

## Analysis of Workload and Needs of Education Personnel Using the Total Quality Management (TQM) Method (Study at the Faculty of Engineering, Universitas Brawijaya)

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### Abstract

Being a superior, world class and active in developing the nation through the tri dharma process of higher education is UB's hope to improve service, transparency and accountability so as to create campus life with academic nuances which will eventually bring UB towards entrepreneurial university, (UB 2008 Governance Pattern ) The writing of this thesis aims to find out, identify and analyze the Workload and Needs of Educational Personnel Using the Total Quality Management Method (Study at the Faculty of Engineering, Universitas Brawijaya) by analyzing the data using Miles and Huberman theory using descriptive qualitative research methods. The results of the study show that the workload of government institutions, especially also in the diving university environment, is still not considered enough so that the problems that arise in terms of providing services are often only associated with low work motivation and lack of work incentives. certain periods and no work appears in other periods. Therefore a step is needed to find out the workload for each position and the lowest work unit through workload analysis. With the analysis of workload, it will be known that the volume of work charged to a service unit and planning of human resource needs, including interpreting strategic policies in the future, especially for organizations in higher education so that they are in line with what has been defined in Resource Management Human College.

**Keywords:** workload analysis, planning, effective efficiency

### INTRODUCTION

Higher education providers as explained in the 2012 Higher Education Act state that as part of the national education system, higher education has a strategic role in educating the nation's life and also for advancing science and technology by paying attention to and applying the values of humanity and civilization and empowerment a nation that is sustainable and able to develop science and technology also produces scientists, intellectuals, and or professionals who are cultured and creative, democratic, tolerant, strong character, and dare to defend the truth for the benefit of the nation.

In achieving competitiveness, UB continues to strive to produce graduates who are independent, disciplined and competitive so that

they are able to compete in the world of work and also Universitas Brawijaya will continue to improve itself to improve service, improve quality and determined to improve its performance significantly in service, organization and human resources, facilities and infrastructure, and finances that develop financially in accordance with the increasing number and quality of human resources (HR) both lecturers and education staff. (UB 2008 Governance Pattern, h 75). Based on data on the development of human resources available at Universitas Brawijaya when viewed from developments over five years, the number of education staff, lecturers and students is:

**Table 1. Data on Human Resources in Higher Education**

Years	Tendik			Dosen			Mhs
	PNS	NON	Σ	PNS	NON	Σ	
2013	928	1.089	2.017	1.483	527	2.010	61.231
2014	904	981	1.885	1.423	670	2.093	59.469
2015	919	993	1.912	1.458	483	1.941	64.037
2016	896	1.033	1.929	1.429	685	2.114	64.326
2017	849	1.273	2.122	1.386	706	2.092	65.482

Sumber: (Pusat Informasi, Dokumentasi dan Keluhan UB, 20 Oktober 2017)

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The data above shows that it is necessary to improve the implementation of management Human resources to be better, focus, sustainable and have a clear plan. One of the key elements that must be organized now is the planning of education staff. This must be done based on workload analysis to improve efficiency and effectiveness, because some personnel management has not been fully implemented to meet organizational needs.

This phenomenon also occurs in the Faculty of Engineering in Universitas Brawijaya, where the distribution of education personnel has not shown the needs of the organization, in the sense that it is not based on an analysis of the existing workload, so that procurement is still only likely to be estimated. According to the interview with academic staff, Herdina, stated that the education staff assigned to the academic department were still double positions where the Tupoksi was unclear, so the implementation of administrative services, especially in academic circles, was often not optimal because of the work done so that analysis was needed workload to distribute existing education personnel so that there is no double job description and also to find out the number of educational staff needs at the Faculty of Engineering, Universitas Brawijaya.

Through workload analysis it will be known the volume of work in the service unit charged and planning of human resource needs including also in interpreting strategic policies in the future especially for organizations in higher education so that they are in accordance with what has been defined in Higher Education Human Resource Management.

In this study the author uses a qualitative approach where to understand the phenomena experienced in research among motivations, behaviors, perceptions, actions and others holistically and through descriptions in the form of words and languages, in a special natural context and by utilizing various natural methods.

