JURNAL TEKNOINFO
Volume 20, Number 2, July 2026, Page 149-159
E-ISSN 2615-224X P-ISSN 1693-0010
https://publikasi.teknokrat.ac.id/index.php/teknoinfo/index
DOI: https://doi.org/10.33365/teknoinfo.v20i2.1651

Application of COBIT 5 Framework in the Evaluation of Information Technology Infrastructure to Improve Education Effectiveness (Case Study of SMK YPT Pringsewu)

Agus Ginanjar[1*],Ochi Marshella Febriani[2]
[1,2]Faculty of Computer Science, Darmajaya Institute of Informatics and Business, Lampung
[1*]agusgin2508@gmail.com, [2]ochimarshella@darmajaya.ac.id

Abstract
The development of information technology (IT) in the world of education requires educational institutions to have effective and structured IT infrastructure governance. SMK YPT Pringsewu as a technology-based vocational school faces various problems related to IT infrastructure, especially in computer and network laboratories, such as inadequate device specifications, unstable internet connections, and suboptimal system management and monitoring. This study aims to evaluate the condition of information technology infrastructure in supporting the effectiveness of education using the ISACA framework, namely COBIT 5. This study uses a quantitative approach with a survey method through the distribution of questionnaires to 227 respondents consisting of students and teachers majoring in DKV and TKJ. The domains used in the evaluation are DSS01 (Manage Operations), BAI02 (Manage Requirements Definition), and MEA01 (Monitor, Evaluate and Assess Performance and Conformance). The analysis was carried out by measuring the maturity level based on the COBIT 5 capability model and conducting gap analysis between the current conditions and the expected conditions. The results show that the level of maturity of IT infrastructure governance at SMK YPT Pringsewu is at the Defined Process level (Level 3), but there are still some gaps in aspects of operational management, performance monitoring, and definition of IT needs. Therefore, improvements are needed in the form of the preparation of more structured standard operating procedures, improved device maintenance, optimization of infrastructure monitoring, and more targeted IT development planning. This research is expected to be a reference for SMK YPT Pringsewu in increasing the effectiveness of IT infrastructure management and supporting the improvement of the quality of the learning process.
Keywords: IT Governance, Information Technology Infrastructure, COBIT 5, Maturity Level, Educational Effectiveness.

1. INTRODUCING

The development of information technology (IT) has had a significant impact on various sectors, including the education sector. The use of information technology in the world of education not only functions as a means of supporting school administration, but also becomes the main component in supporting the learning process, practicum, communication, and management of academic data. A good IT infrastructure is able to increase the effectiveness of learning, accelerate access to information, and support the improvement of the quality of human resources in the educational environment. Therefore,

Agus Ginanjar: * Corresponding Author

JURNAL TEKNOINFO
Volume 20, Number 2, July 2026, Page 149-159
E-ISSN 2615-224X P-ISSN 1693-0010
https://publikasi.teknokrat.ac.id/index.php/teknoinfo/index
DOI: https://doi.org/10.33365/teknoinfo.v20i2.1651

educational institutions are required to have optimal governance and management of IT infrastructure in order to be able to meet the evolving needs of learning. [1]

Information technology infrastructure includes hardware, software, computer networks, information systems, and technology services used to support educational activities. The availability and quality of IT infrastructure greatly affect the success of the teaching and learning process, especially in vocational high schools that are oriented towards practice and mastery of technological competencies. However, in its implementation, there are still various problems that cause the use of IT infrastructure to not run optimally, such as limited computer device specifications, internet network instability, lack of device maintenance, and suboptimal management of computer laboratories. [2]

SMK YPT Pringsewu is one of the vocational high schools in Lampung Province that focuses on developing students' skills and competencies according to industrial needs. The school has several expertise programs, including Computer and Network Engineering (TKJ), Visual Communication Design (DKV), Mechanical Engineering, Light Vehicle Engineering, Motorcycle Engineering, Audio Video Engineering, Electrical Engineering, and Marketing. In supporting practical learning activities, the school provides computer laboratory facilities which are used as the main means of learning based on information technology. [3]

