

In Adaptive Physical Impact Of Training Program To The Improvement Of Teaching Competency Education

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Abstract This study aims to determine the impact of training program to the improvement of teaching competency in Adaptive Physical Education (APE) of special educators. The provided training is competency-based and conventional training program. The teaching competency consist of professional and pedagogical of APE. This research using experiment method with factorial model 2X2. The sample are teachers of intellectual disability student. The sampling data collection using stratified cluster random sampling. The samples are 60 teachers divided to four groups that joined 60 hours of training program. The statistical analysis applied with T-Test sample paired test, Anova test (Two Way Anova with Main Effect and Interaction Effect), and PostHoc Test. The results shows that group of teachers in competency-based training program gain a high competency test score, average score higher than other groups. There is no interaction between training program and competency test result to the enhancement of teaching competency in APE.

Keywords: Adaptive Physical education, experiment method, Anova Test, competency-based training

1. Research Background

Law No.14 year 2015 [6] regarding teacher and lectures states that teacher is a professional educator who have main role in educating, teaching, guiding, arranging, training, assessing and evaluating the student in formal early education level, elementary and secondary levels. The law also defines that professionalism is a occupation or activity conducting by someone and become a financial resource that require skill, expertise, and capability that fulfil the quality standard and certain norm as well as profession education. The law number 20 year 2003 [5] regarding national education system, the law number 14 year 2005 [6] regarding teacher and lecturer, and government regulation number 19 year 2005 [32] regarding national educational standard demands reformation of the teacher to have higher level in pedagogical, personality, professional and social competencies.

Regulation of the Minister of National Education (Permendiknas) of the Republic of Indonesia Number 32 of 2008 [8] Regarding Academic Qualification Standards for Special Education Teacher Competencies Article 3 states Special education providers must apply academic qualification standards and competencies of special education teachers. The core competencies of special education teachers adjust the core competencies of public school teachers as stated in the Regulation of the Minister of National Education Number 16 of 2007 [7].

Special education teacher competency standards are fully developed from four teacher competencies, namely pedagogic competence, personality competence, social competence, and professional competence. Regulation of the Minister of National Education Number 16 of 2007 [7] for Competencies of Teachers in Physical, Sports and Health Education subjects in SDLB / MILB, SMPLB / MTsLB, SMALB / MALB, and special education teachers in general and vocational education units, namely: 1) understand the concepts and principles of implementing adaptive physical education (APE); 2) able to conduct assessments for

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learning purposes; 3) able to plan recreational programs and APE; 4) able to carry out adaptive recreational and physical education (PE) programs; 5) able to evaluate recreational programs and APE; 6) master the types and characteristics of children with special needs and the basics and principles of special education.

Education for children with special needs requires a distinctive service pattern, especially for children with functional development disability (children with developmental impairment), the development should refer to a certain condition with intelligence and adaptive functions, by showing various problems with different cases [4].

Implementing PE in children with special needs, an APE teacher should be able to manage learning activities, so that the implementation can run effectively and achieve the expected results. Good PE is when there is adaptation. With APE children with special needs can show people that they can also live like normal children, and excel through their talents. [14]; [26].

However, some findings by the ministry of education [9] shows that the PE teachers only provide learning material without being balanced with other knowledge and abilities in the learning process. the teachers lack in giving ideas, explanations, demonstrating, guiding and motivating education and training participants in learning activities in accordance with the conditions of the training participants they faced. Thus, the implementation of education in Indonesia still needed a lot of improvement [27].

In another study by Tarigan [26] suggested that APE teachers have many weaknesses and difficulties in carrying out the learning process, including difficulties in understanding and carrying out training material, lack of understanding of PE curriculum and sports, lack of skill in using learning methods, lack understand in conducting evaluations, as well as do not have representative sources and textbooks.

Increasing the capacity of PE teachers is a very important concern in carrying out their professional duties. The implementation of professional duties can be improved through education and training. The regulation of Minister of State PAN and RB Number 16 of 2009 [23] regarding Teachers' functional

occupation and their credit is motivated by the fact that teachers have a strategic role in improving the learning process and the quality of students. Functional education and training is included in the category of training that is carried out to achieve competency requirements that are in accordance with the types and levels of each functional occupation.

In Permendiknas Number 35 of 2010 [17] it is stated that functional training is the activity of teachers in participating in education or training that aims to improve the professionalism of the teacher concerned in a certain period of time. Professional development can be carried out by government institutions, non-government training providers, organizers, or educational units. At the level of the education unit, this program can be carried out by the instructor teacher, core teacher, class teacher coordinator, and the like appointed by the best teacher and assigned by the principal. The training program helps teachers develop and gain new knowledge, as well as engage with colleagues in their schools and other schools. Training programs are needed to re-orient teachers for new goals and values, use teaching methods, prepare teachers to deal with curriculum changes, and to provide new teachers with knowledge and teaching skills in the field of education. [30]; [11]; [3]; [24].

