Firefighters Service in the Sudin Environmental Fire Control and Saving in East Jakarta

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This study aims to analyse the service quality in terms of training and competency of the firefighters. The theory used in this study refers to the findings of Simamora, Moeheriono and Mangkunegarabah that have influence between Training and Competence on Service Quality.

The research methods used were quantitative methods using questionnaires and involving a population with the total number of 97 people. From the total population, 78 respondents were selected as the sample of this study by using Slovin's formula. Based on the research results obtained by using partial and multiple linear regression analysis with SSPS Conversion 20, it was found that: partially, the Training has a significant positive effect of 34.7% on Service Quality. For Competence, it has a positive and significant effect on Service Quality of 21.8%. Free variables of Training and Competence together were tested by using F test, which showed that it has a positive and significant effect on Quality of Service, which can be seen from the Determination Coefficient value (R2) that was 45.3%.

Key words: *Training, Competence, and Service Quality.*

Background of Study
Introduction

Jakarta is one of the cities in Indonesia which is prone to fires. The city has a fairly dense urban area both in terms of population and its buildings. This condition increases the risk of fire disasters. As one of the cities that is prone to fire, the DKI Jakarta Government needs extra resources to provide assistance and fire handling services. In implementing fire management at the Provincial level, the DKI Jakarta Government forms a Fire and Rescue Service Office, while at the city level, it is assisted by a Service Unit which is divided into five administrative cities in Jakarta consisting of Jakarta Pusat, North Jakarta, West Jakarta, South Jakarta and East Jakarta.

On this basis, the East Jakarta Fire and Rescue Management Sub-Department needs to intensify training activities for their officers, especially field officers who have problems handling dangerous sensitive cases directly, that they are not careful with due to slow response to fire and lack of hands-on skills. The intensive provision of training to officers then is hoped to improve the work competency of the officers, thus their performance will become better in time.

Literature Review
Public Service

The Dictionary of Indonesian Language explains 'services' as methods, or results of service work (Poltak S, 2011: 5). In another view, 'service' is a series of activities, since it is recognised as a process.
Based on the above information, the term 'service' is an activity carried out between relationships and service providers using equipment such as organisations or companies.
The term 'public' on the other hand is discussed in the UK public as general, society, and state. 'Public' is actually accepted as an Indonesian Language term which means general, many people, and crowded. The right way to use is that the 'public' actually means 'the people who are often termed government employees who serve the interests of the whole community' (Poltak S, 2011: 5).
In Indonesia, the concept of service administration is always used jointly or by the cases of the licensing services and and public services as well.

The Meaning of Training

In the following description, there are several notions of 'training' from the experts which is one of the independent variables namely Training (X1) chosen by the author.

According to Wexley and Yuki in As'ad (2013: 33), "Job training or development is a term that involves business in order to achieve mastery of skills, knowledge and changes in attitudes relevant to work." Meanwhile, according to Armstrong (2013: 59), "Training is an effort to improve general knowledge and understanding of the environment as a whole and increase the knowledge and expertise of an employee."

According to Handoko (2014: 107), "People should not stop learning after completing their school because learning is a lifelong process, therefore training and employee development programs must be continuous and dynamic". Wibowo (2011: 442) also states that "Training is an investment of organizations that is important in human resources as it involves all human resources to obtain knowledge and skills."

The Factors that Affect Training

According to Mangkunegara (2013: 45-46), the factors needed in training and development includes:
1. Individual differences; 2. Relations with analysis positions; 3. Motivation; 4. Active participation; 5. Selection of upgrading participants; 6. Training and development methods.
In order to get perfect final results of the training, it must be noted that the process during the training is continuously necessary in terms of the training participants.

Type of Training
Based on analysis of training needs that have been carried out, it is necessary to conduct training to improve the quality of service and work at the lower and middle levels;

Training Indicator
The final stage after training and development is evaluation, which aims at testing the effectiveness of the training and development.

To assess the effectiveness, it can be evaluated using the following indicators;
1. Reaction, that is how well participants like training and development; 2. Learning, that is how far the participants learn the facts, principles and approaches in training and development; 3. Results, that is how far employee behaviour changes due to the training and development and also whether there is an increase in productivity that has been achieved;

Determination of Skills Aspect
Skills are a series of actions of observation, re-expressing, planning and doing, both reproductive and productive. Skills are arranged according to some categories as follows:

1. Knowledge skills which include decision making, problem solving and logical thinking; 2. Psychomotor skills; that is to carry out physical actions; 3. Reactive skills – habits and introspection; 4. Interactive skills – acting in interaction with others that contain elements of physical and thinking activities; 5. Determination of aspects of attitude.

Attitude contains values, behavioural and feeling attitudes as a basis for behaviour as a whole. Aspects of skills are arranged by some categories including:

1. Acceptance that is sensitive to symptoms and stimuli, and it accepts and resolves these symptoms and stimuli; 2. Greetings, are actively following, realizing and carrying out certain symptoms themselves; 3. Assessment, is steady behaviour and settles and contains sincerity of conscience and active control of behaviour; 4. Organisation, is the behaviour of institutionalising, organising, and establishing interactions between values and making it as an establishment; 5. Character, is institutionalising a value of the state of the system in an individual and behaving according to the system.

With the existing evaluation, the results of the training and development that have been carried out will reveal whether the results are in accordance with what is expected by the agency or if further training and development is needed for employees. All of this can be assessed from the evaluation, so the agency knows what to do in the future.

Competence

According to Palan (2008), competency is defined as the underlying characteristics of behaviour that describe motives, personal characteristics, concepts, values, knowledge, or skills that are performed by someone who is superior in the workplace. According to Prihadi (2014), there are 2 (two) main themes in the definition and concept of competencies originating from different sources. First, *competence* - that is where competence generally refers to the ability to carry out a job or part of jobs competently. Second is *competency,* which refers to a set of behaviours that must be demonstrated by the person concerned in working with tasks and functions with competence.

