

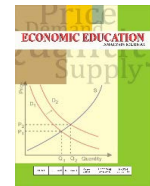


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### Evaluation of Asset Lending System (SIPINSET)

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#### Abstract

The purpose of this study was to provide an integrated and innovative system that can provide easy access to asset management and lending at the Faculty of Economics, Universitas Negeri Semarang. The need for a digital-based asset lending system is an urgency that must be carried out by the General and Personnel Sub-section in various work units, including the Faculty of Economics, Universitas Negeri Semarang. The system is expected to be able to increase the effectiveness and efficiency in the process of recording, inventorying, and borrowing organizational assets/work units. However, the current problem was that the asset lending system could not be fully integrated automatically, so schedule collisions and data differences between users were often encountered. Therefore, it is necessary to innovate the Asset Lending System (Sipinset) service. This type of research was quantitative with a population of all LK/BSO and education staff in the Faculty of Economics, Unnes. The results of the study recommend the use of feedback from Sipinset users by providing input and suggestions on column features for better development.

#### How to Cite

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## INTRODUCTION

One of the duties and functions of the administrative division is to carry out affairs in the field of management and staffing Harahap & Angelia (2016) within the faculty/institution. In these duties and functions, household affairs and infrastructure are often the focus of services at the Faculty of Economics (FE). In this regard, lending and borrowing assets in an organization is a natural thing (Suparman & Sangadji, 2018), especially on the campus of the Faculty of Economics, Universitas Negeri Semarang. However, the management of lending and borrowing assets at FE, Unnes is still manual. This is indicated by the procedure for borrowing assets that still use correspondence media. Based on the manual asset borrowing, it raises several problems such as the lack of optimization of aspects of system effectiveness and efficiency,

Advances in information technology seem to make everyone able to find out what they want to know quickly and briefly. In addition, along with the development of movement, both government and private organizations are increasingly applying information and communication technology to support their effectiveness, productivity, and efficiency (Widiyanto, 2018). According to Komorotomo and Margono (Widiyanto, 2018), they stated that to face the growth and development of an organization that is already so complex, an information system is needed to help provide data and information as material for determining policies and strategies to provide data and information quickly and accurately. With the development of today's technology, every agency should be able to make maximum use of technology to solve existing problems (Puspaningrum & Sudarmilah, 2020), especially the problem of borrowing assets at FE Unnes which is still done manually. The manual application of the asset lending system will cause problems, namely the efficiency of the borrowing process and the length of the data reporting process (Yusuf, 2017). The manual system applied is still a waste of time in searching for data because it uses paper as storage media, while on the other hand, good services are needed including fast, accurate, and precise services (Saputra, Inovera, & Susanti, 2018; Yunita & Devitra, 2017).

Therefore, the Faculty of Economics, Unnes needs an information system that is easy to use and better for disseminating the data. For this reason, a web-based information system can be used that can disseminate data widely and is easily accessible via the internet. The system is later expected to be a good way out in recording FE Unnes assets, displaying asset data if needed at any time, and being able to see what assets are being and or will be borrowed, or assets in a damaged condition.

Information systems play an important role in any field, whether small-scale, medium-scale, or even large-scale companies or institutions engaged in any field to convey information (Agung Aryanto, 2017; Heru Supriyono, Achmad Munawir Noviandri, 2017; Januhari, 2015; Limantara, Cahyo, Purnomo, & Mudjanarko, 2017; Mara Destiningrum, 2017; Mizwar, 2012; Suhartono, 2015; Wahyuni, 2017; Wiga Ayu Puspaningrum, Arif Djunaidy, 2013; Yunita & Devitra, 2017).

The background of the problem that was raised from the problem of unorganized lending of FE Unnes assets caused assets not to be properly recorded, resulting in asset loss. Computer systems can minimize the occurrence of these problems. Therefore, the authors provide innovations to facilitate asset lending at FE Unnes by building additional online application features for asset lending. The online asset lending application feature is an additional feature that will record all existing assets and monitor asset lending activities at FE Unnes. From the existing Online Asset Lending Feature, after using it, it turns out that there are still shortcomings, namely a borrower who has borrowed assets can still borrow goods or assets that have been borrowed by other lenders. This is because there is no system that automatically blocks goods that have been borrowed. With the evaluation of the existing system, it is hoped that it can

help solve problems in the system so that the accountability of the FE Unnes infrastructure section and asset handling can be done quickly and accurately, and there is no disparity in lending between one borrower and another. In addition, borrowers can also find out the recapitulation of asset data that can still be borrowed with easy access so that the asset lending procedure does not take a long time. With this feature, the condition and presence of FE Unnes assets can be known so that collisions and delays in asset returns can be detected. With the evaluation of the existing system, it is hoped that it can help solve problems in the system so that the accountability of the FE Unnes infrastructure section and asset handling can be done quickly and accurately, and there is no disparity in lending between one borrower and another.

Researchers found a problem that occurred in the asset lending system at the Faculty which did not automatically block assets that had been borrowed so that they could not be borrowed by others. From these problems, the author intends to carry out an evaluation and development related to the asset lending system in the Faculty of Economics, Universitas Negeri Semarang.

## METHODS

The type of research used in this research was descriptive quantitative research. According to Sugiyono (2017:7) quantitative research is a research method based on the philosophy of positivism that is used to examine certain populations or samples, collect data used research instruments and research data in the form of numbers and analyzed by using statistics.

The population used in this study were all students of the Student Organization (LK)/Semi Organizational Body (BSO) and education staff in the Faculty of Economics who had used the Asset Lending System (SIPINSET). The details are in the Table 1.

While the samples in this study were all LK/BSO students and Education staff in the

**Table 1.** Research Population Data

No	Category	Amount
1.	LK/BSO Students Using Scissors	44
2.	Snippet User Pendidik	22
Total		66

Source: Secondary data, 2021

Faculty of Economics who had used the Asset Lending System (SIPINSET) totaling 66, the sample was determined by using a saturated sampling technique. According to Sugiyono (2017:85) the saturated sampling technique is a sampling technique where all members of the population are used as samples.

