



Training Data Analysis To Increase The Capacity Alumni

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ABSTRACT

Aftersales is a routine program carried out to increase the capacity of alumni, especially alumni of Public Health Sciences, Universitas Negeri Malang. This training took the theme of data analysis which was carried out six times both online and offline. Training results were measured through pre- and post-test questionnaires for 15 participants. The results show that there is a significant increase in knowledge p value (<0.005). Statistical data analysis is a topic that is expected to be able to increase knowledge, skills and support alumni according to their field of work.

KEYWORDS

Statistical data analysis; Health dashboard; Training

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INTRODUCTION

The Public Health Sciences, Universitas Negeri Malang Undergraduate Study Program has 8 (eight) specializations which refer to the main pillars knowledge health public. Interest the consists from Health Administration and Policy, Community Nutrition, Epidemiology, Occupational Safety and Health, Health Promotion and Science behavior, Biostatistics and Science Population, and Reproductive Health. The Public Health Sciences Undergraduate Study Program was established since April 12, 2013 below management Faculty of Sport (FIK) Universitas Negeri Malang (FIK UM, 2020).

Undergraduate alumni public health is one of movers and actors who plunge directly in society. Based on eight existing specializations, alumni work in various fields sectors that don't free from sector health, good as analyst health, program managers and stakeholder policy. Skills mastery technology information in data processing and data presentation are the main skills required mastered in work. One of obligation expert health stated society in the Code of Ethics for Public Health Expert, try to increase knowledge and skills in accordance with development knowledge and technology (IAKMI, 2022).

The COVID-19 pandemic has an impact on management education high and quality graduate of bachelor health public (Ismail & Irwan, 2021). During pandemic, learning process using method online which is with minimal mentoring in class practice. Survey results on *tracer study* of IKM FIK UM alumni graduates 2021 shows 16% said level skill in technology information very low. One of them caused by the lack of practical processes during online class. On emphasis method learning, as many as





51% stated practice become the thing that is most lacking accommodated.

Since 2020, Department Public Health Sciences routinely has do a number a activity training for alumni through the Aftersales program (Gayatri et al., 2021, 2022). However not available training that leads to mastery technology information, especially for alumni who have interest biostatistics. That matter based minimal resource lecture in 2022 has only own one lecturer with field skill biostatistics. Therefore that, with condition the COVID-19 pandemic that has down and towards adaptation new normal as well as supported with more lectures, then training with strengthening technology information can held.

MATERIALS AND METHODS

Implementation activity designed with use Aftersales name which is branding for activity enhancement alumni activities at FIK UM. The steps are following:

1. Analysis alumni situation and conditions

Analysis the situation and conditions of alumni are carried out through alumni *tracer study* data and surveys requirements sent through online link. Alumni tracer study data illustrates condition a number of aspect needs that are not yet available fulfilled in a way maximum during the learning process. Whereas through survey, alumni needs are interest as well adjustment timetable activity appropriate training with alumni time.

2. Determine priority problem as well as solution offered

Priority problem determined through results assessment on surveys alumni needs and alumni tracer study data. Determination priority problem aim for determination appropriate topic with alumni needs.

3. Implementation activity

Activity training will be held as much six meetings in hybrid with proportion enhancement knowledge with online in twice. Furthermore four meetings will done offline with focus enhancement skills implemented in the computer lab faculty of sports UM.

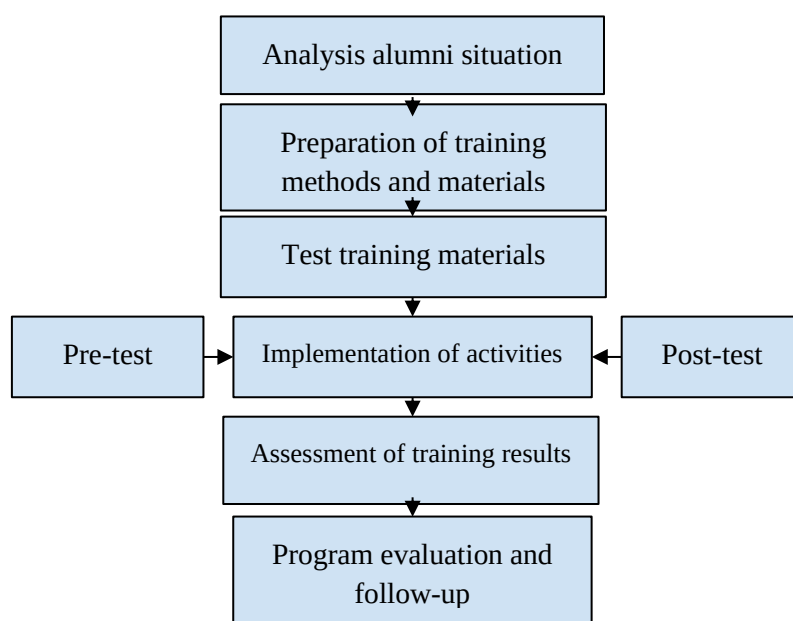
4. Measurement results

Measurement results enhancement knowledge will be held through several questions on the pre and posttest. Pretest will give at the meeting beginning before training starts and the posttest will be held after training over. Measurement results enhancement skills done with evaluation results project is over.

