Application of Lecturer Performance Index In Badan Penjaminan Mutu Lancang Kuning University

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Abstract

In the Badan Penjaminan Mutu of Lancang Kuning University (BPM) in processing the Lecturer Performance Index (IKD) data, it still uses manual data in data processing, so this causes many problems. Among them: delays in reporting, inaccurate data, the emergence of efficiency and effectiveness of the work, overlapping data, data archiving that is not good, and other problems that result in all aspects of the existing assessment. To be able to answer all of these challenges, the author intends to submit research making Compurterization-based Quality Assurance Services application, especially in online based lecturer performance index data processing. Its usefulness is to facilitate the academic community of Lancang Kuning University in conducting data processing of Lecturer Performance Index (IKD). and it is expected that with the computerized application of Quality Assurance Services will be more effective and efficient in working. This E-IKD was created using a Mobile / Web Service application. Several actors are directly integrated with the service of this system, such as: Unit Units in the University of Lancang Kuning, Assessors, Lecturers and Administrators. Implementation methodology uses case tools which are a computer-based product, aiming to support one or more software engineering activities or processes. The purpose of the case tools is to increase the speed of analysis of university leaders, provide information related to existing business processes, improve accuracy in evaluating performance, better documentation, and use by users who are still prime. In order to provide scientific group quality assurance services or expertise and management services. The purpose of this study is the application of E-IKD (Lecturer Performance Index) based on information technology as a medium of service for lecturers and as an evaluation medium for the Badan Penjaminan Mutu (BPM) in all Units in the Lancang Kuning University environment.

Keywords: Paper International Conference, Information System, online.

1. Introduction

Lancang Kuning University is one of the largest universities in Riau Province. Lancang Kuning University has a vision of "Becoming a Superior University at the National level based on Malay culture". To realize this vision, Lancang Kuning University continues to regulate and manage it so that it always provides the best quality education. To ensure the sustainability of the quality of higher education can run well, the Lancang Kuning University Quality Assurance Agency (BPM-UNILAK) was formed. Badan Penjaminan Mutu of Lancang Kuning University has the main task of guaranteeing, monitoring, and building a quality culture at Lancang Kuning University with reference to Law No. 12 of 2012 concerning Higher Education. In the Badan Penjaminan Mutu (BPM) of Lancang Kuning University in processing the Lecturer Performance Index (IKD) data, there is no information technology-based media that can be utilized in data processing while this requirement is very important in improving the quality of higher education in the development of the 4.0 revolution, so this resulting in many problems. Among them: delays in reporting, inaccurate data, the emergence of efficiency and effectiveness of the
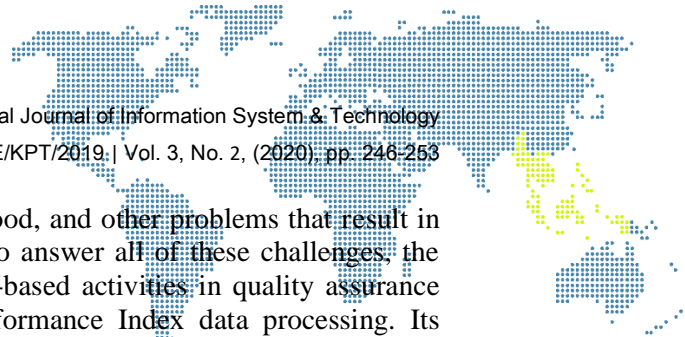
work, overlapping data, data archiving that is not good, and other problems that result in all aspects of the existing assessment. To be able to answer all of these challenges, the author intends to carry out information technology-based activities in quality assurance services, especially the online-based Lecturer Performance Index data processing. Its usefulness is to facilitate the academic community of Lancang Kuning University in conducting data processing of Lecturer Performance Index (IKD). and it is expected that with the computerized application of Quality Assurance Services will be more effective and efficient in working, so that UNILAK's Vision and Mission will be achieved with the parameters that have been specified in the service system. The formulation of the problem in this study are as follows:

a) How to design and build a web-based Lecturer Performance Index (IKD) application at the Badan Penjaminan Mutu of Lancang Kuning University?

b) How to utilize application-based information technology that can manage the reporting of Lecturer Performance Index (IKD) data results and document accurate and precise assessment results at the Badan Penjaminan Mutu of Lancang Kuning University?

