

# THE EFFECT OF AMC'S MAIN DUTIES IN THE SURVEILLANCE ON THE AIRSIDE

Fikri Afif Fardani\*, Bambang Wasito, Anton Budiarto

Politeknik Penerbangan Surabaya, Jemur Andayani 1/73 Wonocolo Surabaya, Jawa Timur, Indonesia, 60236

\*Corresponding Author. Email: [danifikri8@poltekbangsby.ac.id](mailto:danifikri8@poltekbangsby.ac.id)

## ABSTRACT

The Apron Movement Control (AMC) unit conducts surveillance on the airside (airside) including personnel activities Ground Handling, Ground Support Equipment (GSE) vehicle traffic, and aircraft manouvering. At Juwata Tarakan Airport there are a total of 13 parking stands, where the parking stand is divided into 2 areas, namely parking stands 1-6 are on the main apron while 7-13 are on the west apron, which not all parking stand areas can be monitored directly from the work space of the Apron Movement Control (AMC) unit. This study aims to determine the correlation between the use of Closed Circuit Television (CCTV) monitors on services and surveillance in the airside area at Juwata Tarakan Airport. The data collection method in this study used Direct Observation, Literature Study and Questionnaire. The analysis method used is a quantitative descriptive method in which there are validity tests and reliability tests. The results of this study show that there is a strong correlation between the use of Closed Circuit Television (CCTV) monitors on service and surveillance of the Apron Movement Control (AMC) unit in the airside area of Juwata Tarakan Airport.

**Keywords:** *Closed Circuit Television (CCTV) Monitor, Apron Movement Control (AMC), Airside.*

## 1. INTRODUCTION

Economic development and equity in Indonesia cannot be separated from the important role of air transportation services [1]. Air transportation services are a type of transportation that is really reliable for people who will travel or travel especially over long distances [2]. Referring to Law No. 1 of 2009 concerning Aviation, an airport is an area/place on land and/or waters that have certain limits, to be used to land or take off from aircraft, get on and off passengers, load and unload goods, also become a place of transportation exchange (land or sea), also equipped with flight security and safety facilities.

Juwata Airport is one of the airports managed by the Ministry of Transportation, located on Jl. Mulawarman No. 1, Tarakan City, North Kalimantan. In this new normal era, flights have returned to full operation and the number of service users continues to increase from time to time. The increasing number of service users from time to time, makes a consequence where all matters related to service users must be ensured safe. So that the flight can be carried out smoothly and well.

Safety must be a top priority so that flight activities run smoothly [3]. Especially is the airside area which is

the main operational of the aircraft. Based on the Regulation of the Director General of Civil Aviation Number KP 038 of 2017 concerning Apron Management Service article 1, surveillance of all areas on the airside, especially in the Apron area is the responsibility of the Apron Movement Control (AMC) Unit. This study designed a model for detecting objects in the apron to view visual information from the apron video frames, especially information on the movement and location of each proposed object [4].

The Apron Movement Control (AMC) unit conducts surveillance on the airside (airside) including personnel activities Ground Handling, Ground Support Equipment (GSE) vehicle traffic, and aircraft manouvering [5]. The Apron Movement Control (AMC) Unit service itself is a service provided to service users at Juwata airport, such as Aviobridge services and parking stand slot services. At Juwata Tarakan Airport there are currently 13 parking stands, parking stands 1-6 are located on the main apron, while 7-13 are located on the west apron. Two of them are on parking stands 7 and 8 which are equipped with Aviobridge facilities. The office of the Apron Movement Control (AMC) unit itself at Juwata Tarakan Airport is located right in front of parking stand 8 in the west apron area. Therefore, the surveillance of the Apron Movement

Control (AMC) unit is only limited to parking stand 13. While parking stands 1-6 or main apron, and some airside areas cannot be monitored optimally by Apron Movement Control (AMC) unit personnel.

In this regard, based on the Regulation of the Director General Of Civil Aviation No KP 038 of 2017 concerning Apron Management Service article 6 paragraph 1, the office of the Apron Movement Control (AMC) unit must be equipped with adequate facilities, one of which is Closed Circuit Television (CCTV) if necessary. The workspace facilities of the Apron Movement Control (AMC) unit at Juwata Tarakan Airport are currently quite good. However, for now it is not equipped with a Closed Circuit Television (CCTV) monitor that can facilitate Apron Movement Control (AMC) personnel in carrying out services and surveillance in the airside area, especially on the apron.