Characteristics of Competence

Parents of competency incorporated in the Hay-Macber group (pioneered by MC Clelland, Boyatzis, Spencers and Spencer), in Prihadi (2014), suggest five following competency characteristics: 1) Motives: motives are things that people think or want consistency that results in actions. 2) Traits: personal characteristics refer to physical characteristics and consistency of responses to situations or information. Controversy on emotions and initiatives is a response towards something more complex. 3) Self-Concept: this category includes attitudes and values. The value of an individual has an attitude that can predict what someone will do in a short time. A person who has values becomes a leader more likely to show leadership behaviour. An assignment will be the lead of his or her own leadership in this case; 4) Knowledge: this category refers to the information and learning outcomes that a person has in certain fields; 5) Skills: is the ability of a person to do a job both physically and mentally. The competence of mental skills or cognitive includes analytical thinking (processing of knowledge and consequential causation, organising data) and conceptual thinking (recognising patterns in the complex).

Competency Concept

Prihadi (2014) stated that the level of competency has implications for human resource planning. Group Day-Macber describes the concept of competence as illustrated in Figure 2.1 below:

Figure 2.1: Competitive Model of Iceberg (Prihadi, 2014)
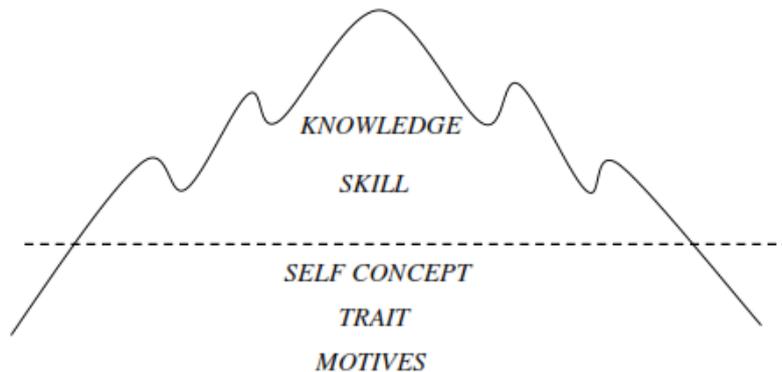
Factors that Affect Competence

Zwell (2010) in Wibowo (2013: 339) revealed that there are several factors that can affect a person's competence that are made up of beliefs and values. Having beliefs about himself and others will influence someone's behaviour. If someone believes that they are creative and innovative, they will think about new or different things to do. Skills: skills play a role in most competencies. Experience: expertise from many competencies requires experience in organising people, competency in group meetings, solving problems, and so on. Personality characteristics: personality can influence the skills of managers and workers in a number of competencies including in conflict resolution, work ability in teams, and providing influence and building relationships. Motivation is a factor in competency that can be changed. Emotional issues are barriers to emotions which can restrict the mastery of competence. Intellectual ability refers to t competence depending on cognitive thinking such as conceptual thinking and analytical thinking.

Dimension of Competence

According to Moeheriono (2012: 16), there are five dimensions of competency that must be possessed by individuals, especially for an employee in carrying out their duties in the organisation as follows: task skills, skills for carrying out routine tasks according to the work standards. Task management skills refers to the skills managing a variety of different tasks on work. Action-taking skills refer to the skills of taking fast and immediate action when there is a problem in job. Collaborative skills (job role environment skills) refers to skills for employment as well as maintaining the comfort of the work environment. Adaptation skills (transfer skills) are skills for dealing with the new environment.

Service Quality

Quality of service is a word for service providers showing that something is done well. The advantages of a service product depends on the uniqueness and quality shown by the service in accordance with the expectations and desires of the customer. The customer satisfaction can be defined as the difference between the reality and the expectations of customers for the services they receive. According to Kotler (2013: 20), service is any action or activity that can be offered by a party to another party which is basically intangible and does not result in any ownership. Quality of service performance is the expected level of excellence and control over the level of excellence to fulfil the customer's desires (Tjiptono, 2014: 59). There are two main factors that influence the quality of the company's services, namely customer expectations and the company's performance perceived by customers.

