Analysis Risk Management Application e-Raport Using COBIT 4.1

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Abstract— The role of information technology in increasing the use of e-Raport is to make it easier for schools to input student data. The e-Raport application is very important because it is a system to make it easier for teachers, staff, students, parents, and the Ministry of Education and Culture to find out the results of student learning analysis at SMK N 1 Balige as a means of communication between schools, students and parents of students. The problem with e-Report at SMK N 1 Balige is that there is an error when using the application to input data. The purpose of this study was to analyze risk management in the e-Raport application at SMK N 1 Balige. This research method uses quantitative methods. In measuring IT risk management, the author uses the Control Objective for Information and Related Technology (COBIT) 4.1 domain Plan and Organize especially (PO) framework, PO9 (Assessment and Manage IT risk). The result of this research is the value of the maturity level of the risk management application of e-Raport at SMK N 1 Balige is 2.6088. The maturity level of the e-Report of SMK N 1 Balige is Defined. Recommendations from this study are the need for a special person to control the e-Raport application at SMK N 1 Balige and training in the use of the e-Raport application.

Keywords— Cobit 4.1, e-Raport, PO9, Risk Assesment

I. INTRODUCTION

Progress in the use of a technology that is increasing from time to time as well as the ability to access speed of information is a demand in running the wheels of government, both in the business world and in education. The use of information technology in an institution certainly brings benefits to the institution. Information technology is now the key for an organization or company in developing and improving the efficiency of the ongoing process[1].

The very significant role of IS/IT must be balanced with regulation and management appropriate so that the loss or threat what might happen can be avoided even can be prevented. As for the frequent threats occurs, among others, cases of loss of data, data leakage, available information inaccurate caused by processing wrong data so that data integrity is not defensible, abuse use of computers, as well as procurement Information Technology/System investment Valuable information but not offset by the return of the value in accordance[2].

In the world of education, an information system in student assessment whose utilization is not far from the use of information technology because until now there are still many schools that use manual systems, to print student grade reports still use report cards.[3].

The use of E-Raport can be interpreted in accordance with the application. E-Raport is a web-based software for compiling reports on the achievement of student competencies by the education unit level developed by the school curriculum sub-directorate. The E-Raport application is an application for processing knowledge values, skill values, conducting attitude values by educators so that final grades and descriptions are formed automatically according to student acquisitions in assessing each basic competency, after which the homeroom teacher will input extracurricular values, student attendance, achievements, attitude description, for that E-Raport is one of the efforts to control the quality of the assessment.

Regarding the analysis of risk management or management of threats that arise in the use of the E-Report application, the output will provide solutions to limit risk errors, in terms of solving risks that still arise and risks that rarely occur in schools. The result is expected, the school requires an E-Report risk management analysis using COBIT 4.1 to minimize the risks that have occurred.

II. METHOD

This study uses a quantitative research type, which will provide a complete, systematic, factual and accurate picture of the state of the management information system. This research can also include how management evaluate the school to information system implemented at SMK N 1 Balige. This research follows the COBIT 4.1 a framework that is part of the IT standard management model that is enhanced by the Information Technology Governance Institute or also known as (ITGI) from the Information System Audit and Control Association (ISACA). COBIT 4.1 has 34 high-level supervision and then has 4 domains including the following, Deliver and Support (DS), Monitor and Evaluate (ME).

A. Plan and Organize (PO)

A process domain COBIT 4.1 defines the results of a strategic plan and identifies an IT to achieve business goals, has indicators such as table 1:

Tabel 2.1. LEVEL CONTROL OBJECTIVE PO[4]

Indicator	Describe
PO1	Determine a strategic
	information technology plan.
PO2	Define the information
	architecture
PO3	Specify technology direction
PO4	Define IT organization and
	relationships

PO5	Manage investment in
	information technology
PO6	Communicate management
	objectives and direction
PO7	Manage human resources.
PO8	Manage Quality
PO9	Assess Risk
PO10	Manage the project.