However, based on the results of initial observations, the condition of the IT infrastructure in the computer laboratory at SMK YPT Pringsewu is still facing several obstacles. The Visual Communication Design Laboratory (DKV) has computer specifications that are not in accordance with the needs of the latest graphic design software, especially in the capabilities of the processors and graphics cards used. In addition, the Digital Simulation Laboratory experienced obstacles in the stability of the internet network and several computer devices that were no longer optimal for use in the learning process. Problems were also found in the Computer and Network Engineering Laboratory (TKJ), where some network hardware and computer specifications have not kept up with the latest technological developments. This condition causes the effectiveness of the use of computer laboratories to be less than optimal in supporting students' practicum activities. [4]

In addition to device and network factors, the management of IT infrastructure in computer laboratories is also still not running optimally. Some of the problems found include the lack of regular device maintenance processes, the lack of a structured IT governance evaluation, and the management of laboratory use that has not been properly organized. If this condition continues, it can affect the quality of practical learning and reduce the effectiveness of the use of information technology in the school environment.

To overcome these problems, an evaluation of information technology governance is needed that is able to measure the level of IT infrastructure management capability systematically. One of the frameworks that is widely used in IT governance evaluation is COBIT 5 developed by ISACA. COBIT 5 provides a framework that can assist organizations in evaluating, managing, and improving the quality of IT governance to align with organizational goals. This framework is also able to measure the capability level of IT processes so that the level of maturity of the applied information technology management can be known. [7]

This study uses the domains of BAI (Build, Acquire and Implement), DSS (Deliver, Service and Support), and MEA (Monitor, Evaluate and Assess) because these domains are considered relevant to the condition of the computer laboratory infrastructure at SMK YPT Pringsewu. The BAI domain is used to evaluate the procurement and development process of IT infrastructure, the DSS domain focuses on IT operational services and support, while the MEA domain is used to conduct oversight and evaluation of the performance of the IT governance implemented.

Agus Ginanjar: * Corresponding Author

JURNAL TEKNOINFO
Volume 20, Number 2, July 2026, Page 149-159
E-ISSN 2615-224X P-ISSN 1693-0010
https://publikasi.teknokrat.ac.id/index.php/teknoinfo/index
DOI: https://doi.org/10.33365/teknoinfo.v20i2.1651

Based on the description of these problems, this study aims to evaluate the governance of information technology infrastructure in the computer laboratory of SMK YPT Pringsewu using the COBIT 5 framework. The results of the study are expected to provide recommendations for improvements to the management of IT infrastructure so that it can improve the effectiveness of learning, the quality of computer laboratory services, and support a more optimal educational process. In addition, this research is also expected to be a reference for other educational institutions in evaluating information technology governance based on the COBIT 5 framework.

2. METHODOLOGY

2.1 Types and Approaches to Research

This study uses a quantitative approach with a survey method to evaluate the governance of information technology infrastructure at SMK YPT Pringsewu. The quantitative approach was chosen because this study aims to measure the maturity level of IT processes in a structured manner based on indicators that have been set in the COBIT 5 framework developed by ISACA.

2.2 Research Objects and Subjects

The object of the research is the management of information technology infrastructure in the computer and network laboratory at SMK YPT Pringsewu. The research is focused on the majors of Visual Communication Design (DKV) and Computer and Network Engineering (TKJ). The research subjects consisted of 227 respondents which included students and teachers who were directly involved in the utilization of IT infrastructure. The selection of respondents was carried out by purposive sampling, which is based on active involvement in the use of computer and network laboratory facilities.

2.3 COBIT 5 Domains and Processes Used

This study uses three domains in COBIT 5 that are adjusted to the identified IT infrastructure problems, namely:

1) DSS01 (Manage Operations) to evaluate the operational management of IT infrastructure.
2) BAI02 (Manage Requirements Definition) to assess the process of defining IT requirements.
3) MEA01 (Monitor, Evaluate and Assess Performance and Conformance) to measure the process of monitoring and evaluating IT performance.