Air transport is an activity which necessarily must combine and integrate physical infrastructure [6]. An airport or airfield, also known as an airport, is a facility where airplanes and helicopters can take off and land. Most modest airports have at least one runway. different from large airports, which are usually equipped with various other facilities for flight service providers and users. such as, terminals and hangars. According to the International Civil Aviation Organization (ICAO) in Annex 14: An airport is an area of land or water (including buildings, facilities and equipment) designated wholly or partly for the take-off and landing of aircraft. Airport terminals are used for passenger and baggage handling. Also for meetings between aircraft and ground transport. Airports are also used to handle the transportation of goods (goods).

The airport has 2 different areas, namely the landside and the airside. The terminal is the air terminal's principal framework for adjusting travelers and starts at the traveler dropoff control and reaches out to screening designated spots permitting admittance to airside activities [7]. The different needs of these two parts can sometimes conflict with one activity with another. For example, security activities limit as little connection (doors) as possible between the ground side and the air side, whereas service activities require as many doors to be opened from the ground side to the air side as possible in order for services to run smoothly. These activities are interdependent, so one activity can limit the ability of the entire activity.

According to Atmoko [8] Closed Circuit Television (CCTV) is the utilization of camcorders to send video signs to a particular spot, in a few arrangements of screens. CCTV stands for Closed Circuit Television, which is a computer system using a video camera that is useful for displaying and recording an image at the place and time where the Closed Circuit Television (CCTV) device is installed [9]. Closed Circuit Television (CCTV) is usually used as a tool to increase security. Currently,

this technology is one of the most common methods for controlling school crimes and violence [10]. Furthermore, CCTV is considered to decrease work expenses and increment the viability of oversight [11].

Services are all activities or methods provided by one party to another party that are essentially intangible and do not result in ownership of something [12]. The client is the sole adjudicator of that correlation results from customer assumptions (ie, quality looked for) with genuine assistance execution discernments (ie, saw quality) [13].

Monitoring/control according to [14] in the book Basic Management, Understanding, and Problems is a method of structuring various aspects in one work environment, so that operations are aligned with the accuracy in the plan. Surveillance involves organized monitoring to generate information for security purposes [15]. Monitoring/control aims to make the process run according to plan, and make corrections if there are deviations, so that the final goal is in accordance with the plan.

Based on the background described above, the problem is obtained:

1. What is the effect of the use of Closed Circuit Television (CCTV) monitors in the Apron Movement Control (AMC) unit on service and surveillance in the airside area at Juwata Tarakan Airport?
2. How effective is the utilization of Closed Circuit Television (CCTV) monitors in the Apron Movement Control (AMC) unit for services and surveillance in the airside area at Juwata Tarakan Airport?

## 2. METHODS

### 2.1 Research Design

This research will be conducted using quantitative methods. Which starts with the problem statement that has been described in chapter 1 and achieves the goals to be achieved [16] [17]. Researchers make observations in the field first after that will take data through questionnaires. Quantitative research design is absolutely able to develop in accordance with site conditions, and according to the results of numerical analysis, and serves to provide clues for researchers to step up and describe what is happening in the field.

The study used an evaluation approach for its design. To compare an event, activity, or product on a predetermined basis and program that serves to describe an event/problem, evaluation-based research is part of the decision-making process [18].

## 2.2 Method Of Collecting Data

### 2.2.1 Observations

In this study using the observation method. Perception is efficient perception and recording of the components that show up in a side effect or side effects in the object of examination [19]. Analyst perception is one of a few field perception procedures used to comprehend the way of life and design of society straightforwardly [20]. Observations will be carried out in the airside area of Juwata Tarakan Airport by observing the research object.

### 2.2.2 Literature Study

In this research the literature study was carried out by collecting information related to research from related journals, supporting laws, and previous research [21].

### 2.2.3 Questionnaire

The questionnaire method is a list of series containing questions that are implemented into a questionnaire in order to obtain results that can be assessed. Researchers used a questionnaire as a research data collection tool [22]. In this case, researchers distributed a questionnaire containing a list of questions about the problems studied to personnel of the Apron Movement Control (AMC) and Aviation Security (AVSEC) units of Juwata Tarakan Airport.