B. Acquire and Implement (AI)

A process domain COBIT 4.1 defines to achieve an IT strategy, identify IT solutions or can implement them into a business, has indicators such as table 2:

Tabel 2.2. LEVEL CONTROL OBJECTIVE AI

Indicator	Describe				
AI1	Identifies automatic solutions				
AI2	Acquire and maintain				
	application software				
AI3	Acquire and maintain				
	technology infrastructure				
AI4	Develop and maintain IT				
	procedures				
AI5	Meets IT Data Sources				
AI6	Managing change				
AI7	Installing and accrediting				
	systems and their changes				

C. Delivery and Support (DS)

This domain includes the process of fulfilling IT services, system security, service continuity, training and education for users, and fulfilling ongoing data processes, having indicators such as table 3:

Tabel 2.3. LEVEL CONTROL OBJECTIVE DS

Indicator	Describe
DS1	defines and manages service
	levels
DS2	manages third party services
DS3	manages performance and
	capacity
DS4	ensures continuous service
DS5	ensures system safety
DS6	identifies and allocates costs
DS7	educates and trains users
DS8	manages service and incidents
DS9	manages configuration
DS10	manages problems
DS11	manages data
DS12	manages Facilities
DS13	manages operations

D. Monitor and Evaluation

This domain focuses on the problem of controls whose application can occur within the organization, internal and external audits and independent assurance of the inspection process carried out. have indicators such as table 4:

Tabel 2.4. LEVEL CONTROL OBJECTIVE ME

Indicator	Describe
ME1	supervises and evaluates IT
	performance
ME2	supervises and evaluates internal
	controls
ME3	ensures fulfillment of external
	needs
ME4	provides IT governance

The level and model of maturity in COBIT 4.1 are as follows:

Tab	le 2.5	. TINO	JKAT	KEN	ΊΑΤ	AN(JAN	COR	TT 4.1
		-		_					

Lable	2.3. III\GKA		MADOOO
Nilai	Level	Describe	VARUUU
0-	0Non	the condition of the company	
0,50	existent	has not realized the need for	VAR000
		information technology and	
		has not acknowledged that	**. Cor
		there are even problems in the	
		company's services.	2. Rea
0,51-	1 Initial/Ad	The condition if the company	The
1,50	hoc	has recognized that	level
		information technology is	Cronh
		needed and there is even	CIONU
		evidence.	т
1,51-	2	A condition where there is	<u>I</u>
2,50	Repeatable	responsibility and the person	
	and intuitive	in charge of information	
		technology but the process still	
		depends on the knowledge of	
		certain parties.	
2,51-	3 Defined	Conditions where company	
3,50		policies or procedures	
		regarding Information	
		Technology have been defined	3. Ma
		by company management and	The
		even IT testing and training	matur
3,51-	4 Manage	Conditions where Information	CODI
4,50	and	Technology has been	COBI
	Measureable	measured and monitored by	
		management.	
4,51-	5 Optimized	Conditions where the	No.
5,00		application of information	1
		technology is a shared	
		responsibility of business	i
		management and IT.	t
			/
			2

III. RESULTS AND DISCUSSION

Research activities carried out in data analysis are respondent categorization which aims to determine the reliability and validity of the analyzed questionnaire results[5].

A. RESULT

1. Validity Test

The results of the discussion at the validity test stage of the questionnaire data are poured into the validity formula and the results of the validity test obtained from level 0 to level 5 show a value of 0.822 so that r count is greater than r table then the data is valid[6].

