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INFORMATION TECHNOLOGY GOVERNANCE MODEL IN UNIVERSITY GOVERNANCE FOR IMPROVING LECTURER PERFORMANCE IN THE IMPLEMENTATION OF *TRIDARMA*

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Abstract

This study aims to develop an Information Technology (IT) governance model based on University Governance to enhance lecturers' performance in implementing the Three Pillars of Higher Education *(Tridharma)* at STEBI Tanggamus. The research is motivated by several issues, including limited IT infrastructure, the absence of standard operating procedures, and the fragmented development of information systems. The study employs the Enterprise Architecture Planning (EAP) method involving analysis of the existing conditions, mapping of data, application, and technology architectures, and designing an implementation roadmap. The findings indicate that EAP effectively identifies *Tridharma* information requirements, formulates the integration of core applications (academic information system, e-learning, performance reporting), and develops IT management standards that were previously unavailable. Interviews with institutional leaders further revealed the urgent need for system integration to improve accountability in lecturers' reporting processes. The study concludes that an EAP-based IT governance model serves as a strategic solution to strengthen university governance and improve lecturers' performance. The novelty of this research lies in applying EAP within the context of small-to-medium Islamic higher education institutions and integrating it directly with *Tridharma* performance indicators.

Keywords: IT governance, university governance, EAP, *Tridharma,* lecturer performance, information architecture.

I. INTRODUCTION

The implementation of effective university governance is an important foundation in improving the quality of higher education in Indonesia. In the context of higher education governance, the government has set standards for the implementation of education through Law Number 12 of 2012 concerning Higher Education, which emphasizes that universities are obliged to carry out autonomous and accountable management in order to achieve the quality of the Tridharma. In addition, this regulation emphasizes the importance of the use of information technology (IT) in strengthening the management and governance system, so that all academic and non-academic activities can take place effectively, transparently, and measurably. In line with these needs, the government also establishes a special policy regarding the use of the Electronic-Based Government System (SPBE) through Presidential Regulation Number 95 of 2018, which requires public institutions, including public and private universities, to implement an integrated, efficient, and service-oriented information system. At the operational level of higher education, Permendikbud Number 3 of 2020 concerning National Standards for Higher Education also emphasizes that the implementation of the Tridarma must

be supported by structured governance, including the availability of adequate IT resources to support the optimal implementation of education, research, and community service.

In the context of lecturer performance, IT governance plays a strategic role because it supports various main activities such as digital-based learning management, lecturer performance reporting on Sister and BKD Online, research data management, and scientific publications that are integrated with national systems such as SINTA and GARUDA. Regulations such as PermenPAN-RB Number 1 of 2023 concerning Functional Positions also emphasize the importance of accurate, verified, and digitized performance reporting. Thus, the development of an IT governance model within the framework of university governance is a strategic need so that institutions are able to increase the productivity and quality of lecturer performance in the implementation of the Tridharma of Higher Education. Previous studies have shown that the application of Enterprise Architecture Planning (EAP) is an effective approach in building integrated information technology governance in universities. A study by Handayani & Setyowati (2021) found that EAP is able to systematically map the needs of academic and non-academic business processes so that institutions can design IT architectures that are aligned with the strategies of higher education organizations. The results of the study confirm that without structured architectural planning, universities often experience duplication of systems, data insynchronization, and low effectiveness of academic services.

Research conducted by Rahman, Putra, & Nugroho (2020) shows that the use of the EAP method in IT governance development improves the quality of campus management decision-making through the provision of more accurate and integrated data. The research was conducted at one of the private universities in Indonesia and produced an IT architecture model that supports the improvement of lecturer performance, especially in filling lecturer workload (BKD), research management, and reporting results of community service. The results prove that EAP helps institutions develop IT blueprints that are able to support the implementation of the Tridarma in a more measurable and accountable manner. Firmansyah et al. (2022) emphasized that the implementation of EAP in higher education institutions is able to improve the quality of overall IT governance through the development of interconnected data architectures, applications, and technologies. The study found that EAP-based enterprise architecture significantly improves the integration of academic systems, research repositories, and e-learning services which has a direct impact on improving lecturer performance and productivity. This research shows that EAP not only functions as a system design method, but also as a strategic tool to realize the principles of effective, transparent, and quality-oriented university governance.