## 2.3 Types Of Research

### 2.3.1 Research Object

The object of research is something that will be examined by researchers to obtain data. One way to research is object-based by calling attention to stimuli that are spatially superimposed on other, situations that hinder spatial selection [23]. In this study the object studied was the lack of Closed Circuit Television (CCTV) facilities and the absence of Closed Circuit Television (CCTV) monitors available in the Apron Movement Control (AMC) unit workspace as a facility to support service activities and control of air side movements by the unit. Apron Movement Control (AMC) Juwata Airport Tarakan.

### 2.3.2 Population

Population is a region comprising of specific items or subjects that have specific characteristics and qualities that still up in the air by specialists to be concentrated and afterward reached determinations.

### 2.3.3 Sample

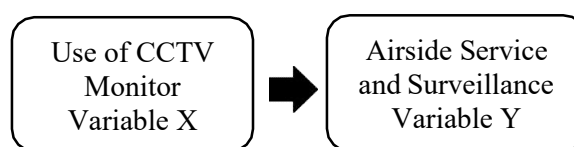
The sample is part or part of the population being studied and taken by researchers on parties related to this problem. In this study the researchers tried to take

samples from 7 Apron Movement Control (AMC) personnel and 13 Aviation Security (AVSEC) members at Juwata Tarakan Airport.

## 2.4 Instruments

### 2.4.1 Research Variable

Whatever researchers choose to investigate to collect data and reach conclusions about it is a research variable. Theoretically the research variable is an object, trait, value, or activity with variations that vary from one to another which is determined by the researcher with the intention of studying it and drawing conclusions. In collecting data, this study uses the independent variable (variable X) and the dependent variable (variable Y) [24].



**Figure 2.1 Research Variable**

### 2.4.2 Likert Scale

One method for estimating perspectives, feelings, and view of an individual or gathering of social peculiarities is the Likert Scale [24]. The following is a rating system on a Likert scale:

**Table 2.1 Likert Scale**

No	Symbol	Description	Score
1	SS	Very Agree	5
2	S	Agree	4
3	N	Neutral	3
4	TS	Disagree	2
5	STS	Very Disagree	1

### 2.4.3 Index Score

Then after finding the total score value, the next step is to determine the assessment of respondents interpretation using the Index % formula.

**Table 2.2 Percentage Value**

Answer	Description
0% - 19.99%	Very (Disagree Or Very Less)
20% - 39.99%	Disagree Or Not Good
40% - 59.99%	Fair Or Neutral
60% - 79.99%	Agree, Like
80% - 100%	Very (Agree Or Like)

In addition, Spearman's rank correlation coefficient formula is used to ascertain whether there is a relationship or correlation between the variables. An index or number known as the KK Correlation Coefficient is used to determine the degree of closeness (strong, weak, or absent) of a relationship between variables. (Hasan, 2001) as follows:

$$r_s = 1 - \frac{6 \sum d^2}{n(n^2-1)} \quad (1)$$

explanation:

rs = Spearman rank coefficient

d = Difference in rank

n = Number of Rank Pairs

After the value of the coefficient is known, the value of KK is used as a benchmark to find out how closely the relationship or correlation between these variables

## 2.5 Data Analysis

### 2.5.1 Validity Test

Validity Test In a study, it is said to be valid if it is able to measure what should be measured or measure what is desired. In other words, the validity test is intended to determine the level of accuracy of the measuring instrument used in measuring the measured variable.

### 2.5.2 Reliability Test

Reliability is really a device for estimating a survey which is a mark of a variable or develop. A poll is supposed to be dependable on the off chance that an individual's solutions to explanations are predictable or stable over the long haul. Reliability tests are used to measure the consistency of measurement results from questionnaires in repeated use.

### 2.5.3 Normality Test

The ordinariness test is a test directed to check whether our exploration information comes from a regularly conveyed populace. This test is essential since all parametric factual computations expect the ordinariness of the circulation.

## 3. RESULTS AND DISCUSSION

### 3.1 Observation

Based on the observations made, researchers still found some violations committed. For example, a ground handling (GH) officer does not use ear while conducting aircraft parking services (marshalling) and does not use Ground Support Equipment (GSE) equipment that can be used properly. for example, when land services still do not use standard use of Ground Support Equipment (GSE) equipment such as the Belt Conveyer Loader (BCL). At this stage, the researchers made direct observations at Juwata Tarakan Airport while carrying out the On The Job Training (OJT) which was held for about 3 months.



