

Evaluation of Information Technology Governance Readiness at LKP Karya Prima Based on ISO/IEC 38500 Using the CIPP Model

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Abstract

Effective information technology governance plays an important role in supporting institution goals, including those of non-formal educational institutions. LKP Karya Prima Kursus has implemented information technology to support its operational activities; however, no comprehensive evaluation has been conducted to assess the readiness of its information technology governance. This study aims to evaluate the readiness level of information technology governance at LKP Karya Prima Kursus using the ISO/IEC 38500 framework integrated with the Context, Input, Process, Product (CIPP) evaluation model. The study employed a mixed-methods approach by collecting data through observation, interviews, documentation, and questionnaires distributed to 23 respondents using a total sampling technique. The collected data were analyzed using descriptive statistics based on a Likert scale and interpreted according to the CIPP evaluation components. The findings indicate that the overall readiness level of information technology governance achieved an average score of 2.41, categorized as Less Ready. The evaluation results show that the Context component scored 2.41 (Less Ready), Input scored 2.42 (Less Ready), Process scored 2.14 (Less Ready), while Product achieved the highest score of 2.65 (Moderately Ready). The Process component represents the weakest aspect and should therefore become the primary focus for organizational improvement. This study proposes several recommendations, including the establishment of formal IT governance policies, enhancement of human resource competencies, development of standard operating procedures, implementation of continuous monitoring and evaluation, and alignment of IT strategies with organizational objectives. These recommendations are expected to improve the effectiveness and sustainability of information technology governance implementation at LKP Karya Prima Kursus.

Keywords: ISO/IEC 38500, Information Technology Governance, CIPP, Evaluation, LKP Karya Prima

1. INTRODUCTION

The development of information technology has changed the way institutions conduct business processes, improve operational efficiency, and support faster and more accurate decision-making[1]. In the education sector, the use of information technology is no longer limited to administrative activities, but has become an important part of academic data management, student services, institutional communication, and the formulation of institutional development strategies. Therefore, the implementation of information technology must be supported by

good governance so that the technology investments made can provide optimal benefits, minimize risks, and align with the institution's goals[2].

Course and Training Institutions (LKP) as one of the providers of non-formal education are also required to be able to adapt to the development of information technology[3]. The digitization of administrative processes and services has become one of the important factors in improving the quality of services to the community[4]. However, the implementation of information technology in many non-formal educational institutions still faces various obstacles, such as the lack of clear information technology governance policies, limited human resources, the absence of regular evaluations of technology utilization, and the suboptimal use of information systems in supporting the institution's business processes[5]. These conditions result in the utilization of information technology not yet being fully able to provide added value to the institution[6], [7].

LKP Karya Prima Kursus is one of the non-formal educational institutions that has utilized information technology to support various operational activities, such as student administration, course data management, information dissemination, and academic services[8], [9]. However, initial observations indicate that the implementation of information technology in the institution still faces several issues, including the absence of a formally structured information technology governance policy, the lack of documented strategic information technology planning, the irregular execution of evaluations, and the unavailability of information technology performance measurement indicators as a basis for decision-making. This condition has the potential to cause the utilization of information technology to not run effectively, efficiently, and sustainably.

One of the frameworks widely used in evaluating information technology governance is ISO/IEC 38500[10], [11]. This international standard provides six main principles that serve as guidelines for Institutions in directing, controlling, and evaluating the use of information technology, namely Responsibility, Strategy, Acquisition, Performance, Conformance, and Human Behavior. The application of these principles helps Institutions ensure that information technology investments provide optimal benefits, comply with applicable regulations, and support the achievement of the Institution's goals.

Although ISO/IEC 38500 is capable of providing an overview of the maturity level of information technology governance, the standard does not specifically explain the evaluation of the institution's context, resource readiness, implementation process, and the overall results of information technology application[10], [11]. Therefore, this research combines ISO/IEC 38500 with the Context, Input, Process, Product (CIPP) evaluation model[12]. The CIPP model allows for a comprehensive evaluation starting from the identification of the Institution's needs (Context), resource readiness (Input), process implementation (Process), to the results obtained from the implementation of information technology (Product). The integration of these two approaches is expected to produce a more comprehensive evaluation compared to using only one framework separately[13], [14].

Several previous studies have examined information technology governance using various frameworks, including ISO/IEC 38500 and the CIPP evaluation model. However, most studies have focused solely on measuring the maturity level of governance or program evaluation separately, thus failing to provide a comprehensive picture of the relationship between information technology governance principles and institutional evaluation aspects[15]. In addition, research on the integration of ISO/IEC 38500 and the CIPP model in non-formal educational institutions is still relatively limited, particularly in course and training institutions. This condition indicates that there is still a research gap that needs to be further examined[16].

