

# Effectiveness of Administrative Staff Working in the Study Program State Polytechnic Banjarmasin in Using Integrated Information System (SIMPADU)

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## ABSTRACT

The importance of the work effectiveness of each employee is expected to have a positive impact on improving the quality of human resources in an organization. In the field of education, one effort in increasing the effectiveness of employee work can be done by developing an information technology system in the educational institution. The purpose of this research is to test the difference of working effectiveness of the administrative staff of study programs in Polytechnic Banjarmasin before and after the implementation of SIMPADU. The effectiveness of the work examined in several indicators items, namely: production, efficiency, quality, flexibility, and job satisfaction. This research used a quantitative approach. The sample was obtained from all the administrative staff of study programs in Polytechnic Banjarmasin, 16 people was chosen by using census technique. The data collected through questionnaire were analyzed by using paired samples t test in order to prove the acceptance and rejection of the hypotheses. The results of analysis show that there is significant difference of working effectiveness of the administrative staff of study programs before and after the implementation of SIMPADU in Polytechnic Banjarmasin. This study connects also the results of research on the theoretical and managerial implications. The managerial implications Polytechnic Banjarmasin recommend that can improve work effectiveness through providing trainings both inside and outside the campus environment. Providing trainings to face the technological change will improve the quality of employees so as to provide satisfactory performance.

**Keywords:** Working effectiveness; Staff; SIMPADU

## INTRODUCTION

### Research Background

The authors stated that the integration of technology information and system is important. Management information systems at universities including important institutional activity [1-3]. Ngafifi explain advances in technology continue to grow very rapidly, and gave birth to a digital society [4]. In line with research from the Husaini speaks of the advancement of computer and technology information this too a positive impact on education [5]. Gavua et al. and Ghavifekr et al. explain, management system information plays an important role in education [6,7]. In the world of higher education, the implementation of the Tri Darma Higher Education will not be able to run properly without and information systems support both academic system, in line with research from Shah that the use of information technology in management education has

increased considerably because efficiency and effectiveness [8,9]. Pressman (2012) in Simanjuntak explains that there are six quality attributes of academic information system according to the ISO 9126 standard identification described as follows:

- a. Functionality:** Level about how device soft meet the needs that have been established previous and have sub-sub the following attributes: compatibility, accuracy, interoperability, conformance and security.
- b. Reliability:** Total times the use of the software available and have sub attributes: maturity, fault tolerance, capability to recovery.
- c. Ease to use:** Level about how the software eases of use, in which case. This is often indicated using sub attributes following: easiness to understand, easy to learn, operability.
- d. Efficiency:** Level use system resources optimally, where it is

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indicated by the sub attributes following: time behavior, resource behavior.

**e. Easiness maintenance:** This ease with which determines how improvements may be carried out in a software, where it is indicated using sub attributes following: ability for do analysis, ability for amendments, matters relating to the stability and capability for do examination.

**f. Portability:** Easiness how software can be moved from an operational environment to environment. Other operations, which it identified using sub attributes: the ability to adapt, the ability to installed, suitability the ability to be replaced.

Information systems and appropriate quality standard is expected to improve the performance and effectiveness of the work employee in an organization. This is supported by research from Salamah states that the perception of expediency technology information has a positive relationship and significant effect on the performance of individual employees [10].

## Formulation of the problem

**The problem in this study can be formulated as follows:**

Is there a difference effectiveness of administrative staff study program at the Polytechnic Banjarmasin before and after implementation of the Integrated Information System (SIMPADU)?

## Research purpose

This study aims to determine and analyze differences in working effectiveness administrative staff study program at the Polytechnic Banjarmasin before and after implementation of Integrated Information System (SIMPADU).