Although various studies have proven the effectiveness of the Enterprise Architecture Planning (EAP) approach in improving information technology governance in universities, until now there has been no research that specifically examines its application in the context of university governance at STEBI Tanggamus. Most of the previous studies focused on large institutions with relatively mature IT infrastructure, while STEBI Tanggamus has different characteristics, namely the scale of the organization that is growing, digitalization that is not yet optimal, and information systems that are still partially running separately. This condition shows that there is a research gap in the development of IT governance models that are tailored to the needs of economic and business-based Islamic educational institutions such as STEBI Tanggamus.

The main problem faced by STEBI Tanggamus is the lack of an integrated IT governance model to support the implementation of Tridarma to the maximum. Academic information systems, research repositories, and lecturer BKD reporting are not fully connected, so the data produced is not always synchronous and often requires manual processing. In addition, management support for strengthening IT-based university governance has not been equipped with long-term architectural planning, so technological developments are not in line with the

strategic needs of the institution. This condition has the potential to reduce the effectiveness of academic services, slow down lecturer performance, and hinder the improvement of the quality of the institution. Based on these problems, this research aims to develop an information technology governance model based on Enterprise Architecture Planning (EAP) that is able to support the strengthening of university governance at STEBI Tanggamus. The developed model is expected to produce an integrated design of data, application, and technology architecture so that it can improve the performance of lecturers in the implementation of Tridarma, especially in the aspects of education, research, and community service. This research also aims to provide strategic recommendations for the development of information systems that are more effective, efficient, and in line with national higher education standards and institutional needs of STEBI Tanggamus.

II. RESEARCH METHODS

2.1. Types and Approaches to Research

This study uses a qualitative-descriptive approach with the Enterprise Architecture Planning (EAP) method as the main framework in designing an information technology governance model. The qualitative approach was chosen because this research focuses on an in-depth understanding of the condition of IT governance, the flow of Tridarma's business processes, and the needs of lecturers and management at STEBI Tanggamus. The EAP method is used to produce an architecture blueprint that includes data architecture, application architecture, technology architecture, and university governance-based IT implementation plans.

2.2. Research Location and Research Subject

The research was carried out at STEBI Tanggamus as the main object, with the research subjects including the leaders of the institution (Chairman, Vice Chairman, and Head of Study Program), staff of the Quality Assurance Institute, information system managers, and active lecturers. The selection of subjects was carried out by purposive sampling based on their direct involvement in the process of implementing the Tridarma and the use of information technology. This approach ensures that the data obtained is relevant to the needs of IT architecture and governance analysis.

2.3. Data Collection Techniques

Data is collected through the following techniques:

1. **Interview**
   It is carried out to leaders, lecturers, and IT managers to find out the condition of the existing system, information needs, lecturer performance barriers, and the level of digitalization implementation.
2. **Observation**
   It includes observations of academic business processes, information systems used, BKD reporting mechanisms, research management, and other Tridarma support systems.
3. **Documentation studies**
   It includes the collection of institutional policy documents, SOPs, organizational structures, lecturer performance reports, research data, and supporting documents for IT governance.

With the combination of these techniques, the researcher obtained a comprehensive picture of the actual state of IT governance to be analyzed in the EAP framework.

III. RESULTS AND DISCUSSION

3.1. Research Results

The results of the study show that information technology governance at STEBI Tanggamus is still in the development stage, with several elements of the information system that are already running but have not been fully integrated. Based on an interview with the Chairman of STEBI Tanggamus, Riki Renaldo, M.TI, it is known that institutions have realized the importance of digitalization and more mature IT architecture planning. He conveyed that,

"We already have several systems such as SIAKAD and e-learning, but so far it has not been connected to the lecturer's Tridarma reporting system. We need more targeted IT governance so that lecturer, BKD, research, and service data can be managed in one clear architecture."