The novelty of this research lies in the integration of ISO/IEC 38500 principles with the CIPP evaluation model as an approach to evaluating information technology governance in non-formal educational institutions. Thru this integration, the research not only assesses the conformity of the application of information technology governance principles but also evaluates the institution's readiness, process implementation, and the overall results of information technology implementation, thereby producing more comprehensive improvement recommendations that meet the institution's needs. Based on this description, this research aims to evaluate the information technology governance at LKP Karya Prima Kursus using the ISO/IEC 38500 framework integrated with the CIPP evaluation model. The research results are expected to provide an overview of the current condition of information technology governance, identify aspects that still require improvement, and serve as a basis for formulating strategic recommendations to enhance the effectiveness of information technology implementation in non-formal educational institutions .

2. RESEARCH METHODOLOGY

2.1 Type of Research

This research uses a mixed methods approach, which combines quantitative and qualitative approaches in the process of data collection, processing, and analysis. This approach was chosen because it can provide a more comprehensive picture of the information technology governance conditions at the Karya Prima Kursus Training and Course Institution (LKP). Quantitative data were obtained thru the distribution of questionnaires to respondents to measure the level of readiness for information technology governance, while qualitative data were obtained thru observation, interviews, and documentation to support the interpretation of quantitative analysis results.

The type of research used is evaluative research. The evaluative research aims to assess the readiness level of information technology governance based on the principles of ISO/IEC 38500 integrated with the Context, Input, Process, Product (CIPP) evaluation model. The ISO/IEC 38500 framework is used to evaluate

information technology governance thru six main principles: Responsibility, Strategy, Acquisition, Performance, Conformance, and Human Behavior. Meanwhile, the CIPP model is used to evaluate the institution's condition from the aspects of context, resources, implementation process, and the results of information technology application.

The object of the research is the implementation of information technology governance at the Karya Prima Kursus Training and Course Institution (LKP). The research focuses on evaluating the management of information technology that supports administrative processes, student services, academic data management, and the institution's operational activities. The evaluation is conducted to determine the level of readiness of information technology governance while also identifying aspects that still require improvement.

The research population consists of all parties directly involved in the management and use of information technology within the LKP Karya Prima Kursus environment. Based on the relatively limited population size, the sampling technique used is Total Sampling (Saturation Sampling), where all members of the population are made respondents in the study. This technique was chosen so that all conditions of the Institution could be represented, thus the evaluation results reflect the actual conditions of the implementation of information technology governance in the institution.

2.2 Research Stages

The research is conducted thru several stages that are systematically arranged to ensure the research process runs according to the established objectives. The stages of the research begin with problem identification, namely:.



Figure 1. Research Stages

- a. Conducting an initial observation of the information technology governance conditions at LKP Karya Prima Kursus. At this stage, observations are made on the administration processes, data management, use of information technology devices, and the service mechanisms that have been implemented. The results of the identification are used to determine the focus of the research and formulate the issues to be evaluated.
- b. The next stage is the literature review. At this stage, various references related to information technology governance, ISO/IEC 38500 standards, the CIPP evaluation model, research methods, and relevant previous research findings are collected. The literature review aims to strengthen the theoretical foundation, develop the research conceptual framework, and determine the evaluation indicators to be used in the research.
- c. Next, the research instruments are developed. The main research instrument is a questionnaire developed based on the six principles in ISO/IEC 38500. Each indicator is then mapped into the Context, Input, Process, and Product (CIPP) components. In addition to the questionnaire, the researchers also prepared interview guidelines and observation sheets as supporting instruments to obtain qualitative data.
- d. The instruments that have been prepared then go thru the validity and reliability testing stages. Validity testing is conducted to determine the ability of each question item to measure the research variables, while reliability testing is conducted to determine the consistency of the instruments in producing data. Instruments that meet the valid and reliable criteria are then used in the data collection stage.
- e. The next stage is data collection, which is carried out thru observation, interviews, documentation, and the distribution of questionnaires to all respondents. Observation is used to observe the actual conditions of information technology governance implementation. Interviews are conducted with management and information system users to obtain information regarding policies, strategies, and obstacles in the implementation of information technology. Documentation is used to collect supporting documents such as institutional structure, standard operating procedures, and other documents related to information technology governance. Meanwhile, questionnaires are used as the main instrument in obtaining quantitative data. The collected data were then analyzed using a mixed methods approach. Quantitative analysis was conducted by calculating the mean value of each indicator based on the questionnaire results, while qualitative analysis was carried out thru data reduction, data presentation, and drawing conclusions from the results of observations, interviews, and documentation. The results of both analyzes are then integrated to obtain a comprehensive picture of the level of readiness for information technology governance at LKP Karya Prima Kursus.
- f. The final stage is the formulation of conclusions and recommendations. Conclusions are drawn based on the evaluation results of each component:

Context, Input, Process, and Product. Subsequently, strategic recommendations are formulated as a basis for improving information technology governance to be more effective, efficient, and aligned with the Institution's objectives.

