Effect Implementation of Information Technology Software On Improving Performance Capacity Academic and Non-Academic Service Sunan Ampel Islamic University of Surabaya

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Abstract. This research was conducted to examine the effect of applying information technology software to increase the capacity of academic and non-academic performance at the Sunan Ampel State Islamic University in Surabaya as a work support tool. The aim is to apply a software that is able to identify the needs of increasing performance capacity at Sunan Ampel State Islamic University in Surabaya, both academic and non-academic, so that systematic control and evaluation of all academic and non-academic operations can be carried out. The research respondents were 60 students and employees from the Faculty of Science and Technology of the Sunan Ampel State Islamic University in Surabaya. This research uses a quantitative approach with the analysis technique used is path analysis with SmartPLS software-based data processing and the overall results support the hypothesis. Based on the results of the study stated that Information Technology has a positive and significant effect on performance, Information Technology has a positive and significant effect on academic services, Information Technology has a positive and significant effect on non-academic services, but performance has no effect on academic and non-academic services. The conclusion of the research is the influence of the application of information technology software can improve academic and non-academic performance and services at the Sunan Ampel State Islamic University of Surabaya

Keywords: Information Technology, Software, Performance, Academic and non-academic services.
1. Introduction

Definitively an Information Technology System can be interpreted as a system that can produce useful information, which in its application uses information technology (Hartono, 2003). The application of information technology systems in organizations becomes a starting point important in developing the company's human resource capabilities. The existence of information technology systems at this time cannot be separated from its role in the process of doing employee work. Application of the application Information technology systems on the one hand provide advantages can help 2 employees in completing their work, but on the other hand precisely will provide obstacles, especially for employees who do not master the system information Technology.

From the results of searches carried out at this time there is no policy of the State Islamic University (UIN) Sunan Ampel Surabaya which regulates the capacity building of tertiary institutions to improve the performance of all its resources, so that the capacity building program so far has been run often undirected and overlapping. UIN Sunan Ampel of Surabaya's capacity building programs are more often initiated by the central education department and are top down. To ensure that capacity building can be carried out in a sustainable and well-coordinated way, it is necessary to make a regulation on guidelines for continuous capacity building. Improving human resources needs to be directed towards achieving a high level of efficiency and great ability to provide services to all stakeholders so that they are better able to carry out the principles of Good Education with an emphasis on:

1. Community participation in education;
2. Transparency, openness to all questions and criticisms and able to explain it;
3. Accountability, and can be accounted for;
4. Innovation, Professional and Multi-Intelligence in various disciplines.

By carrying out these good principles (Good Education), to achieve these results is not easy, it needs to be built sustainably in the long run. At this level the Sustainable Capacity Building for Decentralization program becomes very important and strategic. The implementation of the Capacity Building Action Plan (CBAP) of this program is a need to fix some of the weaknesses that are still possessed by universities. To evaluate the capacity building, an application media is needed to measure the successful implementation of the higher education work programs.

All programs are implemented according to the existing education regulations. From this research, a problem can be formulated, namely how to determine continuously increasing the capacity of tertiary education towards decentralized, quality, competitive and international education and how to provide maximum, innovative, appropriate work program, effective, transparent, accreditation, self-evaluation and education services accountable?

The purpose of this research is to improve the performance capacity of the UIN Sunan Ampel of Surabaya in providing educational services to the community, by preparing a Capacity Building Action Plan (CBAP) obtained through needs analysis and implementing capacity building for the first stage and evaluation of capacity building activities. The research respondents were 60 students and employees from the Faculty of Science and Technology of the Sunan Ampel State Islamic University in Surabaya. This research uses a quantitative approach with the analysis technique used is path analysis with SmartPLS software-based data processing and the overall results support the hypothesis. Research will test for influence the effect Of Implementation Of Information Technology Software On Improving Performance Capacity Academic And Non Academic Services Islamic State University Of Sunan Ampel of Surabaya.
2. Research Methods

2.1 Research Steps

The methods used in developing and increasing academic and non-academic capacity in data collection are:

Part I Needed assessment is needed to produce products in the form of a list of sustainable capacity development needs, obtained through: needs assessment of the 3 main functions of UIN Sunan Ampel of Surabaya, as well as Institutional self-assessment and Training Need Assessment (TNA) are methods which will be used in preparing the Capacity Building Action Plan (CBAP). This research was conducted through 3 (three) stages, namely: Analyzing the needs (need assessment) of Capacity Development, the process of wholeness tracking was carried out through the method (a) SWOT of 3 Main Functions of UIN Sunan Ampel Surabaya (b) Institutional self-facilitated facilitation Self Assessment), and Organizational Capacity Assessment Tool (OCAT). The results of the identification of these needs are in the form of a list of needs that are expected from stakeholders of UIN Sunan Ampel Surabaya. The method used through the workshop, Focus Group Discusion (FGD).