He also said that the main challenge in IT governance lies in the absence of a comprehensive planning architecture, so system development is often reactive and follows momentary needs. According to him, "So far, the system has developed according to urgent needs, not based on long-term planning. As a result, there are several systems that stand alone and are not interconnected." This situation has made various activities that support Tridarma, especially research reporting, lecturer BKD, and community service documentation, unable to be managed effectively. He emphasized that data integration is a strategic need so that management can make accurate and real-time data-based decisions.

In the context of university governance, the Chairman of STEBI said that strengthening IT governance is one of the important efforts to improve lecturer performance and institutional quality. He added that, "We want the lecturer Tridarma process to be easier to monitor and report. If there is an integrated system, lecturers do not need to work twice, while leaders can monitor academic and research achievements more easily." In addition, he emphasized the importance of an IT governance model that is in line with the vision of institutions and national regulations, such as SN-Dikti and PermenPAN-RB regarding the functional positions of lecturers. Thus, the development of an IT governance model based on Enterprise Architecture Planning (EAP) is considered very relevant to ensure harmony between institutional strategies, lecturer needs, and improving the quality of academic services.

The findings of the study also show that technical support for IT development still faces obstacles in terms of infrastructure and operational standards. The Head of the STEBI Tanggamus Computer Center (Puskom), Irwan Baza, M.TI, explained that infrastructure limitations are one of the reasons why system integration has not been optimal. In his interview he emphasized, "So far, we have built the system gradually according to urgent needs. But without thorough architectural planning, many systems stand on their own, so data synchronization is often an obstacle."

In addition, he mentioned the need for technical guidelines that regulate development standards, information security, and system maintenance so that IT governance can run consistently and effectively. He explained that so far the information system has been built with a "per module as needed" approach, so there is no comprehensive architectural framework that oversees all IT development. In his interview he emphasized, "The development of the system at STEBI has been running organically. There is a need from academia, we build; There is a request from the administration, we add. But there is no big blueprint that directs all systems in one integrated architecture yet." This statement shows that there is a fundamental need for a more systematic IT architecture model.

Irwan also acknowledged that the main obstacle in IT management lies in the limitations of infrastructure and data integration. According to him, some of the systems used such as SIAKAD, e-learning, and administrative applications are still running independently and do not have an automatic data exchange mechanism. He said, "Currently the system has not talked to

each other. For example, lecturer data at SIAKAD is not automatically synchronized with the BKD system or research system. This leads to a lot of manual work that could actually be automated." This condition has an impact on the work efficiency of lecturers and staff, as well as making it difficult to provide accurate data for leaders. In addition, Irwan highlighted that operational-standards related to IT management have not been well documented. He explained that information security guidelines, system maintenance procedures, and application development standards still need to be strengthened. He said, "We need clear SOPs related to IT development and maintenance. So far, many activities have been carried out based on technical experience, not based on standard standards." Furthermore, he assessed that strengthening IT governance is very important to support the achievement of the Tridarma of lecturers, especially in the aspects of providing research data, BKD reporting, and community service documentation.

Irwan expressed his full support for the development of an IT governance model based on Enterprise Architecture Planning (EAP). He assessed that this approach was able to help STEBI Tanggamus formulate an integrated data architecture, applications, and technology that was oriented to the needs of the institution. He stated, "EAP is very relevant for the condition of STEBI. With EAP we can develop a long-term IT development roadmap so that we no longer build systems separately, but as a single architectural unit." He hopes that the results of this research can be a strategic basis in building more directed, efficient, and supportive IT governance for improving lecturer performance.

Academic needs related to the implementation of Tridarma also show that there are challenges that have not been covered by the current IT system. The Head of the STEBI Tanggamus Sharia Economics Study Program, Nirwala Dewi, MM, explained that lecturers need more comprehensive system support for the management of educational, research, and community service activities. In his interview he revealed, "Lecturers still have to fill out BKD reports manually and collect research data one by one. If there is a system that can integrate this reporting, the performance of lecturers will definitely be more effective." Furthermore, he added that the integration of research and service data with the academic system will help improve the quality of study programs because data can be monitored systematically and in real-time. Overall, the results of the study illustrate that STEBI Tanggamus has a commitment to digitalization, but does not yet have a structured IT governance model based on enterprise architecture. The main need lies in the preparation of an IT architecture blueprint that can integrate academic services, lecturer performance, and overall Tridarma reporting. These findings are an important basis for designing an IT governance model based on Enterprise Architecture Planning (EAP) so that institutions can achieve more effective, efficient, and accountable university governance.

