# The Effectiveness of Cloud Simacreditation as A Supplement Instrument for Accreditation Value Conversion (ISK)
## (Case Study: University of Lancang Kuning)

*Bayu Febriadi[1], Febrizal Alfarasy Syam[2], Pandu Pratama Putra[3], Ahmad Zamsuri[4]*

*[1,2,3,4]Faculty of Computer Science, Universitas Lancang Kuning, Riau, Indonesia*

*e-mail: bayufebriadi9@gmail.com, pandupratamaputra@unilak.ac.id*

## *Abstract*

*SIM Accreditation Cloud is a media accreditation simulation facility that is used by the Study Program and BPM in implementing and monitoring the feasibility of the study program whether it is in accordance with the standards that should be in creating a quality culture. Lancang Kuning University has 21 Study Programs consisting of 9 Faculties, in implementing an internal quality assurance system, Lancang Kuning University has a Quality Assurance Agency in charge of managing a quality culture, but in the implementation of accreditation with IAPS 4.0 this has not been effective, this is proven to be absent from the study program. who are ready to apply with IAPS 4.0, because there are still obstacles in the preparation of accreditation instruments, while the need for accreditation ratings is very much needed by study programs so that they are able to compete and realize the vision and mission of the study program. Sim Akreditasi Cloud 0.7776 koefesien Berpengaruh terhadap nilai instrumen Suplemen Konversi (ISK).*

***Keywords:** Information System, Accreditation, 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.

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
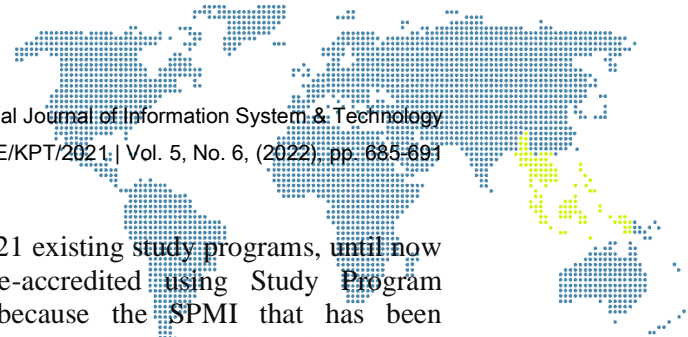
Program Management Unit (UPPS) were out of the 21 existing study programs, until now there has been no study program that has re-accredited using Study Program Accreditation Instrument (IAPS 4.0). This is because the SPMI that has been implemented at Lancang Kuning University has not gone well between 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.

| NO | INSTITUSI/PRODI | AKREDITASI | MASA BERLAKU |
|---|---|---|---|
| 1. | Universitas (AIPT) | B | 10 Mei 2025 |
| 2. | Prodi Magister Manajemen | B | 12 Januari 2026 |
| 3 | Prodi Magister Hukum | B | 20 Desember 2021 |
| 4 | Prodi Administrasi Negara | B | 16 Juli 2024 |
| 5 | Prodi Akuntansi | A | 27 Agustus 2024 |
| 6 | Prodi Manajemen | B | 03 Januari 2023 |
| 7 | Prodi Arsitektur | B | 27 Desember 2021 |
| 8 | Prodi Teknik Sipil | B | 10 Januari 2022 |
| 9 | Prodi Teknik Elektro | B | 30 Januari 2026 |
| 10 | Prodi Agroteknologi | B | 17 September 2024 |
| 11 | Prodi Agribisnis | B | 17 September 2024 |
| 12 | Prodi Ilmu Hukum | A | 02 Juli 2023 |
| 13 | Prodi Sastra Inggris | B | 08 November 2024 |
| 14 | Prodi Sastra Indonesia | B | 30 Desember 2025 |
| 15 | Prodi Sastra Daerah/Melayu | B | 08 November 2025 |
| 16 | Prodi Ilmu Perpustakaan | B | 19 Februari 2026 |
| 17 | Prodi Kehutanan | B | 22 April 2026 |
| 18 | Prodi Sistem Informasi | B | 16 Mei 2022 |
| 19 | Prodi Teknik Informatika | B | 10 Januari 2022 |
| 20 | Prodi Pend. Bahasa Inggris | B | 10 Janauri 2022 |
| 21 | Prodi Pendidikan Biologi | B | 30 Januari 2026 |
| 22 | PAUD | B | 09 Juli 2024 |

In an effort to improve the quality of Unilak, implementing the Cloud Accreditation Sim application as a means and facilities in fulfilling accreditation, including one of them by implementing the Conversion Supplement Instrument policy, but from table 1 we can see from the accreditation value that there is no study program that has submitted a Conversion Supplement Instrument, while this 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 the available resources and the application of information technology in the application of accreditation management information system applications to assist Lancang Kuning University in managing study programs for the preparation of accreditation preparation and assessment simulations. The formulation of the problem in this study is as follows:

a) How to use SimAkreditasiCloud as a means of preparation and simulation of the Accreditation Score Conversion Supplement Interumen at Lancang Kuning University?

