

## **Workload Analysis in Determining the Needs Analysis of the Number in Education Personnel at XYZ University Yogyakarta**

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### **Abstract**

**Background** – XYZ University in Yogyakarta is one of the new state universities which, is currently preparing to enter the Public Service Agency in determining the number of technicians to be distributed to work units. There is no standard provision until now. The actual condition so far is a gap in the number of technicians in several work units. Every team has an excess number of Education Personnel, but in other work units, they experience a shortage. This clear interferes with the tendons' expected performance of the tendons, thus impacting the work unit.

**Research Purpose** - Based on these conditions, this study analyzed the need for educational personnel based on workload analysis.

**Research Methodology**- The study conducted in several units with resource determination method used purposive samplings (specific criteria) at XYZ University in Yogyakarta. Methods of data collection with interviews and documentation. Sources of data in the form of primary and secondary data. The results of this study are expected to be useful for institutional leaders regarding the proportional number of education personnel needed in each work unit.

**Research Result /Contribution** – This research shows that some excess human resources and units lack human resources. However, when viewed from the job description, it turns out that several jobs are routinely low on a daily or weekly basis. But there is a relatively high need for hours in annual activities so, that the workload is uneven. The management needs to be considered the number of when analyzing employees in each work unit. The results provide an overview to the management of XYZ University in planning employee needs in the future period.

**Keywords:** *workload analysis, analysis of human resource needs, education personnel*



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### **INTRODUCTION**

Human Resources in every organization is a vital part that is important to get the leadership's attention. The role and importance of human resources in organizations can utilize all potential human resources and achieve goals, both individually and within the organization. These resources, namely time, energy, and human capabilities (both thinking power and physical power), can be realized in an integrated and optimal manner for the organization's benefit. XYZ University also needs qualified human resources.

The data obtained from the staffing shows an accurate ratio between the number of lecturers and the staff. This standard ratio is required for a university: lecturers: 70% and staff: 30%. Data at XYZ University in Yogyakarta shows that the ratio of lecturers to students is 55%: 44%. The condition of this inappropriate ratio is compound by the level of technical competence that is not accordingly with the technician's work placement. Several units like that; have an excess of tendons, but other units have less

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of them. This condition shows that XYZ University has not carried out a workload analysis, resulting in a significant imbalance in the placement of an educational employee in several units.

One of the main causes of the non-optimal performance of education personnel is that the distribution of education personnel in a work unit or work unit does not yet refer to the organization's actual need, which means not based on the existing workload. The accumulation of education personnel in one work unit and the lack of personnel in other work units is a clear example of HR problems. The distribution of education personnel that does not match the needs and work is the problem. It does not lie in the number of education personnel being too large. One important step in overcoming the problem of mismatches in the number of education personnel is to carry out a Workload Analysis. Workload analysis carried out with the consideration that HR is an asset that must manage properly can achieve the vision, mission, goals and, objectives of the organization can be adequately achieved (Irvianti & Adi, 2010; Enambe, 2015; Imanti & Setyowati, 2015; Gunawan, 2016).

The Internal Supervisory Unit (SPI), one of the vital parts to control and carry out internal supervision from the non-academic side (one of them: HR), conducted this research. Based on the Regulation of the Minister of Education and Culture No. 22 of 2017 concerning Internal Supervisory Units within the Minister of Education and Culture, that SPI is forming to assist Work Unit Leaders in carrying out internal supervision of the implementation of the duties and functions of each Work Unit within the Ministry. One of the important concerns of SPI is the issue of Human Resources (HR). Based on the above background, the purpose of this study is to analyze the workload as one basis for determining the proportionate number of education personnel as follows: (1) Mapping the workload of each technical staff (by looking at the job description) that has been going on so far; (2) Mapping the real need for technical personnel in each unit; (3) Mapping the placement of each unit. Therefore, the results of this research provide recommendations for universities in planning optimal employee needs. This research objective has three (3) strategies that must and implement. There is not possible if it is completed within one (1) year of research, so that research is still needed in a follow-up year to complete the mapping of human resources, especially in the XYZ University environment. This research is very important because the leadership can use the results in determining the number of education personnel in each work unit according to their competence.

## **LITERATURE REVIEW**

### **Human Resource Planning (HR)**

HR planning is a process of estimating the quality and quantity of human resources needed by humans in the future and implementing the efforts that have to be made to meet these needs (Lestari & Trisyulianti, 2018). If HR planning properly, it can provide direct or indirect benefits for the organization (Rivai, 2004; Haqiqi, 2018).