		Correlatio	ns		
		VAR00056	VAR00057	VAR00058	VAR00059
VAR00056	Pearson Correlation	1	.703	.830	.822
	Sig. (2-tailed)		.001	<,001	<,001
	N	18	18	18	18
VAR00057	Pearson Correlation	.703	1	.690	.637**
	Sig. (2-tailed)	.001		.002	.004
	N	18	18	18	18
VAR00058	Pearson Correlation	.830	.690	1	.733
	Sig. (2-tailed)	<,001	.002		<,001
	N	18	18	18	18
VAR00059	Pearson Correlation	.822	.637	.733	1
	Sig. (2-tailed)	<,001	.004	<,001	
	N	18	18	18	18

picture 3.1 Validity Test Level 5

bility Test

e reliability test results obtained from 0 to level 5 show the value of each's alpha, as shown in the table[6] :

Tabel 3.1. RELIABILITY STATISTICS						
Cronbach's Alpha	N of Items					
0.882	3					
0.927	4					
0.586	2					
0.747	4					
0.828	3					
0.917	4					

turity Test

e results of the risk management ity test at SMK N 1 Balige using T 4.1 are shown in the table below[7] :

asareasie	medsured and monitored by							-		
	management.	Tabel 3.2. MATURITY LEVEL 0								
ptimized	Conditions where the	No.	Statement	0	0.33	0.66	1			
	application of information	1	Risk	3	6	2	7	10.3		
	technology is a shared		assessment							
	responsibility of business		in the use of							
	management and IT.		the e-Raport							
			Application.							
		2	Risk	2	6	2	8	11.3		
			assessment							

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the use of the e-Raport Application. 1 1 Training on sister in the use of the e-Raport Application. 3 2 5 8 11.96 3 Security issues in using the c- Raport Application. 3 3 1 13.97 Total 35.57 Statement 0 0.33 0.66 1 Tabel 3.3 MATURITY LEVEL 1 Understanding 1 3 7 7 12.94 No. Statement 0 0.33 0.66 1 3 8 1 3 7 7 12.94 nassessment of the use of the e-Raport application. - 7 12.94 Attention to 1 4 9 4 11.26 1 Meeting the risk is the e- Raport - - - - - 12.19 2 Risk 0 4 7 7 12.94 Admin 0 4 3 11 4.33 3 Risk 0 5 5 <		solutions in						No.	Statement	0	0.33	0.66	1					
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No.	Statement	0	0.33	0.66	1	
	school					
	development.					
	Total					54.46
	Compliance					13.61

Tabel 3.8. MATURITY LEVEL OF ASSESS RISK

P09 Maturity Level Calculation (Level 0-5)			
Level	Compliance	Normalize	Contribution
0	11.85	0.1603	0
1	9.95	0.1346	0.1346
2	13.46	0.1821	0.3642
3	12.19	0.1649	0.4947
4	12.84	0.1737	0.6948
5	13.61	0.1841	0.9205
	73,9	ML	2.6088

B. DISCUSSION

The literature review in this study uses quantitative study analysis that helps the analysis process through a statistical data management approach. The application of quantitative studies needs to consider policies in risk management to ensure the quality of these policies is maintained.

Based on the questionnaires that have been distributed thoroughly, the reliability test results show that the questionnaire analysis has a consistent quality by utilizing qualitative methods into questionnaires as an accurate measuring tool[8].

This study discusses the results of the maturity level or Maturity Level at SMK N 1 Balige, where data were obtained through observations, interviews and questionnaires. In the questionnaire given to the admin of the school operator and the user teacher, a feasibility standard based on COBIT 4.1 was used[9].

This research is focused on looking at the management process, internal control management and whether the regulations that have been made are running or not. All processes that support the process require monitoring and evaluation in order to maintain the quality of an agency.

The main principle of developing information systems is service, by implementing services using applications that have a major impact on company application development. The description of the occurrence of errors in the use of applications is very high related to IT risks. The application of methods in risk management can determine the position of aspects that are continuously in line with the system through the COBIT IT 4.1 framework. The COBIT method provides a significant overview of the organization using this model. The research process carried out by researchers uses the COBIT method to examine and analyze IT, as well company risks towards as good governance[10].