b) How to use information technology-based applications to provide more effective and efficient information in the implementation of the Conversion Supplement Instrument at Lancang Kuning?
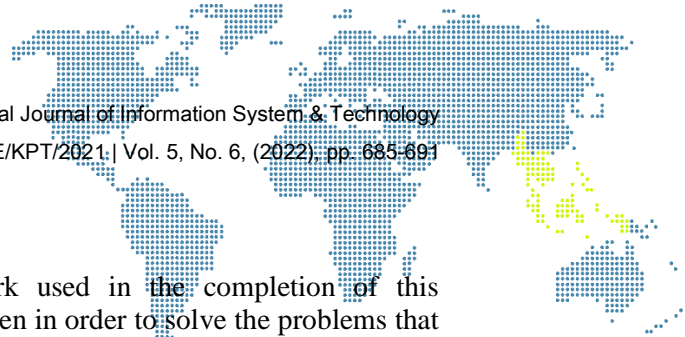
## 2. Research Methodology

Research methodology and research framework used in the completion of this research. This framework is the steps that will be taken in order 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:
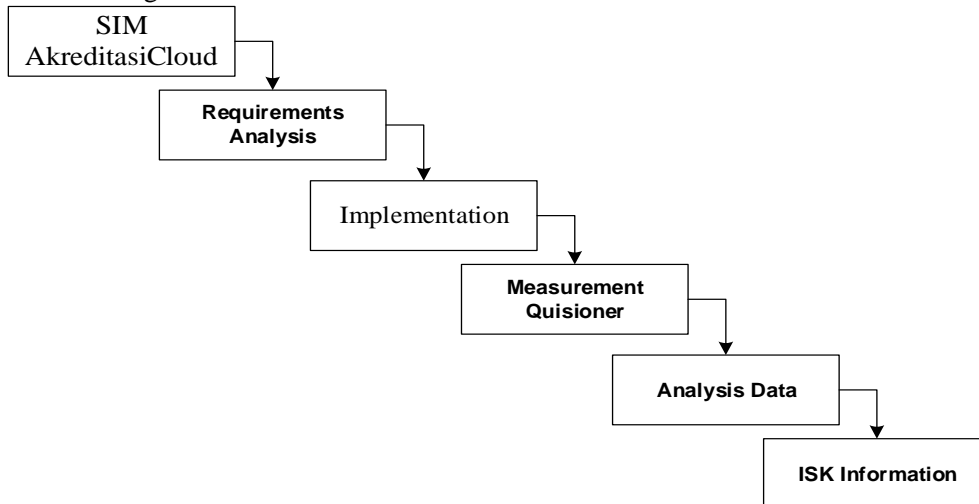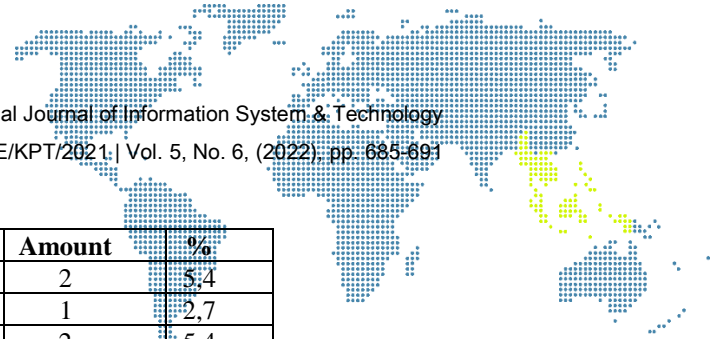


**Figure 1.** Stages of the Waterfall Model

a) Sim Akreditasi Cloud

This modeling begins with the completion of the Sim accreditation cloud application that will be implemented. This is very important, reminding the software must be able to interact with other elements such as hardware, databases, and so on. This stage is often referred to as project definition. The system begins by conducting research beforehand on the elements of the system requirements in question and defining these needs.

b) Requirements Analysis

The need search process is intensified in the software. To know the nature of the program to be made, the software engineer must understand the information domain of the software. By collecting data needed by application users in the development of the archiving system to be built, in this case, the developer collects accreditation data with the team preparation of the Lancang Kuning university accreditation instrument.

c) Implementation Systems

System implementation is implementing an application that describes how a system is formed in the form of drawing, planning and sketching or arrangement of several separate elements into a unified whole and functioning, involving the configuration of software and hardware components of a system.