The type of data used in this research was primary data. Primary data was obtained from filling out a questionnaire by LK/BSO students and Education staff that had used the Asset Lending System (SIPINSET) in the Faculty of Economics. Collecting data used a questionnaire in order to obtain quantitative data to obtain in-depth and comprehensive evaluation results.

The evaluation model used in this study was the Stake Model. On this Model emphasizes two main things, namely: (1) description, (2) consideration, and distinguishes the existence of three dimensions, namely: (1) antecedent/context, (2) transaction/process, and (3) outcome/result. This model provided a systematic method for evaluating the Asset Lending System (SIPINSET) in the Faculty of Economics. If viewed from the approach, the Stake model is considered efficient because the evaluation is directed to decision making and the process is focused on certain stages related to the ongoing program.

This evaluation model according to the structure of the system fulfills all components of input, process and results. These components according to the stake are referred to as antecedents, transactions, and outcomes. Antecedent (input) is the condition of requirements before the process takes place, transaction (process) is the interaction activity that

occurs, and outcome (result) is something that is expected from the interaction that occurs. The stake model is in principle the same as other evaluation models, namely the effort to compare the results obtained with the criteria or standards that have been set.

The instrument according to Arikunto (2004:126) is a tool at the time of research using a method. In any research, the instrument is something that has a very important position because the instrument will determine the quality of the data collected. The higher the quality of the instrument is, the higher the evaluation results. According to Arikunto (2004:69) there are at least 4 requirements for a good instrument, namely: (1) Valid and Sahih, that is, accurately assessing what will be assessed, (2) Reliable, trustworthy, namely the data collected as it is, (3) practical, namely that the instrument is easy to use, practical and uncomplicated, and 4) economical, which is not wasteful in realizing and using something in the preparation, meaning that it does not waste a lot of money, time and energy.

The validity test is a test carried out to determine whether the questionnaire as a measuring instrument for research variables has actually measured what it should have measured (Wahyudin, 2015: 131). The validity test in this study used SPSS Statistics 25. The validity test was carried out by comparing the probability value (p value) with a significance level of 5% or 0.05. If the p value < 0.05 is obtained, it can be interpreted that the item of the instrument is valid. Based on the results of the data analysis that had been carried out, it can be concluded that from the 27 statement items contained in the questionnaire all had p value < 0.05, it can be interpreted that the instrument for measuring the Asset Lending System Evaluation (SIPINSET) of the Faculty of Economics consisting of indicators of ease of access, user interaction, and support was valid.

The reliability test is a test carried out to detect whether the questionnaire as a measuring instrument for research variables has provided consistent or steady measurement re-

sults from time to time (Wahyudin, 2015:134). The reliability test was carried out by using Cronbach's Alpha Test. A variable is declared reliable if it produces Cronbach's Alpha value > 0.70 (Wahyudin, 2015:137). The closer the Cronbach alpha value is to 1.00, the more reliable the data reliability value is for each variable. The reliability test in this study used SPSS Statistics 25. Descriptive statistical analysis is an analysis used to describe the profile of each research variable. The analysis in this study used the minimum, maximum, average, and standard deviation or standard deviation values, as well as a frequency distribution table to explain the frequency value of the data unit as a whole.

## RESULTS AND DISCUSSION

Before testing the results, this study tested the validity and reliability of the instrument. The validity test is a test carried out to determine whether the questionnaire as a measuring instrument for research variables has actually measured what it should have measured (Wahyudin, 2015: 131). The validity test in this study used SPSS Statistics 25. The validity test was carried out by comparing the probability value (p value) with a significance level of 5% or 0.05. If the p value < 0.05 is obtained, it can be interpreted that the item of the instrument is valid. Based on the results of data analysis that had been carried out, it can be concluded that of the 27 statement items contained in the questionnaire, all of them had a p value < 0,

The reliability test is a test carried out to detect whether the questionnaire as a measuring instrument for research variables has provided consistent or steady measurement results from time to time (Wahyudin, 2015:134). The reliability test was carried out by using Cronbach's Alpha Test. A variable is declared reliable, if it produces Cronbach's Alpha value > 0.70 (Wahyudin, 2015:137). The closer the Cronbach alpha value is to 1.00, the more reliable the data reliability value is for each variable. The reliability test in this study used

**Table 2.** System Evaluation Variable Reliability Test Results

No	Variable	Cronbach's Alpha Based on Standardized Items	Cronbach's Alpha Value Required	Information
1.	Asset Lending System Evaluation (SIPINSET)	0.938	> 0.70	Reliable

Source: Data processed, 2021

SPSS Statistics 25. Table 2 is a summary of the results of the reliability test on the evaluation variable.

Descriptive statistical analysis is an analysis used to describe the profile of each research variable. The analysis in this study used the minimum, maximum, average, and standard deviation or standard deviation values, as well as a frequency distribution table to explain the frequency value of the data unit as a whole.

#### Antecedents Stage (Input) based on Support Indicators

#### Descriptive Statistical Analysis of Support Variable According to Students

Support is an effort given to someone both morally and materially to motivate others in carrying out an activity (Notoatmodjo, 2003). Support in this study can be interpreted as support in the use and implementation of the use of the Asset Lending System (SIPINSET) at the Faculty of Economics. Based on the results of the study, it showed that support in the use and implementation of the use of the Asset Lending System (SIPINSET) at the Faculty of Economics according to students was in the medium category with a percentage of 40.91%, and those who chose the low and very low categories were 15, respectively 91%, and 6.82% so that the support in the use of SIPINSET which was reviewed through the user guide, training and use of the existing system was still less than optimal.

The results of descriptive statistical analysis of the support variable in Table 3 showed that the number of units of analysis used in the study indicated by N were 44 respondents. The support variable had a minimum value of 17, with a maximum value of 55. The average

**Table 3.** Results of Descriptive Statistical Analysis of Support Variable

	Descriptive Statistics				
	N	Min	Max	mean	Std. Deviation
X1 Student	44	17	55	38.11	9.279
Valid N (listwise)	44				

Source: Research data processed, 2021

ge value (mean) of the support variable was 38.11 with a standard deviation of 9.279. This means that support had an average value range from 38.11 minus 9.279 to 38.11 plus 9.279. The results of the analysis showed that the mean value was greater than the standard deviation value, meaning that the distribution of data from the support variable was homogeneous which had a small spread so that the mean value can be used to explain the overall support data. The distribution of support variable data is presented in Table 4.