2.3 Data Collection Techniques

Data collection is an important stage in research because it determines the quality of the information that will be analyzed. In this research, data collection was carried out using four techniques: observation, interviews, documentation, and questionnaires. These four techniques complement each other, so the data obtained is not only quantitative but also supported by qualitative information that describes the actual conditions of information technology governance implementation at LKP Karya Prima Kursus. Observation was conducted directly in the LKP Karya Prima Kursus environment to observe the information technology management processes that support administrative activities, student services, data management, and the use of hardware and software. Thru observation, the researcher obtained a real picture of the condition of information technology governance applied at the institution.

Interviews were conducted with parties involved in information technology management, such as institutional leaders, administrative staff, and information system users. The interviews aimed to obtain information regarding information technology management policies, system development strategies, challenges faced, and the institution's needs in improving the quality of information technology governance.

Documentation is carried out by collecting various documents related to information technology governance, including the institution's structure, standard operating procedures (SOP), policy documents, activity reports, and other documents that support the research process. Documentation data is used to strengthen the results of observations and interviews.

The questionnaire is used as the main instrument in the collection of quantitative data. The questionnaire was developed based on indicators referring to the ISO/IEC 38500 framework and the CIPP evaluation model. All respondents were asked to assess each indicator using a five-point Likert scale, thus obtaining data on the level of readiness for information technology governance at LKP Karya Prima Kursus.

Table 1. Data Collection Techniques

Technique	Goal
Observation	Directly observing the condition of information technology governance implementation at LKP Karya Prima Kursus.
Interview	Exploring information regarding policies, strategies, and challenges in the implementation of information technology.
Documentation	Collecting supporting documents related to information technology governance.

Questionnaire	Measuring the level of readiness for information technology governance based on respondents' perceptions.
Technical	Goal

2.4 Research Instruments

The main instrument used in this research is a questionnaire developed based on the six main principles of the ISO/IEC 38500 framework, namely Responsibility, Strategy, Acquisition, Performance, Conformance, and Human Behavior. These six principles are mapped into the Context, Input, Process, and Product (CIPP) evaluation model, enabling a more comprehensive assessment of information technology governance readiness.

The instrument was developed based on the indicators formulated in the research proposal. Each indicator is translated into several questions formulated using language that is easy for respondents to understand. Before being used as a research instrument, all the questions were first consulted with the supervising lecturer and validated to ensure they align with the research objectives.

Mapping the principles of ISO/IEC 38500 to the CIPP evaluation model is used as a basis in the analysis process so that every aspect of information technology governance can be evaluated based on the institution's conditions.

Table 2. Mapping the ISO/IEC 38500 Framework with the CIPP Evaluation Model

Principle of ISO/IEC 38500	CIPP components	Evaluation Focus
Responsabilidad	Context	Clarity of tasks, responsibilities, and authority in information technology management.
Strategy	Context	The alignment of information technology strategy with the institution's objectives.
Acquisition	Input	Procurement of resources and investment in information technology.
Performance	Process	Effectiveness of the implementation and utilization of information technology.
Conformance	Process	Compliance with applicable policies, procedures, and regulations.
Human Behaviour	Product	The impact of the implementation of information technology on users and institutions.

Before being used as a research instrument, all items in the questionnaire are tested for validity and reliability. The testing is conducted to ensure that the instrument can measure the research variables accurately, precisely, and consistently, so that the resulting data can be trusted as a basis for the evaluation process.

2.5 Validity and Reliability Test

Instrument testing is conducted before the process of distributing the questionnaire to respondents. This test aims to ensure that each question item can measure the research variable according to the established objectives.

The validity test is conducted using the Pearson Product Moment correlation. Each question item is declared valid if the correlation coefficient value (r calculated) is greater than the table r value at the 5% significance level. Question items that meet the validity criteria are then used in the data collection process.

Meanwhile, the reliability test is conducted using the Cronbach's Alpha method. An instrument is declared reliable if it has a Cronbach's Alpha value greater than 0.70, which indicates that all question items have a good level of internal consistency and are suitable for use as a research instrument.

The results of the validity and reliability tests show that the research instrument meets the criteria of being valid and reliable, thus it can be used to measure the level of readiness for information technology governance at LKP Karya Prima Kursus.

2.6 Data Analysis Techniques

Data analysis was conducted using a mixed methods approach, which combines quantitative and qualitative analysis. Quantitative analysis was used to process data from the distribution of questionnaires, while qualitative analysis was used to strengthen the interpretation of results thru observation, interviews, and documentation.