Nirwala Dewi, MM, pointed out that the implementation of the Tridarma of lecturers at STEBI Tanggamus still faces various obstacles related to the lack of optimal use of information technology. He explained that in the aspect of education, the lecture process has actually been helped by the existence of an e-learning platform, but its use has not been maximized because it has not been integrated with other academic systems. He said, "Lecturers have used e-learning for lecture materials and assignments, but this system is not yet connected to SIAKAD so there is still a lot of data that must be recorded and reported manually." This condition causes the academic administration process to be longer and demands additional work from lecturers.

In the aspect of research and community service, Nirwala explained that lecturers still face limitations in managing and reporting Tridarma activities. He revealed that the collection of research data and service is still carried out manually, both in the form of printed documents and separate uploads. In his interview, he said, "We don't have a dedicated system for research and service yet. All reports are still collected manually, making it difficult for us when we have to recap or trace lecturers' research data." According to him, the absence of an integrated system

hinders the process of data validation, improving the quality of study programs, and mapping lecturer achievements comprehensively.

In addition, Nirwala highlighted the need for IT system integration to assist lecturer workload reporting (BKD), which currently still relies heavily on manual filling and repeated verification. He said that many lecturers had difficulty in preparing supporting documents for BKD because there was no centralized platform that automatically stored data on education, research, and service activities. He emphasized, "If the BKD system can be connected to SIAKAD, e-learning, and research databases, the lecturers' work will be much easier and more accurate." Furthermore, he added that the integration of systems like this is important to support the effectiveness of the Tridarma and ensure accountability for lecturer performance according to national standards.

Nirwala provides full support to the development of an IT governance model based on Enterprise Architecture Planning (EAP) that is being researched. He considers that this approach is very relevant to solve the problem of data and system fragmentation that STEBI Tanggamus is currently facing. He emphasized that, "If there is an EAP-based governance model, we can have a clear direction in IT development so that all study programs and units can work in the same and integrated system." According to him, the existence of a structured IT architecture will greatly help improve the quality of academic services, speed up the reporting process, and have a significant impact on improving the quality of Tridarma and lecturer performance.

3.2. Discussion

1. Strengthening IT Governance through EAP in Supporting University Governance

The results of the study show that the absence of an integrated IT architecture at STEBI Tanggamus causes the system to run partially and does not support the needs of university governance optimally. This finding is in line with the research of Spewak & Hill (1993) which confirms that EAP is able to systematically plan IT architectures, ranging from data architecture, applications, to technology, so that institutions can avoid the development of fragmented systems (silo systems). Siregar's research (2020) also found that universities that implement EAP are proven to achieve better efficiency in the integration of academic services and quality assurance.

In the context of university governance, IT governance plays an important role as a support for transparency, accountability, and effectiveness of academic management. The results of the interview with the Chairman of STEBI Tanggamus show that institutions need an integrated system to support evidence-based decision-making. This is in line with the research of Al-Farsi & Rahman (2019) which shows that well-governed IT improves institutional accountability and the quality of academic services. Thus, the use of EAP is a relevant approach to ensure that IT governance at STEBI Tanggamus is in line with the vision of national institutions and regulations such as SN-Dikti.

2. Lecturer Performance in the Tridarma and the Need for an Integrated System

Field findings indicate that lecturers at STEBI Tanggamus still face obstacles in reporting the Tridarma due to the absence of an interconnected system. An interview with the Head of the Study Program, Nirwala Dewi, MM, showed that lecturers had to do double administrative work in filling out BKD, collecting research data, and service because there was no integrated platform yet. This finding is consistent with the research of Harjanto & Herlina (2021) which states that the administrative burden of lecturers can be significantly reduced by the implementation of an integrated information system, so that lecturers can focus more on the core activities of the Tridarma. In addition, Widodo's research (2022) shows that digitization of BKD management and research is able to increase time efficiency by up to 40% and reduce the

risk of data errors. The results of this study strengthen the relevance of EAP for STEBI Tanggamus, because through this approach, an application architecture can be designed that supports the Tridarma process as a whole, such as the integration of SIAKAD, e-learning, research repositories, service systems, and online BKD. Thus, the need for an integrated system at STEBI Tanggamus is part of efforts to improve lecturer performance strategically, not just administratively. The existence of a strong IT architecture will support lecturer monitoring and evaluation in a more systematic and real-time manner.