Table 4 showed that 3 respondents (6.82%) of 44 respondents had very low ease of access to SIPINSET, 7 respondents (15.91%) in the low category, 18 respondents

**Table 4.** Frequency Distribution of Support variable

No.	Interval	Frequency	%	Category
1	17-24.6	3	6.82	Very low
2	24.7-32.2	7	15.91	Low
3	32.3-39.8	18	40.91	Currently
4	39.9-47.6	7	15.91	Tall
5	47.7-55.0	9	20.45	Very high

Source: Processed research data, 2021

(40.91%) in the medium category, 7 respondents (15.91%) in the High category, and 9 respondents (20.45%) in the very high category. Based on the results of the analysis of the frequency distribution in table 4 can be concluded that Support variable was in the Medium category, which was seen from the highest frequency located in the interval 32.3 to 39.8, 44 respondents or 40.91% which was the medium category.

**Descriptive Statistical Analysis of Support Variable According to Education staff**

Based on the results of the study, it showed that support in the use and implementation of the use of the Asset Lending System (SIPINSET) at the Faculty of Economics according to education staff was in the low category with a percentage of 54.55%, followed by voters in the medium and very low categories, respectively 27.27%, and 9.09% so that the support in the use of SIPINSET which was reviewed through the user guide, training and use of the existing system was still considered less than optimal according to the system administrator or system manager, because those who had low and very low categories reaching 63%.

Furthermore, the results of descriptive statistical analysis of the support variable are presented in Table 5.

**Table 5.** Results of Descriptive Statistical Analysis of Support variable

Descriptive Statistics					
	N	Min	Max	mean	Std. Deviation
X1Send	22	24	44	32.09	4.428
Valid N (listwise)	22				

Source: Processed research data, 2021

The results of descriptive statistical analysis of the support variable in table 5 showed that the number of units of analysis used in the study was indicated by N was 22 respondents. The support variable had a minimum value of 24, with a maximum value of 44. The average value (mean) of the support variable

was 32.09 with a standard deviation of 4.428. This means that support had an average value range from 32.09 minus 4.428 to 32.09 plus 4.428. The results of the analysis showed that the mean value was greater than the standard deviation value, meaning that the distribution of data from the support variable was homogeneous which had a small spread so that the mean value can be used to explain the overall support data. The distribution of support variable data is presented in Table 6.

**Table 6.** Frequency Distribution Support or Support

No.	Interval	Frequency	%	Category
1	24-28	2	9.09	Very low
2	29-32	12	54.55	Low
3	33-36	6	27.27	Currently
4	37-40	0	0.00	Tall
5	41-44	2	9.09	Very high

Source: Processed research data, 2021

Table 6 showed that 2 respondents (9.09%) of 22 respondents had very low ease of access to SIPINSET, 12 respondents (54.55%) in the low category, 6 respondents (27.27%) in the medium category, 0 respondents (0%) in the High category, and 2 respondents (9.09%) in the very high category. Based on the results of the analysis of the frequency distribution in table 6 can be concluded that Support was in the Medium category, which can be seen from the highest frequency located in the interval 29.32 to 32 as many as 22 respondents or 54.55% which was a low category.

**Transaction Phase (Implementation) Based on SIPINSET Ease of Access Indicators Descriptive Statistical Analysis of Easy Access to SIPINSET According to Students**

Ease of Access according to Davis (1989) in Rasatari (2019) is a degree to which a person believes that the system can be used without requiring much effort so that the ease of access to the Asset Lending System (SIPINSET) can be interpreted as a degree to which a person believes that the asset lending system can be used without requiring a lot

of effort. Based on the results of the study, it showed that the ease of access in the use of the Asset Lending System (SIPINSET) at the Faculty of Economics according to students was in the medium category with a percentage of 43.18%, which was then followed by a low category of 20.45%, and very low at 11.36. % so that the ease of access in using SIPINSET which was reviewed through data input, system display, features, and symbols on the existing SIPINSET was still not good enough.

Furthermore, the results of descriptive statistical analysis of the SIPINSET User Interaction variable are presented in Table 7.

**Table 7.** Descriptive Statistical Analysis Results of Easy Access to SIPINSET

Descriptive Statistics					
	N	Min	Max	Mean	Std. Deviation
X2Student	44	26	50	38.02	5.940
Valid N (listwise)	44				

Source: Processed research data, 2021

The results of descriptive statistical analysis of the SIPINSET ease of access variable in Table 7 showed that the number of units of analysis used in this study were 44 respondents. The SIPINSET Ease of Access variable had a minimum value of 26, with a maximum value of 50. The average value (mean) of the SIPINSET ease of access variable was 38.02 with a standard deviation of 5.940. This means that the ease of access to SIPINSET had an average value range of 38.02 minus 5.940 to 38.02 plus 5.940. The results of the analysis showed that the mean value was greater than the standard deviation value, meaning that the data distribution of the SIPINSET Ease of Access variable was homogeneous which had a small spread so that the mean value can be used to explain the SIPINSET ease of access data as a whole. The distribution of the SIPINSET ease of access variable data is presented in Table 8.

Table 8 showed that 5 respondents

**Table 8.** Frequency Distribution of Easy Access to SIPINSET

No.	Interval	Frequency	%	Category
1	26.0-30.8	5	11.36	Very low
2	30.9-35.6	9	20.45	Low
3	35.7-40.4	19	43.18	Currently
4	40.5-45.2	7	15.91	Tall
5	45.3-50.0	4	9.09	Very high

Source: Processed research data, 2021

(11.36%) of 44 respondents had very low ease of access to SIPINSET, 9 respondents (20.45%) in the low category, 19 respondents (43.18%) in the medium category, 7 respondents (15.91%) in the High category, and 4 respondents (9.09%) in the very high category. Based on the results of the analysis from the frequency distribution in table 8 it can be concluded that the ease of access to SIPINSET was in the Medium category, which can be seen from the highest frequency in the interval 35.7 to 40.4 as many as 19 respondents or 43.18% which was the medium category.