Domain selection is done through mapping between Enterprise Goals, IT-Related Goals, and processes in COBIT 5. [2]

Table 1 Processes used

Yes	IT Domain	IT Subdomain
1	Deliver, Service, and Support	DSS01
2	Build, Acquire, and Implement	BAI02
3	Monitor, Evaluate and Assess	THING01

Table 2 List of Domain Processes Used

Yes	Process Domains	Process Description
1	DSS01	Managing Operations
2	BAI02	Managing Requirements Definitions
3	THING01	Monitor, evaluate, and assess performance and conformity.

Table 3 Process Activities and COBIT 5 Description

IT Process	Process Activities	Activity Description
DSS01	DSS01.1	Performing operational procedures
	DSS01.2	Managing outsourced IT services

Agus Ginanjar: * Corresponding Author

JURNAL TEKNOINFO
Volume 20, Number 2, July 2026, Page 149-159
E-ISSN 2615-224X P-ISSN 1693-0010
https://publikasi.teknokrat.ac.id/index.php/teknoinfo/index
DOI: https://doi.org/10.33365/teknoinfo.v20i2.1651

BAI02	DSS01.3	Monitor IT infrastructure
	DSS01.4	Managing the environment (operational)
	DSS01.5	Managing facilities
	BAI02.1	Define and maintain the functional and technical requirements of the business.
	BAI02.2	Conduct feasibility studies and formulate alternative solutions.
	BAI02.3	Manage risk needs.
	BAI02.4	Obtain approval for needs and solutions.
THING01	ITEM01.1	Establish a monitoring approach.
	ITEM01.2	Monitoring of performance, process and target suitability data
	ITEM01.3	Set performance and compliance targets.
	ITEM01.4	Analyze and report on performance
	ITEM01.5	Ensure the implementation of corrective actions

After determining the method to be used, then proceed with mapping organizational goals related to information technology into the business processes in the COBIT 5 Framework. To determine the Process to be used, it is necessary to map between Enterprise Goals, IT Related Goals, and business processes to be used. [13]

2.4 Calculation of Maturity Rate and GAP

The maturity level measurement was carried out by calculating the average respondents' answers in each COBIT 5 process using the following formula:

$$\text{Maturity Level} = \frac{Indeks = \sum (Jumlah\ Nilai)}{\sum (Pertanyaan\ Kuesioner)}$$

The index rounding scale for the mapping of the maturity level of the model is as follows:

- 0.00 – 0.49 is at level 0 (*Non-Existent*)
- 0.50 – 1.49 is at level 1 (*Initial/Ad Hoc*)
- 1.50 – 2.49 is at level 2 (*Repeatable but Intuitive*)
- 2.50 – 3.49 is at level 3 (*Defined Process*)
- 3.50 – 4.49 is at level 4 (*Managed and Measurable*)
- 4.50 – 5.00 am at level 5 (*Optimised*)

Gap analysis was carried out to find out the difference between the current conditions and the expected conditions using the formula:

Gap=Expected Maturity Level−Current Maturity Level

The greater the value of GAP, the greater the need to improve IT governance in the process.

3. RESULT AND DISCUSSIONS

3.1 Maturity Level Measurement Results

The measurement of the maturity level of information technology infrastructure governance at SMK YPT Pringsewu was carried out using the COBIT 5 framework with a focus on the DSS01, BAI02, and MEA01 domains. Data was obtained from 227 respondents consisting of students and teachers majoring in DKV and TKJ.

Based on the results of the calculation of the maturity index, it was obtained that the average overall maturity level was at Level 3 (Defined Process). This shows that the IT infrastructure management process has been documented and standardized, and has been communicated to the relevant parties. However, the implementation and supervision of existing procedures is still not fully optimal.

In detail, the measurement results for each domain are as follows:

Agus Ginanjar: * Corresponding Author

JURNAL TEKNOINFO
Volume 20, Number 2, July 2026, Page 149-159
E-ISSN 2615-224X P-ISSN 1693-0010
https://publikasi.teknokrat.ac.id/index.php/teknoinfo/index
DOI: https://doi.org/10.33365/teknoinfo.v20i2.1651

1) DSS01 (Manage Operations) is at Level 3, which indicates that IT operational activities have defined procedures, but infrastructure monitoring and facility management have not been carried out consistently and measurably.
2) BAI02 (Manage Requirements Definition) is at Level 3, which indicates that IT infrastructure needs have been identified, but the feasibility analysis and risk management processes of requirements have not been fully systematically documented.
3) MEA01 (Monitor, Evaluate and Assess Performance and Conformance) is also at Level 3, which indicates that performance monitoring activities have been carried out, but are not yet fully based on measurable and sustainable performance indicators.

