimizing an Information and Technology Governance Solution.

COBIT 2019 has a focus area which is of course easier and can be aligned by the company through objective selection so that it is in line with the company's goals and business processes. In finding process objectives, COBIT 2019 has information technology governance design guidelines so that important processes in the company can be identified and then audited.

Implementation of the 2019 COBIT Framework In its implementation the stages are based on the 2019 COBIT framework:

1. Initiate Program, which explains the driving force in the organization.
2. Define Problems and Opportunities, namely explaining the organization's current capabilities, shortcomings and everything related to information technology.

3. Define Road Map by applying targets for improvement followed by gap analysis to identify potential solutions.
4. Plan Program to explain plans and practical solutions for the organization by defining recommendations for improvements to changes to the development plan [6].

Based on the description above, it can be concluded that COBIT 2019 is a framework used to audit information technology governance in an organization or company by providing recommendations to create strategic alignment, obtain value, manage risks and evaluate information technology performance so that the vision, mission and existing business processes can be achieved.

2.3 RACI Chart

RACI or Responsible, Accountable, Consulted, Informed is a governance component of an organizational structure that contains levels of responsibility, activity and accountability that refer to individual roles and organizational structures, both from business and information technology. RACI is a tool used in project management to identify and assign roles and responsibilities for a particular project or process
[7]. There is an explanation of each of these components:

1. Responsible, responsible role (R), namely who has the main operational role to fulfill practices and obtain desired results, referring to who completes/carries out tasks.
2. Accountable, accountable role (A), namely bringing overall accountability. Accountability cannot be shared, because it refers to the success and achievement of tasks.
3. Consulted, the role of the consulted (C) is to provide input in carrying out practice. This leads to who provides input on the role of obtaining information from other units or external partners.
4. Informed, the role of the informed (I) describes who is informed about the achievements of the practice. This leads to who receives the information.

2.4 Kuesioner Flow

The questionnaire carried out in the research refers to the COBIT 2019 Framework module: Governance and Management Objectives. This module explains that each objective has a different questionnaire start level, and also has a different end of assessment at a different questionnaire level stage. If the questionnaire starts from level 2 and ends at level 4, then the questionnaire will be started, distributed and analyzed at level 2 according to the objectives in the COBIT 2019 Framework module: Governance and Management Objectives. If at level 2 the questionnaire reaches the activities process rating in accordance with The table values that the researchers have listed earlier, for example, the rating scale reaches 87% so that it is categorized as fully achieved, the value of which ranges from 85-100%, then the questionnaire can be distributed and analyzed to the next stage until the rating is at a status of not achieved, which later aims to get conclusions about the capability results. objective level of the process being audited or analyzed.

2.5 Likert scale

The Likert scale is a measurement scale developed by Likert (1932). The Likert scale has four or more questions that are combined to form a score/value that represents individual characteristics, for example knowledge, attitudes and behavior. In the data analysis process, a composite score, usually the sum or average, of all question items can be used. The use of the sum of all question items is valid because each question item is an indicator of the variable it represents [8].

2.6 Maturity Levels

Maturity levels measure the maturity level of IT governance processes in a company. Maturity levels are used to control information technology processes so that companies or organizations can find out the current position of information technology maturity and try to improve IT governance for the success of their business processes, along with the maturity scale levels [9].

Table 1. Skala Maturity level

Skala	Maturity level	Keterangan
4,51 - 5,00	5	Optimized
3,51 - 4,50	4	Quantitively Managed
2,51 - 3,50	3	Defined
1,51 - 2,50	2	Managed
0,51 - 1,50	1	Initialization
0,00 - 0,50	0	Empty

III. RESEARCH METHODS

Research methodology is a systematic approach, strategy, or plan used to design, collect, analyze, and interpret data in a study. The author uses a quantitative approach in the research approach carried out.

3.1 Quantitative Methods

Quantitative methods are research stages which will contain data in the form of numbers. Quantitative data is useful for testing the validity of research whether it refers to existing concepts. The quantitative data in this research is the calculated data from the questionnaire results that the researchers submitted based on COBIT 2019 and then distributed to respondents using Guttman scale calculations, capability levels and maturity levels.

3.2 Data Collection Methods

3.2.1. Observation

Researchers monitor the condition of SIAKAD STMIK Dharma Wacana Metro.