**Descriptive Statistical Analysis of Easy Access to SIPINSET According to Education staff**

Based on the results of the study, it showed that the ease of access in the use of the Asset Lending System (SIPINSET) at the Faculty of Economics according to education staff was in the high category with a percentage of 63.64%, which was then followed by voters in the medium category, and very high which were 18.18 respectively. %, and 9.09% so that the ease of access in using SIPINSET according to the technique reviewed through data input, system display, features, and symbols on the existing SIPINSET was counted as good and easy access to SIPINSET. This was seen from the high and very high category voters, reaching 72.73% so that the average tendency chose the good category in terms of easy access to SIPINSET.

Furthermore, the results of the descriptive statistical analysis of the SIPINSET User Interaction variable are presented in Table 9.

**Table 9.** Descriptive Statistical Analysis Results Easy Access to SIPINSET

Descriptive Statistics					
	N	Min	Max	Mean	Std. Deviation
X2Send	22	33	42	39.23	1.974
Valid N (list-wise)	22				

Source: Processed research data, 2021

The results of the descriptive statistical analysis of the SIPINSET ease of access variable in table 9 showed that the number of units of analysis used in the study were 22 respondents. The SIPINSET Ease of Access variable had a minimum value of 33, with a maximum value of 42. The average value (mean) of the SIPINSET ease of access variable was 39.23 with a standard deviation of 1.974. This means that the ease of access to SIPINSET had an average value range of 39.23 minus 1.974 to 39.23 plus 1.974. The results of the analysis showed that the mean value was greater than the standard deviation value, meaning that the data distribution of the SIPINSET Ease of Access variable was homogeneous which had a small spread so that the mean value can be used to explain the SIPINSET ease of access data as a whole. The distribution of the SIPINSET ease of access variable data is presented in Table 10.

**Table 10.** Frequency Distribution Easy Access to SIPINSET

No.	Interval	Frequency	%	Category
1	33.0-34.8	1	4.55	Very low
2	34.9-36.6	1	4.55	Low
3	36.7-38.4	4	18.18	Currently
4	38.5-40.2	14	63.64	Tall
5	40.3-42.0	2	9.09	Very high

Source: Processed research data, 2021

Table 10 showed that 1 respondent (4.55%) of 22 respondents had very low ease of access to SIPINSET, 1 respondent (4.55%) was in the low category, 4 respondents (18.18%) was in the medium category, 14 respondents (63.64%) was in the High category, and 2 respondents (9.09%) was in the very high category. Based on the results of the analysis from the frequency distribution in table 10, it can be concluded that the ease of access to SIPINSET was in the Medium category, which can be seen from the highest frequency located at the interval of 38.5 to 40.2 as many as 14 respondents or 63.64% which was the High category.

#### **Outcomes Stage (Results) based on SIPINSET User Interaction Indicator Descriptive Statistical Analysis of SIPINSET User Interaction According to Student**

User interaction or what is commonly called a user interface is the way/mechanism of the user interacting with the program, so that the user and the program can 'communicate' with each other. The User Interface can receive information from the user and provide information to the user (after going through the existing processes in the program/computer) for the benefit of the user. In this study the user interaction in question is the user interaction in using the Asset Lending System (SIPINSET) at the Faculty of Economics so that the SIPINSET user interface can be interpreted as a way/mechanism for the user to interact with the program so that the user and the program can 'communicate' with each other.

Based on the results of the study, it showed that user interaction in the use of the Asset Lending System (SIPINSET) at the Faculty of Economics according to students was in the medium category with a percentage of 31.82%, and then followed by voters in the low and very low categories, respectively 27.27%, and 18.18%. User interaction in the use of SIPINSET according to students who were reviewed through the need for system use, input, and information produced was in



the poor category because the average student who chose the medium, low and very low categories reaches 76.73% so that user interaction in using SIPINSET still needs to be improved. Furthermore, the results of descriptive statistical analysis of the SIPINSET user interaction variable are presented in Table 11.

**Table 11.** Descriptive Statistical Analysis Results of SIPINSET User Interaction

Descriptive Statistics					
	N	Min	Max	Mean	Std. Deviation
X3 Stud	44	16	30	22.07	3.487
Valid N (listwise)	44				

Source: Processed research data, 2021

The results of the descriptive statistical analysis of the SIPINSET user interaction variable in table 11 showed that the number of units of analysis used in this study were 44 respondents. The SIPINSET user interaction variable had a minimum value of 16, with a maximum value of 30. The average value (mean) of the SIPINSET user interaction variable was 22.07 with a standard deviation of 3.487. This means that SIPINSET user interaction had an average value range of 22.07 minus 3.487 up to 22.07 plus 3,487. The results of the analysis showed that the mean value was greater than the standard deviation value, meaning that the data distribution of the SIPINSET user interaction variable was homogeneous which had a small spread so that the mean value can be used to explain the SIPINSET user interaction data as a whole. The distribution of SIPINSET user interaction variable data is presented in Table 12.

Table 12 showed that 8 respondents (18.18%) of 44 respondents had very low ease of access to SIPINSET, 12 respondents (27.27%) in the low category, 14 respondents (31.82%) in the medium category, 8 respondents (18.18%) in the High category, and 2

**Table 12.** Frequency Distribution of SIPINSET User Interaction

No.	Interval	Frequency	%	Category
1	16.0-18.8	8	18.18	Very low
2	18.9-21.6	12	27.27	Low
3	21.7-24.4	14	31.82	Currently
4	24.5-27.2	8	18.18	Tall
5	27.3-30.0	2	4.55	Very high

Source: Processed research data, 2021

respondents (4.55%) in the very high category. Based on the results of the analysis from the frequency distribution in table 10, it can be concluded that SIPINSET User Interaction was in the very low category, which can be seen from the highest frequency located in the interval 21.7 to 24.4 as many as 14 respondents or 31.82% which was a very moderate category.