### **Workload Analysis**

Globally while still being based on the value of defending the State".According to the Minister of Research, Technology and, Higher Education Regulation Numbers, 2 of 2018, workload analysis was used to determine the amount of time, effort, and resources needed to carry out organizational tasks and functions (Menristek DIKTI, 2018). The workload analysis is carrying to determine the needs of education personnel, the level of effectiveness and efficiency of work positions/units, and job performance of positions/units (Ramadhan & Bakar, 2014; Christina & Suardana, 2015; Lestari & Trisyulianti, 2018; Hidayat et al., 2018). Measurement of workload at XYZ University is carried out by referring to the Minister

of Research and Technology and Higher Education Regulation Number 2 of 2018 and the Strategic Plan of XYZ University (2020-2024) concerning Institutional Strengthening as PTN and External Efficiency towards World Class University and producing competitive graduates. In carrying out the workload analysis, the following was it's required:

- a. The results of the job analysis in the form of job information.
- b. Set the number of hours worked per day.
- c. There is a unit of results.
- d. Completion time of tasks/products.
- e. There is a standard working time.
- f. There is a workload to be measured.
- g. Calculation of the number of employees needed.

Walintukan's research (2017); Helianty (2013); Taroreh et al. (2016) concluded that overall there is an excess of the actual number of employees compared to the number of employees' needs according to the time and volume of the workload required. In some Bureau units and overstaffing, the current number exceeds the number of employees required.

## **RESEARCH METHOD**

The study method used in this study is a method of descriptive research. The study was conducted in three units with purposive samplings (certain criteria) at XYZ University in Yogyakarta. Methods of data collection with interviews and documentation. Sources of data in the form of primary and secondary data. The results of this study are expected to be useful to know the proportional number of education personnel needed in each work unit.

To help the research, the researcher chose four resources personnel and considered that the resource person knows clear information about their work unit. Their people are:

- a. Head of staff
- b. Academic information personal in the Academic, Evaluation, Registration, and Statistics subsection
- c. Program and Budget Implementation Analyst personnel in Planning, evaluation and budget subsection
- d. Organizational Analyst and Management in Data Administration and Legislation subsection

Researchers carry out to There are three stages carried out to determine the need and availability of education personnel in each work unit (Muchransyah & Rahmawati, 2016):

### **Identification of Work Units and Administrative Jobs at XYZ University**

At this stage, identification of work units and descriptions of administrative work and employees carry out in each unit. Researchers in workload analysis research must identify a list of activities based on Standard Operational Procedures, work instructions, and job descriptions were the second step in workload analysis research. Furthermore, the classification of incumbents aims to avoid errors in determining the type of work to be carried out so that education personnel works in accordance with their positions. Before carrying out a workload analysis, the identification process of incumbents is carried out, which aims to determine the respondents or position holders in each work unit that will be the object of research. Respondent determined to facilitate the process of analyzing the workload and measuring the

time to be carried out. The next step is to identify the details of the activities adjusted to the list of activities that have previously been based on the job description.

### **Calculation of Workload per the same type of work or activity**

Before conducting the interview, We determined the job of the work unit. A Job of the work unit is grouping jobs that have the same type of work and activities. Determination of work unit is done to make it easier to analyze the workload, so it will be easier when determining the number of employees. In carrying out workload analysis, it takes some data obtained from employees including, a list of activities, details of activities, processing time, number of jobs, and categories of work.

### **Workload Analysis each work unit**

At this stage, the analysis process is carried out on the results of load analysis data processing work that has been done. The analysis consists of workload analysis per family which consists of an analysis of employee needs based on workload analysis and analysis of workload per day in one year. From that phase, will know analysis results the problems contained in determining the number of education personnel.

## **FINDING AND DISCUSSION**

### **Data Collection and Calculation of the Number of Education Personnel**

The data needed in this study is data on the details of activities in each unit. The details of the activities in each unit are based on the activities that have been carrying so far. The administrative activities of each team are different and varied. There are activities routinely carried out every day (daily). Some are carried out once a week (weekly), some are monthly, some are quarterly, some semi-annual and, some are yearly according to the activities carried out. Facilitate the calculation of the need for working hours for each unit, the data obtained are classified based on their routines. The total analysis measure of each routine group is converted into hours per day needed to find out the average hours needed in a work unit.

The work unit that is the object of this study is the education staff at the several work units in the rectorate XYZ University in Yogyakarta, especially those related to administrative work.

Table 1. Need of Working Hours per Day at Sample

<b>Work Unit</b>	<b>Data</b>	<b>Daily</b>	<b>Weekly</b>	<b>Month</b>	<b>Quarter</b>	<b>Semester</b>	<b>Annual</b>	<b>Total</b>
BUREAU OF ACADEMIC, STUDENT, PLANNING, AND COOPERATION Subdivision of Academic, Evaluation, Registration, and Statistics: <b>Position:</b> <b>Academic information</b>	Total Time for each category	337	60	1327	0	1800	14055	
	Activities /hours of the day	5,62	0,20	1,01	0,00	0,23	0,89	
	Total Required Working Time/Day (hours)							