3.2 Attribute-level maturity measurement results

After the recapitulation process of calculating the results of the questionnaire, the level of maturity of the attributes is obtained in the table below:

Table 4 Combined Attribute Level Maturity Table

Sub	CURRENT		Expectacy	
	STUDENTS	TEACHER	STUDENTS	TEACHER
BAI02.1	2,94	4,07	4,47	4,50
BAI02.2	2,86	4,07	4,46	4,36
BAI02.3	2,95	4,07	4,47	4,29
BAI02.4	2,92	4,14	4,52	4,43
DSS01.1	3,08	4,29	4,58	4,43
DSS01.2	3,02	4,29	4,55	4,36
DSS01.3	3,13	4,43	4,62	4,43
DSS01.4	2,97	4,29	4,57	4,36
DSS01.5	2,92	4,07	4,56	4,29
ITEM1.1	2,88	4,29	4,59	4,43
ITEM1.2	3,07	4,29	4,63	4,36
ITEM1.3	3,05	4,36	4,62	4,43
ITEM1.4	3,20	4,36	4,70	4,43
ITEM1.5	3,16	4,29	4,69	4,43

Based on Table 4 on the maturity level of the combined attributes, the results of the study show that the governance of information technology infrastructure at SMK YPT Pringsewu is at Level 3 (Defined Process). This shows that the IT infrastructure management process has defined procedures and is applied in school operational activities. However, the expectancy value in all domains is still higher than the current maturity level, indicating that the current condition has not fully met user expectations. The gap that occurs is caused by several factors, such as inadequate computer specifications, unstable internet network, and less than optimal maintenance of computer laboratory equipment. In addition, the IT infrastructure monitoring and evaluation process is still not carried out in a structured and sustainable manner so that infrastructure management has not run optimally.

This condition has an impact on the suboptimal learning process of practical learning in computer laboratories, especially in the use of graphic design applications and network simulations. Disruption of devices and internet networks causes the practicum process to be hampered and reduces the effectiveness of information technology-based learning. The results of the study show that there is a difference in perception between students and teachers on the level of maturity of IT infrastructure. Students give lower grades because they are more likely to experience technical problems directly during practicum activities, such as slow computers and unstable internet connections. Meanwhile, the teacher

Agus Ginanjar: * Corresponding Author

JURNAL TEKNOINFO
Volume 20, Number 2, July 2026, Page 149-159
E-ISSN 2615-224X P-ISSN 1693-0010
https://publikasi.teknokrat.ac.id/index.php/teknoinfo/index
DOI: https://doi.org/10.33365/teknoinfo.v20i2.1651

assessed that the management of IT infrastructure was quite good in terms of operations and the sustainability of the learning process in general