**Figure 3.1 Ground Handling Officer Violations**

Based on the above incident, it is proven that the surveillance of the Apron Movement Control (AMC) unit from the workspace is not optimal because some parking stand areas cannot be monitored directly from the Apron Movement Control (AMC) unit workspace. The absence of Closed Circuit Television (CCTV) monitors in the workspace and the lack of Closed Circuit Television (CCTV) devices that monitor the entire apron area make it less optimal. The lack of awareness of personnel working in the airside area of work safety is still lacking, this can endanger security, safety and smooth flight.

### 3.2 Questionnaire

The data collection method used was by distributing questionnaires to 20 respondents using Likert scale research instruments consisting of officers working in the airside area, namely Apron Movement Control (AMC) and Aviation Security (AVSEC) personnel at Juwata Tarakan Airport. The distribution of questionnaires is carried out using Google Form media and filled in by respondents in each statement that respondents think is most appropriate.

**Table 3.1 Recapitulation Result Questionnaire**

Questionnaire	Skor	Value (%)	Category
X1	63	63	Agree
X2	64	64	Agree
X3	54	54	Neutral
X4	62	62	Agree
X5	69	69	Agree
Y1	68	68	Agree
Y2	67	67	Agree
Y3	59	59	Neutral
Y4	64	64	Agree
Y5	69	69	Agree

The next step is to find the rank correlation by making the following table:

**Table 3.2 Correlation Rank**

X	Y	Ranking X	Ranking Y	D	d <sup>2</sup>
63	68	3	2	+1	1
64	67	2	3	-1	1
54	59	5	5	0	0
62	64	4	4	0	0
69	69	1	1	0	0
Total					2

$$r_s = 1 - \frac{6 \sum d^2}{n(n^2-1)}$$

$$r_s = 1 - \frac{6.2}{5(5^2-1)}$$

$$r_s = 1 - \frac{12}{5(24)}$$

$$r_s = 1 - \frac{12}{120}$$

$$r_s = 1 - 0,1$$

**r<sub>s</sub> = 0,9 (Very Strong Correlation)**

The results of the calculation of questionnaire data obtained a correlation coefficient score of 0.9, which can be interpreted that there is a strong correlation between variable X and variable Y. Because the results obtained do not produce a minus score, it means that the relationship is positive, namely if variable X increases or the use of Closed Circuit Television (CCTV) monitors and the number of Closed Circuit Television (CCTV) devices is added / increased, then the variable Y or the duty of service and surveillance of the Apron Movement Control (AMC) unit will be maximized.

### 3.3 Data Testing Results

#### 3.3.1 Validity Test

To quantify the legitimacy of the survey given to the respondents, it was calculated using the computer-aided SPSS program version 26. Validity can be known from the significance value (p-value), if the significance value of the correlation result is < 0.05 then the test concludes valid.

**Table 3.3 Result Validity Test Variable X**

		Correlations					Total_X
		X1	X2	X3	X4	X5	
X1	Pearson Correlation	1	.290	.183	.294	-	.532*
	Sig. (2-tailed)		.215	.441	.208	.949	.016
	N	20	20	20	20	20	20
X2	Pearson Correlation	.290	1	.782**	.538*	.517*	.886**
	Sig. (2-tailed)	.215		.000	.014	.019	.000
	N	20	20	20	20	20	20
X3	Pearson Correlation	.183	.782**	1	.556*	.409	.827**
	Sig. (2-tailed)	.441	.000		.011	.073	.000
	N	20	20	20	20	20	20
X4	Pearson Correlation	.294	.538*	.556*	1	.355	.746**
	Sig. (2-tailed)	.208	.014	.011		.125	.000
	N	20	20	20	20	20	20

X5	Pearson Correlation	-	.517*	.409	.355	1	.578**
	Sig. (2-tailed)	.949	.019	.073	.125		.008
	N	20	20	20	20	20	20
Total_X	Pearson Correlation	.532*	.886**	.827**	.746**	.578**	1
	Sig. (2-tailed)	.016	.000	.000	.000	.008	
	N	20	20	20	20	20	20

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 3.4 Result Validity Test Variable Y**