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BUREAU OF ACADEMIC, STUDENT, PLANNING, AND COOPERATION, PLANNING, PROGRAM EVALUATION AND BUDGET SECTION: Program and Budget Implementation Analyst	Total Time for each category	240	702	2930	0	4955	38845	
	Activities /hours of the day	4,00	2,34	2,22	0,00	0,63	2,45	
	Total Required Working Time/Day (hours)							11,64
BUREAU OF GENERAL AND FINANCE: LAW AND PROCEDURE: Data Administration and Legislation: Organizational Analyst and Management	Total Time for each category	2126	874	645	0	865	7603	
	Activities /hours of the day	35,43	2,91	0,49	0,00	0,11	0,48	
	Total Required Working Time/Day (hours)							39,42

Table 2. Calculation of the Number of Needs and Availability of Education Personnel  
In Each Work Unit

No	Work Unit	Total Time	Total Time/7,2	Number of Needs/Unit	HR Available now	Surplus/defisit of HR/Unit
1	BUREAU OF ACADEMIC, STUDENT, PLANNING, AND COOPERATION Subdivision of Academic, Evaluation, Registration, and Statistics: Position: Academic information manager	7,94	7,2	1	3	2
2	BUREAU OF ACADEMIC, STUDENT, PLANNING, AND COOPERATION, PLANNING, PROGRAM EVALUATION, AND BUDGET SECTION: Program and Budget Implementation Analyst	11,64	7,2	1,66 = 2	1	(1)

3	BUREAU OF GENERAL AND FINANCE: LAW AND PROCEDURE: Data Administration and Legislation: Organizational Analyst and Management	39,42	7,2	5,475 = 5	1	(4)
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### Discussion

The calculation of the need for working hours per day for each work unit can show that the results are quite varied. There are work units where the need for working hours per day is low, and some are high. This data gives an idea to the institution's leadership. That there are differences in workloads between sections. It is necessary to conduct further analysis to find out the things that cause these differences. Based on the results of calculating the need for working hours per day in each work unit, the next step needs to calculate the need for education personnel. The number of employee needs in each work unit is carried out by considering the available effective working hours. Results of the calculation employee need compared with the real conditions in the field, analyzed whether the current amount in that section is by following under with the calculation results, there is excess or even a shortage. Recapitulation of the calculation of the number of employees in each work unit can be looked at in Table 2. The results data entry in table 2 provides an overview of the excess and or deficiency of the amount of staff in each work unit.

The management also needs to consider when analyzing the number of employees in each work unit. Theoretically, if there is an excess number of education personnel in several work units, it indicates an idle time for these employees. However, when viewed from the job description, it turns out that several jobs are routinely low on a daily or weekly basis. There is a fairly high need for hours in semi-annual or annual activity. That shows the workload is uneven. The same thing happened to the three bureaus. Several units experience higher activity than normal days, such as the Bureau of Academic, Student Affairs, Planning, and Cooperation. In addition to routine daily and weekly activities, busyness will occur during promotional activities prior to the admission of new students, guardianship activities, and payment of tuition fees every semester and graduation. During the period, these activities require sufficient staff to carry out these activities. For the Bureau of General Affairs and Finance, the accumulated workload will also occur when paying tuition fees every semester and at the end of the year.

Suppose the overall process of analyzing the number of employees' needs based on workload in each work unit has been completed. The results will serve to provide an overview to the management of XYZ University in planning employee needs in the future period. These results show to arranging the number of employees. The results will serve as some guidance in the future period. The results of this study can also be used as a reference in analyzing the workload of each work unit so that there are no units that have excess human resources on the one hand, and on the other hand, there is a shortage of human resources.

### CONCLUSION AND FUTURE RESEARCH

Calculation of the need for employees, especially education personnel at XYZ University, can use the Workload Analysis approach. In this case, job description data in each work unit was a need. Administrative work in one work unit varies quite a lot, especially when viewed from the time side. There are jobs routinely carried out daily or weekly, but there are also jobs that are only carried out every

semester or even once a year but, these activities require quite a lot of time. Therefore, at the beginning of this study, it is necessary first to sort out activities based on time classification, then convert them into the need for working hours each day.

A more detailed analysis is necessary if there will be adjustments to the number of education personnel in several work units, requiring a large number of employees. So that the adjustment of the number of employees will not interfere with the overall activity process at XYZ University. If the results of the calculation of the workload analysis based on the need for working time per day occur, there is still an imbalance in the load between work units.

The results of this study provide an overview to the management of XYZ University in planning human resources for the coming period, and it is very important to conduct further analysis related to the workload for each work unit. Workload based on the analysis of the work can do well if there is clarity of guidelines or work instructions, the existence of a good understanding of the work guidelines. Each individual needs the existence of clarity of duties and responsibilities of the work. In addition, conformity has needed between the guidelines of work with the knowledge, abilities, and expertise possessed by each education personnel, accordance agreement with duties and responsibilities the answers provided with the ability of each educational force, and background in knowledge and education who meet the job qualifications.

XYZ University should do workload analysis activities that have to be done periodically. Workload analysis is beneficial for the organization in planning staffing programs, training, coaching, and employee development so that HR performance can be in line with unit performance and organization.

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