#### **MATERIAL AND METHOD**

After all the data in this study are described, it can be seen that the highest response from the respondents for each variable is 3.60. This value is in category 3.41 - 4.20 (Good) for the statement "I care about the environment around the workplace". The interview with the Head of Administration of the Faculty of Engineering, Universitas Brawijaya stated that the workload condition of each part must be interrelated

between part one and the other in terms of maintaining cooperation to get the appropriate and planned results.

From the conclusions and explanations of the results of interviews and also from the results of questionnaires, it can be concluded that the educational staff of the Faculty of Engineering Universitas Brawijaya care for each other and work together between parts one with the other because the work is related to each of its parts. This must be maintained by all education personnel so that completing work can get optimal work results.

Furthermore, the lowest respondents for each variable are with an average of 2.82. This value is in the categories 2.61 - 3.40 (Good enough) for the statement "I am able to express the contents of the mind". This is also in accordance with the interview with each section who argued that the education staff of the Faculty of Engineering Universitas Brawijaya said that not all education staff could express their thoughts. From the results of the questionnaire and conclusions of the interview, it can be concluded that for this competency dimension it needs attention and can be increased to education staff who are not yet open to share with each other so that the quality and productivity of workloads can be better and better. can improve the quality and work productivity of the education staff themselves.

From the results of questionnaires can be drawn a conclusion that the overall educational staff in carrying out work responsibly in accordance with the duties and functions of each part and the work carried out interrelated between parts of one another this needs to be maintained so that it can be trusted to do the work given and cooperating with each other, it will be able to improve the condition of the relationship between quality and work productivity of the education staff will be better.

#### **Data Collection**

Data collection is the most strategic technique or step in a study, because the purpose of research is to obtain data that can be used to analyze which will eventually find the substance at issue in the research formula.

In this study the data collection techniques used are:

##### **a. Observation**

Observation or observation is the activity of a process or object with the intention of perceiving

and then understanding the knowledge of a phenomenon based on previously known knowledge and ideas, namely directly observing the activities of activities carried out by the educational staff in working on the work. For example, the academic part works on making a student pass certificate, how much time is needed starting from pengonsepan to completion and has been signed by the leader.

b. Interview

What is done in this case is interviewing or asking directly to the informant or resource person regarding activities carried out based on Tupoksi who carry out the task or position, in this case the education staff or employees in each part of the Faculty of Engineering, Universitas Brawijaya

c. Documentation

Carry out data collection from records or documents related to the problem to be examined, either in the form of a list of tasks or data in each section in the Faculty of Engineering, Universitas Brawijaya.

In this study data analysis is processed by processing the data obtained then evaluated with the aim of getting a complete picture of the results of the research.

Discussion of the Total Quality Management Method only focuses on the three pioneers of TQM development, namely:

W. Edwards Deming, Joseph M. Juran, and Philip B. Crosby.

Nasution (2004), fully explains as follows:

1. W. Edwards Deming Method

Deming noted success in introducing problem solving techniques and statistical process control. In order to be able to distinguish systematic and specific causes in dealing with quality Deming advocates the use of SPC in companies, and Deming believes that differences or variations are real facts that cannot be avoided in industrial life.

Deming Cycle is a continuous improvement model of W. Edward Deming which consists of four main components in a sequence known as the PDCA cycle (Plan-Do-Check-Act)

This cycle was developed to be able to connect between operations, customer needs and focus on resources all parts in a synergy to meet customer needs (Ross, 1994 h 237).

2. Joseph M. Juran Method

Defining quality as goods or services that can be used and can meet what is desired by the user. One of his famous contributions is "Juran's Three Basic Steps to Progress", including:

- a. Hold training programs widely.
- b. Establish leadership at a higher level.
- c. Structured improvement on the basis of continuity with dedication and urgency.

3. Philip B. Crosby Method

What is known as zero and prevention management are as follows:

a. Quality is a requirement.