**Descriptive Statistical Analysis of SIPINSET User Interaction According to Education staff**

Based on the results of the study, it showed that user interaction in the use of the Asset Lending System (SIPINSET) at the Faculty of Economics according to education staff was in the very low category with a percentage of 72.73%, and then followed by voters in the low and medium categories which were 9.09% respectively, and 4.55%. User interaction in the use of SIPINSET according to the trend that was reviewed through the need for system use, input, and the resulting information was in the poor category, because the average trend that chose the very low, low, and medium category was 86.37% so that user interaction the use of SIPINSET still needs to be improved.

The results of the descriptive statistical analysis of the SIPINSET user interaction variable are presented in Table 13.

The results of the descriptive statistical

**Table 13.** Descriptive Statistical Analysis Results of SIPINSET User Interaction

Descriptive Statistics					
	N	Min	Max	Mean	Std. Deviation
X3Send	22	17	24	18.73	2.142
Valid N (listwise)	22				

Source: Processed research data, 2021

analysis of the SIPINSET user interaction variable in table 13 showed that the number of units of analysis used in this study were 22 respondents. The SIPINSET user interaction variable had a minimum value of 17, with a maximum value of 24. The average value (mean) of the SIPINSET user interaction variable was 18.73 with a standard deviation of 2,142. This means that SIPINSET user interactions had an average value range of 18.73 minus 2,142 up to 18.73 plus 2,142. The results of the analysis showed that the mean value was greater than the standard deviation value, meaning that the data distribution of the SIPINSET user interaction variable was homogeneous which has a small spread so that the mean value can be used to explain the SIPINSET user interaction data as a whole. The distribution of SIPINSET user interaction variable data is presented in Table 4.

Table 14 showed that 16 respondents (72.73%) of 22 respondents had very low ease of access to SIPINSET, 2 respondents (9.09%) in the low category, 1 respondent (4.55%) in

**Table 14.** Frequency Distribution of SIPINSET User Interaction

No.	Interval	Frequency	%	Category
1	17.0-18.4	16	72.73	Very low
2	18.5-19.8	2	9.09	Low
3	19.9-21.2	1	4.55	Currently
4	21.3-22.6	0	0.00	Tall
5	22.7-24.0	3	13.64	Very high

Source: Processed research data, 2021

the medium category, 0 respondents (0%) in the High category, and 3 respondents (13.64%) in the very high category. Based on the results of the analysisThe frequency distribution in table 12 can be concluded that SIPINSET User Interaction was in the very low category, which can be seen from the highest frequency in the 17.0 to 18.4 interval as many as 16 respondents or 72.73% which was a very low category.

### Antecedents Stage (Input) based on Support Indicators

The system can be defined as a collection of components that are interconnected with one another to form a single unit to achieve certain goals (Jogiyanto, 2008:34). The system is a group of tool parts and so on that work together to do something (KBBI, 2005: 495). According to Febrian (2004:398), the system is a network of procedures that are interconnected, gathered together to perform an activity or to complete a certain goal. Jogiyanto in Hutahaeon (2014) suggests that the system is a collection of elements that interact to achieve a certain goal. The system will describe an event and a real entity. According to Gelinas and Dull (2010:11), a system is a set of interdependent elements that together accomplish specific objectives. Translated into, a system is a set of related elements that together achieve a specific goal. Mulyanto (2009:29) defined the system as a component consisting of humans, information technology and work procedures that process, store, analyze, and disseminate information to achieve a goal. So the system is a unit which consists of components that are related or interact with each other to achieve a common goal by operating data at a certain time to produce information.

Support is an effort given to someone both morally and materially to motivate others in carrying out an activity (Notoatmodjo, 2003). Support in this research can be interpreted as support in the use and implementation of the use of the Asset Lending System (SIPINSET) at the Faculty of Economics. Based on the results of the study, it showed

that support in the use and implementation of the use of the Asset Lending System (SIPINSET) at the Faculty of Economics according to students was in the medium category with a percentage of 40.91%, and those who chose the low and very low categories were 15, respectively 91%, and 6.82%.

According to Komorotomo and Margono in Widiyanto (2018), they stated that to deal with the growth and development of an organization that is already so complex, an information system is needed to help provide data and information as material for determining policies and strategies to provide data and information quickly and accurately. With the current technological developments, every agency should be able to utilize technology optimally to solve existing problems, especially the problem of borrowing assets at FE Unnes which was still done manually. FE Unnes needs an information system that is easy to use and better for disseminating the data. For this reason, a web-based information system can be used that can disseminate data widely and is easily accessible via the internet.

Based on the results of the study, it showed that support in the use and implementation of the use of the Asset Lending System (SIPINSET) at the Faculty of Economics according to education staff was in the low category with a percentage of 54.55%, followed by voters in the medium and very low categories, respectively 27.27%, and 9.09%. Support in the use of SIPINSET which was reviewed through the user guide, training and use of the existing system was still considered to be less than optimal according to the system or the system manager because those who had low and very low categories reaching 63%.

This was in line with research from Sadiq (2020) that the process of submitting goods to be borrowed by employees to the school facilities section starts from the employee contacting the facilities section regarding the availability of goods to be borrowed by the employee and the condition of the goods is in good or damaged condition, then the facilities section responds based on the informa-

tion submitted by the employee. If the goods are available and in good condition, the goods are ready to be loaned, but if the goods are damaged, the application for borrowing the goods will be canceled by the facilities section, besides that the facilities section also cancels the submission if the goods submitted are not available. Goods based on the submitted can be borrowed if the applicant, namely an employee, has filled out the loan form manually on a piece of paper in which there are several points that must be filled in, namely the item code name, item name, loan date, loan data, borrower position, borrowing function, date return of goods and the condition of the goods before borrowing. After that, the employee gives the completed form to the facilities section to be archived into the loan book.

In addition, previous research on system use support has been conducted by Haidir (2020) with research results showing that user involvement in system development had a significant influence. User involvement had an influence in terms of accounting information system performance, while supervisor support also had a significant influence on accounting information system performance. Similar research had also been carried out by Puspitawati, & Widasyanti (2020) with research results revealing that top management support and organizational structure were empirically proven to have an effect on the quality of Accounting Information Systems.