2. Research Methodology

In this article use the method of data collection and system development methods as follows:

2.1. Method of collecting data

a) Literature Method

It is a data collection technique by studying references in the form of documents or files and collecting data, laws and regulations, books, research journals, etc.. Data needs that reveal about the indicators used in building the Lecturer Performance Index (E-IKD) application based on online data, in this activity the committee uses lecturer data and related actors at the Badan Penjaminan Mutu of Lancang Kuning University.

b) Observation Method

Metode observasi merupakan metode penelitian dimana, peneliti melakukan pengamatan/melihat dan meneliti langsung ke obyek penelitian tentang seluruh aktifitas yang berhubungan dengan maksud penelitian, Dengan menganalisa mengevaluasi sistem yang sedang berjalan dalam pengolahan data indeks kinerja dosen pada Badan Penjaminan Mutu Universitas Lancang Kuning dan memberikan solusi melalui sistem informasi yang akan dibangun sehingga dapat lebih bermanfaat.
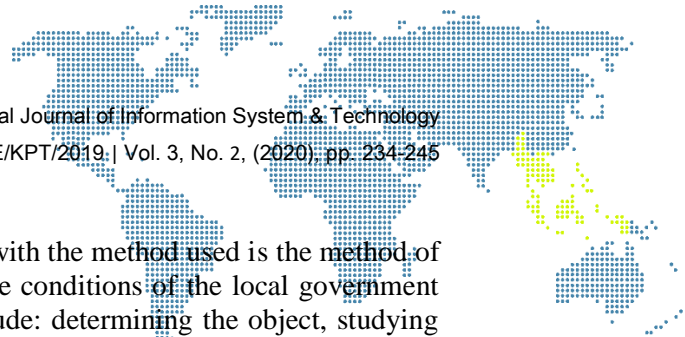
c) Interview Method

The interview is a conversation between the writer and the informant. The writer here hopes to get information, while the informant is someone who is assumed to have important information about an object. Interviews were conducted directly to the Head of the Lancang Kuning University Quality Assurance Agency and all staff members, so that the writer could analyze the problems that occurred in processing the lecturer performance index data at the Lancang Kuning University.

2.2. Systems Development Method

Development of the system can mean composing a new system to replace the old system as a whole or improve existing systems. While the main stages of the system development life cycle consist of a structured development method with a system development life cycle approach (System Development Life Cycle or SDLC). Consists of several phases as follows:

a) Planning

At this staged the focus is more on interpreting the needs and diagnosing problems by defining the goals and objectives of the system to be built.

b) System Analist

In this phased an analysis of the existing system with the method used is the method of interviewing the parties concerned and observing the conditions of the local government which is the scope of the study. In this phased include: determining the object, studying the organization, analyzing output requirements, analyzing input requirements, evaluating system effectiveness.

c) System Design

In designing this system based on the needs and problems encountered in the research object. In this phase includes database design, user interface design, hardware requirements, network design, software requirements.

d) System Implementation

After going through the requirements, analysis and design stages, the whole system is ready to be implemented. In the implementation phase there are several tasks carried out between implementing the design in components, souce code, scripts, executables etc.

e) System Operation and Maintenance

At this stage there is training of users and an evaluation of the running system, if there are deficiencies or errors, improvements and maintenance are held.

