

# ANALYSIS OF THE EFFECT OF QUALITY ASSURANCE AND INFORMATION TECHNOLOGY ON HIGHER EDUCATION ACCREDITATION PERFORMANCE (Case Studi: Lancang Kuning University)

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**Abstract:** This study aims to determine the effect of Quality Assurance and Information Technology in Higher Education Accreditation Performance. With the issuance of PerBAN-PT No: 1 of 2020 concerning the mechanism for extending the accreditation period for study programs and universities that are automatically extended, existing study programs at private universities in Riau province are still waiting for a long accreditation period to be extended, without submitting using the 9 Criteria accreditation instrument. It can be seen from the 21 study programs at Lancang Kuning University, none of them have applied for using the IAPS 4.0 accreditation instrument. Of course, this is not by the expectations of universities to ensure a quality culture in achieving the vision and mission of the university. The method used in this study is a quantitative method by determining the variables of SPMI and Academic Culture in influencing the performance of accreditation of universities and study programs. Quality Assurance 0.782 coefficient Influences on accreditation performance and Academic Culture affects 0.820 coefficient affects accreditation performance at Lancang Kuning University.

**Keywords:** Quality Assurance, Information Technology, Accreditation Performance, Lancang Kuning University

## 1. Introduction

Accreditation is something that must be met or obtained by a university, this is because the accreditation status is a reflection of the performance of the university concerned and describes the quality, efficiency, and relevance of a study program held. Then the government stipulates, for the implementation of accreditation of a private university, as long as it has never been evaluated (accredited) by or through the Badan Akreditasi Nasional Perguruan Tinggi (BAN-PT), then the implementation of accreditation of the university concerned is carried out by referring to the criteria or Accreditation Form. from BAN-PT. In carrying out the entire process of higher education accreditation, several aspects need to be considered by related parties. These aspects are the accreditation standards of higher education institutions and study programs that are used as benchmarks in evaluating and assessing the quality of performance. The next aspect is the demand for accountability and responsibility that requires universities to provide quality assurance to the community. In line with the implementation of quality management in higher education institutions, the government through the Directorate General of Higher Education (Dikti) has issued a guideline, namely the Guidelines for Quality

Assurance (quality assurance) for higher education, which expressly requires that the quality assurance process in higher education is an absolute and non-negotiable requirement.

Quality assurance is expected to be carried out in all tertiary institutions with quality points applied, including: study program curriculum, human resources, students, learning process, facilities and infrastructure, academic atmosphere, finance, research and publications, community service, governance, institutional management, information systems, as well as domestic and foreign cooperation. The quality points mentioned above must refer to the National Education Standards. This standard serves as the basis for, implementing and supervising education in the context of realizing quality national education. The implementation of quality assurance in universities, both state universities and private universities, is carried out in two ways, namely internal quality assurance and external quality assurance. The problem of higher education quality assurance is related to its implementation. So far, the quality assurance of private universities refers to the Minister of Research, Technology and Higher Education Regulation No. 44 of 2015 concerning National Standards for Higher Education. This means that the higher education quality assurance system which includes the Pangkalan Data Perguruan Tinggi (PD Dikti), the Internal Quality Assurance System, and the External Quality Assurance System is implemented by meeting the established Standard Nasional Pendidikan Tinggi (SNPT). However, private universities are given the authority to set their own quality assurance policies according to their capabilities so that there is no uniform standard in private universities. This gives rise to a different understanding of the implementation of the policies applied to each PTS.

The Internal Quality Assurance System has been implemented by Lancang Kuning University with the SPMI Book as a standard determination, implementation, evaluation, control, and improvement (PPEPP) cycle document and is also supported by the application of an information technology-based Accreditation Management Information System to support the need for management accreditation as a simulation of accreditation assessment at UNILAK, but this is not by what happened at the Faculty level as a Study Program Management Unit (UPPS) were out of the 21 existing study programs, until now there has been no study program that has re-accredited using Study Program Accreditation Instrument (IAPS 4.0). This is because the SPMI that has been implemented at Lancang Kuning University has not gone well between the university and the faculties, so the SPMI that has been established at the university does not have a good impact on the management of quality culture at the faculty and study program level. To overcome this, Lancang Kuning University implements an accreditation management information system as an accreditation simulation management in fulfilling SPMI so that it can be run by the Vision and Mission that has been aspired to be able to improve the performance of higher education accreditation. Based on the background of the problem, the formulation of the problem in this study is as follows: (1) Does the implementation of Quality Assurance affect the accreditation performance of Lancang Kuning University?; (2) Does the application of information technology affect the accreditation performance of Lancang Kuning University?