d) Measurement

**1) 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 42 people, details can be seen in Table 1 as follows:

**Table 1.** Research population

| No | Study program | Amount | % |
|----|---------------|--------|------|
| 1 | Ilmu Hukum | 2 | 5,4 |
| 2 | Akuntansi | 2 | 5.4 |

| No | Study program | Amount | % |
|---|---|---|---|
| 3 | Ilmu Manajemen | 2 | 5,4 |
| 4 | Kehutanan | 1 | 2,7 |
| 5 | Sistem Informasi | 2 | 5,4 |
| 6 | Teknik Informatika | 2 | 5,4 |
| 7 | Ilmu Administrasi | 2 | 5,4 |
| 8 | Pendidikan Biologi | 2 | 5,4 |
| 9 | Pendidikan Bahasa Inggris | 2 | 5,4 |
| 10 | PG PAUD | 2 | 5,4 |
| 11 | Arsitektur | 2 | 5,4 |
| 12 | Teknik Sipil | 2 | 5,4 |
| 13 | Teknik Elektro | 2 | 5,4 |
| 14 | Agroteknologi | 2 | 5,4 |
| 15 | Agribisnis | 2 | 5,4 |
| 16 | Sastra Inggris | 1 | 2,7 |
| 17 | Sastra Indonesia | 1 | 2,7 |
| 18 | Sastra Daerah | 1 | 2,7 |
| 19 | Ilmu Perpustakaan | 1 | 2,7 |
| 20 | Ilmu Hukum S2 | 2 | 5,4 |
| 21 | Ilmu Manajemen S2 | 2 | 5,4 |
| | Jumlah | 37 | 100 |

## 2) 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.

## 3) Measurement for each variable

a) Sim AkreditasiCloud (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 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.

b) ISK 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

688
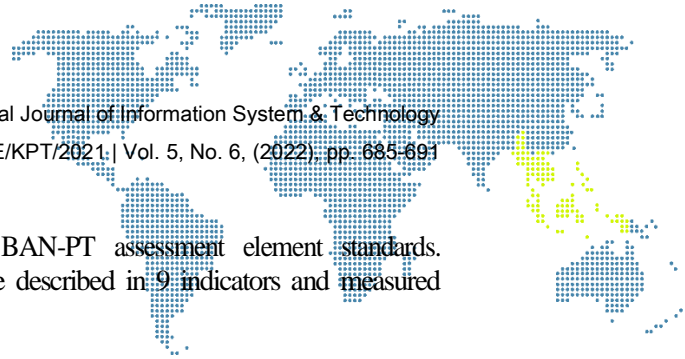
assessment elements that are by the BAN-PT assessment element standards. Organizational performance variables are described in 9 indicators and measured using 18 questions using a scale of 1-5.

e) Analysis of Data

Data Analysis is an analysis of the activities of implementing the cloud accreditation sim application from study program and university data which will simulate the accreditation value in the application. So that the data is ready to produce information.

## 3. Results And Discussion

Tabel 2. Descriptive analysis shows, Information Technology, and ISK 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.

### Table 2. Descriptive Analysis

| Indicator | Min | Max | Mean | Category |
|---|---|---|---|---|
| Sim AcreditationCloud | 1 | 5 | 4.11 | Sangat Setuju |
| ISK Performance | 1 | 5 | 4.48 | Setuju |

### Table 3. Convergent validity

| | | |
|---|---|---|
| Sim AcreditationCLoud (X1) | 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 |
| ISK Performance Accreditation(Y) | Resource | 0.812 |
| | Curriculum | 0.862 |
| | Quality Assurance | 0.877 |
| | Graduate Tracking | 0.725 |

Table 3. This shows that the indicators on each research variable, Sim Accreditation, and ISK 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 4. AVE and AVE root

| Variable | AVE | AVE root | Sim accreditation | ISK Accreditation |
|---|---|---|---|---|
| Sim Accreditation | 0.688 | 0.644 | 1 | |
| ISK Performance | 0.644 | 0.555 | 0.618 | 1 |

Berdasarkan Table 4, 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 of discriminant validity.

### Table 5. Composite Reliability

| Variable | Composite Reliability |
|---|---|
| Information Technology | 0.888 |
| ISK Performance Accreditation | 0.932 |

Table 5. 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 6.** R Square

| Variable | R Square |
|---|---|
| ISK Performance Accreditation | 0.516 |

Calculation results in Table 6. 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.** Inner Weight

| No | Influence Relationship | Coefficient | T Statistic | Description |
|---|---|---|---|---|
| H1 | Information Technology=> Performance Accreditation | 0.776 | 4.110 | Significant |

Table 7. 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.

## 4. Conclusion

After conducting research activities at the University of Lancang Kuning, the authors conclude that: The results of the testing hypothesis show that information technology at Lancang Kuning University has a positive and significant effect on the performance of ISK accreditation. The meaning of the findings of this study shows that Sim Accreditation has been running has an effect of 0.776 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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