Suggestions for developing the SIPINSET system are (a) the process of collecting data on goods as consumable and non-consumable assets by schools owned by the previous school; (b) The process of data collection of incoming goods from suppliers on the submission of school goods based on needs; (c) The process of releasing goods as an activity of borrowing goods by all employees and students by submitting a loan application first; (d) The process of returning goods borrowed by students and employees as well as lecturers with a predetermined time limit when submitting a loan of goods; (e) The process of warning system on inventory of goods or assets

that are used up or not used up in the event of a delay in returning, damage and inventory of consumable and non-consumable goods if it is below the minimum amount; (f) The process of reporting all activities starting from data collection of goods, entering goods, borrowing, returning to warnings; (g) The data backup process is carried out periodically by the manager so that the inventory data will continue to be monitored.

### **Transaction Phase (Implementation) Based on SIPINSET Ease of Access Indicators**

Ease of access according to Davis (1989) in Rasatari (2019) is the degree to which a person believes that the system can be used without requiring much effort. An online system that is used more often can indicate that the system is better known, easier to operate and easier to use by users. Igraria (2000) in Nuraini and Welsa (2018) suggested that individual perceptions related to the ease of using computers are the degree to which individuals believe that using a particular system will be error-free. Ease of access to the Asset Lending System (SIPINSET) can be defined as the degree to which a person believes that the asset lending system can be used without requiring much effort. Based on the results of the study, it shows that the ease of access in the use of the Asset Lending System (SIPINSET) at the Faculty of Economics according to students was in the medium category with a percentage of 43.18%, which was then followed by a low category of 20.45%, and very low at 11.36%. so that the ease of access in using SIPINSET which was reviewed through data input, system display, features, and symbols on the existing SIPINSET was still not good enough. This was seen from the low and very low category voters, reaching 31.81%, and those who voted moderately 43.18% so that on average they chose the poor category in terms of easy access to SIPINSET and very low at 11.36% access to SIPINSET.

According to students, Ease of Access in SIPINSET was in the poor category due to several things, including data input that takes

a lot of time, is less effective and efficient, the display on the menu is difficult to understand, some features are incomplete, and difficulties in accessing asset information so that in the system of borrowing and returning assets many transactions have obstacles. Based on these problems, SIPINSET requires development in order to facilitate the process of borrowing goods and assets at the Faculty of Economics. The design and implementation of a loan information system has been carried out by several previous studies with different case studies, including: "Web-Based Information System for Borrowing Space and Goods at Muria Kudus University Using the Sms Notification Feature" in this study, the researcher created a web-based information system for borrowing space and goods and a feature sms gateway.

The system built in this study did not use a framework with the MVC model and the UI/UX used still needs to be developed to make it more comfortable and easy to use by users (Khasbi et al., 2016). In addition, there is also a research "Design of Information Systems for Borrowing of Web-Based Video Conference Demo Devices with the Waterfall Method" which was implemented at PT. Alliance Sakti as a data collection information system for demo units. Similar to previous researchers, in this study, the system built did not use an MVC-based framework so that the system built was more neat and organized, and in terms of security it was better (Christian, Ade & Ariani, 2018). In addition, there is also a design for a book lending information system implemented at SMPN 1 Madiun. In this study the system was made by using PHP very simply in terms of appearance or system features (Putera & Ibrahim, 2018). Then, research on the design of an office asset management information system conducted at PT Mediatama Anugrah Citra (Megawati, & Hasugian, 2018), as well as research by Ridwan, et al (2017) regarding the Design of an Asset Management Information System at PT. Indonesian Crafts Center and even better in terms of security (Christian, Ade & Ariani, 2018).

However, this is different from the results of the study from the Education staff's point of view where based on the results of the study showed that the ease of access in the use of the Asset Lending System (SIPINSET) at the Faculty of Economics according to Education staff was in the high category with a percentage of 63.64%, which was then followed by voters in the category medium, and very high which were 18.18%, and 9.09% respectively. The ease of access in using SIPINSET according to the surveys reviewed through data input, system display, features, and symbols on the existing SIPINSET was considered good and easy to access SIPINSET. This was seen from the high and very high category voters, reaching 72.73% so that the average tendency to choose the category was good in terms of easy access to SIPINSET.

This difference can be influenced by several things, including education staffs who were used to all the menus in SIPINSET and had received socialization regarding how to use the system, while according to students all the menus in SIPINSET were still foreign and also some students did not understand well with the manual which existed.

This was in line with the research of Puspaningrum, & Sudarmilah (2020); and Ramadhan, & Andah (2018) regarding the asset lending system, where the results of the study showed that By making a web-based asset lending system, information about assets can be easily identified and can facilitate borrowing data collection and handling if the user cancels the loan, the system automatically provides cancellation status for the loan so that accurate loan information can be generated. In addition, by making a web-based asset lending system that has a banned feature and prints user reports of bad behavior, the user will be careful in using the assets he has borrowed because the user only needs to input the loan data and then just wait for the acc of the related party. Therefore, the advice given by the researcher is that there is a need for socialization to parties who will use the Asset Lending System and the asset data inputted must

be correct and in accordance with the truth, and even though the borrowing made by the user has been validated by the system, it is recommended that the officer validate it again to be more accurate. This thing needs to be done because it is feared that users will hack the system, and maintenance must be carried out periodically to detect bugs and fix them.

### **Outcomes Stage (Results) based on SIPINSET User Interaction Indicator**

User interaction or so-called user interface is one of the services provided by the operating system as a means of interaction between the user and the operating system. User Interface is a communication mechanism between the user and the system (Ilham, 2018). User Interface is the way/mechanism of the user to interact with the program, so that the user and the program can 'communicate' with each other. The User Interface can receive information from the user and provide information to the user (after going through the existing processes on the program/computer) for the benefit of the user (Binus.ac.id, 2017). In this study, the user interaction in question was the user interaction in using the Asset Lending System (SIPINSET) at the Faculty of Economics.

User interaction (use Interface) SIPINSET is one of the important things in the development of a system, where this user interaction enters the outcomes stage which has a function to evaluate how the results of using the system are currently or have been running.