		Correlations					Total_Y
		Y1	Y2	Y3	Y4	Y5	
Y1	Pearson Correlation	1	.565**	.264	.379	.191	.713**
	Sig. (2-tailed)		.009	.261	.099	.421	.000
	N	20	20	20	20	20	20
Y2	Pearson Correlation	.565**	1	.020	.397	.055	.578**
	Sig. (2-tailed)	.009		.934	.083	.817	.008
	N	20	20	20	20	20	20
Y3	Pearson Correlation	.264	.020	1	.378	.389	.684**
	Sig. (2-tailed)	.261	.934		.100	.090	.001
	N	20	20	20	20	20	20
Y4	Pearson Correlation	.379	.397	.378	1	.009	.712**
	Sig. (2-tailed)	.099	.083	.100		.972	.000
	N	20	20	20	20	20	20
Y5	Pearson Correlation	.191	.055	.389	.009	1	.507*
	Sig. (2-tailed)	.421	.817	.090	.972		.023
	N	20	20	20	20	20	20
Total_Y	Pearson Correlation	.713**	.578**	.684**	.712**	.507*	1
	Sig. (2-tailed)	.000	.008	.001	.000	.023	
	N	20	20	20	20	20	20

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

Test validity using the pearson correlation method, from the output of the SPSS program seen the value of pearson correlation in the total table. Based on the table

shows the magnitude of the significance value (p-value) of all statement items, the value is  $< 0.05$  (alpha). Thus it can be concluded that all statement items are declared valid and questionnaires in this study can be used to analyze.

### 3.3.2 Reliability Test

The procedure used to quantify inner consistency in this study was Cronbach's alpha strategy. On the off chance that the worth of Cronbach's Coefficient Alpha is more noteworthy than 0.60, the survey as an estimating gadget is viewed as solid. In the event that the worth of Cronbach's Coefficient Alpha is under 0.60, the survey as an estimating gadget is viewed as untrustworthy.

**Table 3.5 Result Reliability Test**

Case Processing Summary		N	%
Cases	Valid	20	100.0
	Excluded <sup>a</sup>	0	.0
	Total	20	100.0

a. Listwise deletion based on all variables in the procedure.

### Reliability Statistics

Cronbach's Alpha	N of Items
.828	10

The figure above show the result value of Cronbach's Alpha program SPSS is 0.828. This shows that the indicators used in this study are very reliable, so the questionnaire used in this study is a reliable questionnaire.

### 3.3.3 Normality Test

Normality test is a statistical test conducted to find out how the data is distributed.

**Table 3.6 Result Normality Test**

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		20
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	2.33482773
Most Extreme Differences	Absolute	.095
	Positive	.095
	Negative	-.086
Test Statistic		.095
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Normality test results by looking at the significance value. If the significance value is less than 0.05 then the data is considered not normally distributed, whereas if the significance value is greater than 0.05 then the data is considered normally distributed. It can be seen in the picture above that the results of the normality test are greater than 0.05, so this study can be said to be normally distributed.

## 4. CLOSING

### 4.1 Conclusions

Based on the results of the analysis and discussion above obtained after conducting research related to the title and problems that the researcher has described in the previous chapter, the researcher can draw several conclusions, namely:

1. The use of Closed Circuit Television (CCTV) monitors in the workspace of the Apron Movement Control (AMC) unit has a strong correlation with the service and surveillance of the Apron Movement Control (AMC) unit in the airside area of Juwata Tarakan Airport. It can also be concluded that the existence of Closed Circuit Television (CCTV) monitor facilities connected to the apron/airside area can optimize the surveillance of the Apron Movement Control (AMC) unit on all movements in the airside area. Because the results show a strong correlation, the use of Closed Circuit Television (CCTV) monitors is very important for service and surveillance in the airside area.
2. The use of Closed Circuit Television (CCTV) monitors will be very effective for Apron Movement Control (AMC) unit personnel. Because the service function and surveillance of the Apron Movement Control (AMC) unit with Closed Circuit Television (CCTV) device connectivity in the Apron Movement Control (AMC) workspace will make it easier for Apron Movement Control (AMC) personnel to monitor the situation/movement on the apron/airside.

### 4.2 Suggestions

Based on the results of research conducted at Juwata Tarakan Airport, researchers gave some suggestions as follows:

1. Improve adequate facilities and infrastructure by adding Closed Circuit Television (CCTV) devices on the airside/apron that are connected to the monitor in the workspace of the Apron Movement Control (AMC) unit, making it easier for Apron Movement Control (AMC) personnel to monitor the situation/movement on the apron/airside and do not focus on the service function of inputting flight data only but on the function of supervising all activities on the air side so as not to interfere with the smoothness, security, and safety of flights.

2. Further research is carried out to determine the places where Closed Circuit Television (CCTV) devices are installed to be more effective with the aim of minimizing the costs used.