Quantitative data were analyzed using descriptive statistics by calculating the mean value of each indicator using the following equation.

$$\bar{x} = \frac{\sum x}{n} \quad (1)$$

Explanation:

$\bar{X}$ = Average score

$\sum X$ = Total score of all respondents

n = Number of respondents

Each indicator is measured using a five-point Likert Scale, namely:

Table 3. Five-point Likert scale

Skor	Criteria
5	Strongly agree
4	Agree
3	Neutral
2	Don't Agree
1	Strongly Disagree

The average score obtained is then interpreted using the categories of information technology governance readiness levels as shown in Table 4.

Table 4. Categories of Information Technology Governance Readiness Levels

Value Interval	Category
4,21 – 5,00	Very Ready
3,41 – 4,20	Ready
2,61 – 3,40	Quite Ready
1,81 – 2,60	Not Ready
1,00 – 1,80	Not Ready

Next, the average values of each indicator are grouped based on the components Context, Input, Process, and Product. The evaluation results for each component are then analyzed to determine the readiness level of information technology governance at LKP Karya Prima Kursus based on the ISO/IEC 38500 framework combined with the CIPP evaluation model. Qualitative analysis is conducted thru the stages of data reduction, data presentation, and conclusion drawing. The results of the qualitative analysis are used to strengthen the quantitative analysis results, providing a more comprehensive picture of the information technology governance conditions at LKP Karya Prima Kursus. Based on these evaluation results, strategic recommendations are formulated as a basis for improving information technology governance to be more effective, efficient, and aligned with the institution's goals.

3. RESULTS AND DISCUSSION

3.1 General Overview of the Research Object

Lembaga Kursus and Pelatihan (LKP) Karya Prima Kursus is one of the non-formal educational institutions engaged in the development of community competencies and skills thru various training programs. In supporting its operational activities, LKP Karya Prima Kursus has utilized information technology in several activities, such as administrative management, student data management, training schedule preparation, archive management, and information dissemination to both participants and instructors. The utilization of information technology is expected to enhance service effectiveness, expedite administrative processes, and support decision-making by the management.

However, initial observations indicate that the implementation of information technology governance at LKP Karya Prima Kursus has not been carried out optimally. Some policies regarding information technology management are still informal, the division of responsibilities has not been well documented, and the evaluation process of information technology usage has not been conducted regularly. These conditions have the potential to reduce the effectiveness of information technology utilization in supporting the achievement of the Institution's goals.

Based on these conditions, this research conducts an evaluation of the readiness of information technology governance using the ISO/IEC 38500 framework combined with the Context, Input, Process, Product (CIPP) evaluation model. The evaluation is carried out to determine the institution's readiness level in implementing information technology governance while also identifying aspects that still require improvement so that recommendations can be formulated according to the institution's needs.

3.2 Respondent Characteristics

The respondents in this study are all parties directly involved in the management and utilization of information technology within the LKP Karya Prima Kursus environment. The sampling technique used was Total Sampling (Saturation Sampling), so the entire population was made the respondents of the study. Based on the data collection results, the number of respondents who participated was 23 people. All the distributed questionnaires were successfully returned, resulting in a 100% response rate.

Table 5. Recapitulation of Research Respondents

Description	Amount
Number of Respondents	23
Questionnaire Distributed	23
Return Questionnaire	23
Return Questionnaire	100%

Based on Table 5, all respondents have provided answers to the distributed questionnaire, allowing all data to be used in the analysis process. The 100% response rate indicates that the obtained data can represent the actual conditions of information technology governance implementation at LKP Karya Prima Kursus.

3.3 Results of Information Technology Governance Evaluation Based on the CIPP Model

The evaluation of information technology governance was conducted using the Context, Input, Process, Product (CIPP) model combined with the principles of ISO/IEC 38500. Analysis is conducted on each component to determine the Institution's readiness level in implementing information technology governance. The evaluation results are presented in the form of average values (mean), which are then interpreted based on readiness level categories.

3.3.1 Evaluation of the Context Component

The Context Component is used to evaluate the institution's condition, policy direction, division of responsibilities, and alignment of information technology strategies with the institution's objectives. The evaluation of this component aims to determine the extent to which the institution has a sufficient foundation to support the implementation of information technology governance.

Table 6. Context Component Evaluation Results

Kode	Indikator	Mean	Category
C1	Responsibility	2,39	Not Ready
C2	Strategy	2,44	Not Ready
C3	Responsibility	2,41	Not Ready
C4	Strategy	2,40	Not Ready
Avarage		2,41	Not Ready

Based on Table 6, an average score of 2.41 was obtained, placing the Context component in the Less Prepared category. This result indicates that the Institution has made initial efforts in implementing information technology governance, but its implementation has not yet been optimal. The division of tasks and responsibilities in information technology management has not been formally documented, while the formulation of information technology strategies is still not fully aligned with the Institution's goals.

