

UTILIZATION OF SPORT PERFORMANCE LABORATORY TO IDENTIFY HEALTH AND PHYSICAL CONDITION OF THE FITNESS MEMBERS

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Abstract: FIK UNY's Fitness Center is one of laboratory facilities used to facilitate education and scientific research and is used to serve public community as well. Aside of having fitness center, Faculty of Sport Sciences (FIK) also builds the Achievement Laboratory and Physical Condition Laboratory. Achievement Laboratory and Physical Condition Laboratory owned by Faculty of Sport Science are the facilities that really support sport coaching in Special Region of Yogyakarta. The existence of achievement and physical condition laboratory used as a monitor facility to see the progress and improvement of athletes' physical condition. This program aims to optimize the tools and devices in the laboratory to the academics, promote the existence of the laboratory to the society and sport organizations, and it can help the fitness center members in monitoring their health and physical condition during the workout. The result of this activity in utilizing the achievement laboratory gains the great appreciations from the participants. The participants feel that the existence of achievement laboratory is very useful in monitoring the health condition and any physical condition progress during the workout, besides, it is very useful in assisting the lectures, workouts, and research as well. The participants also suggest that the utilization of the laboratory facility is emphasized on the use, the management, and the maintenance as well. The promotion of this Achievement Laboratory should be increased more and the development of this laboratory needs to be planned for the better maintenance and expand the capacity of the laboratory.

Keywords: *Achievement Laboratory, health, physical condition*

INTRODUCTION

One of the usual ways in keeping the health is by taking exercise besides consuming some supplements and vitamins gained from the daily intakes. The results of Hidayah & Sugiarto research (2013: 35) most of the respondents (73.3%) directly after consuming supplements, stamina and body health improve and can increase muscle mass and add aesthetic value in the body. Pane (2015: 1) argues that exercising can increase endurance, improve brain function, relieve stress, reduce cholesterol. The fact is that some particular exercises are not only helpful in keeping the body stay fit and health but it is also useful in shaping specific parts of the body to be looked more interesting or in other words, looked muscular. Nowadays, to gain the muscular body people just go to the gym or fitness center to exercise. Many gym centers in Yogyakarta City have offered several workout programs to attract the customers to be a member and one of those gym centers is FIK UNY's Fitness Center.

FIK UNY's Fitness Center is one of the laboratory facilities used to provide the educational facility and scientific research, it serves the society as well. In the higher education level, the laboratory is a very important component in implementing Three Pillars of Higher Education. Laboratory is a facility for academics in doing the educational activities, research, and community service. Kertiasa (2006) stated that laboratory is a working place for having some experiments and investigation in specific disciplines such as Physics, Chemistry, Biology, and others. Meanwhile according to Poerwadarminta (2001), laboratory is defined as a place for conducting some experiments. An educational institution is required to have the supporting facility for the learning process in order to gain the learning purpose. In such limited definition concept, laboratory is a closed place in which the experiments and researches are done. This place can be a closed space, chamber, or even open space like a garden (1995, p. 7).

Aside of having a fitness center laboratory related to the sport coaching, Faculty of Sport Science, Yogyakarta State University (FIK UNY) owns the Achievement Laboratory and Physical Condition Laboratory. The laboratory is another facility optimized to support the coaching. Its existence is as a support facility aimed to identify the improvement and progress of particular athletes' physical condition. Several tests and measurements of athletes' physical condition are conducted in this kind of laboratory in order to find out the level of physical health and fitness of the athletes.

Pratiwi (2009) argued that healthy condition as a perfect state in terms of physical, mental, social, and inexistence of disease. Mervyn and Shyrock (2001), defined the healthy condition as a condition where all the body parts work efficiently with the adequate supports and demands. While Irianto and Kusno (2004) stated that healthy condition is a state of intact and dynamic in a life cycle, where human beings may function completely and adapt constantly towards the emergence of changes over time to fulfill the daily needs.

Recently, utilization and optimization of Achievement and Physical Condition Laboratory is only used in particular lecture related to the tests and measurements, even the laboratory is aimed to facilitate and evaluate the athletes' achievement in the regional levels. The measurement activity that is related to the society's health and physical condition cannot be facilitated for now as the problem of limited space and equipment. The laboratory used for the learning activities is optimized by the lecturers in conducting some kinds of practices using the equipment provided there. This learning activity is aimed to find out the test results and how to measure precisely. It is hoped that the students will eventually understand and skilled enough in doing some tests and measurements in relation to identifying the health and physical condition.

The finest health and physical condition is the goal of every member of Fitness Center in doing their exercise program. At FIK UNY's Fitness Center, the members are offered to some exercise program to gain the finest health and physical condition. The program consists of Physical Fitness, Fat Lose, Body Shaping, Weight Gain, Body Building, and Therapy Rehabilitation. The average amount of active members is up to 150 members in a month. From these numbers, many members have not been monitored how far they can go in implementing the exercise program that they have chosen and how these members in gaining the finest health and physical condition. Considering this situation, the management of FIK UNY's Fitness Center cooperates with Achievement Laboratory and Physical Condition Laboratory conducting some tests and measurements to figure out the members' health and physical condition.