## Benefits of research

**Research this be expected provides the following benefits:**

- Contributed in education, especially for the development of the theory of increasing the effectiveness of work through use information systems.
- As an evaluation for Polytechnic Banjarmasin to further find out what this are becoming weaknesses and strengths SIMPADU for improvement in the future as well as ingredients consideration in decision making and policy in the field of technology and information in Polytechnic Banjarmasin.
- As reference for further research especially in the field human resources management and information systems.

## LITERATURE REVIEW

### Work effectiveness

Handoko in Yudhaningsih explains that the effectiveness of the work consists of words and work effectiveness [11]. Effectiveness is the ability to select the destination or the right equipment for the achievement of the set objectives. Meanwhile, Handayani in Supardi said that if the goal or objective has been achieved as planned earlier was effective [12]. So if the goal or target is not completed within the allotted time, the was not effective. Gibson in Supardi emphasizes effectiveness to the achievement of targets [12]. "Effectiveness is the attainment target that already agreed on joint effort." The level of achievement of the objectives it shows

the effectiveness of the targets. Effectiveness of the work can be measured by:

### Production

Production reflects ability organization in resulted on a number of goods and services as demanded by the environment. The concept does not include consideration of efficiencies that will we define briefly. The size of the production including income, sales, market share, students pass, patients cured, and the document have been processed, and clients served.

### Quality

Is defined as meeting the expectations of customers and clients to performance products and services, with the size and quality assessment comes from customers and clients.

### Efficiency

Efficiency is defined as the ratio of output than input. These short-term criteria focuses on a cycle input – process – output, and even income (rate of return) of capital and assets, unit costs, waste material, waste, timesteps, the occupancy rate, and cost each patient, each student or each client.

### Flexibility

Organizations need to invest not only in technology of flexible production methods, but also in the development of employee capabilities to operate technology.

### Satisfaction

Measure of satisfaction including attitude of employees, employee turnover, absenteeism, tardiness and laments.

### Information systems

Information system is a system based technology that could technically defined as a set of interrelated components that collect, retrieve, process, store and distribute information to support decision making in an organization [13].

Laudon et al. explains that the information systems have become an integrall tool, on line, interactive and highly involved in the operation by the minute and decision making in large organizations [14].

The information system developed for support whole organizations, executives, and business area [15].

### SIMPADU (Integrated Systems Integrated)

SIMPADU an integrated information system in Polytechnic Banjarmasin. This system is one manifestation Tri Darma Higher Education that performed by Polytechnic Banjarmasin. SIMPADU contains academic data which include: the presence of students and lecturer, the value of the course, lecture schedules and card results studies and data staffing contains data of all employees in Polytechnic Banjarmasin. Simpadu also equipped with data research and community service performed by lecturers of Polytechnic Banjarmasin.

### System information for improving work effectiveness

In accordance with the results of previous research from Prakarsa [16-22], Nurrani and Ferdian [23-26], Sambhaji and Sudhkar as well as the research of Thi and Che which states that application

of information systems to improve the effectiveness work employee and management within an agency [27-30].

## Hypothesis

Based on theory and previous research, this hypothesis is:

Ho: There is no difference in effectiveness administrative work study program at the Polytechnic Banjarmasin before and after using SIMPADU.

Ha: There is difference in effectiveness administrative work study program at the Polytechnic Banjarmasin before and after using SIMPADU.

## RESEARCH METHODS

The approach used in this study is quantitative. This type of research is comparative, for the purpose of this study was to compare the effectiveness of administrative staff study program at the Polytechnic Banjarmasin before and after the use of Information Systems Integrated (SIMPADU). The population in this study are all administrative staff study program at the Polytechnic Banjarmasin totaling 16 people. Technique sampling use *census technique*, so that a sample of 16 people. Mechanical scoring using likert scale.

According to the Table 1 in mind that most of the items meet the validity criteria. It can be seen that most of the items contained in the study have  $r \geq 0.30$ , so it can be concluded that most of the items in this study valid question. However, there are also some items that have  $r < 0.30$ , so it cannot be used a measuring tool in the study (Table 2).