2.3. System Development Tools and Techniques

Structured system development methodology requires tools and techniques. The tools used in a methodology are generally in the form of pictures or diagrams or graphs to be more easilyunderstood. A part from drawing, the tools used are not images, for example data dictionaries, English structures, or forms for recording or presenting data. Graphical system development tools include:

a) HIPO Diagram (Hierarchy plus Input-Proces-Output).
b) Usecase Diagram.
c) Class Diagram.
d) State Transition Diagram.

General graphical tools can be used on all methodologies, including system flow chart, program flow chart, process flow chart, organization chart etc.

3. Results and Discussion

3.1. New System Design

The author designs a system using the method development system development lyfe cycle (SDLC) with a system design tool approach to the unified modeling language (UML).

a) Usecase Diagram

The Usecase Diagram explains the picture of the actors involved in using the Lecturer Performance Index (E-IKD) system that will be built, can be seen in the picture 1. Use the case diagram below:
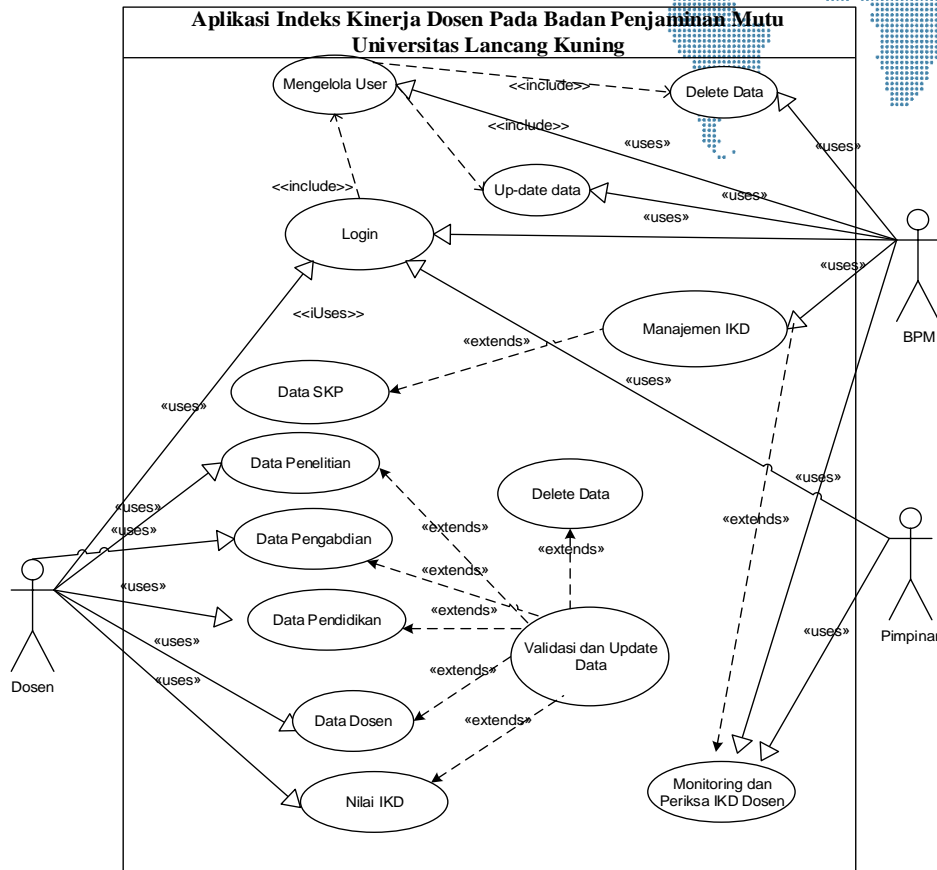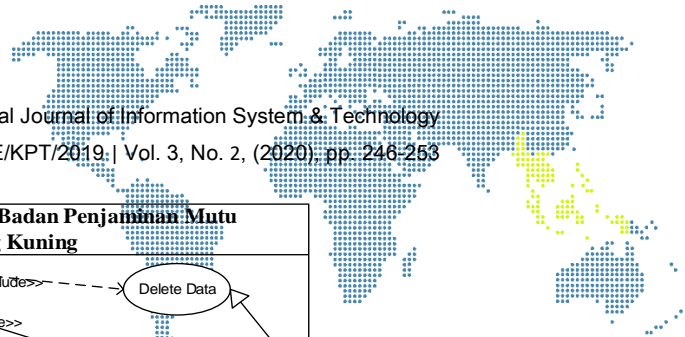
Figure 1. Usecase Diagram