## REFERENCES

- [1] L. Carnis and E. Yuliatwati, "Nusantara: Between sky and earth could the PPP be the solution for Indonesian airport infrastructures?," *Case Studies on Transport Policy*, ISSN 2213-624X, pp. 18-26, 2013.
- [2] C. Archetti and L. Peirano, "Air intermodal freight transportation: The freight forwarder service problem," *ISSN 0305-0483*, 2020.
- [3] S. Gao and L. Wang, "More experience might not bring more safety: Negative moderating effect of pilots' flight experience on their safety performance," *ISSN 0169-8141*, 2023.
- [4] Z. Lyu and Y. Zhang, "A novel temporal moment retrieval model for apron surveillance video,," *ISSN 0045-7906*, 2023.
- [5] H. Korkmaz, E. Filazoglu and S. S. Ates, "Enhancing airport apron safety through intelligent transportation systems: Proposed FEDA model,," *ISSN 0925-7535*, 2023.
- [6] Button, Kenneth and E. Pels, "International Air Transport: The Impact of Globalisation on Activity Levels," 2010.
- [7] Price, Jeffrey and J. Forrest, "Landside and Terminal Operations," 2016.
- [8] e. H. Atmoko, *Membuat Sendiri CCTV berkelas Enterprise dengan Biaya Murah*, Yogyakarta: Andi, 2005.
- [9] M. Abdel-Aty, Y. Wu, O. Zheng and J. Yuan, "Using closed-circuit television cameras to analyze traffic safety at intersections based on vehicle key points detection,," *ISSN 0001-4575*, 2022.
- [10] W. Fisher, W. Galloway, R. Steel, C. Olariu, C. Kerans and D. Mohrig, "Earth-Science Reviews,," 2021.
- [11] J. Manolev, A. Sullivan and R. Slee, "The datafication of discipline: ClassDojo, surveillance and a performative classroom culture," *Learning Media and Technology*, 2018.

- [12] Laksana and Fajar, *Manajemen Pemasaran*, Yogyakarta: Graha Ilmu, 2018.
- [13] L. Eboli and G. Mazzulla, "Customer Satisfaction as a Measure of Service Quality in Public Transport Planning.," *International Encyclopedia of Transportation*, pp. 220-224, 2021.
- [14] Strong and Earl, *Manajemen Dasar, Pengertian, dan Masalah*, Jakarta: Bumi Aksara, 2001.
- [15] M. Henry, "Surveillance," *International Encyclopedia of Human Geography (Second Edition)*, Elsevier, pp. 147-151, 2020.
- [16] L. Rochmawati and L. D. Kusumayati, "'Can I Increase My English Test Score?' The Test-Taking Instructional Strategy to Improve Learners' English.," *In 20th AsiaTEFL-68th TEFLIN-5th iNETAL Conference (ASIA TEFL 2022)*, pp. 338-347, 2023.
- [17] L. Rochmawati, Fatmawati, M. Sukma and Sonhaji, "Onlinelearning motivation for AviationEnglish: Attitude, readiness, and demographic factors," *J. Eng. Educ. Society*. 6:1.doi: 10.21070/jees.v6i1.792, 2021.
- [18] Riduwan, *Skala Pengukuran Variabel-variabel Penelitian*, Bandung: Alfabeta, 2010.
- [19] Nawawi, Hadari and Martini, *Instrumen Penelitian Bidang Sosial*, Yogyakarta: Gadjah Mada University Press, 1992.
- [20] Fine and G. Alan, "Participant Observation," *International Encyclopedia of the Social & Behavioral Sciences (Second Edition)*, pp. 530-534, 2015.
- [21] J. Hakemulder, "Literature: Empirical Studies," *Encyclopedia of Language & Linguistics (Second Edition)*, pp. 274-280, 2006.
- [22] Preston and Valerie, "Questionnaire Survey," *International Encyclopedia of Human Geography (Second Edition)*, pp. 175-181, 2020.
- [23] Valdés-Sosa, Rodríguez and Iglesias, "1.32 - Object-Based Attention☆," *The Senses: A Comprehensive Reference (Second Edition)*, pp. 524-531, 2020.
- [24] Sugiyono, Bandung: Alfabeta, 2009.
- [25] I. Hasan, *Pokok-Pokok Materi Statistik 2 (Statistik Inferentif)*, Jakarta: PT Bumi Aksara., 2001.