3.2.2. Interview

Researchers conducted this with SIAKAD managers at STMIK Dharma Wacana Metro. In this interview the researcher obtained some information related to the IT governance process, as well as getting an overview of the problems faced by SIAKAD at STMIK Dharma Wacana Metro.

3.2.3. Questionnaire

the questionnaire contains written questions given to respondents at STMIK Dharma Wacana Metro, which were obtained through RACI Chart analysis. The questionnaire submitted to respondents contained several activities at each level. The levels distributed for the questionnaire of course refer to the COBIT 2019 book: Governance and Management Objectives. The level given for the questionnaire of course varies, depending on the domain obtained.

3.2.4. Studi Literature

Researchers read and understand theories related to research, namely IT governance audits, and of course leading to COBIT 2019. The researchers obtained these theories and explanations through journals, ebooks and previous research which can support this thesis. The literature study that serves as a guide for this research is an ebook issued by ISACA in 2018-2019, namely COBIT 2019.

3.3 Data Analysis Methods

After the necessary data has been collected, which comes from the explanation in the data collection method section with two data sources, namely primary data and secondary data, the next step in this research is the data analysis stage. Analysis of this research data uses a Likert measurement scale followed by calculating capability level and maturity level.

3.3.1. Likert Measurement Scale

recapitulate the results of respondents' answers from questionnaires distributed to STMIK Dharma Wacana Metro City, in accordance with the objective of the audit process, namely DSS (Deliver, Service and Support).

3.3.2. Maturity Levels

Researchers obtained questionnaire data using a Likert scale, researchers calculated capability levels and maturity levels using the scale ratings formula.

IV. DISCUSSION

4.1 Identify the Analysis Process

This step was taken to identify the governance of information technology implementation at STIMIK Dharma Wacana Metro City and select appropriate information technology procedures to improve information technology governance at STMIK Dharma Wacana. Identification was carried out focusing on the implementation of information technology, namely SIAKAD or Academic Information System at STMIK Dharma Wacana Metro City. The results of the identification found that there were several things that needed to be improved, referring to the 2019 Cobit Framework standard, the IT Domain was chosen, namely the DSS (Deliver, Service and Support) Domain because it focuses on delivery, quality IT services and adequate support to users. and also includes activities such as IT operational management, security management, and business continuity management, so it is suitable for application to the SIAKAD Audit. The domains that will be applied to the SIAKAD audit are as follows:

Table 2. IT Process at SIAKAD STMIK Dharma Wacana Metro

Domain IT	Proses TI
DSS (*Deliver, Service, and Support)*	DSS01–Managed Operations
DSS (*Deliver, Service, and Support)*	DSS06– Managed Business Process Controls

Based on the table above, the selected IT domain is DSS (Deliver, Service, and Support) and has a process:

1. DSS01-Managed Operations

DSS01 focuses on managing operations, namely coordinating and implementing operational activities and procedures required to provide internal and outsourced I&T services. Include implementation of established standard operating procedures and required monitoring activities.

2. DSS02-Managed Business Process Controls

DSS02 focuses on managed business process controls i.e. establishing and maintaining appropriate business process controls to ensure that information associated with and processed by in-house or outsourced business processes meets all relevant information control requirements. Identify relevant information control requirements. Manage and operate adequate input, throughput, and output controls (application controls) to ensure that information and information processing meet these requirements.

4.2 Identify Control Object

Of course, every Governance Management Objective in COBIT 2019 has detailed control objectives as a control tool for the GMO itself. The following are detailed control objectives DSS01 and DSS06 which have become process objectives in this research based on COBIT 2019 and the background of the research problem.

Table 3. IT Activities at SIAKAD STMIK Dharma Wacana Metro

IT Prosess	IT Aktivity	Information
DSS01	DSS01.01	Perform operational procedures
	DSS01.02	Manage outsourced I&T services.
	DSS01.03	Monitor I&T infrastructure.
	DSS01.04	Manage the environment.

	DSS01.05	Manage facilities.
DSS06	DSS06.01	Align control activities embedded in business processes with enterprise objective
	DSS06.02	Control the processing of information.
	DSS06.03	Manage roles, responsibilities, access privileges and levels of authority.
	DSS06.04	Manage errors and exceptions.
	DSS06.05	Ensure traceability and accountability for information events
	DSS06.06	Secure information assets.