Part 2, Model Development for developing a Capacity Building Action Plan (CBAP). The activity was carried out by compiling a longlist of the results of the need assessment, prioritizing and continued with the compilation of a shortlist. The method used through workshops, and Focus Group Discusion (FGD), and questionnaires.

Part 3, Implementation of the CBAP that has been prepared and evaluated, from CBAP as an implementation sample is realized in the capacity building activities.

2.2 Data Collection

At this stage data collection is seen as a research activity that can be done by most people. This can be observed when a researcher engages a friend or colleague in a study conducted as a data collection officer. Every research activity always strives for data obtained in accordance (valid) and reliable (reliable). Research data is all information needed to solve a research problem. The techniques that are usually used in a study are as follows:

a. Questionnaire

Questionnaires are the data collection techniques most widely used in survey research. The reason is that by distributing questionnaires researchers can reach a large number of respondents in a short amount of time. In addition, the series of questions in the questionnaire can be arranged carefully and calmly in the researcher's office so that the formulation and arrangement of the questions can follow systematically in accordance with the research problem and the variables studied.

b. Study of literature

This Literature Study is conducted to obtain information by collecting data through books, literature, papers, journals, newspapers, value lists, study results cards, transcripts, papers and other sources related to the issues discussed.

2.3 Data Preprocessing Phase

At this stage, ensure that the data to be processed is good data, by selecting the complete data and having complete features so that the data processing is in accordance with the method that will be used later. The preprocessing data stage consists of attribute selection, support value calculation, and data standardization.

2.4 Analysis Tools

This research uses Partial Least Square (PLS) as an analysis tool. PLS is one of the methods to implement the Structural Equation Modeling (SEM) model. PLS is a powerful analysis method because it can be applied at all data scales, it does not require a lot of assumptions and the
sample size does not have to be large (Meilita et al, 2016). Besides being able to be used to confirm theories, PLS can also be used to explain the presence or absence of relationships between latent variables. PLS can simultaneously analyze constructs that are formed with reflective and formative indicators. This study uses PLS to determine the relationship between latent variables consisting of information overload, communication overload, social media exhaustion, and job performance.

Table 1. PLS Assessment Criteria

| Criteria                                      | Explanation                                                                                                                                 |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| **Evaluation of Structural Models**          | **R2 for endogenous latent variables** R2 results of 0.67, 0.33 and 0.19 for endogenous latent variables in the structural model indicate that the model is "good", "moderate", and "weak".  |
| **Estimated path coefficient**               | The estimated value for the path relationship in the structural model must be significant. This significant value can be obtained by the bootstrapping procedure.                       |
| **F² for effect size**                       | F² values of 0.02, 0.15 and 0.35 can be interpreted whether the predictor of latent variables has a weak, medium or large influence on the structural level. |
| **relevance of predictions (Q² dan q²)**     | Blindfolding procedure is used to calculate:                                                                                              |
|                                              | \[ Q^2 = 1 - \sum \frac{E_n}{O_n} \]                                                                                                     |
|                                              | \[ q^2 = \frac{Q^2_{\text{included}} - Q^2_{\text{excluded}}}{1 - Q^2_{\text{included}}} \]                                                |
|                                              | Q is the omission distance, E is the sum of squares of prediction errors and O is the sum of squares of observation. Q² values above zero provide evidence that the model gives predictive relevance (Q²) below zero indicating the model lacks predictive relevance. |

**Evaluation of Reflective Measurement Models**

| Loading factor     | The loading factor value must be above 0.70                                                                                                      |
|-------------------|---------------------------------------------------------------------------------------------------|
| Composite         | Composite reliability measures internal consistency and its value must be above 0.60                                                               |
| Realiability      |                                                                                                   |
| AVE               | AVE value must be above 0.50                                                                        |
| Discriminant Validity | The AVE value must be greater than the correlation value between latent variables.                              |
| Cross Loading     | Is another measure of discriminant validity. It is expected that each indicator block has a higher loading for each latent variable measured than the indicator for the other latent variable. |

**Evaluation of Formative Measurement Models**

| Significant weight | Estimated values for formative measurement models must be significant. The level of significance is assessed by the bootstrapping procedure. |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------|

Source: Ghozali (2008:27)

Table 2. Validity Test Parameters in the PLS Measurement Model
2.5 Implementation of the system
At this stage the selection of data will be used, namely the name data, the method used, the value of support, and other supporting data. resulting in clear outputs and grouping results.

2.5.1 Making the Program
This stage will produce an academic and non-academic system improvement program. At this stage, the grouping of work data will also be carried out according to the implementation that has been designed. The results that have been applied to the application will run a module functions.

2.5.2 Program Trial Phase
The next stage is to test the program that was built to validate the truth and accuracy of the previously applied system based on needs.

3. Result
Enhancing and developing the university’s performance capacity in providing educational services to the community, by preparing a Capacity Building Action Plan (CBAP) that is obtained through needs analysis. Implement capacity building for the first stage and evaluate capacity building activities.

