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Analysis of The Effect of E-IKD as Data Processing on The Performance of Lecturers (Case University of Lancang Kuning)

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Abstract

Badan Penjaminan Mutu of Lancang Kuning University (BPM UNILAK) is an agency in charge of implementing an internal quality assurance system (SPMI) and an external quality assurance system (SPME) or also known as accreditation but in processing Lecturer Performance Index (IKD) data. , still use manual data in data processing, so this causes a lot of problems. Among them: are delays in reporting, inaccurate data, lack of efficiency and effectiveness of work, overlapping data, poor data archiving, and other problems that affect all aspects of the existing assessment. To be able to answer all these challenges, the author intends to propose research on making computerized-based Quality Assurance service applications, especially in online-based Lecturer Performance Index data processing. Its purpose is to make it easier for the academic community of Lancang Kuning University in carrying out the collection of the Lecturer Performance Index. It is also hoped that the existence of a computerized-based Quality Assurance Application service will be more effective and efficient at work so that UNILAK's vision and mission are superior to the parameters that have been determined in the service system. The purpose of this research is the application of information technology-based e-IKD (Electronic Lecturer Performance Index) as a service medium for lecturers and as an evaluation medium for the Quality Assurance Agency (BPM) in all units within Lancang Kuning University. This e-IKD was created using the Mobile/Web Service application. Several actors are directly integrated with this system service, such as the Unit at Lancang Kuning University, UPM, Lecturers, and Administrators. Methodology This research uses case tools which are computer-based products, aiming to support one or more software or process engineering activities. The purpose of case tools is to increase the speed of analysis of higher education leaders, provide information related to existing business processes, increase accuracy in conducting performance evaluations, better documentation, and better presentation of information.

Keywords: *e-IKD, Information Technology, BPM UNILAK.*

1. Introduction

In the face of Regulation Menteri Pendidikan dan Kebudayaan (PERMENDIKBUD) No. 5 of 2020 and the regulation of the Badan Akreditasi Nasional Perguruan Tinggi (BAN-PT) No. 1 of 2020, related to the fulfillment of accreditation of universities and study programs that have used the Higher Education Accreditation Instrument (IAPT 3.0) and Study Program Accreditation Instrument (IAPS 4.0), and also related Key Performance Indicators (IKU), So we need a system that can help Lancang Kuning University in the preparation and implementation of accreditation assessments for both universities and study programs in order to be able to adjust the implementation and preparation of the mechanism for extending the validity period of accreditation for colleges and study programs. Lancang Kuning University is one of the largest universities in Riau Province. Lancang Kuning University has a vision of "Being a Superior University at the National level based on Malay culture". To realize this vision, Lancang Kuning University continues to organize and manage in order to always provide the best quality education. To ensure that the continuity of service quality can run well, an

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institutional body was formed under the name of the Badan Penjaminan Mutu Lancang Kuning University (BPM-UNILAK).

The Badan Penjaminan Mutu (BPM) in processing Lecturer Performance Index (IKD) data has used an integrated system so that it is faster and more precise in processing lecturer performance data. In order to be able to answer whether it is in accordance with the expectations of the academic community in processing performance data, the author intends to analyze the effect of the e-IKD system in data processing in improving lecturer performance for Study Programs and Faculties within the Lancang Kuning University. Its purpose is to make it easier for the academic community of Lancang Kuning University in carrying out processing and documents related to the Lecturer Performance Index (IKD).

The existence of a lecturer performance index application is needed in an era that already utilizes information technology in carrying out activities for the BPM team in processing Lecturer Performance Index data. and more accurate in presenting information on lecturer performance index data in the academic community of Lancang Kuning University.

Table 1. Lancang Kuning University IKD Performance in 2021

No	Fakultas	Program Studi	IKD Prodi	IKD Fakultas
1	Fakultas Kehutanan	Kehutanan	1.95	1.95
2	Fakultas Pertanian	Agribisnis	2.38	2.62
		Agroteknologi	2.86	
3	Fakultas Ilmu Komputer	Teknik Informatika	2.54	2.71
		Sistem Informasi	2.88	
4	Fakultas Ekonomi	Manajemen	2.63	2.62
		Akuntansi	2.61	
5	Fakultas Hukum	Ilmu Hukum	1.98	1.98
6	Fakultas Ilmu Administrasi	Ilmu Administrasi Negara	2.65	2.65
7	Fakultas Ilmu Budaya	Ilmu Perpustakaan	0	0
		Sastra Indonesia	0	
		Sastra Inggris	0	
		Sastra Daerah	0	
8	Fakultas Keguruan dan Ilmu Pendidikan	Pendidikan Biologi	2.53	2.48
		Pendidikan Guru Usia Dini	2.75	
		Pendidikan Bahasa Inggris	2.15	
9	Fakultas Teknik	Teknik Elektro	2.35	2.59
		Teknik Sipil	2.62	
		Arsitektur	2.79	
10	Pasca Sarjana	Magister Manajemen	0	0
		Magister Hukum	0	

To improve the quality of Unilak, implementing the e-IKD application as a means and facility in fulfilling lecturers' performance data, including one of them implementing accreditation fulfillment, but from table 1 it can be seen from the performance scores of lecturers that there are still several study programs that have not processed lecturer performance data, even though this is very important in the demands of study program accreditation performance and fulfillment of the quality culture at Unilak itself.