Initially the quality translated as goodness. This definition has a weakness, which is not specifically explaining what is good. The definition of quality according to Crosby is that which meets or matches the requirements (conformity with requirements) which means less than the minimum requirements so that an item or service can be said to be of poor quality. These requirements can change according to the needs of the organization, suppliers, customers and markets or competition.

b. Quality system is prevention

In the past, quality systems were judgments. Products will be assessed at the end of the process. This assessment only states if it is good, then it is submitted to the distributor, while if it is bad it will be deleted. Therefore, prevention must be carried out from the start so that the output is guaranteed to be good will save costs and time. This is known as the law of tens. That is, if we find an error at the beginning of the process, the cost may be only one rupiah. However, if it is found in the second process, the cost is 10 rupiah. For this reason, the Corsby quality system is prevention.

c. Zero damage (zero defect) is a performance standard that must be used which according to him can be achieved if the company does something right from the first process and in each process.

Miles and Hubermen said that in the analysis of qualitative data, the activity was carried out interactively and continued until it was finished, so that the data became saturated. The measure of data saturation is indicated by the absence of new data or information obtained. In the analysis of activities include data reduction, data presentation, verification and conclusion.

The following is the analysis stage according to Miles and Huberman's theory:

1. Data Analysis or Collection Phase

Data collection can be done in various ways through interviews, observation, and documentation. Data collection is needed to achieve the research objectives. Analysis of data data can be done using interviews, obsession, data submission, and so on.

## 2. Reduction Phase

Data reduction is a form of analysis that sharpens, directs, classifies, discards unnecessary, and arranges data in such a way that final conclusions can be taken and verified. Data reduction stage, researchers will be guided by the goals to be achieved. This stage is done by summarizing, choosing the main things, focusing on important things, looking for themes and patterns. Examples are summarizing direct contact data with people, situations and events at the research location, making objective notes, coding, making reflective notes, making marginal notes, storing data, making memos, analyzing interlocations, and making summaries/temporary locations between locations.

From this summary, the researcher then reduces the data whose activities include certain elements including (1) the process of selecting data based on the level of relevance and relationship with each group of data, (2) compiling data in the same unit. Grouping data in units of this type can also be equivalent to categorization / variable activities, (3) making data coding in accordance with the research work grid.

Other activities that are still included in data reduction are focus, simplification and transfer from rough data to field notes. In qualitative-naturalistic research, this is a sustainable activity and therefore researchers need to frequently examine carefully the recordings obtained from each contact that occurs between researchers and informants.

## 3. Data Presentation Stage

Data presentation is done to make it easier and understand what happened and plan further activities. In presenting this data it is presented in the form of text and narrative tables. Through the presentation of data, data can be arranged in a relationship pattern so that it will be easier to understand. At this stage the model is developed such as describing the context in research, matrix checklists, describing developments between time, role matrices, clustered concept matrices, matrices influencing location dynamics and event lists.

## 4. The stage of drawing conclusions and verifying data

In this qualitative study conclusions might be able to answer the problem that has been formulated from the beginning and answer the problem statement. The initial conclusions submitted can be temporary if there are still changes during the next data collection and can

be trusted if valid and consistent evidence is supported.

Conclusions from the results of the review and reduction of data are temporary conclusions from the results of the research taken. This temporary conclusion can still change if other strong evidence is found during the data verification process in the field.

In carrying out workload analysis, the first thing to do is to identify job descriptions in a certain period of time that must be completed under normal circumstances. Calculation of the workload itself through calculating the number and volume of each job description or activity so that the work weights are obtained based on the results of the work volume times with the norm of time.

In this chapter the researcher will describe the data and results of research on the problems that have been formulated in Chapter 1, namely about the condition of the workload of each position in the service unit at the Faculty of Engineering, Universitas Brawijaya? and What are the educational staff needs in accordance with the workload of each service unit in the Faculty of Engineering, Universitas Brawijaya?