An instrument is said to be reliable if the value Cronbach Alpha  $> 0.60$ . Closer Cronbach's alpha 1, the higher the internal consistency reliability. By using SPSS Version 21.0, technique analysis of the data that will be used is *Related t-Test*. While the normality test will be conducted with the test *One Sample Kolmogorov-Smirnov (K-S)* by using extent significance of  $> 5\%$  or 0.05 (Table 3).

**Table 1:** The validity of the test results before and after using simpadu.

| No  | Item                                | Before | After |
|-----|-------------------------------------|--------|-------|
| 1.  | Document                            | 0.739  | 0.493 |
| 2.  | Demands work                        | 0.771  | 0.729 |
| 3.  | The performance is satisfactory     | 0.900  | 0.570 |
| 4.  | No complaints from other parties    | 0.623  | 0.392 |
| 5.  | Work quality                        | 0.713  | 0.692 |
| 6.  | Work exceeding the target           | 0.674  | 0.778 |
| 7.  | On time                             | 0.760  | 0.372 |
| 8.  | Do not do waste                     | 0.846  | 0.265 |
| 9.  | Advanced technology                 | 0.663  | 0.560 |
| 10. | Ability growing                     | 0.759  | 0.302 |
| 11. | Training                            | 0.784  | 0.664 |
| 12. | Operate technology                  | 0.491  | 0.451 |
| 13. | Adaptation                          | 0.854  | 0.681 |
| 14. | The attitude of employees           | 0.640  | 0.596 |
| 15. | Do not want to get out of a job now | 0.374  | 0.514 |
| 16. | Presence                            | 0.546  | 0.830 |
| 17. | It's never too late                 | 0.621  | 0.788 |
| 18. | Complaints                          | 0.784  | 0.860 |

**Table 2:** Results of reability test.

|        | Alpha Cronbach | Reliability |
|--------|----------------|-------------|
| Before | 0.924          | Reliable    |
| After  | 0.891          | Reliable    |

**Table 3:** Results of normality test.

|                        | Before | After |
|------------------------|--------|-------|
| N                      | 16     | 16    |
| Normal Mean            | 60.69  | 67.88 |
| Parameters Std.        | 9.611  | 7.856 |
| a,b Deviation          |        |       |
| Most Absolute          | 0.173  | 0.18  |
| Extreme Positive       | 0.11   | 0.122 |
| Difference Negative    | -0.173 | -0.18 |
| S                      |        |       |
| Kolmogorov-Smirnov Z   | 0.693  | 0.722 |
| Asymp. Sig. (2-tailed) | 0.723  | 0.675 |

## One-Sample Kolmogorov-Smirnov test

a Test distribution is Normal.

b Calculated from data.

Based on the Table 3, Asymp. Sig (2-tailed) before use SIMPADU of 0.723 and after use SIMPADU of 0.675, it can be concluded that the data were normality distributed.

Basis for a decision on the t test: If the significance of the test  $\leq 0,05$  then Ho is rejected and Ha accepted.

- If the significance of the test  $> 0.05$  then Ho is accepted and Ha rejected.

### Basis for a decision on a t-test using SPSS Version 21.0:

- If the significance of the test is less than 0.05, there is a difference that significant effectiveness administrative staff study program before and after use System Information Integrated (SIMPADU).

- If the significance of the test is greater than 0.05, there is no difference that significant effectiveness administrative staff study program before and after use System Information Integrated (SIMPADU).

## RESULTS AND DISCUSSION

### Hypothesis test results

The table above shows the average effectiveness of the administrative staff of study program before and after use SIMPADU. Before use SIMPADU average effectiveness of the work of 16 employees amounted to 60.69, while after SIMPADU effectiveness of the use of the average amounted to 67.88 (Table 4).