The current maturity level is obtained based on the results of the questionnaire calculations that were distributed previously. The author uses the RACI chart in the process of selecting respondents by selecting roles in the RACI table with Responsible and Accountable levels of responsibility, which means that the role understands and has more control over the IT practices to be researched, so that the data processed will be better. valid. The following is a RACI chart that has been compiled by the author:

Table 4. RACI Chart Mapping

Person	RACI Chart			
Pembimbing Akademik	**R**			**I**
Admin/BAAK/Operator	**R**			
Wakil Ketua1		**A**		
Dosen			**C**	
Mahasiswa				**I**

4.3 Define Problem

At this stage, a search for control illustrations was carried out at SIAKAD Dharma Wacana Metro City. Based on the analysis carried out, the expected level of ability is obtained in the range 0-5. The summary is listed in the table below:

Table 5. DSS01 Maturity Level is Expected at the Management Level

Domain	Aktivity	Maturity Level	Information
DSS01	DSS01.01	4	Quantitively Managed
DSS01	DSS01.02	4	Quantitively Managed
DSS01	DSS01.03	4	Quantitively Managed
DSS01	DSS01.04	4	Quantitively Managed
DSS01	DSS01.05	4	Quantitively Managed

Table 6. DSS01 Maturity Level Expected at User Level

Domain	Aktivity	Maturity Level	Information
DSS01	DSS01.01	4	Quantitively Managed
DSS01	DSS01.02	4	Quantitively Managed
DSS01	DSS01.03	4	Quantitively Managed
DSS01	DSS01.04	4	Quantitively Managed
DSS01	DSS01.05	4	Quantitively Managed

It is known that the level of maturity expected at the management and user level in the DSS01-Managed Operations Domain and its sub domains is at level 4, namely Quantitively Managed or a measurable and controlled process.

Table 7. DSS06 Maturity Level Expected at Management Level

Domain	Aktivity	Maturity Level	Information
DSS06	DSS06.01	4	Quantitively Managed
DSS06	DSS06.02	4	Quantitively Managed
DSS06	DSS06.03	4	Quantitively Managed
DSS06	DSS06.04	4	Quantitively Managed
DSS06	DSS06.05	4	Quantitively Managed
DSS06	DSS06.06	4	Quantitively Managed

Table 8. DSS06 Maturity Level Expected at User Level

Domain	Aktivity	Maturity Level	Information
DSS06	DSS06.01	4	Quantitively Managed
DSS06	DSS06.02	4	Quantitively Managed
DSS06	DSS06.03	4	Quantitively Managed
DSS06	DSS06.04	4	Quantitively Managed
DSS06	DSS06.05	4	Quantitively Managed
DSS06	DSS06.06	4	Quantitively Managed

It is known that the expected level of maturity at the management and user level, in the DSS06 - Managed Business Process Controls Domain and its sub domains is at level 4, namely Quantitively Managed or measurable and controlled processes.

4.4 Define Road Map

Table 9. Current Maturity Level of Domain DSS01 At Management Level

Domain	Aktivity	Average answer respondents			Average	Maturity Level	Information
		R1	R2	R3			
DSS01	DSS01.01	1,67	2	2	1,89	2	**Managed**
DSS01	DSS01.02	1,67	1,67	1,67	1,67	2	**Managed**
DSS01	DSS01.03	2,33	1,33	1,33	1,66	2	**Managed**
DSS01	DSS01.04	1,67	1,67	1,67	1,67	2	**Managed**
DSS01	DSS01.05	1,67	2	1,67	1,78	2	**Managed**
Average		**1,80**	**1,73**	**1,67**	**1,73**	**2**	**Managed**

It is known that the maturity level of information technology management at SIAKAD at STMIK Dharma Wacana has currently obtained a score of 1.73 for the DSS01 process domain at the management level which can be categorized at the maturity level, namely level 2.