The data from the results of this study were obtained from observation, documentation and interview techniques, which were carried out by researchers with educational staff. In addition, the researcher also checks and requests data in the Civil Engineering Department of the Brawijaya University. This researcher also uses qualitative methods to see the natural condition of a phenomenon. This approach also aims to gain understanding and describe complex reality. Qualitative research is a process of collecting data which in principle also processes the drafting of concepts, categories and hypotheses which are always completed by field data. The concepts, categories or hypotheses supported by the data are the findings of qualitative research. (Muhadjir, Noeng 1992) in the Word. For the analysis phase, what is done by the researcher is making a list of questions for interviews, data collection, and data analysis carried out by the researchers themselves. To be able to find out the extent of the information provided by research informants, researchers used several stages: First composing interview questions based on elements of credibility elements that will be asked to informants or informants. Secondly, conducting interviews with educational staff in Departments other than researchers also interviewing education staff in the Section

Staffing to find supporting data. Third, do direct documentation in the field to complete data relating to research. Fourth, move the research data in the form of a list of all the questions submitted to informants or resource persons. Fifth, analyze the results of interview data that has been conducted

Respondents in this study amounted to 75 people who were used as samples for the study were educational staff at the Faculty of Engineering, Universitas Brawijaya. In this initial study, what you want to know is the education, age, gender, and tenure of the respondent. For respondents' personal data more clearly can be seen in the following characteristics.

**Table 2. Characteristics of Respondents**

No	Respondent	Information	Amount	Percentage (%)
1	High School Education	SMA	8	11.00
		D3	30	40.00
		S1	37	49.00
		S2	-	-
		Amount	75	100
2	Age	≤ 20 years	-	-
		21 – 30 years	8	11.00
		31 – 40 years	34	45.00
		41 – 50 years	21	28.00
		≥ 50 years old	12	16.00
		Amount	75	100
3	Sex	Male	41	55.00
		Women	34	45.00
		Amount	75	100
4	Working Period	≤ 5 years	7	9.00
		6 – 10 years	34	45.00
		11 – 15 years	27	36.00
		16 – 20 years	5	7.00
		≥ 21 years old	2	3.00
		Amount	75	100

Source: Primary Data processed in 2018

Based on Table 2, it is known that the respondents based on the level of education in the Faculty of Engineering of Universitas Brawijaya are known to be the most, namely S1 / undergraduate numbering 37 people because S1 is a standard determined for employee recruitment besides, knowledge possessed by education staff with Bachelor education in completing work is sufficient support and can improve its performance, for the age of respondents the most are 31 to 40 years as many as 34 people or 45.00%. This shows that most of the education staff at the Faculty of Engineering, Universitas Brawijaya are still relatively young and at productive age. Education staff have good skills, abilities and motivation so that they can improve their performance and the gender of the number of male education personnel is 55% more than the female education staff is 45.00%,

Furthermore, what dominates the working period of respondents is whose working period is 6 to 10 years, so it can be concluded that the Faculty of Engineering Universitas Brawijaya is

dominated by educational staff whose work period is new.

**A. Respondents' Response to Research Variables**

To explain the respondent's response to the research variable, the response analysis given by the respondent was related to the statement. The statement distributed consists of 17 statement items, namely 10 items related to Competence, 2 items related to Motivation, and 5 items related to the performance of the education staff. Criteria for determining the statement of the research variables are:

1. Lowest value =  $1 \times 1 = 1$
2. Top Value =  $1 \times 5 = 5$
3. Score Interval =  $\frac{\text{Top Value} - \text{Lowest Value}}{\text{Total score}}$

Score distribution becomes:

1. 1.00 - 1.80 = Strongly disagree, Very bad, Very low
2. 1.81 - 2.60 = Disagree, Not Good, Low

- 3. 3. 2,61 - 3,40 = Enough to agree, Good enough, High enough
- 4. 4. 3,41 - 4,20 = Agree, Good, High
- 5. 5. 4,21 - 5,00 = Strongly agree, Very good, Very high

B. Respondents Against Competency Variables  
 In this study measured through 10 indicators of variable competence and response results on competency variables can be explained in table 3 as follows:

**Table 3. Respondents' Response to Competence**

No	Question	Score					Total	Total Score	Average
		1	2	3	4	5			
<b>Intellectual Competence</b>									
1	I am always ready to carry out work	0	0	25	37	13	75	288	2.88
2	I am able to create new things at work	0	0	22	30	23	75	301	3.01
3	I care about the work environment	0	0	2	11	62	75	360	3.60
4	I am able to express my thoughts	0	6	17	41	11	75	282	2.82
	Average								3.07
<b>Emotional Competence</b>									
5	My ability to control emotions	0	0	14	36	25	75	311	3.11
6	I am confident in ability	0	0	14	40	21	75	307	3.07
7	My ability to adjust to the environment	0	5	7	41	22	75	305	3.05
8	My ability to understand responsibility	0	0	4	19	52	75	348	3.48
	Average								3.17
<b>Social Competence</b>									
9	My ability to invite and convince colleagues	0	3	15	42	15	75	293	2.93
10	My ability to maintain cooperation	0	0	4	28	43	75	339	3.39
	Average								3.16
	Average variable competence								3.13

Source: Primary Data processed in 2018

- 1.00 - 1.80 = Bad
- 1.81 - 2.60 = Poor
- 2.61 - 3.40 = Good enough
- 3.41 - 4,20 = Good
- 4,21 - 5,00 = Very good

Based on table 5.2, it can be seen that the respondent's response to the competency variable on average is at 3.13, which means it's quite good. This shows that all education staff have fairly good competencies. Intellectual competencies that have the highest respondent responses are an average of 3.07. This value is in categories 2.61 - 3.40 (Fairly Good). In the statement of intellectual competence "I am always ready to carry out work" and "I am able to create new things at work" and "I care about the work environment" and "I am able to express the contents of my mind". This shows that the intellectual competence of the educational staff

in the Faculty of Engineering, Universitas Brawijaya is quite good.

The highest indicator is the response to the intellectual competency dimension of 3.60. This value is in category 3.41 - 4.20 (Good) for the item statement "I Care About the Work Environment". This shows that the education staff of the Faculty of Engineering Universitas Brawijaya always care about their colleagues both in completing work or in facing problems and they work together to solve problems. The lowest indicator is 2.82. The value is at 2.61 - 3.40 (Good enough) for the statement item "I am able to express the contents of the mind". This shows that the educational staff of the Faculty of Engineering Universitas Brawijaya in conveying their thoughts is good but still limited only in the delivery of ideas.

Furthermore, the responses of respondents related to the Emotional dimension have an average of 3.17. This value is in the categories 2.61 - 3.40 (Good enough). The statement in the Emotional competence dimension is "My ability to control emotions" and "I am confident in my abilities" and "My ability to adjust to the environment" and "My ability to understand responsibility". The indicator of the dimensions of emotional competence is 3.48. This value is at 3.41 - 4.20 (Good) for the statement item "Ability I understand responsibility". This shows that the education staff of the Faculty of Engineering, Universitas Brawijaya, especially those who work long ago, understand the responsibility for the work given. This shows that in controlling the Emotional competence of the educational staff of the Faculty of Engineering, Universitas Brawijaya is quite good.

The lowest indicator is the Emotional competence dimension of 3.05. This value is in the number 2.61 - 3.40 (good enough) for the item statement and "My ability to adjust to the environment" This shows that education personnel especially those who are still new need to get attention and need to be improved in terms of adaptability in the work environment.

Furthermore, the response to social competencies is an average of 3.16. This value is

in the number 2.61 - 3.40 (Good enough) The statement in this social dimension is "My ability to invite and convince colleagues" and "My ability to maintain cooperation". This shows that the social competence possessed by the UB Faculty of Engineering education staff is quite good, but it still needs to be improved and received attention.

The highest indicator in respondents' responses to social competence is 3.39. This value is in the category 2.61 - 3.40 (Good enough) for the statement "My ability to maintain cooperation" This shows that in terms of maintaining good cooperation between parts one and the other parts the education staff is good enough.