METHOD

The activity method applied in carrying out this activity is carried out with two approaches, theory and practice (Gunawan, 2013: 121). First, the theoretical approach consisted of socialization program of equipment existence in the laboratory towards the academics including the lecturers, staffs, college students, and society at large including the sport coaching organization. The socialization program was conducted through the material presentation delivered by Sumarjo, M.Kes who was in charge of delivering the first health material, Prof. Dr. Sumaryanto, M.Kes who was in charge of delivering the second material of physical condition, Dr. Ahmad Nasrulloh, M.Or who was in charge of delivering the third material of weight training, and Dr. Sigit Nugroho, M.Or who was in charge of delivering the fourth material of introduction and usage of test and measurement equipment. After the presentation was delivered by these four lecturers, it was continued by arranging discussion session for question and answers related to the equipment used in measuring health and physical condition and the implementation of exercise program.

The second approach was based on the practice done to the members of fitness center in helping to introduce the use of test and measurement equipment related to health and physical condition measurement for: 1) height, weight 2) body mass index, 3) reaction, 4) balance, 5) power, 6) flexibility, 7) leg and back strength, and 8) arm strength. The target of this activity was the active

members who exercised at Fitness Center including the lecturers, staffs, college students, and common people with the total of 22 persons.

The duration needed for the implementation of this activity was for 5 months. It was conducted in 1 day located in the lecture room at the east side of GOR UNY (Yogyakarta State University Sport Hall). The steps in conducting this activity were: 1) Doing the survey for the target, proposal arrangement, seminar of the activity planning, 2) Tools and equipment preparation, 3) Material and media preparation, 4) Implementation of test and measurement, 5) Activity evaluation, 6) Writing the Report, 7) Seminar for the Activity Result, 8) Report Revision, 9) Archiving and Report Submission, and 10) Publication for the Activity. The supporting and obstructing factors of this activity were as follows:

The supporting factors were: 1) there was such availability for the experts in the field of health and sports, 2) there was such enthusiasm of the participants in conducting this activity, 3) there was complete facilities at the place in conducting the community service, and 4) there was adapted material designed for the needs of the society so it was able to adjust the strategy for supporting the activity. While the obstructing factors were: 1) the conflicting schedule as the implementation of this activity was clashed at the same time of the opening and designing for Yogyakarta State University’s Anniversary Day so there was such cancelation of the time for implementing this activity, 2) there was a problem in operating the equipment since it was rarely used, and 3) the limited equipment used as the equipment available was only the manually-operated equipment.

RESULTS

In general, the implementation of this activity is conducted smoothly and exactly as it is planned. The location for this community service activity is at GOR Universitas Negeri Yogyakarta (Yogyakarta State University Sport Hall). It takes the duration for about 8.5 hours started at 08.00 am and ended at 4.30 pm. Broadly speaking, the results of tests and measurements for the health and physical condition of the members of the FIK UNY fitness center can be seen as follows:

Table 1. Results of tests and measurements of health and physical condition.

No	Height	Weight	BMI	Reaction			Balance	Power	Flex	Strenght		
				Visual	Audio					Arm	Leg	Back
1	162	76,4	29,1	0,253	0,253	44	50	25	52	254	212,5	
2	147	56,3	26,1	0,498	0,859	41	30	27	21,5	42	54,5	
3	170,5	37,2	26,6	0,315	0,344	17	56	29	35	201,5	235,5	
4	152	53,7	23,2	0,288	0,356	141	43	42	21	204,5	190	
5	161	65,3	25,2	0,382	0,425	32	37	46	23	113	138	
6	166,5	63,2	22,8	0,285	0,29	23	72	41	41	157,5	141,5	
7	167	78,6	28,2	0,45	0,407	15	43	33	31	143,5	83	
8	175	72,7	23,7	0,309	0,28	14	65	40,5	48	269	201	
9	171	64,1	21,9	0,291	0,337	240	74	33	65	281	256,5	
10	159	53,5	21,2	0,325	0,315	102	42	34,5	31	139	109,5	
11	158	45,4	18,2	0,282	0,209	47	53	44,5	27	61,5	46,5	
12	159	73,2	29	0,373	0,35	46	40	38	30	143,5	125,5	
13	145,5	43,7	20,6	0,323	0,541	84	36	39	25	95	85	
14	156	52,3	21,5	0,281	0,306	13	53	38,5	25	143,5	80,5	
15	150,5	49,5	21,9	0,275	0,314	108	41	40	21	90	57	
16	146	44,4	20,8	0,319	0,293	13	42	35,5	16	73,5	86,5	
17	173	76,7	25,6	0,447	0,383	86	59	41	42	169	115,5	
18	171,5	69	23,5	0,294	0,307	25	70	43,5	58	300	238	
19	163	69	26	0,289	0,306	78	46	41,5	47	127	142	
20	171	75,6	25,9	0,3	0,321	232	62	30,5	45	272	177	
21	173	69,2	23,1	0,273	0,344	39	61	37,5	38,5	255	209	
22	168	65,2	22,2	0,33	0,338	9	55	30,5	42	160,5	160	