Table 10. Current Maturity Level of DSS01 Domains at User Level

Domain	Aktivity	Average answer respondents			Average	Maturity Level	Information
		R4	R5	R6			
DSS01	DSS01.01	2	2,33	1,67	2,00	2	**Managed**
DSS01	DSS01.02	0	0	0	0,00	0	**-**
DSS01	DSS01.03	2	2	2	2,00	2	**Managed**
DSS01	DSS01.04	2,33	2	2	2,11	2	**Managed**
DSS01	DSS01.05	2	1,67	2	1,89	2	**Managed**
Average		**1,67**	**1,60**	**1,53**	**1,60**	**2**	**Managed**

It is known that the maturity level of information technology management at SIAKAD at STMIK Dharma Wacana has currently obtained a score of 1.60 for the DSS01 process domain at the user level which can be categorized at the maturity level, namely level 2.

Table 11. Current Maturity Level of DSS06 Domains at Management Level

Domain	Aktivity	Average answer respondents			Average	Maturity Level	Information
		R1	R2	R3			
DSS06	SS06.01	1,67	2	1,67	1,78	2	**Managed**
DSS06	DSS06.02	1,67	2	1,67	1,78	2	**Managed**
DSS06	DSS06.03	1,67	2	2	1,89	2	**Managed**
DSS06	DSS06.04	2	1,67	2	1,89	2	**Managed**
DSS06	DSS06.05	2,33	1,67	1,67	1,89	2	**Managed**
DSS06	DSS06.06	2,33	2	1,67	2,00	2	**Managed**
Average		**1,95**	**1,89**	**1,78**	**1,87**	**2**	**Managed**

It is known that the maturity level of information technology management at SIAKAD at STMIK Dharma Wacana has currently obtained a score of 1.87 for the DSS06 process domain at the management level which can be categorized at the maturity level, namely level 2.

Tabel 12. Current Maturity Level of DSS06 Domain at User Level

Domain	Aktivity	Average answer respondents			Average	Maturity Level	Information
		R1	R2	R3			
DSS06	SS06.01	2	2	1,67	1,89	2	**Managed**
DSS06	DSS06.02	1,67	2	1,67	1,78	2	**Managed**
DSS06	DSS06.03	2	1,67	2	1,89	2	**Managed**
DSS06	DSS06.04	2	2	2	2,00	2	**Managed**
DSS06	DSS06.05	1,67	1,67	1,67	1,67	2	**Managed**
DSS06	DSS06.06	1,67	1,67	1,67	1,67	2	**Managed**
Average		**1,84**	**1,84**	**1,78**	**1,82**	**2**	**Managed**

It is known that the maturity level of information technology management at SIAKAD at STMIK Dharma Wacana has currently obtained a value of 1.82 for the DSS06 process domain at the user level which can be categorized at the maturity level, namely level 2. After finding the current maturity level and the expected maturity level in the process DSS01 and DSS06 domains then perform gaps to determine the gap between the current maturity level and the desired maturity level.

Table 13. DSS01 Maturity Level Gap at Management Level

Domain	Aktivity	Current Maturity Level	Expected Maturity Level	Gap
DSS01	DSS01.01	1,89	4	**2,11**
DSS01	DSS01.02	1,67	4	**2,33**
DSS01	DSS01.03	1,66	4	**2,34**
DSS01	DSS01.04	1,67	4	**2,33**
DSS01	DSS01.05	1,78	4	**2,22**
		Average		**2,27**

Table 14. DSS01 Maturity Level Gap at User Level

Domain	Aktivity	Current Maturity Level	Expected Maturity Level	Gap
DSS01	DSS01.01	2,00	4	**2**
DSS01	DSS01.02	0,00	4	**4**
DSS01	DSS01.03	2,00	4	**2**
DSS01	DSS01.04	2,11	4	**1,89**
DSS01	DSS01.05	1,89	4	**2,11**
		Average		**2,40**

Based on the calculation of the current maturity level and the expected maturity level in the DSS01 domain, at the management level the average gap is 2.27, while at the user level the average gap is 2.40.