Based on the description above, the author tries to utilize available resources and the application of information technology in analyzing the effect of e-IKD on lecturer performance in fulfilling accreditation data and information in managing study programs. The formulation of the problem in this study is as follows:

a) How to analyze the effect of e-IKD as lecturer data processing to improve lecturer performance at Lancang Kuning University?
b) How to use information technology-based applications to provide more effective and efficient information in the implementation of e-IKD as data processing of lecturer performance in Lancang Kuning?

2. Research Methodology

The research methodology and research framework were used in the completion of this research. This framework is the steps that will be taken to solve the problems that will be discussed. The stages in the modeling used are Waterfall modeling, and can be seen in the image below:

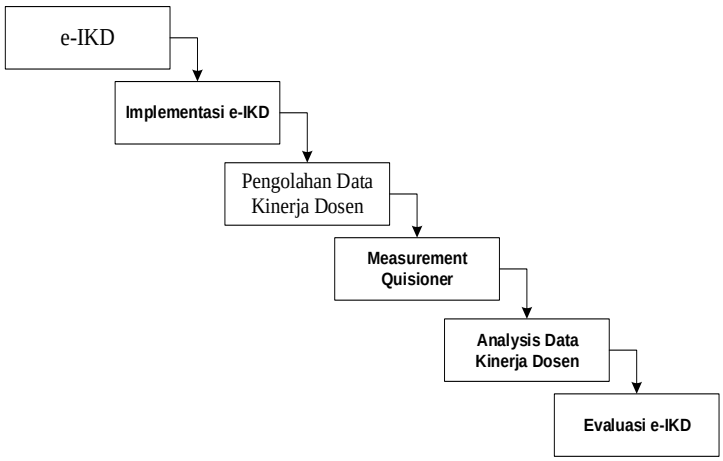

Figure 1. Stages of the Waterfall Model

a) e-IKD
e-IKD is an application that has been built and will be implemented in processing lecturer performance data at the Lancang Kuning University Quality Assurance Agency which is always carried out after the completion of the academic year of learning. This is very important, considering that software must be able to interact with other elements such as hardware, databases, and so on. The e-IKD application system begins by filling in data and processing lecturer performance data either by the study program or the Faculty as the study program management unit.
b) Implementation Systems e-IKD
System implementation is the application of an application that describes how a system is formed in the form of drawing, planning, and depicting or compiling several separate elements into a unified whole and functioning, which involves the configuration of software and hardware components of a system. In this case, the implementation of e-IKD is carried out by BPM with a study program within the University of Lancang Kuning, which consists of 21 study programs and assesses as many as 350 lecturers at Unilak.
c) Lecturer performance data processing
at this stage, BPM Unilak performs data processing on lecturer performance after being inputted by the study program according to the IKD instrument that has been adjusted to the IKD implementation guide on the e-IKD application at Lancang Kuning University.

2.1. Measurement

The population in this study were lecturers at Lancang Kuning University which consisted of 21 study programs spread across 9 faculties and postgraduates as a study

program management unit at Lancang Kuning University totaling 350 people, the details of which can be seen in Table 2 as follows:

Table 2. Research population

No	Study program	Amount	%
1	Ilmu Hukum	38	12,06
2	Akuntansi	20	6,35
3	Ilmu Manajemen	20	6,35
4	Kehutanan	12	3,81
5	Sistem Informasi	12	3,81
6	Teknik Informatika	30	9,52
7	Ilmu Administrasi	24	7,62
8	Pendidikan Biologi	28	8,89
9	Pendidikan Bahasa Inggris	11	3,49
10	PG PAUD	10	3,17
11	Arsitektur	12	3,81
12	Teknik Sipil	12	3,81
13	Teknik Elektro	12	3,81
14	Agroteknologi	8	2,54
15	Agribisnis	8	2,54
16	Sastra Inggris	7	2,22
17	Sastra Indonesia	7	2,22
18	Sastra Daerah	7	2,22
19	Ilmu Perpustakaan	7	2,22
20	Ilmu Hukum S2	14	4,44
21	Ilmu Manajemen S2	16	5,08
Jumlah		315	100

2.2. Data collection technique

Based on the data source, this study uses primary data and secondary data. Primary data were obtained by questionnaire technique, while secondary data was obtained by documentation technique. Primary data is data obtained by the researchers themselves. Primary data was obtained by distributing questionnaires, namely written statements with several questions that must be answered by respondents. Respondents then responded to the statements given. This questionnaire is closed because all answers are available. The questionnaire is designed to answer questions regarding respondents' understanding of the lecturer performance index and e-IKD Information Technology.