## **2. Literature Review**

### **Internal Quality Assurance System**

Internal Quality Assurance System is a systemic activity to ensure the quality of higher education in higher education by universities (internally driven) to oversee the implementation of higher education by universities on an ongoing basis (continuous improvement). Higher education quality assurance is an absolute thing to be done by universities to ensure that all processes that take place in it have been running by good practices that need to be carried out by higher education. The Internal Quality Assurance System at a university is an independent

activity of the university concerned to carry out the quality assurance process without getting interference from the government. The Internal Quality Assurance System is the autonomous right of a university to maintain the quality of the processes that take place in the university through a system that is designed, executed, and controlled by the university itself. The Internal Quality Assurance System is something that must be done by universities to regulate that the management of all things in universities is based on a standard that guarantees quality. The Internal Quality Assurance System in PT is the adoption of quality assurance carried out in business organizations which are commonly known as a total quality management system.

The Internal Quality Assurance System can be designed based on the quality award model issued by Malcolm Baldrige USA. In the 2011-2012 Criteria for Performance Excellence (Baldrige Performance Excellence Program, 2010) guidelines, the intended internal quality assurance criteria are:

1. Quality leadership;
2. Human resource development;
3. Quality strategy;
4. Source of information;
5. Quality assurance on processes and products;
6. Satisfaction of human resources;
7. Customer satisfaction;
8. Social and environmental impacts;

### **Information Technology**

Management Information System (SIM) Accreditation is an information technology-based system managed by Lancang Kuning University to manage accreditation at Lancang Kuning University. This system is a policy of Lancang Kuning University to be applied to solve problems in accreditation simulations for study programs and universities, is expected to act as a data center, produce accreditation forms for study programs and universities, both hardcopy and softcopy, and be able to simulate the possibility of obtaining study program accreditation based on data and documents entered into information technology-based systems. Users of the Accreditation SIM are designed to be able to meet the need for integration of accreditation documents, both study program accreditation (APS) and Higher Education Accreditation (APT). Accredited SIM users consist of:

1. Users at the Admin level of the Accreditation SIM manager
2. Users at the Faculty level, namely the Study Program Management Unit
3. Users at Study Program level
4. Users at Compiler level filling in accreditation SIM.

### **College Accreditation Performance**

Performance is the result of the achievement of the efforts that have been made which can be measured by certain indicators. Individual performance indicators include products or services that have been produced, sales that have been successfully carried out, the amount of money earned or several resources saved, and so on. While organizational performance indicators include the amount of profit earned, the number of products produced, or services produced or provided to customers. Pambudu Tika (2010) in his book *Organizational Culture and Improved Company Performance* suggests that performance is the result of the work function or activities of a person or group in an organization which is influenced by various factors to achieve organizational goals within a certain period. Organizational performance is the organization's achievement of a predetermined set of targets. The target in question consists of both objective and subjective targets. From some of the performance definitions above, it can be seen that some of the elements contained in performance are: The results of the work function both

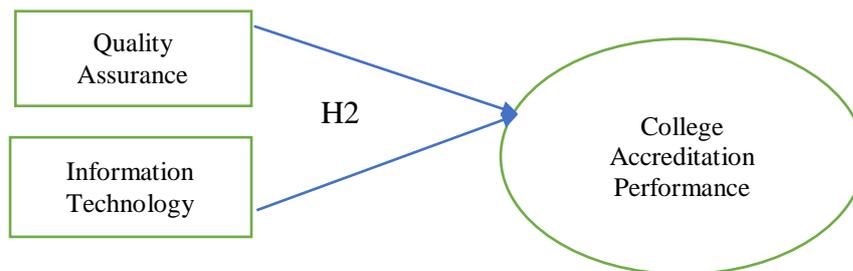
individually and in groups, influencing factors, achievement of organizational goals, and within a certain period.

Based on the above and based on the object of research used in this study, the definition of organizational performance used refers to the standards and elements of the BAN-PT accreditation assessment. So the definition of performance in this study is as follows: performance as the results of work functions or activities of managers in higher education organizations which are assessed based on assessment elements that are by BAN-PT assessment elements standards to achieve organizational goals within a certain period. The standard elements of the BAN-PT accreditation assessment are in the form of Study Program Performance Sheets (LKPS) and Self Evaluation Reports (LED) for Study programs and universities through nine standards, namely:

1. Vision, mission, goals and objectives, and achievement strategies
2. Governance, leadership, management system, and quality assurance
3. Students and graduates
4. Human resources
5. Finance, facilities, and infrastructure
6. Education
7. Research
8. Devotion.
9. Outcomes and Achievements of the Tri Dharma

**Framework and Hypotheses**

From the results of the literature review above, a model or theoretical framework is developed. In this study, the research variables proposed are Quality Assurance, Information Technology, and Higher Education Accreditation Performance variables.