Tabel 15. DSS06 Maturity Level Gap at Management Level

Domain	Aktivity	Current Maturity Level	Expected Maturity Level	Gap
DSS06	DSS06.01	1,78	4	**2,22**
DSS06	DSS06.02	1,78	4	**2,22**
DSS06	DSS06.03	1,89	4	**2,11**
DSS06	DSS06.04	1,89	4	**2,11**
DSS06	DSS06.05	1,89	4	**2,11**
DSS06	DSS06.06	2,00	4	**2,00**
		Average		**2,13**

Table 16. DSS06 Maturity Level Gap at User Level

Domain	Aktivity	Current Maturity Level	Expected Maturity Level	Gap
DSS06	DSS06.01	1,89	4	**2,11**
DSS06	DSS06.02	1,78	4	**2,22**
DSS06	DSS06.03	1,89	4	**2,11**
DSS06	DSS06.04	2,00	4	**2,00**
DSS06	DSS06.05	1,67	4	**2,33**
DSS06	DSS06.06	1,67	4	**2,33**
		Average		**2,18**

Based on the calculation of the current maturity level and the expected maturity level in the DSS06 domain, at the management level, the average gap is 2.13, while at the user level, the average gap is 2.18. Based on the results of the maturity level calculation and gap analysis carried out, there are several sub domains that have not reached the expected level, recommendations are given to improve capabilities to the expected level.

Table 17. DSS01 Process Recommendations

Activity	Results	Gap	Recommendation
DSS01.01	The survey results show that it is necessary to improve and maintain operational procedures and activities to support services at SIAKAD.	Have not implemented improvements and maintenance of operational procedures and activities to support services at SIAKAD.	It is necessary to develop and maintain operating procedures to improve all existing services at SIAKAD.
DSS01.02	The survey results stated the need for an integrated system to manage critical internal IT at SIAKAD.	have no plans to create one yet Integrated system for managing important internal information technology at SIAKAD.	It is necessary to plan an integrated system to accelerate the growth and development of management SIAKAD.
DSS01.03	The survey results show that regular and structured monitoring is needed to handle incidents appeared on SIAKAD	Already have an event log or event record, but there is no specific plan for handling events the.	A special plan is needed for monitoring related to system development at SIAKAD
DSS01.04	The results of the survey states the need to develop and identify IT tools to reduce vulnerability to environmental threats.	Don't have a plan yet placement and development of IT facilities to minimize and reduce sensitivity to environmental hazards.	to reduce vulnerability to environmental threats.
DSS01.05	The survey results state the need to check IT facilities to protect against power outages.	Has no plans to inspect ICT facilities for outage protection.	It is necessary to verify the origin of the electricity source and make plans to provide an electric generator or machine used to generate electricity to provide backup electricity in the event of a power outage.

Table 18. DSS06 Process Recommendations

Activity	Results	Gap	Recommendation
DSS06.01	Based on the survey results, it is known that there is a need for control activities and identification of improvementsp there is SIAKAD	There is no identified plan to improve SIAKAD.	It is necessary to plan the identification of improvements to SIAKAD.
DSS06.02	The results of the questionnaire indicate the need for authentication to check the integrity and validity of the data throughout the processing cycle at SIAKAD.	There is already authentication and data validation at SIAKAD but it is still not optimal.	Need to add special methods for authentication and protect data from data leaks.
DSS06.03	the need for officer training to improve officer competency.	Do not have a training plan on roles and responsibilities to ensure staff understand their responsibilities.	It is necessary to plan the organization and involvement of staff in training, both inside and outside the university, to improve staff competency.
DSS06.04	The survey results show that procedures are needed to	There are no procedures for correcting employee	It is necessary to have a plan to improve staff

	correct officer errors, overcome officer errors, and overcome unbalanced conditions	mistakes, dealing with employee mistakes, and dealing with unbalanced conditions.	competency through the development of SOPs that guide staff performance.
DSS06.05	The results of the questionnaire show the importance of tracing and documenting information sources, supporting evidence and accurate transaction records at SIAKAD, and the action of disposing of information sources and transaction records that can cause deviation.	Does not yet have retention requirements to meet operational needs.	Need to meet retention requirements to meet operational, financial reporting and compliance needs.
DSS06.06	The survey results show that data classification and security procedures are needed to protect information assets.	Library management does not yet have a data classification plan and security procedures to protect information assets.	Need to plan data classification to help keep employee and visitor data safe and potentially prevent or limit data breaches, hacking and cyber attacks.

V. CONCLUSION

Based on the results of the audit that was carried out on the Academic Information System or SIAKAD using the COBIT 2019 framework with a focus domain, namely DSS, it was concluded that the maturity level for the DSS01 and DSS06 domains was at level 2 or Managed, which means planning and performance measurement is ongoing, although not yet optimal. Based on the results of these calculations, it is hoped that based on the results of the program plan previously described, it can reach the expected level of maturity, namely level 4.

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