Service is an activity or sequence of activities that occurs in direct interaction between someone and another person or machine physically and it provides customer satisfaction (Koetamsi, 2007)
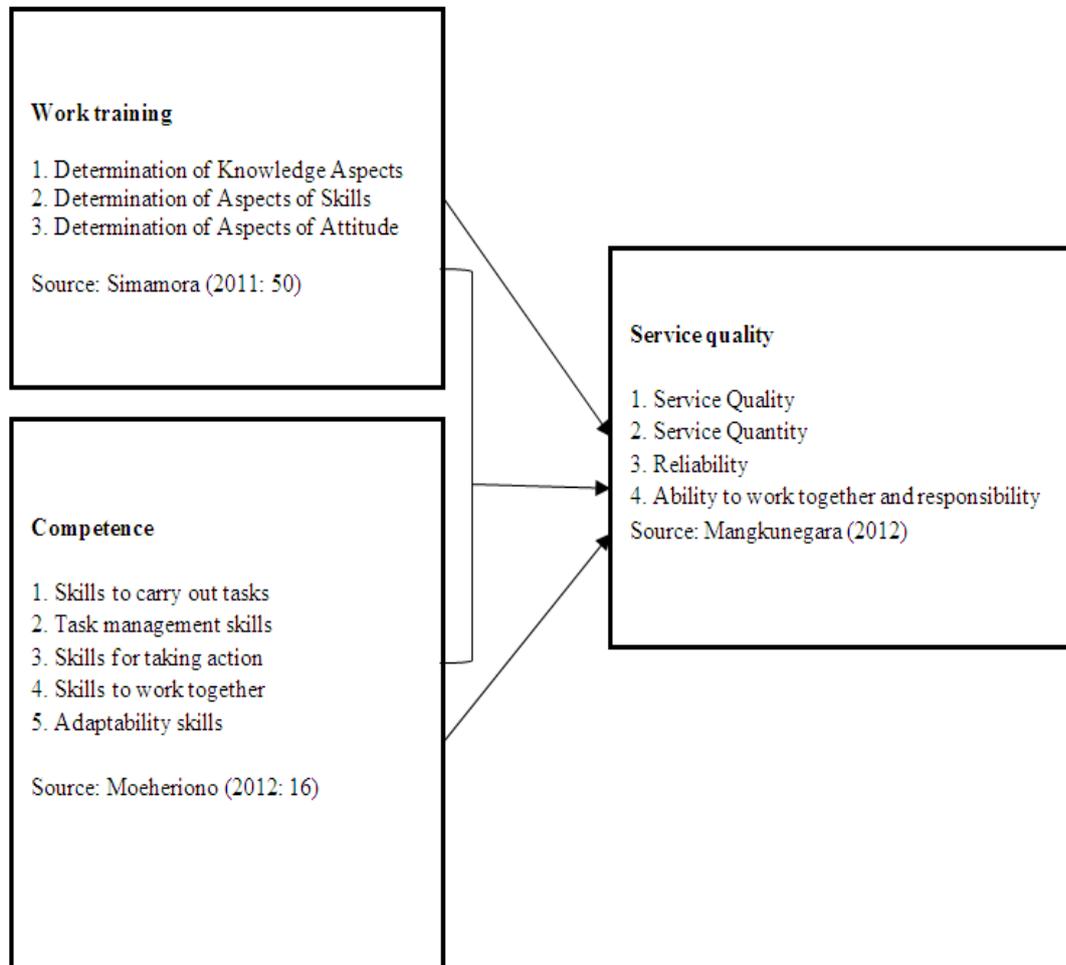
Concept of Service Quality

It can be said that the service or service component plays a strategic role in every business. Purchasing an item is often accompanied by an element of service. Likewise, a service is often expanded by entering or adding physical products to the service offering. Generally, services are more intangible, and cannot be seen and touched, thus users can only have direct experience. However, service also includes things that are tangible which can be seen and touched physically and the service itself (Tjiptono and Chandra, 2016: 175).

Conceptual Framework

The development of the ability of professional employees can be created by providing education and training to the concerned employees. Education and training are aimed to improve employees' competency and quality especially in terms of knowledge, abilities, and skills (Arep and Tanjung, 2003). The company is expected to be able to provide and form a skilled and competent workforce in carrying out jobs that are increasingly demanding high work skills. The employees need to be trained so that they can master their field of work well, in the end, the training will improve their performance.

On this basis, the research concept framework can produce the effect of training and competency on service quality, as follows:

Figure 2.2. Research Conceptual Framework Model

Work training

1. Determination of Knowledge Aspects
2. Determination of Aspects of Skills
3. Determination of Aspects of Attitude

Source: Simamora (2011: 50)

Competence

1. Skills to carry out tasks
2. Task management skills
3. Skills for taking action
4. Skills to work together
5. Adaptability skills

Source: Moeheriono (2012: 16)

Service quality

1. Service Quality
2. Service Quantity
3. Reliability
4. Ability to work together and responsibility

Source: Mangkunegara (2012)

Hypothesis

Based on the conceptual framework, the hypotheses (temporary estimates) in this study are as follows:

1.Training has a positive and significant effect on the quality of service for firefighters in the East Jakarta Fire and Rescue Management Sub-Department; 2. Competence has a positive and significant effect on the quality of service of firefighters in the East Jakarta Fire and Rescue Environment Sub-Department; 3. Training and Competence simultaneously have a positive and significant effect on the quality of service of firefighters in the East Jakarta Fire and Rescue Environment Sub-Department.

Research Methods
Research Approach

This research is descriptive quantitative in nature. The variables in the study consisted of two independent variables namely 'Training' as variable X1, 'Competence' as variable X2, and one dependent variable, namely 'Service quality' as variable Y.

Table 3.1: Training Variable (X1)

Variable	Dimension	Indicators
Training (X_1)	Determination of Knowledge Aspects	Concept Principle Fact Procedure
	Determination of Skills Aspects	Skills Knowledge Skills Psychomotor Reactive skills Interactive skills
	Stance Aspect Determination	Reception Welcome Assessment Organisation Character

Source : Simamora (2011:50)

Table 3.2: Competency Variable (X2)

Variable	Dimension	Indicators
Competence (X₂)	Skill in carrying out the tasks	Mastery of Work Equipment Mastery of Procedures and Working Methods
	Skill in processing the tasks	Understanding the Rule of Work or Job Understanding Company Policy Understanding Company Objectives
	Skill in taking the action	Understanding Company Targets Able to work together with coworkers without conflict
	Skill in cooperation	Ability to Work in Teams
	Adaptation Skill	Ability to empathize

Source : Moeheriono (2012:16)

Table 3.3: Service Variable (Y)

Variable	Dimension	Indicators
Service quality (Y)	Service quality	A Accuracy Skills
	Service quality	More Faster
	Reliability	Craft Initiative Instrusive
	Cooperative Ability and Responsibility	Working with fellow employees Dedicated to the Company Working optimally and responsibly

Source: Mangkunegara (2012)

Type of Data

The type of data used in writing consists of qualitative data obtained in the form of information both oral and written obtained from quantitative data from the East Jakarta Fire and Rescue Management Sub-Department, in the form of numbers related to the problem of the study.

Questionnaire

The questionnaire is a technique of data collection conducted by giving a set of questions or written questions to the respondent to answer (Sugiyono, 2014: 230). The questionnaire in this study contained several questions related to the research variables, namely, Training, Competence and Quality of Service Performance.

Interview

The interview method in this study was carried out by direct face-to-face interviews and submitting oral questions to employees of the East Jakarta Fire and Rescue Management Sub-Department.