Explanation:

1) In developing the system there are 3 actors namely: Lecturer, BPM and Leadership.
2) The lecturer has the duty to upload the lecturer profile data, education, research, devotion and supporting lecturers.
3) BPM has the duty to recap data and evaluate the value of the Lecturer University Lancang Kuning Performance Index data.
4) The Chairperson conducts supervision of Lancang Yellow University Lecturer Performance Index (IKD) data. All actors must log in before carrying out activities in the system

b) Activity Diagram

Activity Diagram explains how the flow of the system developed in the online based Lecturer Performance Index application, can be seen in the image below 2. Activity Diagram below:
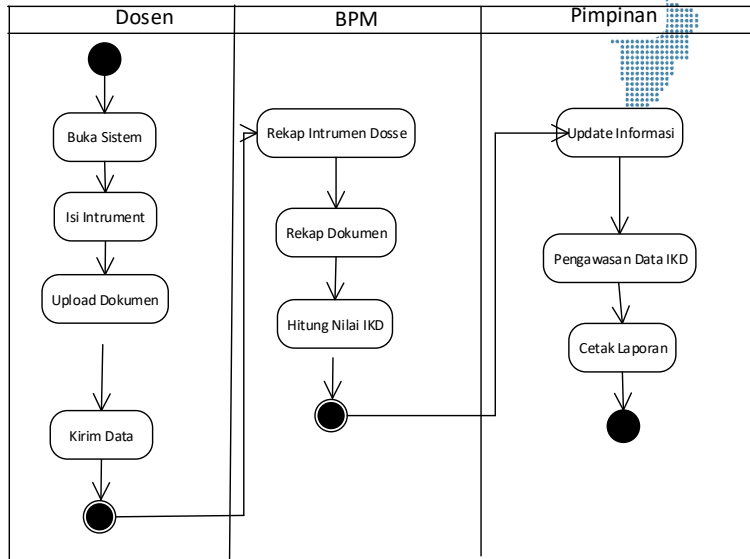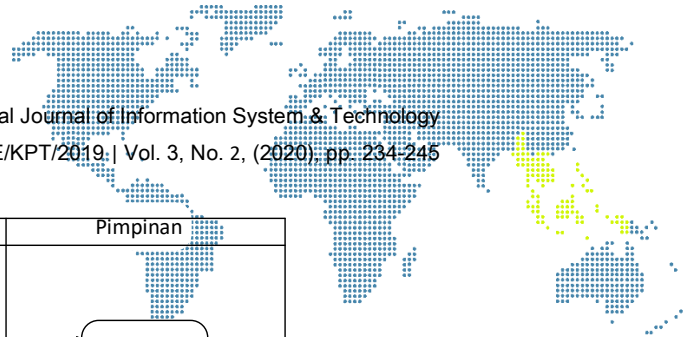
Figure 2. Activity Diagram

Explanation:

1) The activity diagram explains the flow of lecturers in filling out the instrument and uploading the completeness of the Lecturer Performance Index (IKD) data document.

2) The Quality Assurance Agency has the duty to summarize the instrument data and lecturers' documents in recapitulating the Lancang Kuning University Lecturer Performance Index value.