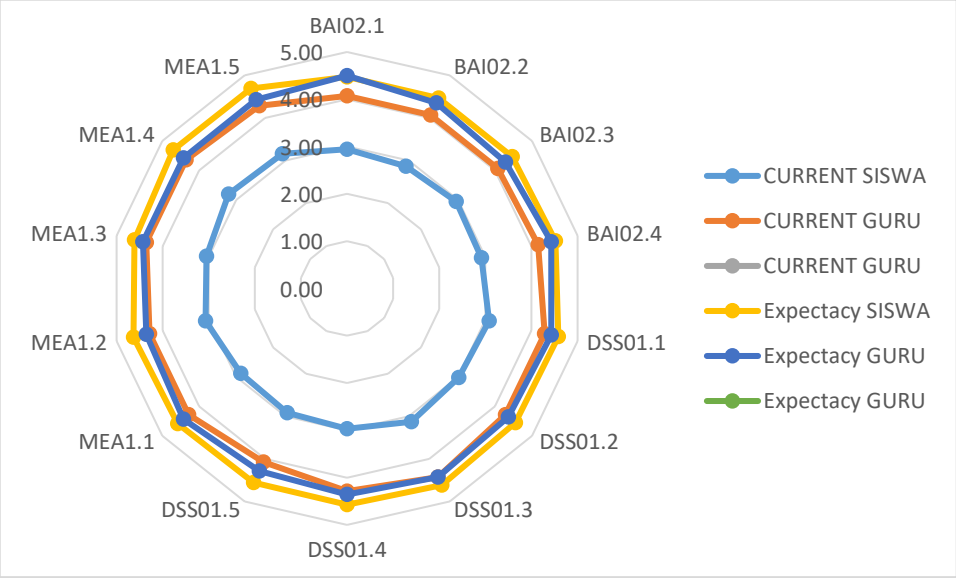

Figure 1. Questionnaire Combined Maturity Level Radar Graph

Based on Figure 1 of the combined maturity level radar graph, there is a difference between the current maturity level and expectancy values in all COBIT 5 domains used. Radar graphs are used to visualize the maturity level of IT infrastructure governance and show the magnitude of gaps in each research domain. The wider the area of the chart indicates the better the level of maturity, while the distance between the current and expectancy lines indicates the size of the gap that still needs to be fixed.

The graph shows that the BAI02 domain has a larger gap than other domains. This shows that the process of procurement and development of IT infrastructure is still a top priority in improving IT governance at SMK YPT Pringsewu. Meanwhile, the DSS01 and MEA01 domains show that operational management as well as the monitoring and evaluation process have gone quite well, but still need improvement to be able to support the effectiveness of learning optimally.

Based on the results of the calculation of the attribute maturity level, the average score on the business process can be seen in the following student table.

Table 5. Average Score of Student Maturity Level

Process	Current Maturity Level	Expect Maturity Level
BAI02	2,92	4,48
DSS01	3,02	4,57
THING01	3,07	4,46

Table 6. Average Value of Model Maturity Level

Process	Current Maturity Level	Expect Maturity Level
BAI02	3	4
DSS01	3	4
THING01	3	4

Based on the results of the average student maturity level, all domains are at Level 3 (Defined Process). This shows that the IT infrastructure governance process already has

Agus Ginanjar: * Corresponding Author

JURNAL TEKNOINFO
Volume 20, Number 2, July 2026, Page 149-159
E-ISSN 2615-224X P-ISSN 1693-0010
https://publikasi.teknokrat.ac.id/index.php/teknoinfo/index
DOI: https://doi.org/10.33365/teknoinfo.v20i2.1651

procedures that are applied in school operational activities, but the implementation and management of infrastructure is still not optimal, especially in the aspects of computer devices and internet network stability.

Table 7. Average Score of Teacher Maturity Level

Process	Current Maturity Level	Expect Maturity Level
BAI02	4,09	4,39
DSS01	4,27	4,37
THING01	4,31	4,41

Table 8. Average Value of Model Maturity Level

Process	Current Maturity Level	Expect Maturity Level
BAI02	4	4
DSS01	4	4
THING01	4	4

Based on the teacher's perspective, the maturity level of IT infrastructure is at Level 4 (Quantitatively Managed). This shows that the management of IT infrastructure is considered to have run quite well and measurably in supporting the learning process. However, improvements are still needed in the monitoring process and infrastructure development so that IT management becomes more optimal.

3.3 GAP Analysis

The analysis of the average gap (GAP) that occurs between the measurement of the maturity level in the current governance of the information system and that expected by the management can be seen in the table below:

Table 9. Student GAP Analysis

Process	Current Maturity Level	Expect Maturity Level	GAP
BAI02	2,92	4,48	1,56
DSS01	3,02	4,57	1,55
THING01	3,07	4,46	1,39

Based on the results of the students' GAP analysis, all domains still show a considerable gap between the current conditions and the expected conditions. The largest gap is in the BAI02 domain, which shows that IT infrastructure planning and development has not fully met learning needs.