Literature

In this study, the data collection is carried out by retrieving data from various sources, namely books, internet, and journals that are used as a theoretical basis and reference to make the questions / statements in the research.

Sampling Technique Population

Population is a generalisation area consisting of objects/subjects that have certain qualities and characteristics determined by the researcher to be studied and then concluded (Sugiyono, 2012: 80). The total population of this study is 97 firefighters in the East Jakarta Fire and Rescue Management Sub-Department in the Environment.

Table 3.4: Total Population of the Research

No	Groups	Population
1	Kasudin dan Kasie	15
2	The Chief of Peleton (platoon)	30
3	Urban Village Community in East Jakarta	52
Total		**97**

Sampling technique

In determining the size of the sample, researchers used the Slovin formula as follows:

$$n = \frac{N}{1 + Ne^2}$$

Description:

n = sample size

N = population size

e = Percentage of inaccuracy due to sampling errors that are still tolerated which is 5%. (Umar: 2013: 78)

So for the number of population that was 97, the calculation for finding samples is as follows:

$$n = \frac{97}{1 + 97\,(0{,}05)^2}$$

n = 78.07 integrated to 78

Based on the above calculation, the number 78.07 is integrated to 78. So, the sample in this study was chosen to be 78 respondents only. The sampling technique used in this study was Random Sampling.

Table 3.5: Number of the Samples

No	Groups	Population	Sample			
1	Kasudin dan Kasi	15	78	/97 x 15	=	12
2	The Chief of Peleton (Palatoon)	30	78	/ 97 : 30	=	24
3	Urban Village Community in East Jakarta	52	78	/ 97 52	=	42
Total		**97**				

Validity Testing

According to Arikunto (2012: 78), validity is "a measure that shows the levels of validity or expertise of an instrument." An instrument is said to be valid if it is able to measure what is desired and it can reveal data from variables that are examined appropriately. In this study, the validity used is internal validity, namely; the validity achieved when there is a match between the parts of the instrument as a whole.

In this study, item analysis was used to test the validity of each item, the scores on each item were correlated with the total score. The formula used is a test of Product Moment Correlation formula:

$$r_{xy} = \frac{N.\sum xy - (\sum x)(\sum y)}{\sqrt{\{N.\sum x^2 - (\sum x)^2\}\{N.\sum y^2 - (\sum y)^2\}}}$$

Description:

Rxy = Correlation coefficient between variables X and variable Y
N = Number of respondents
$\sum$X = Number of item scores
$\sum$Y = Total score
$\sum$XY = Number of product score multiplication questions
$\sum$X2 = Number of squares of item scores
$\sum$ Y2 = Number of squares of total score

Then the results of the hit rxy are consulted with r table with a significance level of 5%. If the rxy hit price is obtained >r table, then the instrument is said to be valid, but conversely if the price of rxy hits <r table, then it is said that the instrument item is invalid (the result of the Validity Test attached).

Research Result
Description of Research Results

Description analysis is used to determine the state of each variable. The analysis carried out includes: average, median, mode, standard deviation, and data visualisation in the form of tables and graphs. Based on the research problems, this study consists of two independent variables and one dependent variable including the Training variable (X1), Competence (X2), and Service Quality (Y). The samples taken in this study were 78 employees in the Fire Management Sub-Department and Rescue of East Jakarta.

Category of Variables

The categories of each variable are grouped into four categories: Very Good, Good, Good Enough and Poor. The steps for grouping the percentage categories are:

Calculate the maximum percentage

$$\frac{Questionnaire\ maximal\ score}{Questionnaire\ Maximal\ score}\ x\ 100\%$$

$$\frac{5}{5}\ x\ 100\% = 100\%$$

Calculating a minimum percentage

$$\frac{Questionnaire\ minimal\ score}{Questionnaire\ maximal\ score}\ x\ 100\%$$

$$\frac{1}{5}\ x\ 100\% = 20\%$$

Calculate the percentage range

Maximum percentage - Minimum percentage

100% - 20% = 80%

Looking for class length

$$\frac{Percentage\ Interval}{The\ Total\ Criteria} = \frac{80}{4} = 20$$

The results of the descriptive category of the percentage of each variable can be seen in the table below:

Interval	Criteria
81% $\leq$ % $\leq$ 100 %	Very good
61 % $\leq$ % $\leq$ 80 %	Good
41 % $\leq$ % $\leq$ 78 %	Enough
20 % $\leq$ % $\leq$ 40 %	Less

After knowing the descriptive categories for each variable, the next step is to find the percentage value of each variable with the following formula:

$$NP = \frac{R}{SM}\ x\ 100\%$$

Description

NP = Value in percent (%)
R = Average real score achieved by students
SM = Ideal score

Description of Research Variables

The description of each variable is based on the results of distributing questionnaires to 78 respondents, the results of which can be explained as follows:

Training Variables (X1)
Based on the variable 'Training in the field' using a questionnaire with a total of 18 items, the results of the descriptive analysis were obtained as follows:

Table 4.2: Data Description Training Variables (X1)

N	Valid	78
	Missing	0
Mean		66.3462
Median		67.0000
Mode		70.00
Std. Deviation		5.28617
Minimum		53.00
Maximum		77.00
Sum		5175.00

Source: Author's processed primary data of 2018

Based on Table 4.2, the description of the 'Training' variable shows the number of respondents was 78 people, the lowest score was 53 and the highest score was 77 with a total score of 5175. The average (Mean) was 66.35, median was (Me) 67, mode was (Mo) 70, and Standard Deviation was 5.29. The distribution of 'Training' variable data is described by the histogram graph below:

Figure 4.1. Histogram Variable Graph X_1
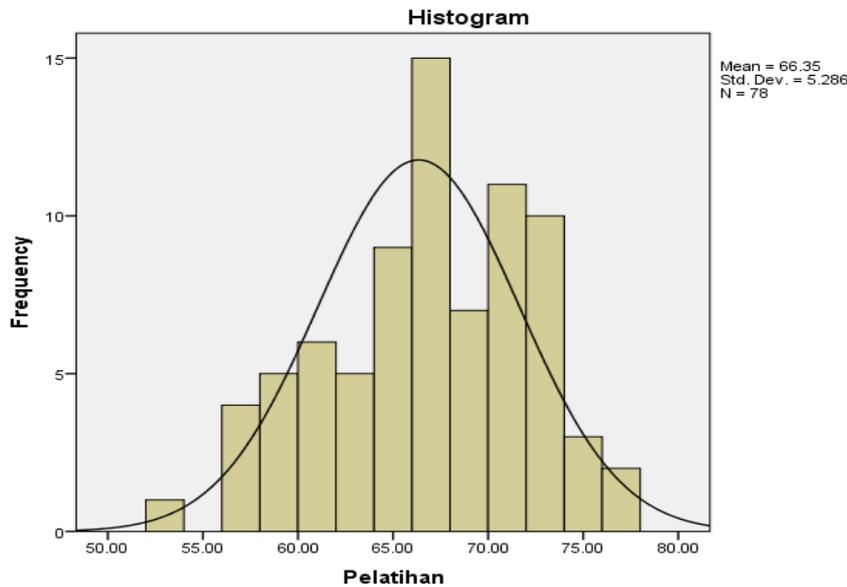
Furthermore, to find out the training variable categories in the East Jakarta Fire and Rescue Sub-department Environment, the percentage descriptive values were calculated first:

$$NP = \frac{R}{SM} \; x \; 100\%$$

$$NP = \frac{R}{SM} \; x \; 100\% = \frac{66{,}35}{18 \; x \; 5} \; x \; 100\% \; = \frac{66{,}35}{90} \; x \; 100\%$$

$NP = \; 73{,}72\%$

From the calculation results obtained, the percentage of training was 73.72%. After being matched with the descriptive percentage categories, it was concluded that the 'Training' variables in the East Jakarta Fire and Rescue Management Sub-Department were classified as good.

- Variable Competency (X2)

Based on the data collection of 'Competency' variables in the field using a questionnaire consisting of 16 items, the results of the descriptive analysis are obtained as follows:
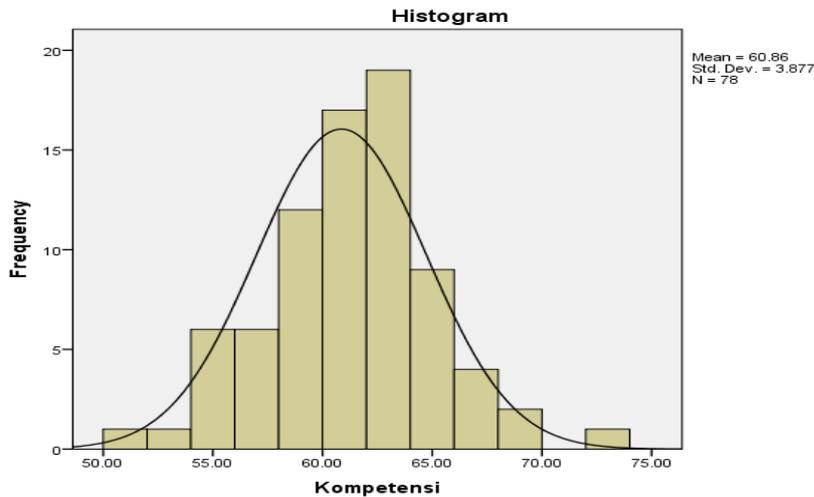
Table Description Variable Competency (X2)

N	Valid	78
	Missing	0
Mean		60.8590
Median		61.0000
Mode		63.00
Std. Deviation		3.87709
Minimum		51.00
Maximum		73.00
Sum		4747.00

Source: Author's processed primary data 2018

Based on the description of the 'Competency' variable in the above table, the number of respondents was 78 people, the lowest score was 51 and the score was high 73, with a total score of 4747. The average (Mean) was 60.86, median (Me) was 61, mode (Mo) was 63, and standard deviation was 3.88. The variable data distribution for 'Competency' can be described by the histogram graph below:

Figure 4.2. Histogram Variable Graph X2

Furthermore, to find out the category of 'Employee competency' variable in the East Jakarta Fire and Rescue Environment Sub-department, the percentage descriptive value was calculated as follows:

$$NP = \frac{R}{SM} \; x \; 100\% = \frac{60,86}{16 \; x \; 5} \; x \; 100\% = \frac{60,86}{80} \; x \; 100\%$$

$$NP = 76,07$$

From the results of the obtained calculation, the percentage of 'Competence' was 76.07%. After being matched with the descriptive categories of the above percentages, it was concluded that 'Employee competency' in the East Jakarta Fire and Rescue Environment Sub-Department was in the category of having good competence.

Variable Quality of Service Performance (Y)

Based on variable data collection on the 'Quality of Service Performance in the Field' by using a questionnaire consisting of 17 items, the results obtained were as follows:

Table 4.4: Description Variable Quality of Service Performance (Y)

	Valid	78
	Missing	0
Mean		63.7051
Median		64.0000
Mode		64.00
Std. Deviation		4.17509
Minimum		55.00
Maximum		73.00
Sum		4969.00

Based on the above table regarding the distribution of data 'Quality of Service,' the number of respondents was 78 people, the lowest score was 55 and a high score 73, with a total score of 4969. The average (Mean) was 63.71, median (Me) was 64, mode (Mo) was 64, and standard deviation was 4.18. Variable data on 'Quality of Service Performance' can be described by the histogram graph below:

Figure 4.3. Histogram Variable Graph Y
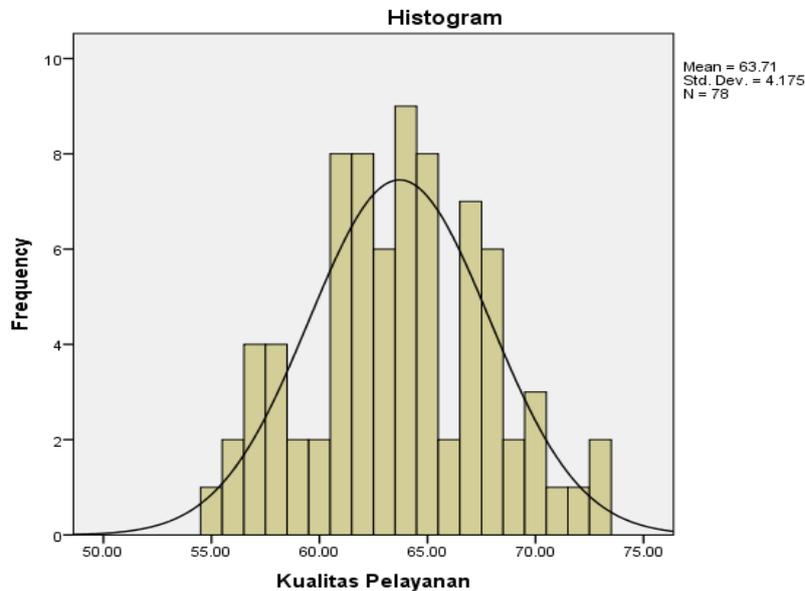
Furthermore, to find out the trend regarding 'Service Quality in the East Jakarta Fire and Rescue Environment Sub-department,' the percentage descriptive value was calculated first as follows:

$$NP = \frac{R}{SM} \; x \; 100\%$$

$$NP = \frac{63{,}71}{17 \; x \; 5} \; x \; 100\% = \frac{63{,}71}{85} \; x \; 100\% = \; 74{,}95$$

From the results of the calculation obtained, the percentage of the 'Quality of Service Performance' was 74.95%. After being matched with descriptive percentage categories, it was concluded that the 'Quality of Service Performance in the Fire Mitigation Environment Sub-Department and East Jakarta Rescue' is categorised as having good service quality.

Testing Requirements Analysis
Normality Test

Normality testing is done in order to find out whether the population is normally distributed. The normality test of the data in this study used the One-Sample Kolmogorov-Smirnov Test method with the significance level used as a rule to accept or reject the normality test, whether or not a data distribution is a significance level $\alpha = 0.05$. The data is normally distributed if the significance value is greater than 0.05.

The results of the analysis of the normality test for each variable based on the output of SPSS are summarised as follows:

Tabele 4.5: Result of Normality Test

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Training	.089	78	.197
Competence	.085	78	.200[*]
Service quality	.071	78	.200[*]

Based on the Kolmogorov-Smirnov normality test table for 'Training' variables (X1), a significance value (Sig.) of 0.197 was obtained indicating that the Sig. >0.05. 'Competency' variable (X2) obtained a significance value (Sig.) of 0.200 which indicates that the value of Sig. >0.05. and the 'Service Quality' variable (Y) obtained a significance value (Sig.) of 0.200, that indicates that the Sig. >0.05. Because all the Sig. research variables are greater than 0.05, it can be concluded that the spread of data on all research variables is normally distributed.

Linearity Test

Linearity Test X1 with Y

The results of the linearity test with SPSS for 'Training' variables (X1) with 'Service Quality' variables (Y) is presented in Table 4.6 below:

Tabel 4.6: Linearity test X_1 and Y

				Mean Square		
Quality of Training Service	Between Groups	(Combined)	22	33.573	3.059	.000
		Linearity	1	465.653	42.430	*.000*
		Deviation from Linearity	21	12.998	1.184	.300
	Within Groups		55	10.975		
	Total		77			

Based on the above table, it is known that the significance value in linearity was 0,000. Because the significance value of linearity was less than 0.05 (0,000 <0,05), it can be concluded that there was a linear relationship between 'Service uality' variables and 'Training' variables. With this, the linearity assumption between variable X1 and variable Y was fulfilled.

Linearity Test X2 and Y

The results of linearity test with SPSS for 'Service Quality' variable (Y) with 'Competency' variable (X2) is presented in Table 4.7 below:

Table 4.7: Linearity Test X2 with Y

				Square	F
Quality of Competence Services	Between Grou	(Combined)	18	2.962	1.476
		Linearity	1	292.402	18.572
		Deviation from Linearity	17	7.112	.452
	Within Groups		59	15.744	
	Total		77		

Linearity Test X2 with Y

				Square		
Quality of competence services	Between Groups	(Combined)	18	22.962	1.476	139
		Linearity	1	292.402	18.572	*000*
		Deviation from Linearity	17	7.112	.452	964
	Within Groups		59	15.744		
	Total		77			

Based on the above table, it is known that the significance value in Linearity was equal to 0,000. Because the significance value of Linearity was less than 0.05 (0,000 <0,05), it can be concluded that there was a linear relationship between 'Service Quality' variables (Y) and 'Competency' variables (X2). With this, the linearity assumption between variable X2 and variable Y were fulfilled.

Multicollinearity Test

The Multicollinearity test is used to find out whether there is a perfect relationship between independent variables. A good regression model should not have a correlation between independent variables. A regression model that is free from multicollinearity can be seen if it has a Variance Inflation Factor (VIF) value below 10 and a tolerance value above 0.1.

Multicollinearity testing in research is based on the outputs of the SPSS program as follows:

Model		Sig.	Collinearity Statistics	
			Tolerance	VIF
(Constant)	.380	.020		
Training	.681	.000	.934	1.071
Competence	.817	.000	.934	1.071

Based on the above table, it can be seen that the Variance Inflation Factor (VIF) value of the Training variable (X1) and the Competency variable (X2) = 1,071, = 4,718, both of which are smaller than 10, so the tolerance value is greater than 0,1 (0,934). Thus, it can be concluded that there is no linear influence between independent variables, or the regression model does not occur multicollinearity problems.