The lowest response indicator is 2.94. This value is in category 2.61 - 3.40 (Good enough) for the statement "My ability to invite and convince colleagues". This shows that there needs to be attention and education staff need to be improved in various knowledge, ideas and thoughts.

Based on interviews, it was concluded that the conclusions related to the competence of education staff are presented in Table 5.3 as follows:

**Table 4. Conclusion of Results of Interview on Competence**

No.	Indicator	Conclusion
1	Always ready to carry out work	Education staff of the Faculty of Engineering, Universitas Brawijaya I am always ready to carry out work in accordance with Tupoksi
2	Able to create new things at work	Education staff of the Faculty of Engineering, Universitas Brawijaya In general, they are able to think creatively depending on the workload given
3	Care about the work environment	the education staff of the Faculty of Engineering, Universitas Brawijaya are in total care and help each other because they are interrelated between parts
4	Able to convey the contents of his mind	Education staff of the Faculty of Engineering, Universitas Brawijaya are able and have the opportunity to issue ideas and ideas
5	The ability to control emotions	able to control emotions depending on the problem at hand
6	confident in ability	the educational staff of the Faculty of Engineering, Universitas Brawijaya are confident of the ability for the work provided by superiors.
7	Ability to adapt to the environment	For employees who have long been able to adapt to their environment
8	Ability to understand responsibility for the work given	Employees understand the responsibilities of the work given
9	The ability to invite and convince colleagues	Education staff of the Faculty of Engineering Universitas Brawijaya Not all are able to be open
10	Ability to maintain collaboration	Education staff of the Faculty of Engineering Universitas Brawijaya work together in work

C. Statement of Respondents Against Motivation Variables.  
The next research is the motivation variable

measured through 2 indicators and the results of responses to these variables are explained in table 5.4 as follows:

**Table 5. Respondents' Response to Motivation**

No	Statement	Score					Total	Score Total	Average
		1	2	3	4	5			
1	The salary obtained is in accordance with the position performed	0	0	22	38	15	75	293	2.93
2	In working always get support	0	3	20	16	36	75	310	3.10
<b>Average Motivation Variable</b>									3.01

Source: Primary Data processed in 2018

- 1.00 - 1.80 = Bad
- 1.81 - 2.60 = Poor
- 2.61 - 3.40 = Good enough
- 3.41 - 4,20 = Good
- 4,21 - 5,00 = Very good

Based on table 5, it is known that the variable score is at 3.01 which means it is quite good. This shows that in carrying out the tasks and jobs given overall the motivation of the educational staff of the Faculty of Engineering Universitas Brawijaya is in a fairly good category.

Motivational indicators that have the highest average response of 3.10. The response value is at 2.61 - 3.40 (good enough) for the statement "In working always get support" means the respondent's response is quite good. This shows that the Faculty of Engineering Universitas Brawijaya strongly supports education staff who have good motivation in terms of doing a job so they can work better in the future.

The conclusions from the interviews conducted are presented in table 5.5 as follows:

**Table 6. Conclusion of Results of Interviews About Motivation**

No.	Indicator	Conclusion
1	the salary obtained is in accordance with the position and work performed	Payments have been regulated by government regulations
2	in doing work always get support	Employees who work well will always get support.

D. Respondent's Statement Against Performance Variables.

Performance variable measured through 5 indicators and the results of responses to these variables are explained in table 5.6 as follows:

**Table 7. Respondents' Response to Performance**

No.	Statement	Score					Total	Total Score	Average
		1	2	3	4	5			
1	I always complete work according to standards	0	7	16	28	24	75	294	2.94
2	A day I can finish some work	0	0	22	35	18	75	296	2.96
3	I enter and leave work according to work schedule	0	1	26	34	14	75	286	2.86
4	In my work I am always responsible	0	2	9	38	26	75	313	3.13
5	I completed the work at the appointed time	0	2	20	36	17	75	293	2.93
<b>Average Performance Variable</b>									2.96

Source: Primary Data processed in 2018

- 1.00 - 1.80 = Bad
- 1.81 - 2.60 = Poor
- 2.61 - 3.40 = Good enough
- 3.41 - 4,20 = Good
- 4,21 - 5,00 = Very good

Based on table 5.6 it is known that the respondent's score of the performance variable is average at 2.96 which means it's quite good. This shows that the entire educational staff of the Faculty of Engineering Universitas Brawijaya already has a pretty good performance. The highest average indicator of response performance is 3.13. This number is at 2.61 - 3.40 (good enough) for the statement "In my work I am always responsible" This shows that in carrying out the work given by the Kependidikan staff, it will take full responsibility in accordance with the duties of each field.