3) The leaders control and take policy on the value of the Lecturer University Lancang Kuning Performance Index.

c) Class Diagram

Class Diagram explains the entities and attributes in the information technology-based E-IKD application system, can be seen in Figure 3. Class Diagram below:
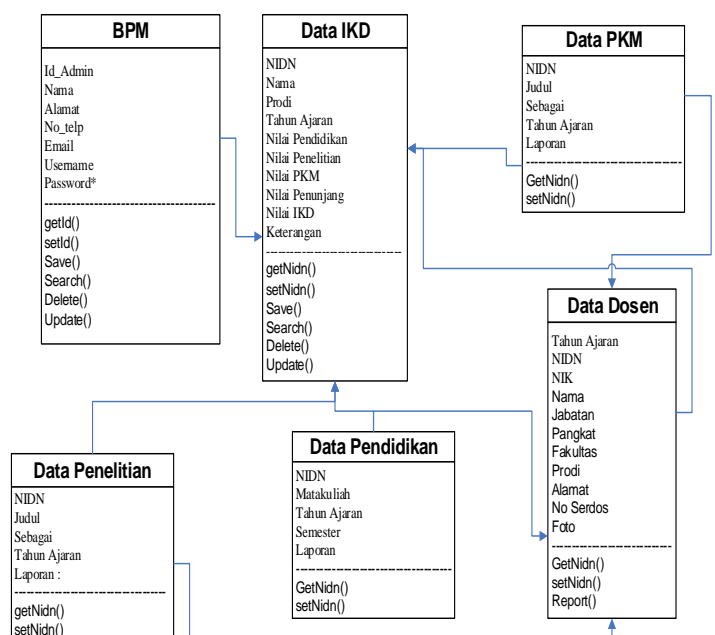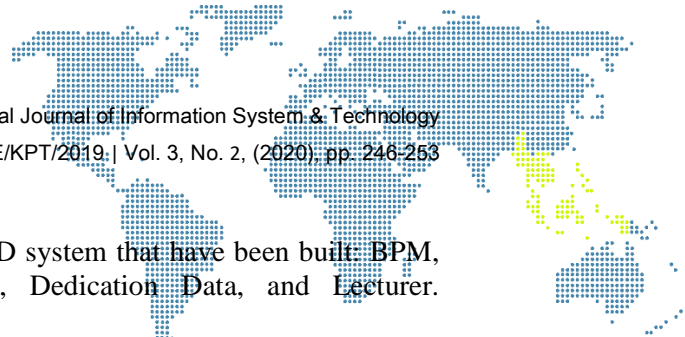

Figure 3. Class Diagram

Explanation:
In the class diagram there are 6 entities in the E-IKD system that have been built: BPM, Lecturer Data, Education Data, Research Data, Dedication Data, and Lecturer. Performance Index Value Data (IKD).

a) Each entity has attributes that are an explanation of the entity.
b) The class diagram also explains the integrity of the data flow in the developed system.

3.2. New system interface

In the new system view that has been built based on the previous design of usecase diagrams, activity diagrams, and class diagrams in the application development of information technology-based Lecturer Performance Index at Badan Penjaminan Mutu of Lancang Kuning University

a) Main Menu

In the system design the main menu of the E-IKD application is built at the Lancang Yellow University Quality Assurance Agency in Figure 4. Display the Main Menu below.
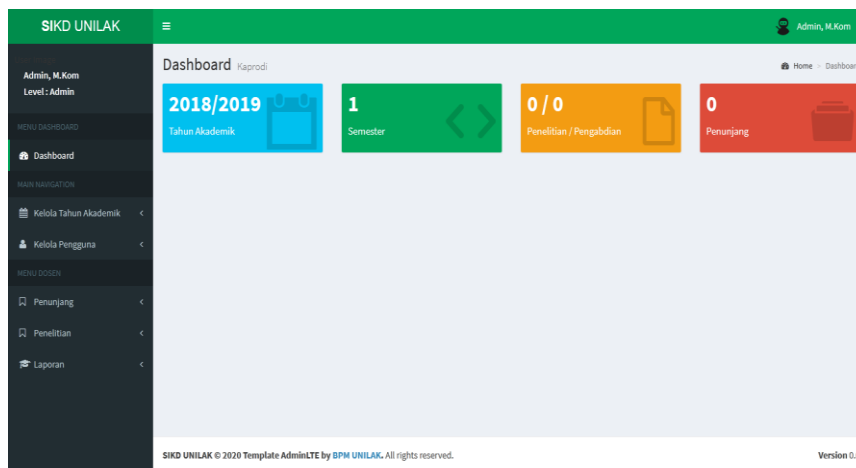