**Figure 1. Framework**

**Research Hypothesis**

From the theoretical framework above, the tentative hypotheses that can be proposed in this study are as follows:

- H1: The better the implementation of SPMI, the better the Higher Education Accreditation Performance.
- H2: The better the Application of Information Technology, the better the Higher Education Accreditation Performance.

**3. Method**

**Research Approach**

Based on the method used, this research is survey research. Survey research is research that takes samples from a population using a questionnaire as a data collection tool (Singarimbun, 2012). In addition, the author tries to test the hypothesis of the effect of the implementation of the Internal Quality Assurance System on the performance of universities and the effect of the

application of the Accreditation SIM on the performance of Lancang Kuning University. Judging from the nature, The research conducted is descriptive explanatory, namely research that describes and explains the influence of the Internal Quality Assurance System and accreditation MIS on the performance of higher education accreditation through hypothesis testing conducted through data collection in the field. Nazir (2011) argues that descriptive research studies problems in society in certain situations, including relationships, activities, attitudes, and views as well as ongoing processes and the influence of a phenomenon. The research paradigm used in this study is a quantitative approach paradigm. The quantitative approach is represented by collecting data through questionnaires.

### Population and Research Sample

The population of this research are lecturers at Lancang Kuning University which consists of 21 study programs located in 9 faculties and postgraduates as the study program management unit at Lancang Kuning University, totaling 276 people, details can be seen in Table 1 as follows:

**Tabel 1. Research Population**

No	Study program	Amount	%
1	Ilmu Hukum	32	11,59
2	Akuntansi	22	7,97
3	Ilmu Manajemen	20	7,25
4	Kehutanan	12	4,35
5	Sistem Informasi	16	5,80
6	Teknik Informatika	18	6,52
7	Ilmu Administrasi	28	10,14
8	Pendidikan Biologi	10	3,62
9	Pendidikan Bahasa Inggris	10	3,62
10	PG PAUD	9	3,26
11	Arsitektur	12	4,35
12	Teknik Sipil	12	4,35
13	Teknik Elektro	11	3,99
14	Agroteknologi	12	4,35
15	Agribisnis	11	3,99
16	Sastra Inggris	6	2,17
17	Sastra Indonesia	6	2,17
18	Sastra Daerah	6	2,17
19	Ilmu Perpustakaan	6	2,17
20	Ilmu Hukum S2	8	2,90
21	Ilmu Manajemen S2	9	3,26
Jumlah		241	100

### Data Collection Technique

Based on the data source, this study uses primary and secondary data. Primary data was obtained using a questionnaire technique, while secondary data was obtained using a documentation technique. Primary data is data obtained by the researcher himself. Primary data is obtained by distributing questionnaires, a written statement with several question items that must be answered by the respondent. Respondents then respond 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 Internal Quality Assurance System, Information Technology, and Higher Education Accreditation Performance.

For the operationalization of variables, research instruments are needed that refer to the indicators of each variable. Indicators of the Internal Quality Assurance System variable, Information Technology variable, and also the Lancang Kuning University Accreditation Performance variable were measured using an ordinal scale according to Likert with the answer choices "very unimportant", "not important", "quite important", "important", and "very

important". Furthermore, this answer choice in the questionnaire is given a score on the five alternative answers.

### Measurement for Each Variable

Quality Assurance (X1) as an independent variable is defined as the application of quality assurance in higher education. Based on PerBAN-PT Regulation No. 3 of 2020, concerning Higher Education Standards, related to Quality Assurance: variable SPMI described in 5 indicators, namely: Determination, Implementation, Evaluation, Control, Improvement and measured using 15 questions using a scale of 1-5.

Information Technology (X2) as an independent variable is defined as the implementation of the Tridharma of Higher Education which is attached and developed to be implemented which 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 in her 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.

Organizational Performance (Y) as the dependent variable is defined as the results of work functions or management activities in each study program which are assessed based on assessment elements that are by the BAN-PT assessment element standards. Organizational performance variables are described in 9 indicators and measured using 18 questions using a scale of 1-5.

## 4. Result and Discussion

Table 2. Descriptive analysis shows that SPMI, Information Technology, and Higher Education Accreditation Performance has been shown by the study program at the Lancang Kuning University College which is the research sample can be categorized as good or important.

**Tabel 2. Descriptive Analysis**

Indicator	Min	Max	Mean	Category
Quality Assurance	1	5	4.18	Setuju
Information technology	1	5	4.11	Sangat Setuju
Organizational Performance	1	5	4.48	Setuju

Table 3. This shows that the indicators on each research variable, namely Quality Assurance of Information Technology and Higher Education Performance, have an outer loading value above 0.7, so it can be said that these indicators have met the criteria of convergent validity.