First Hypothesis: Effect of Training on Service Quality (X1 □Y)
The hypothesis tested is:
Ho: $\rho X1Y = 0$
Ha: $\rho X1Y \neq 0$

This means that if the results of the calculation of the analysis obtained is the value of the influence of X1 with Y equals 0 (zero), it is concluded that there is no positive influence between 'Training' on 'Service Quality,' If the first hypothesis cannot be proven, then the alternative hypothesis was that there was a positive influence between 'Competency' on 'Service Quality.'

a. Dependent Variable: Service Quality
From the results of the analysis in the above table, the value of the t count obtained was 6.354 with the value of Sig. 0,000. This t count is compared with the value of t table at a significant level of 0.05 with df (78–2) = 76, the obtained value is 1.992. After being compared, it turns out that the t count is greater than t table (6.354> 1.992). Likewise, with the significance level obtained of (p-value), Sig <value α (0,000 <0,05) , it can be seen that Ho is rejected and Ha is accepted. So, it can be concluded that Training has a significant effect on Service Quality.

Furthermore, after it was concluded that the regression line equation had a significant effect, then it showed how much it influences the 'Training' variable on 'Service Quality,' the results of the analysis are as follows:

Determination Coefficients X1 toward Y

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.589ᵃ	**.347**	.338	3.39614

Based on the results of the analysis of the above Coefficients Determinants, it can be seen that the determination coefficient (R Square) was 0.347. This means that the 'Training' variable has a partial influence on 'Service Quality' around 34.7%.

Second Hypothesis: Effect of Competence on Service Quality (X2 □Y)

The hypothesis tested is:

Ho: $\rho X1Y = 0$

Ha: $\rho X1Y \neq 0$

This means that if the results of the calculation of the analysis get the value of the effect of X2 with Y equal to 0 (zero), then it is concluded that there is no positive influence between Competency and Service Quality. If the first hypothesis cannot be proven, then it uses the alternative hypothesis of an existing positive influence between Competence and Service Quality.

Based on the results of regression analysis using SPSS, the following information is obtained:

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	d. Error	Beta		
1	(Constant)	33.116	6.662		4.971	000
	Competence	.503	.109	.467	**4.601**	**000**

a. Dependent Variable: Service Quality

From the results of the above table analysis, the information obtained shows the value of the t count is 4.601 with Sig. 0,000. This t count is then compared with the value of the t table at a significant level of 0.05 with df (78–2) = 76, the obtained value that is 1.992. After being compared, it turns out that the t count is greater than t table (4.601> 1.992). Likewise, with the significance level (p-value), it is known the Sig <value of α (0,000 <0,05), and it can be concluded that Ho is rejected and Ha is accepted. So that it can be seen that 'Competence' significantly affects 'Service Quality'.

Then it was concluded that the regression line equation had a significant effect. To determine how significant the 'Competency' variable is on 'Service Quality', the results of the analysis were observed as follows:

Determination of X2 Coefficients towards Y as follows:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.467[a]	*.218*	.931	2.043

Determination of X2 Coefficients towards Y as follows:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
		8	1	43

Based on the above analysis of Coefficients Determinants, it can be seen that the obtained coefficient of determination (R Square) is 0.218. This means that the 'Competency' variable partially influences 'Service Quality' at around 21.8%.

Joint/ Simultaneous Test (Test F)

To find out the effect of independent variables on the dependent variables (simultaneous), the F test is used. The test is carried out in the following ways:

Comparing the value of F count with F table.
If F count >F table then Ho is rejected and Ha is accepted, so it can be concluded that there is an influence between variable X together on variable Y.
If t count <t table then Ho is accepted and Ha is rejected, it can be concluded that there is no effect between X variable on Y variable.
Comparing the significance probability value (Sig.) with the value of α (0.05).
If Sig. <0.05, then Ho is rejected and Ha is accepted, so it can be concluded that there is an influence between variable X together on variable Y.
If Sig. > 0.05, then Ho is accepted and Ha is rejected, so it can be concluded that there is no influence between variable X together on variable Y.
Third Hypothesis: Effect of Training (X1) and Competence (X2) Together on Service Quality (Y)
To test the effect of independent variables simultaneously (together), the F test is used. The hypothesis tested is:

H0: $\rho X12\ Y = 0$
H1: $\rho X12\ Y> 0$
This means that if the results of the calculation of the analysis get the value of the effect of X1 and X2 on Y equal to 0 (zero), it is concluded that there is no positive influence between 'Training' (X1) and 'Competency' (X2) together on 'Service Quality' (Y). If the first

hypothesis cannot be proven, then using an alternative hypothesis is: that there is a positive influence between both training (X1) and competence (X2) on service quality (Y).

Based on the results of multiple regression analysis using SPSS, the following information is obtained:

Variable Regression Coefficients X1 and X2 towards Y

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.290	6.426		2.380	.020
	Training	.397	.070	.502	5.681	.000
	Competence	.363	.095	.337	3.817	.000

 a.   Dependent Variable: Service Quality

From the results of the above table, it shows that the regression line intercept value (a) is obtained 15.290 while the slope value or regression coefficient b1 is 0.397, and b2 is 0.363 so that it results in the following multiple regression equation:

$$\tilde{Y} = a + bX_1 + bX_2$$
$$\tilde{Y} = 15,290 + 0,397X_1 + 0,363X_2$$

From the above equation, it can be explained that:

The overall independent variables, Training (X1) and Competence (X2) have a positive influence on the dependent variable of Service Quality (Y).

The training coefficient value is 0.397 which means that if the 'Training' is getting better with the assumption that other variables remain, the 'Service Quality' will increase by 0.397.

The 'Competence' coefficient value is 0.363 which means that if 'Competency' is getting better with the assumption that other variables remain, the 'Service Quality' will increase by 0.363.