Figure 4. Main Menu

b) Lecturer Profile Data

In the system design the main menu of the E-IKD application is built on the Lancang Kuning University Quality Assurance Agency in the figure below.
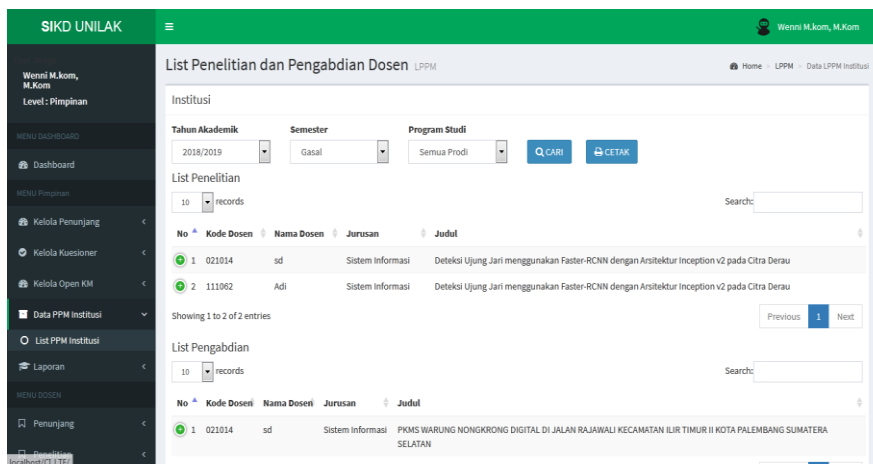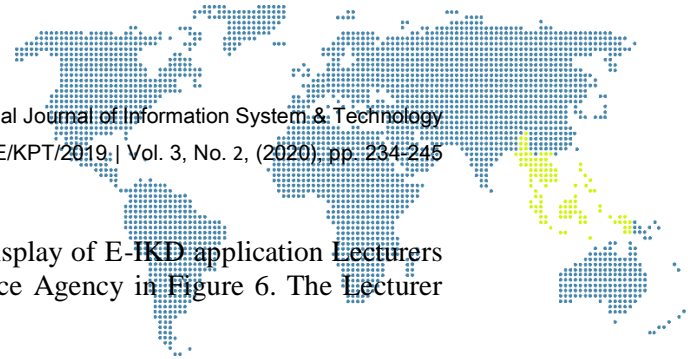