IV. CONCLUSION

From the research results, it can be concluded as follows: Based on the analysis process of risk management management at SMK N 1 Balige has a maturity level at level 3 which means the value is in the position define process. The process of achieving its goals in a much more organized manner using organizational assets and is well defined. Suggestions from research related to the same research are that it is necessary to define the recommended actions to be carried out on each process attribute that is directed at the stages of achieving the expected maturity process. For this reason, management must monitor and measure the appropriateness of the procedure and take action if the process cannot be carried out effectively.

REFERENCES

- [1] S. Handoyo, B. S. WA, and E. T. Luthfi, "Evaluasi Implementasi Sistem Informasi Paket Aplikasi Sekolah Menggunakan Framework Cobit," *J. Inf.* ..., vol. 4, 2018.
- [2] F. Fenny and J. F. Andry, "Audit Sistem Informasi Menggunakan Framework Cobit 4.1 Pada Pt. Aneka Solusi Teknologi," *Pros. Semnastek*, vol. Vol. 3, No, no. 0, pp. 1–2, 2017, [Online]. Available: https://jurnal.umj.ac.id/index.php/semn astek/article/view/2001.

- [3] D. Rustiana, M. Faisal, and L. Iamayanti, "Prototype Analisa Sistem Informasi Penilaian E-Raport Menggunakan Swot," *ICIT J.*, vol. 5, no. 1, pp. 21–29, 2019, doi: 10.33050/icit.v5i1.99.
- [4] M. P. Setia Wardani, "Audit Tata Kelola Teknologi Informasi Bagian," Audit Tata Kelola Teknol. Inf. Menggunakan Framew. COBIT dengan Model Matur. Lev., vol. IV, no. 02, pp. 1–10, 2010.
- [5] A. Arumana, A. F. Rochim, and I. P. Windasari, "Analisis Tata Kelola Teknologi Informasi Menggunakan Kerangka Kerja COBIT 4.1 pada Fakultas Teknik Undip," *J. Teknol. dan Sist. Komput.*, vol. 2, no. 2, pp. 162–169, 2014, doi: 10.14710/jtsiskom.2.2.2014.162-169.
- [6] R. Setyadi and H. N. Prabowo, "Risk Management Analysis of Bus Transportation Application Using Cobit 4.1," JURTEKSI (Jurnal Teknol. dan Sist. Informasi), vol. 7, no. 2, pp. 203–212, 2021, doi: 10.33330/jurteksi.v7i2.1046.
- [7] T. Kristiana and M. Informatika, "Analisis Tata Kelola Teknologi Informasi Menggunakan," vol. XIII, no. 2, pp. 157–164, 2016.
- B. Supradono, "Tingkat Kematangan [8] Tata Kelola Teknologi Informasi (IT Governance) pada Layanan dan Teknologi Dukungan Informasi (Kasus: Perguruan Tinggi Swasta di Kota Semarang)," Semin. Nas. Teknol. Inf. Komun. Terap. 2011 (Semantik 2011), vol. 2011, no. Semantik, pp. 0-2011. [Online]. Available: 6. https://publikasi.dinus.ac.id/index.php/ semantik/article/view/101.
- [9] E. J. Simbolon, H. P. Chernovita, and M. N. N. Sitokdana, "Analisis Tata Kelola Aplikasi Presensi Karyawan (COBIT 4.1 Domain Monitoring and

Evaluate)," *JATISI (Jurnal Tek. Inform. dan Sist. Informasi)*, vol. 8, no. 2, pp. 896–907, 2021, doi: 10.35957/jatisi.v8i2.902.

[10] J. F. Andry, Y. M. Geasela, A. Wailan, B. A. Matjik, A. Kurniawan, and J. Junior, "Penggunaan COBIT 4.1 Dengan Domain ME Pada Sistem Informasi Absensi (Studi Kasus: Universitas XYZ)," Inform. Mulawarman J. Ilm. Ilmu Komput., vol. 13, no. 2, p. 97, 2019, doi: 10.30872/jim.v13i2.1152.