From the results of observations and interviews, it is known that the utilization of information technology is still oriented toward meeting daily operational needs. Strategic planning that governs the long-term development of information technology has not been systematically formulated, causing the implementation of information technology to tend to be reactive to the needs of the Institution. These conditions result in the principles of Responsibility and Strategy, as recommended in ISO/IEC 38500, not being optimally implemented.

The results of this study indicate that the contextual aspect still requires special attention, particularly in the formulation of information technology governance policies, the establishment of a clear responsibility structure, and the alignment of information technology strategies with the institution's vision and mission. Improvements in these aspects will serve as the main foundation for enhancing the quality of information technology governance at LKP Karya Prima Kursus.

3.3.2 Evaluation of Input Components

The Input Component aims to evaluate the readiness of the Institution's resources in supporting the implementation of information technology governance. The evaluation of this component includes the availability of information technology infrastructure, human resources, budgetary support, and the procurement process of information technology in accordance with the Acquisition principle of ISO/IEC 38500. Readiness in the Input component is a crucial factor as it determines the overall success of the implementation of information technology governance.

Table 7. Results of Input Component Evaluation

Code	Indicator	Mean	Catagory
I1	Acquisition	2,48	Not Ready
I2	Acquisition	2,39	Not Ready
I3	Strategy	2,41	Not Ready

I4	Acquisition	2,40	Not Ready
Average		2,42	Not Ready

Based on Table 7, an average score of 2.42 was obtained, placing the Input component in the Less Prepared category. This result shows that LKP Karya Prima Kursus has various resources that support the implementation of information technology, but their utilization and management are still not optimal. The availability of hardware, software, and networks has supported most administrative activities, but it has not been accompanied by sustainable development planning. Observation results show that the process of procuring information technology is still based on short-term needs. The institution does not yet have an information technology investment planning document that regulates system development priorities, device renewal cycles, or long-term budget allocation strategies. This condition causes the procurement process to be more reactive than strategic.

In addition, the competence of human resources in managing information technology still needs to be improved thru continuous training. Although most employees are able to use the available applications, their ability to manage, maintain, and develop information technology is still limited. This has resulted in the suboptimal utilization of information technology as a support for the Institution's business processes.

If linked to the Acquisition principle in ISO/IEC 38500, the research results indicate that the procurement and development processes of information technology have not fully considered the long-term benefits for the Institution. Therefore, the Institution needs to develop a structured information technology investment plan, set procurement priorities based on strategic needs, and enhance human resource competencies so that the implementation of information technology governance can run more effectively.

3.3.3 Evaluation of the Process Component

The Process component is used to evaluate the implementation process of information technology governance, including control mechanisms, monitoring, evaluation, compliance with policies, and the effectiveness of information technology implementation in supporting the Institution's activities. In this study, the Process component refers to the principles of Performance and Conformance in the ISO/IEC 38500 framework.

Table 8. Results of Process Component Evaluation

Code	Indikator	Mean	Category
P1	Performance	2,21	Not Ready
P2	Performance	2,10	Not Ready
P3	Conformance	2,13	Not Ready
P4	Conformance	2,12	Not Ready
Average		2,14	Not Ready

Based on Table 8, an average score of 2.14 was obtained, placing the Process component in the Less Prepared category. This score is the lowest compared to the Context, Input, and Product components. The results indicate that the implementation of information technology governance at LKP Karya Prima Kursus still faces various obstacles in the aspects of implementation and control.

The results of the observation indicate that the institution does not yet have a mechanism for periodic evaluation of information technology performance. In addition, risk control procedures, documentation of information technology activities, and monitoring of system implementation have not been carried out systematically. This condition causes the Institution to have difficulty in identifying problems and determining appropriate corrective actions.

If related to the principle of Performance, the research results show that information technology has been utilized to support the Institution's activities, but the effectiveness of its implementation has not been measured using clear performance indicators. On the other hand, the principle of Conformance has not been optimally applied because not all information technology activities are supported by written policies and procedures that refer to governance standards.

The lower Process value compared to other components indicates that the Institution needs to prioritize the development of operational procedures, monitoring mechanisms, periodic evaluations, and information technology risk control. This step is important so that the implementation of information technology governance does not only focus on the use of technology but also on a structured and sustainable management process.

3.3.4 Evaluation of Product Components

The Product component is the final stage in the Context, Input, Process, Product (CIPP) evaluation model, which aims to assess the final results of the implementation of information technology governance on the achievement of the Institution's objectives. The evaluation of this component focuses on the benefits obtained by the Institution after the implementation of information technology, both in terms of improved service effectiveness, work process efficiency, information quality, and user satisfaction with the system used. In this study, the Product component is linked to the Human Behavior principle in the ISO/IEC 38500 framework, which emphasizes that the implementation of information technology must provide benefits to all stakeholders and consider user behavior in utilizing the technology.