In the DSS01 and MEA01 domains, the gap shows that the operational management, monitoring, and evaluation of IT infrastructure are still not carried out optimally and sustainably. This condition has an impact on the effectiveness of practical learning because students still experience technical problems when using computer laboratories. These results show the need to improve device maintenance, network stability, and a regular monitoring system of IT infrastructure.

Table 10. Teacher GAP Analysis

Process	Current Maturity Level	Expect Maturity Level	GAP
BAI02	4,09	4,39	0,3
DSS01	4,27	4,37	0,1
THING01	4,31	4,41	0,1

SThe entire domain shows a relatively small gap value. This shows that teachers consider IT infrastructure governance to be good enough to support the learning process. However, the BAI02 domain still has the largest gap which shows that the development of

Agus Ginanjar: * Corresponding Author

JURNAL TEKNOINFO
Volume 20, Number 2, July 2026, Page 149-159
E-ISSN 2615-224X P-ISSN 1693-0010
https://publikasi.teknokrat.ac.id/index.php/teknoinfo/index
DOI: https://doi.org/10.33365/teknoinfo.v20i2.1651

IT infrastructure needs still needs to be improved to match the development of learning technologies.

Meanwhile, the DSS01 and MEA01 domains have a gap of 0.1 which indicates that the IT operational, monitoring, and evaluation processes have run quite well and are close to the expected conditions. Nevertheless, schools still need to develop and evaluate infrastructure regularly so that the quality of IT services can continue to improve and support the effectiveness of technology-based learning.

3.4 Validity and Reliability Tests

The validity test in this study used the Pearson Product Moment method with the help of the IBM SPSS Statistics version 20 application. The test was carried out to determine the level of validity of each statement item on the COBIT 5 questionnaire. The basis for decision-making was carried out by comparing the value of r calculated with the r of the table at a significance level of 5% (α = 0.05). The statement item is declared valid if the value r is calculated > r of the table and the significance value is < 0.05.

Table 11. Student Validity Test

Item	R Count	R Table	Sig	α	Remarks
P1	0,568	0,1345	0,000	0,05	Valid
Exp1	0,182	0,1345	0,008	0,05	Valid
P2	0,603	0,1345	0,000	0,05	Valid
Exp2	0,271	0,1345	0,000	0,05	Valid
P3	0,528	0,1345	0,000	0,05	Valid
Exp3	0,265	0,1345	0,000	0,05	Valid
P4	0,563	0,1345	0,000	0,05	Valid
Exp4	0,331	0,1345	0,000	0,05	Valid
P5	0,548	0,1345	0,000	0,05	Valid
Exp5	0,360	0,1345	0,000	0,05	Valid
P6	0,557	0,1345	0,000	0,05	Valid
Exp6	0,266	0,1345	0,000	0,05	Valid
P7	0,580	0,1345	0,000	0,05	Valid
Exp7	0,304	0,1345	0,000	0,05	Valid
P8	0,547	0,1345	0,000	0,05	Valid
Exp8	0,234	0,1345	0,001	0,05	Valid
P9	0,607	0,1345	0,000	0,05	Valid
Exp9	0,259	0,1345	0,000	0,05	Valid
P10	0,501	0,1345	0,000	0,05	Valid
Exp10	0,251	0,1345	0,000	0,05	Valid
P11	0,451	0,1345	0,000	0,05	Valid
Exp11	0,225	0,1345	0,001	0,05	Valid
P12	0,553	0,1345	0,000	0,05	Valid
Exp12	0,295	0,1345	0,000	0,05	Valid
P13	0,527	0,1345	0,000	0,05	Valid
Exp13	0,221	0,1345	0,001	0,05	Valid
P14	0,460	0,1345	0,000	0,05	Valid
Exp14	0,171	0,1345	0,012	0,05	Valid

All statement items have a calculated r-value greater than the r-table and a significance value of less than 0.05. The results show that all questionnaire items are declared valid and suitable for use as research instruments.