Variables that give a greater influence on 'Service Quality' are the coach variables, which are 0.397, while the 'Competency' variable has a smaller influence on 'Service Quality' at 0.363.

Furthermore, to test the significant effect of both Training (X1) and Competence (X2) on Service Quality, the F test is used as follows:

F Test (Anova)

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	608.232	2	304.116	**31.075**	**.000**[b]
	Residual	733.986	75	9.786		
	Total	1342.218	77			

Based on the results of the F test on the above Anova table, it is known that the calculated F value is 31,075 with Sig. 0,000. The result of F count is then compared with F table at the significance level of 0.05 with df (75; 2), it is obtained by the value of F table that was 3.119. After being compared, it turns out that the calculated F value is greater than F table (31,075 >3,119). Likewise, by looking at the significance level (p-value), it is known that the Sig <value of α (0,000 <0,05) then it can be concluded that Ho is rejected and Ha is accepted. So, it can be concluded that Training (X1) and Competence (X2) both have a significant effect on Service Quality (Y).

Furthermore, it was concluded that the multiple regression line equation had a significant effect, then to find out the magnitude of the effect of both 'Training' and 'Competency' variables on 'Service Quality,' it was known from the results of the analysis as follows:

Determination Coefficients X1, and X2 toward Y

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.673[a]	**.453**	.439	3.12833

Based on the above results, it can be seen that the coefficient of determination (R Square) was 0.453. This means that the 'Training' and 'Competency' variables simultaneously (together) have an effect of 45.3%. Thus, about 54.7% of 'Service Quality' is influenced by factors other than 'Training' variables and 'Competency' that are not examined in this study.

Discussion
The Effect of Training on Service Quality

Based on the results of the regression analysis on the first hypothesis test, there is an effect of Training on Service Quality obtained by the value of t count of 6.354 with the value of Sig. 0,000. This means the value of Sig <value α (0,000 <0,05), so it can be concluded that competence has a significant effect on the Quality of Service in the East Jakarta Fire and Rescue Management Environment Sub-Department.

This research is in line with previous research conducted by Eriza Violananda Ekarendyka et al (2015) and Arcella Bedi Saraswati (2015), stating that there is a significant relationship between Training and Service Quality.

Training is one of the most effective development methods in improving human resource knowledge and skills. It is realized that the company cannot escape from the environment which is always changing at any time.

Conclusion

Based on the results of the research and discussion, it can be concluded that the results of the study using partial and multiple linear regression analysis with statistical package for social sciences (SPSS) version 20 shows that Training has a positive and significant effect of 34.7% on Service Quality. Secondly, Competence has a positive and significant influence on Service Quality of 21.8%. The independent variables of Training and Competence are jointly tested by the F test, proving to have a positive and significant influence on Service Quality and the effect is seen from the value of the Determination Coefficient (R^2) that was 45.3%. "P Bedi Arcella Saraswati Djamhur Hamid Topowijono (2015).
Effect of Training on Employee Competence and Service Quality (Study on Eco Green Park, Batu).

Therefore, the presence of training is expected to be able to overcome the decline in employees' performance caused by the inability to understand technology shifts and increasingly knowledge based changes. This is in accordance with Cushway's statement (2002: 116) stating that "training will be statistically used to develop individual skills and abilities to improve performance."

Based on the results of the study, it is noted that the biggest partial influence on the variable Training on Service Quality is about 34.7%.

The Effect of Competence on Service Quality

Based on the results of regression analysis on both hypotheses, testing the influence of Competency on Service Quality, it is known that the value of the t count is 4.601, and with a significance level (p-value), it is known that the value of significance probability (Sig.) = 0,000. This means the value of Sig <value α (0,000 <0,05) so it can be concluded that Competence has a significant effect on the Quality of Service in the East Jakarta Fire and Rescue Management Environment Sub-department.

The problem as expressed by Spencerdo in Moeheriono (2012: 10) states that "the relationship between employee competencies and quality is very important, the relevance is accurate, even if they want to improve their performance, they must have the right job itself."

Based on the results of the study, it was found that the biggest partial influence on the Competency variable on Service Quality was around 21.8%.

The Effect of Joint Training and Competence on Service Quality

Based on the results of multiple regression analysis on the fourth hypothesis test, it is found that there is an effect of Training and Competencies on Service Quality which is known from the calculated F value that is 31.075, and with a significance level (p-value) was 0.000. This means the Sig <value of α (0,000 <0,05), so that it can be concluded that there is an influence of Training and Competence on the Quality of Service in the East Jakarta Fire and Rescue Environment Sub-department.

Mastery of tasks (competencies) in each given job will be able to make an employee more engaged in the task. Besides, the high level of mastery of duties among the employees can help to lift up the achievement speed of work targets, the completion of tasks with high accuracy, carrying out tasks in any situation and completing tasks effectively and efficiently. The quality of performance will increasingly improve through good cooperation to produce quality services and production. In order to be a winner in an increasingly competitive world, organisations must be able to combine all the potential of their members' knowledge, skills, experience and vision to work in teams (Ilyas: 2003). For this reason, training and employee competency will greatly influence their performance or the quality of their work services.

Based on the results of the study, it is discovered that there is a big influence of Training and Competencies variables simultaneously (together) on Service Quality which was 45.3%.

Suggestions

The East Jakarta Fire and Rescue Management Sub-Department must develop training schedules consistently and continuously in order to improve the competency of officers so they can provide quality services to the community.

The technology of operating the DKI Jakarta fire fighter when compared with other countries is still far behind and needs to be improved.

Application of building fire protection systems in DKI Jakarta must work automatically and use modern technology, especially in urban areas.

Officers' competency must be evenly distributed, especially in terms of the ability to operate special units so that they do not rely on just one of the operating officers.

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Dinas Pemadam DKI Jakarta perlu menambah pengadaan mobil pemadam yang lebih modern dengan system kerja otomatis untuk mempercepat operasi penanggulangan kebakaran.