2.3. Measurement for each variable

a) e-IKD (X1) as an independent variable is defined as the implementation of the Tridharma of Higher Education which is attached and developed to be implemented and becomes a guide for the head of study programs, lecturers, and students to deal with internal and external problems of the university. In this case, according to Nadia Saleh Mehdi in 2019 research The influence of information technology (IT) on organization leadership and performance in Iraq, there are 6 indicators in the use of IT; Information Flow (Timely, Accurate, Source), Decision Support, Data Management, Data Communication, Workgroup Support, Executive Support into 18 questions using a scale of 1-5.

b) Lecturer Performance (Y) as the dependent variable is defined as the result of work function or lecturer performance management activities in each study program which is assessed based on the assessment elements in accordance with the BAN-PT assessment element standards. Lecturer performance variables are described in 4 indicators and measured using 8 questions with a scale of 1-5

2.4. Analysis of Data

Data analysis is an analysis of data from the implementation of the e-IKD application at the Quality Assurance Agency from study program data and Lancang Kuning University which will simulate the performance value of lecturers in the application so that the data is ready to produce information on lecturer performance at Lancang Kuning University.

3. Results And Discussion

Table 3. Descriptive Analysis

Indicator	Min	Max	Mean	Category
e-IKD	1	5	4.83	Strongly Agree
Lecturer Performance	1	5	4.26	Agree

Table 3 Descriptive analysis shows that e-IKD as data processing and Lecturer Performance has been shown by the study program at the Lancang Kuning University College whose research samples can be categorized as good or important.

Table 4. Convergent validity

e-IKD (X1)	Information Flow	0.888
	Decision Support	0.812
	Data Management	0.872
	Data Communication	0.875
	Working Group Support	0.715
	Executive Support	0.705
Lecturer Performance	Pendidikan	0.812
	Penelitian	0.862
	PKM	0.877
	Penunjang	0.725

Table 4 This shows that the indicators for each research variable, e-IKD, and Lecturer Performance have an outer loading value above 0.7, so it can be said that these indicators have met the criteria of convergent validity.

Table 5. AVE and AVE root

Variable	AVE	AVE root	e-IKD	Lecturer Performance
e-IKD	0.686	0.644	1	
Lecturer Performance	0.655	0.555	0.618	1

Based on Table 5 shows that the AVE root value in each research variable, in general, is still greater than the correlation that occurs in each of these variables so the variables used in this study have met the criteria for discriminant validity.

Tabel 6. Composite Reliability

Variable	Composite Reliability
e-IKD	0.855
Lecturer Performance	0.905

Table 6 This shows that the value of composite reliability for each research variable is greater than the criteria of 0.70, so that composite reliability has also been met.

Table 7. R Square

Variable	R Square
Lecturer Performance	0.545

The calculation results in Table 6. for the R-Square is 0.545 which indicates that the percentage of the influence of quality assurance and information technology on high performance This shows that the composite reliability value for each research variable is greater than the criteria 0.70, so that composite reliability is also r education accreditation has been fulfilled is 82.6%, while the remaining 18.4% is explained by other factors outside the model, so it can be concluded that the structural model in the study can be said to have a goodness of fit. which is quite good.

Table 7. Inner Weight

No	Influence Relationship	Coefficient	T Statistic	Description
H1	e-IKD=> Lecturer Performance	0.786	5.110	Significant

Table 7. shows that e-IKD has a significant effect on Lecturer Performance at Lancang Kuning University which is the research sample. Based on these results, the first research hypothesis is accepted.

4. Conclusion

After analyzing the effect of e-IKD on the performance of lecturers in research at Lancang Kuning University, the authors conclude that The results of hypothesis testing show that e-IKD at Lancang Kuning University has a positive and significant effect on lecturer performance. The meaning of findings of this study shows that e-IKD has been running to have an effect of 0.776 on the performance of lecturers. This proves that the application of e-IKD information technology which is projected on the ability of Lancang Kuning University as a manager of information technology is implemented properly in increasing the effectiveness of lecturer performance. This can be seen from the results of observations on all dimensions and indicators which have implications for the high results obtained on the dimensions and indicators of lecturer performance. This finding also supports previous findings that the success of a university is highly dependent on the application of information technology.

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