Table 12. Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items

Agus Ginanjar: * Corresponding Author

JURNAL TEKNOINFO
Volume 20, Number 2, July 2026, Page 149-159
E-ISSN 2615-224X P-ISSN 1693-0010
https://publikasi.teknokrat.ac.id/index.php/teknoinfo/index
DOI: https://doi.org/10.33365/teknoinfo.v20i2.1651

	,825	28

Then in the reliability test, the Cronbach alpha value obtained was 0.825 > 0.600, so it was stated that the data was reliable to be used in the study.

Table 13. Teacher Validity Test

Item	R Count	R Table	Sig	α	Remarks
P1	0,650	0,532	0,012	0,05	Valid
Exp1	0,782	0,532	0,001	0,05	Valid
P2	0,738	0,532	0,003	0,05	Valid
Exp2	0,934	0,532	0,000	0,05	Valid
P3	0,664	0,532	0,010	0,05	Valid
Exp3	0,838	0,532	0,000	0,05	Valid
P4	0,899	0,532	0,000	0,05	Valid
Exp4	0,807	0,532	0,000	0,05	Valid
P5	0,642	0,532	0,013	0,05	Valid
Exp5	0,690	0,532	0,006	0,05	Valid
P6	0,704	0,532	0,005	0,05	Valid
Exp6	0,702	0,532	0,005	0,05	Valid
P7	0,825	0,532	0,000	0,05	Valid
Exp7	0,69	0,532	0,006	0,05	Valid
P8	0,772	0,532	0,001	0,05	Valid
Exp8	0,796	0,532	0,001	0,05	Valid
P9	0,934	0,532	0,000	0,05	Valid
Exp9	0,847	0,532	0,000	0,05	Valid
P10	0,828	0,532	0,000	0,05	Valid
Exp10	0,825	0,532	0,000	0,05	Valid
P11	0,828	0,532	0,000	0,05	Valid
Exp11	0,704	0,532	0,005	0,05	Valid
P12	0,825	0,532	0,000	0,05	Valid
Exp1	0,935	0,532	0,000	0,05	Valid
P13	0,816	0,532	0,000	0,05	Valid
Exp13	0,925	0,532	0,000	0,05	Valid
P14	0,828	0,532	0,000	0,05	Valid
Exp14	0,925	0,532	0,000	0,05	Valid

All items in this study were declared valid because the r value of the calculation obtained > r of the table and the significance value of < 0.050.

Table 14. Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
,997	28

Then in the reliability test, the Cronbach alpha value obtained was 0.997 > 0.600, so it was stated that the data was reliable to be used in the study.

4. CONCLUSION

The management of information technology infrastructure at SMK YPT Pringsewu is at Level 3 (Defined Process) based on student perception and Level 4 (Managed and Measurable) based on teacher perception. The results of the study show that the management of IT infrastructure has been running quite well, but there are still obstacles in the aspects of developing infrastructure needs, device maintenance, and internet network stability that affect the effectiveness of practical learning in computer laboratories.

Agus Ginanjar: * Corresponding Author

JURNAL TEKNOINFO
Volume 20, Number 2, July 2026, Page 149-159
E-ISSN 2615-224X P-ISSN 1693-0010
https://publikasi.teknokrat.ac.id/index.php/teknoinfo/index
DOI: https://doi.org/10.33365/teknoinfo.v20i2.1651

This study has limitations because it only focuses on three domains of COBIT 5, namely BAI02, DSS01, and MEA01, and uses a questionnaire-based quantitative approach so that the results of the study are still influenced by respondents' perceptions. Therefore, further research is recommended to use a broader COBIT domain, adding observation and interview methods so that the results of the IT governance evaluation become more comprehensive. In addition, further research can also use the COBIT 2019 framework to obtain a more flexible IT governance evaluation model and in accordance with current information technology developments.

