

# CHAPTER I

## INTRODUCTION

This chapter contains backgrounds of research, problem formulation, objective of research, scope of research, and outline of writing.

### 1.1 Backgrounds

The development in the field of information technology (IT) at this time has brought important benefits to all aspects of human life. IT has a different role for each agency such as a company, a government agency, or a college institution that can be seen according to its function. Every agency must understand the use of IT which will have an impact on the success of the agency.

The implementation of IT as a supporting instrument in the administrative process and the provision of information are useful to all groups with the purpose that can increase the performance of the institution. The use of IT has a dynamic improvement and development interest, because IT is considered to be able to solve problems in technical or operational fields. In order for IT to become a value enhancer in the organization, it is necessary to have Information Technology Governance so that all factors and dimensions related to IT become synergized and able to provide added value.

According to Alberch & Pirani in Wibowo (2016) IT Governance is needed by higher education institutions to create a process of disseminating knowledge in more interactive and dynamic learning activities, transparency of operational governance of institutional activities, and performance-based evaluation with transparent assessment, data security, and information that related to someone intellectual rights. One organization that requires the implementation of IT Governance is a university. Governance has functions to ensure that stakeholder needs, conditions and choices are evaluated to fit the organization's goals, set

priorities in decision making, and monitor performance based on objectives and direction.

Along with the development of IT which increasingly sophisticated, the need for quality, trust, and security is increasingly high. One of the universities that follows the development of information technology is Andalas University (Unand). Unand has an institution in charge of developing information technology, namely the Institute for Information and Communication Technology Development (LPTIK). LPTIK is an important element in supporting the management of higher education institutions, which together with other elements play a role in carrying out the achievement of Unand's vision and mission.

LPTIK has undergone several status changes, initially in the form of an AdHoc team with the name Information and Communication Technology (ICT). In 2013 with the new Unand statute, ICT was changed to LPTIK which consisted of 3 divisions namely the Data Collection Division, Network Division, and Multimedia Division. The Data Collection Division has responsibilities in data management, both student academic data, as well as lecturer and education staff data. The Data Collection Division has a high commitment to the development and implementation of information systems for Unand. The Data Collection Division has the main tasks and functions to design and plan data and monitor data distribution as information material for decision making and application development. The Network Division is the part responsible for managing network traffic in Unand. The Multimedia Division is the part in charge of managing the university's website. In addition to presenting news about the campus, the website also acts as a portal that presents links to faculties, Learning Management Systems, eJournal directories, e-libraries, e-thesis, repositories, local content, academic portals, e-office, student registration, and several other services (LPTIK Renstra, 2017).

In order to carry out Unand's mission as an organization in improving the quality of good university governance, towards excellent university governance, and being able to adapt to changing strategic environments, LPTIK Unand has

designed a development strategy that focuses on developing learning based on blended learning, integrated information system development, business intelligence development, development of service availability levels, and resource capacity development. The program is structured with a plan of activities to implement an ICT-based performance measurement system (LPTIK Renstra, 2017).

The system managed by LPTIK Unand is run by system administrators in each faculty with the main administrator being at LPTIK. In the Data Collection Division, several weaknesses which concern to LPTIK related to the limitations of human resources, the unavailability of Standard Operational Procedure (SOP) services, applications that have not been integrated, as well as several other technical issues. The problem in the Network Division is there is no documentation or standard operating procedures for each service provided which often makes staff work without clear and undocumented procedures. The multimedia division has several limitations in providing maximum services, specifically disseminating application utilization, supporting equipment completeness, improving application and website security, and increasing staff numbers (LPTIK Renstra, 2017).

Many research at LPTIK which related to information systems have been carried out by various sources. Research conducted by Kurnia (2011) on the design of ICT organizations in Unand focused only on the redesign stage of the organizational structure and information technology management system. Aulia (2013) conducted a research on the design of the LPTIK performance appraisal system that began with the determination of the framework to the stage of weighting the Key Performance Indicator using the Analytical Hierarchy Process method. Malta (2016) conducts research with output in the form of processes that are identical to the framework for determining the level of capability and priorities for improving the academic information system of Unand. Haryadi (2017) conducts research on the design of the budget performance management system in LPTIK with the output produced in the form of plan documents and program evaluations, plans and evaluations of program budgets, and performance report documents that are integrated with information systems. Ashari (2019) conducts research on

business process reengineering at LPTIK which aims to model, evaluate, and improve business processes more effectively and efficiently.

Ashari (2019) conducts a redesign of business processes was carried out for the operational activities of each division in LPTIK. The business process design that is carried out includes improving the flow, adding activities and eliminating activities. The output produced in the form of 11 SOP consisting of 2 SOP in the Data Collection Division, 6 SOP in the Multimedia Division, and 3 SOP in the Network Division. Based on the SOP, an increase in the level of throughput efficiency is obtained from existing business processes.

Based on this research there are several suggestions that can be developed for further research. The suggestion is an analysis and improvement that is carried out not only in the Data Collection Division, the Multimedia Division, and the Network Division but also in all the divisions in the LPTIK, the observed process not only focuses on the activities of each SOP but can also consider the financial aspects and existing human resources, and further research is not only carried out up to the design stage, but to the stage of implementing the proposed improvements. The SOP that was designed has been applied to Data Collection Division, Network Division, and Multimedia Division.

Therefore this research is expected to be able to answer suggestions from previous studies due to the importance of time to the business processes run by LPTIK. One tool to evaluate the business process is work time measurement. The time from results of the measurement study is used to determine the workforce and equipment needed, help in the development of effective work methods, manage workers in doing their work, help in comparing the work performance of a work plan that has been set with the workload and resources used, and carry out total productivity measurement.

## 1.2 Problem Formulation

Based on backgrounds above, the problem formulation of this research are:

1. How to determine the standard time for each process of activity in the business process at LPTIK?
2. How to provide improvements to the results of the work measurement?

## 1.3 Research Objectives

Based on background that has been explained, the objective to be achieved in this research is to propose improvements to the results of measurement of work performed.

## 1.4 Research Scopes

Scopes of this research are as follows:

1. Object is only centered at LPTIK Unand
2. There are seven standard operating procedures that can be measured which are SOP for creating repository account, SOP for creating e-learning account, SOP for streaming video, SOP for web hosting, SOP for creating hotspot account, SOP for e-mail registration, and SOP for website news registration.
3. The results of research are only recommendations based on standard times that obtained.

## 1.5 Outline of Report

The outline of this final project is arranged systematically and consists of six chapters are as follows:

**CHAPTER I INTRODUCTION**

This chapter contains background, problem formulation, research objective, research scopes, and outline of writing.

**CHAPTER II LITERATURE REVIEW**

This chapter contains a review of related literature of the research. The literature review consists of theories and tools that will be used in problem solving. These are business process, standard operating procedure (SOP), performance evaluation, work measurement, time measurement techniques, and standard time determination.

**CHAPTER III RESEARCH METHODOLOGY**

This chapter contains the stages used by the author in research that begins with the stages of problem recognition through preliminary studies, literature studies, data collection, and data processing to the stages of suggestion for further research.

**CHAPTER IV DATA COLLECTION AND DATA PROCESSING**

This chapter contains data which has been collected and will be processed by stopwatch time study.

**CHAPTER V ANALYSIS**

This chapter contains analysis to the result that has obtained in previous chapter.

**CHAPTER VI CONCLUSION AND SUGGESTION**

This chapter contains conclusion to the result of research and suggestion for the next research.