In optimizing the achievement laboratory, it uses the method through two approaches as follows:

1. Introduction, in the approach of introducing delivered by the expert team, they explained some materials about health, physical condition, weight training program, and the introduction for test and measurement equipment usage. According to the result of material presentation, it can be noted some important things as follows: a) Many participants do not know about the equipment yet and they do not know how to use the equipment to identify the level of health and physical condition precisely; b) There are some participants who do not know the proper exercise program best for their physical condition; c) Participants may be able to modify and create their own exercise program so the exercise may be appropriate to the expected target.
2. The approach of the practice consists of the demonstration to introduce the use of the test and measurement equipment which is used to measure the health and physical condition such as: 1) height, weight, 2) BMI, 3) reaction, 4) balance, 5) power, 6) flexibility, 7) leg and back strength, and 8) arm strength. Based on the result of observation on the practice in optimizing the achievement laboratory, it can be noted some important things as follows: a) Participants and mentors are very enthusiastic and energetic in doing the activity right from the start until the end of the activity; b) Many participants are interested and feel glad in learning the material given; c) Some participants have some desire in developing and introducing to the greater communities that the Faculty of Sport Science (FIK) has the Achievement Laboratory that can be used by the society.

DISCUSSION

The participants feel that the existence of the Achievement Laboratory is very useful in identifying the physical condition improvement, used for the training and research. Most of the participants express that the laboratory is very useful in helping and supporting the sports achievement in terms of improving the goal and keeping the health. Entjang (2000) stated that health is influenced by three factors: causes of disease, human beings as the host, and the surrounding environment. Moreover, the benefit of the laboratory is that it can support the process in arranging the exercise program combined by using some weight training tools. Another benefit is that it may enrich the knowledge related to the use of laboratory equipment, especially those related to the improvement of sports achievement in the aspect of improving physical condition.

Kardjono (2008) stated that the finest physical condition would influence some mentality aspects such as increasing work motivation, boosting working spirit, self-confidence, and thoroughness. In addition, based on the results of research by Oktriani, Solihin & Komariyah (2019: 66) that regular and measurable sports activities carried out by humans will be closely related to the quality of life, health and well-being. While Sajoto (1995) argued that to improve the physical condition, the entire component should be developed well according to the priority system adjusting the situation and status needed. Physical condition exercise should be get more serious attention to be planned well and systematically so that it can gain the finest level of physical fitness and the body organs may function much better.

While from the aspect of laboratory functionality, it is very useful in assisting the lecture, research, and data gathering for the athletes. Tarmizi (2005) stated that the laboratory functioned as a place to strengthen and ensure the information, determine the causal relations, prove the truth for some factors of particular phenomenon, creating some postulates of particular phenomenon once it was proven empirically, practice something known, developing the skills, giving some exercise using scientific method in solving some problems and to conduct some individual research. The existence of laboratory according to Hofstein and Naaman (2007), may support the learning activity and it may reach three main purpose of education: cognitive, affective, and psycho-motoric. According to Rustaman (2003), the management of laboratory can be divided into three aspects: maintenance activity, supplies, and utilization upgrading.

The use of Achievement Laboratory facilities should be improved more especially for the laboratory staffs so that they can handle the maintenance, monitoring in terms of utilization, administration, procedure, and scheduling. Achievement Laboratory in optimizing the use still needs to be promoted for internal of Yogyakarta State University academics and outside the university, by using the leaflet media promotion or by social media promotion. It may give the information about this Achievement Laboratory. As it was explained by Solihatin and Raharjo (2007), the laboratory should be structured well as normally it has the Head of Laboratory, Technicians, and Laboratory Assistants.

It is hoped that the laboratory improvement should be upgraded in the aspect of its maintenance. The laboratory facilities should be improved more by providing some additional equipment such as treadmill, stationary bike, dumbbell, barbell, squat, leg curl, mattress, and the big ball. It is also needed the additional staff to help the maintenance of the laboratory. The development of Achievement Laboratory may always help the college students, for the lecture activity or research activity, so the students may get the better knowledge and experience. In fact, it may help the students in accomplishing their final assignment. The capacity of the building should be broadened more and it should be centered. The promotion through the newspapers media or social media should be done as well.

CONCLUSION

This activity of utilizing and optimizing Achievement Laboratory gets the great appreciation from the participants. It is said so since the participants feel that the existence of the laboratory is very useful in identifying the health and physical condition and it helps improving the physical condition during the exercise program. In fact, the laboratory can be used well for supporting the lecture activity, practice, and research. The participants also give the suggestions that the use of the laboratory should be emphasized more in its usage, management, and maintenance. This Achievement Laboratory also needs to be promoted more and it is developed more in terms of its maintenance along with the wider capacity and centered-space.

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