5. REFERENCES

[1] R. Simaremare, "Information Technology and the World of Education," 2009.
[2] ISAAC, *COBIT 5 Business Framework*. 2019.
[3] D. Y. Ayu Andini and R. Z. A. Aziz, "Evaluation of Information Technology Governance Using the Balanced Scorecard Framework and Cobit 5," *JUSIM (Journal of Information Systems Musirawas)*, vol. 7, no. 2, pp. 137–143, 2022, doi: 10.32767/jusim.v7i2.1541.
[4] N. L. Sari, "Measurement of Maturity Level of Cobit 5 and DSS (Deliver, Service, and Support) Domains in the OJK Sandbox Regulation Aggregator Cluster," *JATISI (Journal of Informatics and Information Systems Engineering)*, vol. 8, no. 2, pp. 561–572, 2021, doi: 10.35957/jatisi.v8i2.843.
[5] R. A. Setiawan and W. Wasilah, "Evaluation of Information Technology Governance and Management Using the 2019 Cobit Framework at the Communication and Information Service of South Lampung Regency," in *National Seminar on Research and Community Service Results 2022*, 2022, pp. 1–8.
[6] M. M. Sanaky, "Analysis of Delay Factors in the Construction Project of the MAN 1 Tulehu Central Maluku Dormitory Building," *Symmetrical Journal*, vol. 11, no. 1, pp. 432–439, 2021, doi: 10.31959/js.v11i1.615.
[7] A. Nuziar and A. Darmawan, "Jurnal Simada," *Journal of Database Management Information Systems*, vol. 3, no. 1, p. 68, 2020.
[8] K. Sofa, T. L. M. Suryanto, and R. R. Suryono, "Information Technology Governance Audit Using the Cobit 5 Framework at the Tanggamus Regency Public Works Office," *Journal of Information Technology and Systems*, vol. 1, no. 1, pp. 39–46, 2020, doi: 10.33365/jtsi.v1i1.50.
[9] M. Febriani and A. S. Putra, "Evaluation of the Governance of the Staffing System on the Porch of the Research and Standardization of the Industry Bandar Lampung Using the COBIT Framework," 2024.
[10] I. Susiyana and J. Triloka, "Audit of School Library Information Systems Using the Cobit 5 Framework at SMAN 1 Terbanggi Besar Central Lampung," 2023.
[11] H. Herianto and W. Wasilah, "Assessment of Capability Level and Maturity Level of IT Governance at the Office of the Ministry of Religion of Pesawaran Regency, Lampung Province Using the COBIT 2019 Framework," *CONSTELLATION Convergence of Technology and Information Systems*, vol. 2, no. 2, pp. 229–240, 2022, doi: 10.24002/constellation.v2i2.5553.
[12] D. Y. Ayu Andini and R. Z. A. Aziz, "Evaluation of Information Technology Governance Using the Balanced Scorecard Framework and Cobit 5," *JUSIM (Journal of Information Systems Musirawas)*, vol. 7, no. 2, pp. 137–143, 2022, doi: 10.32767/jusim.v7i2.1541.
[13] A. Fiananta and A. Nasiri, "Measuring the Maturity Level of Academic Service Availability in Academic Information Systems Using COBIT 4.1," *Inf.*, vol. 155, no. 2, pp. 155–166, 2019, [Online]. Available: http://isi.ac.id/profile/sejarah/
[14] Chairunisa, "Definition, Function, and How to Make It."
[15] R. Yuliana, *Information and Communication Technology Infrastructure Textbook*. 2021. [Online]. Available: www.penerbitwidina.com

Agus Ginanjar: * Corresponding Author

JURNAL TEKNOINFO
Volume 20, Number 2, July 2026, Page 149-159
E-ISSN 2615-224X P-ISSN 1693-0010
https://publikasi.teknokrat.ac.id/index.php/teknoinfo/index
DOI: https://doi.org/10.33365/teknoinfo.v20i2.1651

[16] "Audit of e-learning with the Cobit 5.0 framework during the COVID-19 pandemic," vol. 21, no. 1, 2021.
[17] ISAAC, *Enabling Processes*. 2012.
[18] G. Waruwu and J. Sundari, "INFORMATION TECHNOLOGY AUDIT USING COBIT 5 CASE STUDY OF PT. GLOBAL NETWORK DHARMA JAYA," *I. J. Informatics and Technology*, vol. 26, pp. 69–74, 2024, doi: 10.23969/infomatek.v26i1.13333.

Agus Ginanjar: * Corresponding Author