Table 9. Results of Product Component Evaluation

Kode	Indikator	Mean	Kategori
PR1	Performance	2,71	Quite Ready
PR2	Human Behaviour	2,63	Quite Ready

PR3	Performance	2,61	Quite Ready
PR4	Human Behaviour	2,60	Quite Ready
Average		2,65	Quite Ready

Based on Table 9, the Product component received an average score of 2.65, placing it in the Fairly Ready category. This score is the highest compared to the other three components, which are Context (2.41), Input (2.42), and Process (2.14). This result shows that although the governance of information technology at LKP Karya Prima Kursus has not yet been fully implemented according to the ISO/IEC 38500 principles, the implementation of information technology has provided tangible benefits to the institution. Observations indicate that the use of information technology can accelerate administrative processes, facilitate the management of student data, reduce the use of manual documents, and increase the speed of information delivery to training participants. Additionally, the use of administrative support applications has helped staff complete tasks more effectively compared to the manual processes previously used.

However, these benefits have not yet been fully supported by good governance. The absence of regular evaluations of user satisfaction, the lack of documented feedback mechanisms, and the absence of periodic measurements of information technology service performance have resulted in the inability to objectively measure the improvement in service quality. In other words, the benefits of information technology have been felt by users, but the Institution does not yet have a governance system capable of ensuring that these benefits can be maintained and continuously improved.

Based on the Human Behavior principle in ISO/IEC 38500, the success of information technology implementation is not only determined by the sophistication of the technology used but also by the readiness of human resources to accept changes, optimally utilize the system, and participate in the information technology development process. Therefore, enhancing user competence thru training, providing system usage guidelines, and implementing user satisfaction evaluation mechanisms are important steps to improve the quality of information technology governance in the future.

Overall, the evaluation results on the Product component indicate that the Institution has benefited from the implementation of information technology; however, these benefits can still be enhanced thru strengthening governance, control, and continuous evaluation aspects in accordance with the principles of ISO/IEC 38500.

3.4 Recap of Information Technology Governance Evaluation Results

After evaluating each component of Context, Input, Process, and Product, a recapitulation is conducted to determine the overall readiness level of information technology governance. This recapitulation provides an overview of the position of each component in supporting the implementation of information technology

governance based on the ISO/IEC 38500 framework combined with the CIPP evaluation model.

Table 10. Recapitulation of CIPP Model Evaluation Results

Component	Average Value	Catagory
Context	2,41	Not Ready
Input	2,42	Not ready
Process	2,14	Not Ready
Product	2,65	Quite ready
Overall Average	2,41	Not Ready

Based on Table 10, it can be seen that the Product component received the highest score, which is 2.65, while the Process component received the lowest score, which is 2.14. These results indicate that the benefits of using information technology have begun to be felt by the Institution, but the governance processes supporting the implementation of information technology have not yet been running optimally. This condition indicates that the Institution is more focused on utilizing technology to support operations rather than developing systematic governance.

The overall average score of 2.41 places the level of readiness for information technology governance at LKP Karya Prima Kursus in the Less Ready category. This result shows that the Institution has a preliminary foundation in the application of information technology, but still requires various improvements in the aspects of planning, resource management, process control, and evaluation of information technology performance so that governance implementation can run effectively and sustainably.

Analysis of each component shows that the main weakness of the Institution lies in the Process aspect, which relates to the implementation, monitoring, evaluation, and compliance with information technology governance policies. On the other hand, the Product component received a higher score because the benefits of using information technology have been directly felt by users in supporting daily operational activities. These findings indicate that the Institution has successfully utilized information technology to enhance work efficiency, but it does not yet have governance capable of ensuring the sustainability and improvement of information technology service quality.

3.5 Gap Analysis

Gap analysis is conducted to determine the level of disparity between the actual condition of information technology governance implementation and the ideal condition expected based on the ISO/IEC 38500 framework. In this study, the ideal condition is set at the maximum score of the Likert scale, which is 5.00, while the actual condition is obtained from the average results of each CIPP evaluation component. The larger the gap value, the greater the improvement efforts needed by the Institution.

Table 11. Gap Analysis of Information Technology Governance

Component	Actual Value	Target Value	Gap	Priority
Context	2,41	5,00	2,59	High
Input	2,42	5,00	2,58	High
Process	2,14	5,00	2,86	Very High
Product	2,65	5,00	2,35	Currenty
Average	2,41	5,00	2,59	Hight

Based on Table 11, it can be seen that all components still have gaps compared to the ideal condition. The Process component has the largest gap, which is 2.86, indicating that the Institution still faces weaknesses in the aspects of implementation, supervision, evaluation, and control of information technology governance. Conversely, the Product component has the smallest gap, which is 2.35, indicating that the benefits of using information technology have begun to be felt even tho its governance is not yet fully mature.