UIN Sunan Ampel Surabaya continued the development and capacity building for the second, third, fourth and fifth stages based on the CBAP that had been made. The impact of this research resulted in a set of higher education behavior changes in providing educational services to the community. Specifically this research was conducted with the aim to:
1. Identifying and analyzing the need for developing and improving the performance capacity of UIN Sunan Ampel Surabaya through self-assessment of the 3 main functions of UIN Sunan Ampel Surabaya and institutional self-assessment.
2. Creating a model of developing and enhancing the performance capacity of UIN Sunan Ampel Surabaya by making work program planning documents.
3. Make an example of the implementation of the development and capacity building of Sunan Ampel UIN Surabaya.
4. Evaluate the effectiveness of the capacity building program after it is implemented with the activity application device.

3.1 Capacity Building Framework
Based on the survey results, as well as the results of interagency, agency and office studies in the UIN Sunan Ampel Surabaya environment there are a number of problems and the need to carry out sustainable capacity development for decentralization. In general the problems faced by UIN Sunan Ampel Surabaya can be seen in the current institutional and human resource conditions.

Efforts to solve this problem are real needs that must be met by UIN Sunan Ampel Surabaya. Identification of the main problems can be seen in the following description:
1. Policies taken are not able to accommodate the needs of the community.
2. Services provided to the community are less fast and less efficient, not yet proactive and of good quality.

Regarding the problems faced, it is necessary to develop a strategic plan as follows:

a. Formulate policies about good educational institutions
b. Establish clear and sustainable Minimum Service Standards (SPM), so that service to the community can be guaranteed both in quality and scope.
c. Develop a Policy on Sustainable Capacity Building

![Figure 1. Capacity Building Framework](image)

### 3.2 Human Resource Development

HR development is carried out after identify a number of problems, issues, and challenges as stated in the survey results, as well as the analysis conducted at the beginning of the CB-AP preparation. From the analysis conducted several gaps were identified including:

1. There is no clear trace of training needs whether in formal, structural, or functional lines.
2. The leadership's lack of understanding about e-government has not supported the creation of an efficient and effective institution in accordance with environmental demands.
3. There is still a lack of understanding of the apparatus in all lines regarding the preparation of legal provisions.
4. The lack of staff's understanding of the use of computers and their maintenance greatly hinders the implementation of routine tasks.

Regarding the problems faced, it is necessary to prepare an orientation plan and training related to:

a. Information and Communication Technology / MIS
b. Computer Skills and Information Management for Staff
Figure 2. HRD Manajement
4. Discussion
4.1 Measurement of Convergent Validity Model
Convergent validity testing is done by looking at the outer loading value because each indicator on each variable dimension is a reflective indicator. A reflective indicator is said to meet convergent validity if it has an outer loading value > 0.7.

4.2 Discriminant Validity Results
Discriminant Validity is assessed based on cross loading, the model has sufficient discriminant validity if the value of cross loading between constructs is greater than the value of cross loading between constructs and other constructs in the model (Jogiyanto, 2009). The significance of the Discriminant Validity or Average Variance Extracted value is, AVE > 0.5.

From the results of PLS analysis of Figure 3 and Figure 4, it was found that the Effect of Information Technology Software (X) on Academic and Non Academic Service (Z) had a positive effect with the significance of the Average Variance Extracted value of 0.569, AVE > 0.5 and the
The influence of Information Technology Software (X) on Performance Capacity (Y) has a positive effect with the significance of the Average Variance Extracted value of 0.756, AVE > 0.5 and the value of p value <0.05. which is 0.000. The effect of Performance Capacity (Y) on Academic and Non Academic Service (Z) has no effect or no significance with the Average Variance Extracted value of 0.175, AVE < 0.5.

4.3 Construct Reliability and Validity Results

Contruct Reliability and Validity to test the reliability and validity of indicators on a dimension or variable. A dimension or variable is said to meet the Contruct Reliability and Validity if it has a composite reliability value > 0.6.

From the results of PLS analysis of Figure 5, it was found that the Contruct Reliability and Validity for Information Technology Software (X) with a Cronbach Alpha value of 0.874 and a Composite Reliability value of 0.909, both valid and realible because they are more than 0.6.

Contruct Reliability and Validity for Performance Capacity (Y) with a Cronbach Alpha value of 0.834 and Composite Reliability value of 0.882, both valid and realible because they are more than 0.6.

Contruct Reliability and Validity for Academic and Non Academic Services with a Cronbach Alpha value of 0.834 and Composite Reliability value of 0.883, both valid and realible because they are more than 0.6.

5. Conclusion

The conclusion based on the results of the study states that Information Technology Software has a positive and significant effect on academic services with an Average Variance Extracted value of 0.569 and Information Technology has a positive and significant effect on performance with an Average Variance Extracted value of 0.756, but performance has no effect on academic services and non-academic with an Average Variance Extracted value of 0.175, less than 0.5.
Suggestion
The functions of increasing academic and non-academic capacity can be added to in order to be more complete so that they can be applied and used to complete more complex forms of work at UIN Sunan Ampel of Surabaya.

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