3. Challenges of IT Infrastructure and Governance: An Analysis of the Condition of STEBI Tanggamus

The results of the interview with the Chairman of the STEBI Tanggamus Puskom, Irwan Baza, M.TI, showed that the main challenge faced by the institution lies in the limited infrastructure and the lack of formal SOPs related to information technology management. The absence of operational guidelines and governance standards causes the IT management process to still run situationally and does not follow a systematic framework. These findings are consistent with the view of Ward & Peppard (2016) who stated that organizations without long-term architectural planning tend to struggle in system efficiency, because IT development takes place organically, undirected, and difficult to control.

The same condition is also seen in the findings of Rahmawati (2019) who explained that universities that do not have formal IT guidelines face challenges in the form of service inconsistencies, high maintenance costs, and difficulties in integrating between systems. This situation is very relevant to the condition of STEBI Tanggamus, where the existing information system develops with a case-by-case approach without an institutional blueprint. This causes the running systems to be not connected to each other, thus hindering the process of monitoring lecturer performance, reporting Tridarma, and integrating academic data.

To overcome these problems, the Enterprise Architecture Planning (EAP) approach has become very relevant as a strategic solution. Through the stages of developing data, application, and technology architectures, EAP helps institutions map information needs, design integrated core applications, and strengthen IT infrastructure standards. In addition, the preparation of an IT development roadmap for the next 3-5 years allows STEBI Tanggamus to have a clear and measurable direction in the development of information systems. The effectiveness of this approach is supported by research by Fitriyani & Kurniawan (2021) which found that the implementation of EAP is able to improve institutional digital readiness, reduce system duplication, and significantly boost operational efficiency.

4. Relevance of EAP-Based IT Governance Model for STEBI Tanggamus

Overall, the findings of this study show that STEBI Tanggamus is in an ideal phase to implement an EAP-based IT governance model. The need for an integrated system, infrastructure challenges, and the desire of leaders to improve lecturer performance show the institution's readiness to transform through an information technology architecture approach. In line with the research of Hapsari et al. (2021), EAP is not only a technical framework, but also a strategic instrument for aligning IT with organizational goals. Thus, the IT governance model developed can have a direct impact on improving the quality of academic services, the effectiveness of Tridarma, lecturer performance accountability, and the efficiency of institutional processes. This discussion shows that empirically and theoretically, the implementation of EAP at STEBI Tanggamus is the right and relevant approach to improve university governance and support the digital transformation of higher education.

IV. CONCLUSION

This study concludes that the main problem of information technology governance at STEBI Tanggamus lies in the limited infrastructure, the unavailability of IT management SOPs, and the development of systems that are still partial and not integrated. This condition causes the Tridarma monitoring process, lecturer BKD reporting, and academic data management not to run optimally. These problems show the need for a more systematic IT governance model and in line with the direction of university governance that is oriented towards improving lecturer performance. As a problem-solving, this study offers an Enterprise Architecture Planning (EAP**)** based IT governance strengthening model that maps the needs of data, applications, and technology architecture, and provides a long-term implementation roadmap that STEBI Tanggamus did not previously have. This approach is not only able to solve system integration obstacles and the absence of operational standards, but also provides a strategic foundation for the development of IT that is efficient, sustainable, and supports the acceleration of institutional digital transformation. The novelty of this research lies in the application of EAP specifically for the context of the university model that was developed not only to map technological needs, but also to integrate aspects of lecturer performance in the Tridarma as the main focus of governance development. Thus, this study makes a new contribution in the form of an adaptive IT governance design, relevant to national regulations, and oriented towards improving academic quality and institutional accountability.

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