Based on the results of research and data analysis that had been carried out, it can be seen that the SIPINSET user interface which was reviewed through the needs of using the system, input, and information generated was considered to be in the poor category, because the average student who chose the medium, low category and very low reaching 76.73% so that user interaction in using SIPINSET still needs to be improved. In addition, the results of research that were viewed from the staff or the manager of the Asset Lending System (SIPINSET) also showed poor results, which

based on the results of the study indicated that user interaction in the use of SIPINSET according to the trend which was reviewed through system usage needs, input, and the resulting information was considered to be in the poor category because the average education staff who chose the very low, low, and medium categories reached 86.37%. So that user interaction in using SIPINSET still needs to be improved.

These results were in line with the opinion of Reed et al (1999) who suggested that as part of developing a system that meets HCI standards, an evaluation of usability must be carried out. Then, Nielsen (2008) also revealed that usability as a user experience in interacting with an application or a website until the user can operate it easily and quickly. So based on this, an evaluation of user interaction (user interface) is very important to do, where the results of this evaluation can be used for development of Asset Lending System (SIPINSET), to support a system that is easy to use and can assist its use in daily activities.

Research that is consistent and supports this research is the result of research proposed by Lin et al (2021) which stated that the main purpose of this research is to develop a comprehensive evaluation of the user interface of elderly cellular users so that technology can be designed to meet individual needs. The research findings showed that the user interface is very important to be evaluated in system development so that the system can be designed to meet the needs of its users. Then, a similar study on user interfaces was carried out by Kisanga et al (2018) with research findings suggesting that ease of use, accessibility, user interface in the use of e-learning systems is very important.

Then, when viewed from the interaction of SIPINSET users with the SIPINSET Standard Operating Procedure (SOP), it is known that the flow of asset lending at the Faculty of Economics through the system starts from logging in, inputting loan data, confirming to the TU to validate the loan of a place, to the process of borrowing a place. However, here

in practice, the user almost never gives input to the umpeg section about problems in using the system performance. This was in accordance with the results of research on the indicators of SIPINSET user interaction, which on average were not good in terms of students and staff because they were in the low category.

As for suggestions from researchers for future system development related to user interaction, it is better to give an input column or suggestions about the system if there are problems and obstacles in its use. These inputs or suggestions can be directly given an answer/feedback from the SIPINSET system manager, so that users, namely students and other academics do not need to go to the related Administration section to submit complaints that are felt in using the system. Complaints from users can be directly submitted through the system in the input/suggestion column provided, making it easier for communication or interaction between system users.

## CONCLUSION

The purpose of this study was to provide an integrated and innovative system that can provide easy access to asset management and lending at the Faculty of Economics, Universitas Negeri Semarang. The results of the study indicated that the support and ease of access of SIPINSET in terms of students and education staff was still low (less) so that feedback was needed from users in order to increase the effectiveness and efficiency of using SIPINSET.

## REFERENCES

- Agung Aryanto. (2017). Analisis dan Perancangan Sistem Informasi Penjadwalan Pasien Keluarga Berencana Pada Klinik Bersalin Sarbini Dewi Yogyakarta. *Naskah Publikasi*, (6), 67–72.
- Arikunto, S. (2004). *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta.
- Binus.ac.id. (2017). *Tipe-tipe Interaksi Dengan User dalam User Interface*. Retrieved Oc-

- tober 29, 2021 from <https://sis.binus.ac.id/2017/05/03/tipe-tipe-interaksi-dengan-user-dalam-user-Interface/>
- Christian, Ade, & Ariani, F. (2018). Rancang Bangun Sistem Informasi Peminjaman Perangkat Demo Video Conference Berbasis Web Dengan Metode Waterfall. *PILAR Nusa Mandiri*, 14(1), 109–111.
- Destiningrum, M., & Adrian, Q. J. (2017). Sistem Informasi Penjadwalan Dokter Berbasis Web Dengan Menggunakan Framework Codeigniter (Studi Kasus: Rumah Sakit Yukum Medical Centre). *Jurnal Teknoinfo*, 11(2), 30-37.
- Haidir, M., S. (2020). Analisis Pengaruh Keterlibatan Pengguna dan Dukungan Pengawas Mengenai Kinerja Sistem Informasi Akuntansi di Bank Syariah Mandiri Yogyakarta. *Jurnal Ekonomi dan Ekonomi Syariah (JESYA)*, 3(1).
- Harahap, A. S., & Angelia, N. (2016). Peranan Promosi Jabatan Terhadap Kinerja Pegawai Negeri Sipil Di Sekretariat DPRD Kabupaten Padang Lawas. *Publikauma: Jurnal Administrasi Publik Universitas Medan Area*, 4(1), 29-42.
- Hutahaean, J. (2014). *Konsep Sistem Informasi 1st ed.*, Yogyakarta: Deepublish.
- Ilham, M. (2018). *Antarmuka Pengguna (User Interface)*. Retrieved October 29, 2021 from <https://muhammadilhamx.wordpress.com/2016/02/18/antarmuka-pengguna-user-Interface/>
- Januhari, N. N. U. (2015). Perancangan Sistem Informasi Peminjaman Penggunaan Ruangan pada STMIK STIKOM Bali. *Jurnal Sistem dan Informatika (JSI)*, 9(2), 86-94.
- Khasbi, I., Nugraha, F., & Muzid, S. (2016). Sistem Informasi Peminjaman Ruang Dan Barang Di Universitas Muria Kudus Berbasis Web Menggunakan Fitur Sms Notification. *Simetris: Jurnal Teknik Mesin, Elektro Dan Ilmu Komputer*, 7(2), 513. <https://doi.org/10.24176/simet.v7i2.762>
- Kisanga, et.al. (2018). Exploring assistive technology tools and e-learning user Interface in Tanzania's vocational education institutions. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 14(3), pp. 50-71.
- Limantara, A. D., Purnomo, Y. C. S., & Mudjanarko, S. W. (2017). *Pemodelan Sistem Pelacakan LOT Parkir Kosong Berbasis Sensor Ultrasonic Dan Internet Of Things (IOT) Pada Lahan Parkir Diluar Jalan. Prosiding Semnastek.*
- Lin, C. J., & Ho, S.-H. (2020). The development of a mobile user Interface ability evaluation system for the elderly. *Applied Ergonomics*, 89, 103215. doi:10.1016/j.apergo.2020.103215
- Megawati, U., K & Hasugian, H. (2018). Rancangan Sistem Informasi Manajemen Aset Kantor Studi Kasus: Pt Mediatama Anugrah Citra. *Indonesia Journal Information System (IDEALIS)*, 1(2).
- Mizwar, A. (2012). Penentuan Lokasi Tempat Pengolahan Akhir (TPA) Sampah Kota Banjarbaru Menggunakan Sistem Informasi Geografis (SIG). *EnviroScienteeae*, 8(1), 16-22.
- Nielsen, Jacob. (2008). *Usability Engineering*. Academic press: London
- Notoatmodjo, S. (2003). *Ilmu Perilaku Kesehatan*. Jakarta: Rineka Cipta.
- Nugraha, Muhammad, dkk. 2020. Sistem Informasi Peminjaman Barang Berbasis Web dengan Metode Waterfall. *MIND Journal*. ISSN (p): 2528-0015 ISSN (e): 2528-0902 Vol. 5 No. 1 Halaman 14 – 23 DOI: <https://doi.org/10.26760/mindjournal.v5i1.14>
- Nuraini, M., dan Welsa, H. (2018). Pengaruh Kemudahan Akses, Kemenarikan Posting Messages, Daya Tanggap Pelayanan Terhadap Sikap Keputusan Pembelian Online Shop Di Instagram (Studi Kasus Pada Mahasiswa Yogyakarta). *Journal Upajiwa*, 2(1).
- Puspaningrum, A., & Sudarmilah, E. (2020). Sistem Informasi Manajemen Peminjaman (Studi Kasus: Pengelolaan Aset Dan Tata Ruang Taman Budaya Jawa Tengah). *Teknologi: Jurnal Ilmiah*, 11(1), 37-45.
- Puspaningrum, W. A., Djunaidy, A., & Vinarti, R. A. (2013). Penjadwalan Mata Kuliah Meng-