From the results hypothesis testing using SPSS Version 21.0, can be explained that the t value is equal to -4.844. t-value is then compared with t table. For a 5% error test two parties with  $dk=n-1$ , obtained t table=2.131, for t worth -4.844, -2.131 then t-value table. For the t-statistic value that is negative if t-value  $<$  t-table, then Ho is rejected and Ha accepted. Because -4.844  $<$  -2.131, it stated that t falls in the region of rejection Ho, so it concluded that Ha is accepted.

**Table 4:** Average effectiveness of the work before and after use SIMPADU.

|        |        | Mean  | N  | Std. Deviation | Std. Error Mean |
|--------|--------|-------|----|----------------|-----------------|
| Pair 1 | Before | 60.69 | 16 | 9.611          | 2.403           |
|        | After  | 67.88 | 16 | 7.856          | 1.964           |

## Discussion

One of the technological developments in the world of higher education is the use of information systems and academic administration in each college. Academic information system used by the Polytechnic Country Banjarmasin is named SIMPADU (System Information Integrated). This system aims for academic administration there is in Poliban implement an efficient and effective structure, in order to achieve the Tri Darma Higher Education. SIMPADU strived able to achieve the development of human resources, both to improve the quality and competence employee nor college student. Before use SIMPADU, administrate staff study program made a recapitulation of the presence of faculty and students manually use Microsoft office excel. Making the recapitulation as this considered less effective and allow for errors formulas. Meanwhile, after their SIMPADU, manufacture recapitulation attendance list to more quickly and accurately. In addition, courses and inputting grades (GPA) directly connected to your students feeder forlap Higher Education, so the administrative staff study program not need to do inputting reset. Based on test results conducted by researchers, it is known that before the use of SIMPADU average of 16 staff administration of study program work effectiveness amounted to 60.69, while after use SIMPADU average effectiveness of the administrative staff study program amounted to 67.88. Hypothesis test results show the value of t count equal to - 4,844 with sig 0.000, Because sig <0.05 then it can be concluded that Ho is rejected and Ha accepted, meaning that there is a significant difference in the effectiveness of the administrative staff course at the Polytechnic Banjarmasin before and after use SIMPADU. This shows that after the implementation of SIMPADU, effectiveness employment as measured from the production, efficiency, quality, flexibility, and job satisfaction has increased.

## Research Limitations

In research that implemented this there are several limitations of the study in terms of both the analysis and testing of hypotheses, which can be identified include:

- Data collected employee performance with questionnaires and that into respondents is employees themselves so as not objective because the respondents assess their own performance.
- Researchers are focusing on prodi administrative staff as users SIMPADU to as respondents.

## CONCLUSION AND RECOMMENDATION

### Conclusion

Based on the research, could concluded that before use SIMPADU average effectiveness of the work of 16 employees amounted to 60.69, while after SIMPADU effectiveness of the use of the average amounted to 67.88. Hypothesis test results show the value of t is equal to -4844 with sig 0000, Because sig <0.05 then it can be concluded that Ho is rejected and Ha accepted, meaning that there

are differences in the effectiveness of the administrative staff course at the Polytechnic Banjarmasin before and after application of the Integrated Information System (SIMPADU).

### Recommendation

- Polytechnic Banjarmasin should further optimize the application of SIMPADU. How that can be done either by applying the system edit online so SIMPADU can also be used outside the campus optimally.
- Polytechnic Banjarmasin should further improve administrative staff work quality study programs that they also can give quality better service to students, lecturer nor stakeholders. How that can be done is done, among others:
  - Capacity-building labor, for example through job training
  - Achievement management power work, for example with improve professionalism;
  - Management functions source human resources, for example improving the health and quality of mental and spiritual.
- Employee satisfaction should further enhanced by:
  - Leaders do not hesitate to commend employee success
  - leaders must create procedure work that support justice, transparency, development career, authority and compensation, as well as providing an opportunity to gain experience
- To researcher Furthermore, expected to develop methods collection data, for example with interviews to the leadership. And is expected to researchers next to make the academic, financial and staffing as respondents.

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