**Tabel 3. Convergent Validity**

Quality Assurance (X1)	Determination of SPMI	0.812
	Implementation of SPMI	0.862
	Evaluation SPMI	0.886
	Control SPMI	0.807
	Enhancement of SPMI	0.842
Information Technology (X2)	Information Flow	0.878
	Decision Support	0.812
	Data Management	0.862

	Data Communication	0.877
	Working Group Support	0.725
	Executive Support	0.725
	Vision, mission, goals and objectives, and achievement strategies	0.886
	Governance, leadership, management system, and quality assurance	0.807
Kinerja Akreditasi (Y)	Students and graduates	0.842
	Human resources	0.777
	Finance, Facilities, and Infrastructure	0.833
	Education	0.787
	Research	0.878
	Devotion.	0.787
	Outcomes and Achievements of the Tri Dharma	0.878

Table 4. This shows that each indicator has the highest outer loading for each variable it composes when compared to other variables. These results indicate that discriminant validity has also been fulfilled.

**Tabel 4. Cross Loading**

Indicator	SPMI	Teknologi Informasi	Kinerja Akreditasi
Determination of SPMI	0.812	0.807	0.833
Implementation of SPMI	0.862	0.842	0.787
Evaluation SPMI	0.886	0.777	0.878
Control SPMI	0.807	0.833	0.787
Enhancement of SPMI	0.842	0.787	0.878
Information Flow	0.777	0.878	0.878
Decision Support	0.833	0.812	0.787
Data Management	0.787	0.862	0.878
Data Communication	0.878	0.886	0.842
Working Group Support	0.812	0.807	0.777
Executive Support	0.862	0.842	0.833
Vision, mission, goals and objectives, and achievement strategies	0.886	0.777	0.787
Governance, leadership, management system, and quality assurance	0.807	0.833	0.878
Students and graduates	0.842	0.787	0.812
Human resources	0.777	0.878	0.862
Finance, Facilities, and Infrastructure	0.833	0.787	0.886
Education	0.787	0.878	0.807
Research	0.878	0.878	0.842
Devotion.	0.787	0.787	0.777
Outcomes and Achievements of the Tri Dharma	0.878	0.878	0.833

According to 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 that the variables used in this study have met the criteria of discriminant validity.

**Table 5. AVE and AVE root**

Variable	AVE	AVE root	Quality Assurance	Information Technology	Performance Accreditation
Quality Assurance	0.726	0.688	1		
Information Technology	0.688	0.644	0.500	1	
Performance Accreditation	0.644	0.555	0.408	0.618	1

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.

**Tabel 6. Composite Reliability**

Variable	Composite Reliability
Quality Assurance	0.946
Information Technology	0.888
Performance Accreditation	0.932

Calculation results in Table 7. for the R-Square is 0.516 indicating that the percentage of the influence of quality assurance and information technology on the performance of higher education accreditation is 82.6%, while the remaining 18.4% is explained by other factors outside the model, thus it can be concluded that the structural model in the study can be said already has the goodness of fit which is quite good.

**Table 7. R Square**

Variable	R Square
Performance Accreditation	0.516

Table 8. shows that Quality Assurance has a significant influence on the Accreditation Performance of the tertiary institutions that are the research sample, while information technology is also concluded to have a significant influence on the accreditation performance. Based on these results, the first research hypothesis is accepted while the second research hypothesis is accepted as true.

**Table 8. Inner Weight**

No	Influence Relationship	Coefficient	T Statistic	Description
H1	Quality Assurance =>Performance Accreditation	0.780	4.270	Significant
H2	Information Technology=> Performance	0.776	4.110	Significant

## 5. Conclusions

The results of testing the first hypothesis show that SPMI at Lancang Kuning University is a positive and significant influence on the performance of higher education accreditation. The meaning of the findings of this study shows that the SPMI that has been running has an effect of 0.782 on the performance of accreditation. This proves that the implementation of SPMI which is projected in the ability of Lancang Kuning University tertiary institutions to act as

quality management is applied properly in increasing the effectiveness of accreditation performance. This can be seen from the results of observations on all dimensions and indicators which have implications for the high results obtained in the dimensions and indicators of organizational performance. This finding also supports previous findings that the success of a university is highly dependent on the implementation of SPMI.

The results of testing the second hypothesis show that information technology at Lancang Kuning University has a positive and significant effect on the performance of higher education accreditation. The meaning of the findings of this study shows that information technology that has been running has an effect of 0.820 on the performance of accreditation. This proves that the application of information technology which is projected in the ability of Lancang Kuning University tertiary institutions to act as information technology management is applied properly in increasing the effectiveness of accreditation performance. This can be seen from the results of observations on all dimensions and indicators which have implications for the high results obtained in the dimensions and indicators of organizational 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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