The gap analysis results indicate that the improvement of information technology governance at LKP Karya Prima Kursus should prioritize the development of operational procedures, monitoring mechanisms, periodic evaluations, and the strengthening of governance policies. Improvements in these aspects are expected to enhance the effectiveness of information technology implementation while also reducing the gap toward the ideal conditions recommended by ISO/IEC 38500.

3.6 Discussion

The research results show that the level of readiness for information technology governance at LKP Karya Prima Kursus received an average score of 2.41, placing it in the Less Ready category. This score indicates that the institution has utilized information technology to support business processes, but the implementation of information technology governance has not been fully carried out in accordance with the principles of ISO/IEC 38500. Based on the evaluation results using the CIPP model, the Context component received a score of 2.41, categorized as Less Ready. This condition indicates that the institution does not yet have a fully documented information technology governance policy and lacks a clear division of responsibilities in information technology management. From the perspective of ISO/IEC 38500, this condition relates to the principles of Responsibility and Strategy, where the Institution should establish a clear structure of responsibilities and ensure that the information technology strategy supports the Institution's business objectives. The lack of clarity in the governance structure causes the implementation of information technology to run based on daily operational needs, rather than long-term strategic planning.

In the Input component, an average score of 2.42 indicates that the Institution has information technology infrastructure and supporting resources, but their

management is still not optimal. The procurement of hardware, software, and networks has been carried out, but it has not been accompanied by a systematic information technology investment plan. In addition, the improvement of human resource competencies in the field of information technology still needs to be enhanced thru continuous training and capacity development. These findings indicate that the Acquisition principle in ISO/IEC 38500 has not been fully implemented because the information technology investment process has not considered long-term benefits for the Institution.

The Process component received the lowest score of 2.14, making it the aspect that needs the most attention. This result indicates that the Institution does not yet have mechanisms for monitoring, evaluation, internal audits, or periodic information technology risk control. The management of information technology activities is still more focused on solving operational problems rather than implementing systematic governance. From the perspective of ISO/IEC 38500, this condition relates to the principles of Performance and Conformance, which emphasize the importance of measuring information technology performance and compliance with the Institution's policies and procedures. The low score on this component indicates that the implementation of information technology governance is not yet supported by a structured evaluation process.

Unlike the other components, the Product component received a score of 2.65 with a "Sufficiently Ready" category. This result shows that the utilization of information technology has provided benefits to the Institution, particularly in improving administrative efficiency, accelerating data processing, and facilitating the delivery of information to students. However, these benefits have not been matched by a user satisfaction evaluation system or a mechanism for continuous service improvement. These findings indicate that the principles of Human Behavior have begun to be applied thru the use of information technology by users, but still require better governance support so that the benefits of information technology can be maintained and enhanced.

Overall, the research results indicate that the benefits of information technology have been felt by the Institution, but the maturity of information technology governance is still at a relatively low level. This condition is evident from the significant gap between the actual condition and the ideal condition, especially in the Process component. Therefore, the improvement of information technology governance should be focused on the formulation of formal policies, the establishment of a clear governance structure, the development of standard operating procedures, the implementation of regular monitoring and evaluation, as well as the enhancement of human resource competencies. The implementation of these recommendations is expected to enhance the readiness of information technology governance, aligning with the principles of ISO/IEC 38500 and supporting the sustainable achievement of the strategic goals of LKP Karya Prima Kursus.

CONCLUSION

This research aims to evaluate the readiness level of information technology governance at LKP Karya Prima Kursus using the ISO/IEC 38500 framework combined with the Context, Input, Process, Product (CIPP) evaluation model. The evaluation results indicate that the overall readiness level of information technology governance received an average score of 2.41, placing it in the Less Ready category. Based on the evaluation results of each CIPP component, the Context component received an average score of 2.41 (Less Ready), Input 2.42 (Less Ready), Process 2.14 (Less Ready), while the Product component received a score of 2.65 (Fairly Ready). The results indicate that the Institution has utilized information technology to support operational activities; however, the implementation of information technology governance has not been optimally carried out in accordance with the principles of ISO/IEC 38500. The Process component has the lowest score, necessitating priority improvements, particularly in monitoring, evaluation, control, documentation, and compliance with information technology governance policies. Meanwhile, the Product component received the highest score, indicating that the use of information technology has benefited the Institution, although these benefits have not been supported by mature governance. Based on the results of this study, it is recommended that LKP Karya Prima Kursus develop a more formal information technology governance policy, clarify the division of responsibilities, enhance human resource competencies, establish standard operating procedures, conduct regular evaluations and monitoring, and develop strategic information technology planning aligned with the institution's goals so that the readiness level of information technology governance can improve sustainably.