Figure 5. Lecturer Profile Data

c) Lecturer Graph Value Data

In the system design that was built, the Graph Display of E-IKD application Lecturers at the Lancang Kuning University Quality Assurance Agency in Figure 6. The Lecturer Value Chart Display below.
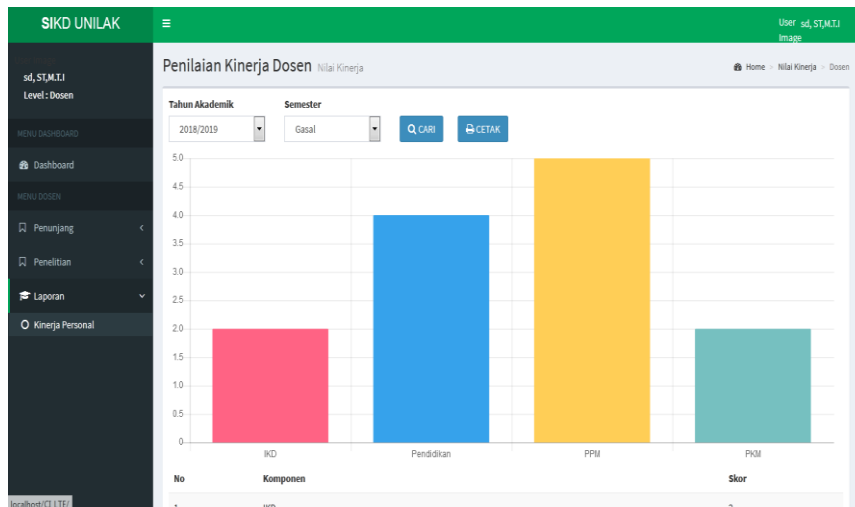

**Figure 6. Lecturer Graph Value Data**

4. Conclusion

After implementing the application of information technology-based E-IKD application at the Lancang Kuning University Quality Assurance Agency, the authors concluded that:

a) The application of E-IKD application at the Yellow Lovers Unoversity Quality Assurance Agency is very helpful in managing the Lecturer Performance Index Value Data in building an integrated system.
b) By utilizing data-based applications and information technology so that lecturer Performance Index data processing can be done quickly and precisely at the Lancang Kuning University Quality Assurance Agency.

References

[1]   Abdillah, M.R., Lin, C.-T., Anita, R., Suroto, B., & Hadiyati. (2018). Knowledge-sharing behavior among banking officers in Indonesia. Journal of International Studies, 11(2), 136-153. doi:10.14254/2071-8330.2018/11-2/10.
[2]   Author 1, A.B. (University, City, State, Country); Author 2, C. (Institute, City, State, Country). (Year). Personal communication,
[3]   Author 1, A.B.; Author 2, C.D.; Author 3, E.F. (2012). Title of Presentation. In Title of the Collected Work (if available), Proceedings of the Name of the Conference, Location of Conference, Country, Date of Conference; Editor 1, Editor 2, Eds. (if available); Publisher: City, Country, Year (if available); Abstract Number (optional), Pagination (optional).
[4]   Febriadi, Bayu. 2017. Efisiensi Sistem Informasi berbasis Online Dalam pengumpulan RPKPS mata Kuliah Untuk Pengembangan Kompetensi Program Studi" Vol 8, No. 1, Digital Zone, Jurnal teknologi Informasio dan Komunikasi.
[5]   Febriadi, Bayu. 2019. Internal Quality Audit Administration Information System in Badan Penjaminan Mutu. Vol. 2. No. 2. Ijistech.Org 2019
[6]   Kadir, Abdul. 2005. Pengenalan Sistem Informasi. Jakarta, Yogyakarta: Andi
[7]   Mohammad Yazdi, 2012, e-learning sebagai media pembelajaran interaktif berbasis teknologi informasi, urnal Ilmiah Foristek Vol. 2, No. 1, Maret 2012, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Tadulako.
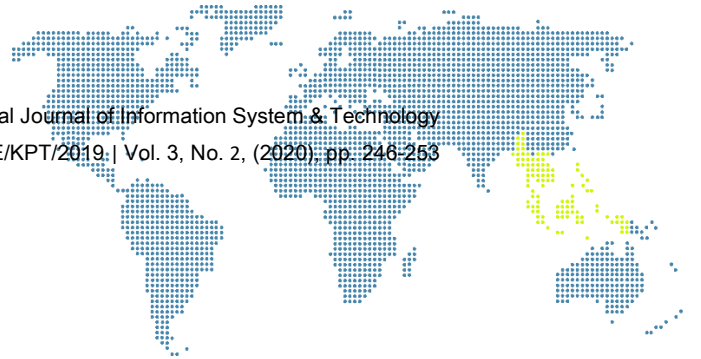
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