- gunakan Algoritma Genetika di Jurusan Sistem Informasi ITS. *Jurnal Teknik ITS*, 2(1), A127-A131.
- Puspitawati, L & Widasyanti, M (2020). Kesuksesan Sistem Informasi Akuntansi yang Dipengaruhi oleh Optimalisasi Dukungan Manajemen Puncak serta Efektifitas Struktur Organisasi. *Jurnal Riset Akuntansi dan Keuangan*, 8(3).
- Putera, A. R., & Ibrahim, M. (2018). Rancang Bangun Sistem Informasi Peminjaman dan Pengembalian Buku Perpustakaan SMP Negeri 1 Madiun. *DoubleClick: Journal of Computer and Information Technology*, 1(2), 57. <https://doi.org/10.25273/doubleclick.v1i2.2025>
- Ramadhan, Muhammad Ihpaz, Andah, Bullion Dragon. (2018). Implementasi Sistem Informasi Peminjaman Aset kampus berbasis Web pada Direktorat Administrasi Umum Universitas Budi Luhur dengan Metodologi Berorientasi Obyek. *Jurnal Idealis* Vol. 1 No. 4 hal. 334-339
- Rastari, A. (2019). Pengaruh Religiusitas, Bagi Hasil dan Kemudahan Akses Terhadap Keputusan Masyarakat Mengambil Pembiayaan Di Koperasi Syariah MSI. *Prosiding SIMBA: Seminar Inovasi Manajemen, Bisnis, dan Akuntansi*. Universitas PGRI Madiun.
- Reed, P., Holdaway, K., Isensee, S., Buie, E., Fox, J., Williams, J., Lund, A. (1999). "User Interface Guidelines and Standards: Progress, Issues, and Prospects", *Interacting with Computers*, 12 (2), Page 119-14.
- Ridwan, M., Muhammad, & Ramdhani, S. (2017). Rancangan Sistem Informasi Manajemen Aset di PT. Sentral Tukang Indonesia. *Jurnal CoreIT*, 3(2).
- Saputra, F. K., Inovera, R. A., & Susanti, E. (2018). Web-based futsal field reservation system. *Journal of Information Systems & Applied Computer Science*, 2614– 0918, 7–10.
- Shadiq, Jafar. 2020. Sistem Informasi Peminjaman dan Pengembalian Barang Pada Sekolah. *Information System For Educators And Professionals* Vol. 4, No. 2, Juni 2020, 188 – 197 E-ISSN: 2548-3587.
- Sugiyono, S. (2017). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- Suhartono, E. (2015). Optimasi Penjadwalan Mata Kuliah dengan Algoritma Genetika (Studi Kasus di AMIK JTC Semarang). *INFO-KAM*, 11(5).
- Suparman, N., & Sangadji, A. D. (2018). Pengelolaan Aset Daerah Dalam Mewujudkan Tertib Administrasi Pada DPPKAD Kabupaten Seram Bagian Barat Provinsi Maluku. *Kelola: Jurnal Sosial Politik*, 1(2), 74-97.
- Supriyono, H., Noviandri, A. M., & Purnomo, Y. E. (2017). Penerapan Sistem Informasi Berbasis Komputer Untuk Pengelolaan Aset Bagi SMP Muhammadiyah 1 Kartasura. *URECOL*, 59-70.
- Wahyudin, Agus. (2015). *Metodologi Penelitian*. Semarang: Unnes Press.
- Wahyuni, U. (2017). Rancang Bangun Sistem Informasi Penjadwalan Kunjungan Narapidana Di Lembaga Pemasyarakatan Klas I Kabupaten Jeneponto Sulawesi Selatan (*Doctoral dissertation, Universitas Islam Negeri Alauddin Makassar*).
- Yunita, I., & Devitra, J. (2017). Analisis dan Perancangan Sistem Informasi Manajemen Aset Pada SMK Negeri 4 Kota Jambi. *Jurnal Manajemen Sistem Informasi*, 2(1), 278-294.
- Yusuf, D. (2017). Sistem Peminjaman Barang Di Perusahaan Menggunakan Teknologi RFID. *Jurnal SIGMA*, 6(1), 49-58.