REFERENCES

- [1] M. Noor, M. Amin, I. Safrila, D. Putra, M. D. Alfikri, and S. M. br Tarigan, **"Evaluation of Helpdesk Performance at the IT Center of a Higer Educatiion Institution Using COBIT 2019 DSS02 Domain,"** *Proc. Int. Conf. Islam. Community Stud.*, pp. 717–723, 2019.
- [2] J. Saragih, A. P. U. Siahaan, and S. Wahyuni, **"Design of Digital Transformation Diagram for IT Governance at the Department of Community and Village Empowerment, Population, and Civil Registration of North Sumatra Province,"** *Int. J. Ind. Innov. Mech. Eng.*, vol. 2, no. 1, pp. 165–171, 2025, [Online]. Available: <https://international.aritekin.or.id/index.php/IJIIME/article/view/258>
- [3] D. R. Andini, E. Fitrianti, E. A. Lestari, and D. Brutu, **"Peran Organisasi Pendidikan di Luar Sekolah dalam Meningkatkan Kualitas Pembelajaran Non-Formal: Studi Kasus di Lembaga Kursus dan Pelatihan,"** *J. Inovasi, Eval. dan Pengemb. Pembelajaran*, vol. 5, no. 1, pp. 158–163, 2025, doi: 10.54371/jiepp.v5i1.794.
- [4] B. Szedmák, L. Varga, and R. Z. Szabó, **"Digital Transformation of Public Services: The Case of the Document Management Application,"** *Int. J. Public Adm.*, vol. 49, no. 10, pp. 647–664, 2025, doi: 10.1080/01900692.2025.2520522.

- [5] N. Alsharari, **"The implementation of enterprise resource planning (Erp) in the United Arab Emirates: A case of Musanada corporation,"** *Int. J. Technol. Innov. Manag.*, vol. 2, no. 1, 2022.
- [6] M. Spring, J. Faulconbridge, and A. Sarwar, **"How information technology automates and augments processes: Insights from Artificial-Intelligence-based systems in professional service operations,"** *J. Oper. Manag.*, vol. 68, no. 6–7, pp. 592–618, 2022.
- [7] M. Attaran, **"Blockchain technology in healthcare: Challenges and opportunities,"** *Int. J. Healthc. Manag.*, vol. 15, no. 1, pp. 70–83, 2022.
- [8] H. Yang and W. Zhang, **"Data mining in college student education management information system,"** *Int. J. Embed. Syst.*, vol. 15, no. 3, pp. 279–287, 2022.
- [9] R. A. Sunarjo, M. H. R. Chakim, S. Maulana, and G. Fitriani, **"Management of educational institutions through information systems for enhanced efficiency and decision-making,"** *Int. Trans. Educ. Technol.*, vol. 3, no. 1, pp. 47–61, 2024.
- [10] T. Toifur, K. Kusriani, and A. Budi, **"Evaluation of Information Technology Governance Using COBIT 5 and ISO/IEC 38500,"** *J. Online Inform.*, vol. 7, no. 1, pp. 17–27, 2022.
- [11] B. G. A. Perdana, A. H. Muhammad, and A. Nasiri, **"Evaluation of IT Governance Based On Spbe Using Cobit 2019 And ISO/IEC 38500: 2015,"** *J. Inovtek Polbeng Seri Inform.*, vol. 9, no. 1, 2024.
- [12] F. Abudaqqa, **"Artificial Intelligence for IT Governance in Saudi Arabia: Opportunities, Challenges, and Future Directions within COBIT 2019 and ISO/IEC 38500 Frameworks,"** *Eur. Sci. Journal, ESJ*, vol. 21, no. 25, p. 125, 2025.
- [13] M. M. Mark, G. T. Henry, and G. Julnes, **"Toward an integrative framework for evaluation practice,"** *Am. J. Eval.*, vol. 20, no. 2, pp. 177–198, 1999.
- [14] G. Phillips-Wren, M. Mora, G. A. Forgionne, and J. N. D. Gupta, **"An integrative evaluation framework for intelligent decision support systems,"** *Eur. J. Oper. Res.*, vol. 195, no. 3, pp. 642–652, 2009.
- [15] K. Putra and R. F. Wijaya, **"Analysis of Information Technology Governance Capability Using COBIT 2019 at PT Xtend Integrasi Indonesia,"** pp. 8173–8181, 2019.
- [16] A. Odoms-Young, A. G. M. Brown, T. Agurs-Collins, and K. Glanz, **"Food insecurity, neighborhood food environment, and health disparities: state of the science, research gaps and opportunities,"** *Am. J. Clin. Nutr.*, vol. 119, no. 3, pp. 850–861, 2024.