5. Evaluate and act continue the program

Evaluate and act the program continues with give questionnaire evaluation activities on each meeting that includes evaluation to method training, time training, materials training, presenters, and provide suggestions and criticism open to all over the process. And then at the end of training, all over participant will request give input to appropriate type of program with alumni needs are good for increase appropriate abilities with work or open a training program for add any skills that field to work. The whole series stages of implementation activity depicted in the following diagram below:





Picture 1. Series of stage implementation activity

RESULTS

Series activity training *Aftersales* will held in a way sustainable in 6 (six) meetings. Activity *Aftersales* will held for one or twice in a month. Activity will start on June 10 – September 9, 2023 which will be implemented every Saturday, from 9.00 AM – 12.00 PM. As for the topic training as following:

- 1) Introduction to Data, Data Structures and Types, Variable Types (Online)
- 2) Health Data Management and Types of Statistical Tests (Online)
- 3) Health Data Dashboard and Types of Applications Used (Online)
- 4) Practice Data Management and Statistical Testing (Offline)
- 5) Practice DHS Secondary Data Analysis (Online)
- 6) Final Project and Final Assessment (Offline)

Activity training presenting experts in their respective fields from practitioner nor native lecturer from Researcher at the Center of Health Research UI, BKKBN RI, Lecturer and Researcher UNHAS Faculty of Public Health, Lecturer at POLTEKKES Kemenkes Malang, and Lecturer at the Faculty of Public Health UNAIR. Participant training consisting of 15 people from alumni IKM UM who have work at the facility health such as hospitals, health centers, health services, as well as alumni who unemployed.

From the results of pre and post training tests carried out to participants in activity *Aftersales* 1-6 show that there is enhancement average value before and after training. Paired t-test used for see level significance in a way statistics, where all over activity show there is effect significant mean difference (p value <0.001).



Table 1. Results of Paired T-Test Analysis Training *Aftersales*

Variable	Average	Standard deviation	P-value
Aftersales 1			
● Pretest	62.5	8.3	<0.001
● Posttest	86.1	14.6	
Aftersales 2			
● Pretest	52.3	12.0	<0.001
● Posttest	90.3	12.8	
Aftersales 3			
● Pretest	42.0	13.9	<0.001
● Posttest	94.0	6.9	
Aftersales 4			
● Pretest	59.3	16.4	<0.001
● Posttest	97.7	5.8	
Aftersales 5			
● Pretest	48.0	7.9	<0.001
● Posttest	96.0	9.7	
Aftersales 6			
● Pretest	44.2	8.6	<0.001
● Posttest	98.3	2.6	

DISCUSSION

Development program professionalism sustainable is one of method for support development useful competencies in performance profession (Yohamintin et al., 2021). Demands very high graduates push graduate of own skills in various field specifically ability soft skills (Istanti & Zen, 2021). University as institution education own not quite enough answer not only as formal provider institution education but guarantee to qualified alumni quality (Irianto, 2012).

Material about data analysis has been studied during the lecture, but frequently become obstacle because of minimal practice. Moreover, developments fast to technology information must be balanced with training comprehensive so that theory during lectures can practiced in a way directly in the job (Rumana et al., 2022).

One of from support to development professionalism is through activity training regularly to alumni. FIK UM has branding *Aftersales* program become one of the sustainable programs implemented every year with various different topics. Activity *Aftersales* has been done proven give benefit in enhancement alumni's knowledge of analysis SPSS topic (Gayatri et al., 2021; Supriatna et al., 2023). In step with these results, the training this time in a way significant capable give impact enhancement alumni's knowledge of material data analysis.

CONCLUSIONS

Professional training program sustainable proven increase knowledge and skills of undergraduate alumni Public Health Sciences UM significant. These results depicted through pre





and post grades that have been statistical test were carried out with p value <0.005 . Training has held during six meetings with diverse topics. The speakers consists from lectures and practitioners who come from various universities and institutions have skills related. Statistical data analysis material become expected material capable increase knowledge, skills, and support alumni jobs.

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