In addition, the average performance indicator that has the lowest response is 2.86. This figure is at 2.61 - 3.40 (good enough) in the statement "I enter and go home to work according to work schedule" shows that the education staff in this indicator is quite good even though there are also those who arrive late and do not work for no reason, so the points this presence needs to be considered so that the performance of education staff can be optimal. Based on the conclusions the interviews conducted are presented in table 8 as follows:

**Table 8. Conclusion of Interview Results About Performance**

No.	Indicator	Conclusion
1	Complete work according to standards	The system of work carried out by the Faculty of Engineering, Universitas Brawijaya is already based on the main tasks and functions carried out in stages
2	A day can finish some work	Within a day can finish the job depending on the level of difficulty of the work or the tasks assigned
3	Work attendance in accordance with a predetermined work schedule	Timeliness of the presence of educational staff is quite good
4		In carrying out the work provided Always responsible in accordance with tupoksi
5	Have responsibility for the work done	In the Faculty of Engineering not all education personnel are able to complete the work in accordance with the specified time.

**Table 9. Number of Job Load in each unit in the Faculty of Engineering, University of Brwijaya**

No	Nama Jabatan	Jumlah Beban Kerja Jabatan
1	Faculty Academic Staff	2887
2	Academic Staff Department of Civil Engineering	11394
3	Staff of the Academic Department of Mechanical Engineering	9808
4	Academic Staff of the Water Resources Engineering Department	9185.72
5	Academic Staff of the Department of Electrical Engineering	11394.64
6	Staff of Academic Affairs Department of Architecture	6897.54
7	Academic Staff of PWK Department	5230.72
8	Staff of the Academic Department of Industrial Engineering	5912
9	Staff of the Academic Department of Chemical Engineering	8435
10	Finance Section Staff	7615.33
11	Staffing Section Staff	4600.63
12	Student Affairs Staff	1080
13	Correspondent Staff	6490.49
14	Procurement & Technician Staff	8572.88
15	BPP Section Staff	1681.17
16	Chief Secretary	4475.67
17	PSIK Section Staff	4271.6
18	Security Unit	13104
19	General Staff (Driver)	5664.5
20	General Staff (Cleanliness) Staff	4723.33
	<b>Total</b>	<b>133424</b>

Source: Primary data processed 2018

Based on Table 9, it can be concluded that the number of Occupational Workloads in the service unit of the Faculty of Engineering, University of Brawijaya, is 133424 and below is a clearer graph of the number of workloads. With the results of the analysis of the workload, it can be known which service units experience the excess and lack of workload, so that from the leadership level can propose changes.

#### **RESULT AND DISCUSSION**

Workload analysis is to calculate the time and capability of education staff in carrying out their tasks. The workload of government institutions, especially also in the tertiary environment, is still lacking so that the problems that arise in terms of providing services are often only attributed to low work motivation and lack of work incentives, besides instability of agency work volumes, which is a small period and work can be a lot in another period.

#### **CONCLUSION**

Based on the results of research and processing of workload analysis data, it can be concluded as follows:

1. The workload conditions at each service unit position at the Faculty of Engineering, Universitas Brawijaya are found to be unevenly divided into workloads where there are positions that exceed the workload that should be.
2. Through the analysis of workloads and identification of appropriate personnel needs, the results obtained are needed by 106 people, while the existing number is 119 people (not including 1 Section Head and 4 Head of Sub-Section and 20 Laboratory Functional Staff) so that there are over 13 education staff, from the results of the analysis it is necessary to change the formation

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