The importance of teacher procurement generally arises to equip them with the competencies needed to achieve success in their work, and this leads to the emergence of the concept of Competency Based Training in the field of Education. This Training aims to provide teachers with knowledge, skills and attitudes that enable them to recognize and solve complex problems that arise in their classrooms. Competency Based Training emerged as a criticism directed to the traditional teaching methods of teacher education and training whose output depends on the knowledge. [15]; [16]; [13]; [10]; [20].

Competency Based Training depends on analyzing the learning process into a group of competencies, that each teacher must obtain opportunities in order to increase the success of achieving goals. Teacher competency improvement is carried out through various strategies in the form of training and non-training, such as the following: 1) Tiered training and special training. This type of training is carried out in P4TK and / or LPMP

and other authorized institutions, where the training program is arranged in stages starting from the basic, secondary, advanced and higher levels. Training levels are arranged based on the level of difficulty and type of competency. Special training (specialization) is provided based on special needs or due to new developments in certain topics, 2) Distance learning. Training through distance learning can be carried out without bringing instructors and trainees in one particular place, but with a training system through the internet. Coaching through distance learning is conducted with the consideration that not all teachers, especially in remote areas, can attend training in designated coaching places such as in the district capital or in the province.

The focus of teacher procurement in quality is largely due to the teacher as the main agent of the education program, because the teacher determines the direction and ensures the success of the education system. Therefore, a competent teacher is one of the key elements in the success of the learning process. As such, it is important to continually evaluate the process of improving teacher capacity in order to prepare teachers who are able to perform their duties and functions effectively and be able to face global challenges in the education system in the present and future.

Education and Training are regulated based on Law Number 22 of 1999 [33] and Government Regulation Number 25 of 2000 [22] basically giving authority to the Education and Training Office at the sub-district, district/city, provincial and national levels to organize education and training. Education is any effort to foster personality, develop knowledge, physical and spiritual abilities to be able to carry out tasks. Education and training, both organized by competent institutions handling upgrading and training such as: P4TK, LPMP, City Education Office, District Education Office Branch, LPTK, professional organizations and private institutions that have concern for education. Various types of activities, both in the form of upgrading, training, technical guidance, workshops, advocacy, and socialization.

The reality in education and training of PE teachers is that the application of the results obtained from training has not been sufficient to provide a fundamental change to the behavior in teaching. This does not mean that teachers do

not increase their knowledge, but more often training held are not in accordance with individual needs of the teachers. The question that still needs to be answered is: "Do the various forms of teacher training have a significant influence on teacher professionals?". In consequences, it is necessary to identify learning need regarding training provision that align with the needs of individuals or institutions. [19]

2. Method

This study using experimental method because this study describes the relationship between a variable treatment with other variables where the treatment is caused by researchers. The research design used is factorial group design with a 2 x 2 design with the Randomized pretest-posttest control group design program.

3. Result and Discussion

3.1. Result

Table 1. Test Result of Low UKG Independent Sample T-Test

Data Group	Mean	t	Sign.	Conclusion
Low Competency	Y1 = 23,56	1,190	,247	Not Significant
	Y2 = 25,78			

Table 2. Test Result of High UKG Independent sample T Test

Data Group	Mean	t	Sign.	Conclusion
High Competency	Y1 = 25,33	2,171	,039	Significant
	Y2 = 33,11			

Table 3. Homogenius subsets test

Test_Result				
kelompok	N	Subset		
		1	2	
Tukey HSD ^{a,b}	x1y1	15	23,5553	
	x2y1	15	25,3333	
	x1y2	15	25,7773	25,7773
	x2y2	15		33,1113
Sig.			,864	,061

Table 4. Hasil Uji faktorial 2x2

Dependent Variable: Test_result

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	802,116 ^a	3	267,372	4,369	,008
Intercept	43559,826	1	43559,826	711,768	,000
UKG	311,357	1	311,357	5,088	,028
Prog_Training	375,000	1	375,000	6,128	,016
UKG *	115,759	1	115,759	1,892	,175
Prog_Training Error	3427,169	56	61,199		
Total	47789,112	60			
Corrected Total	4229,286	59			

a. R Squared = ,190 (Adjusted R Squared = ,146)

3.1. Discussion

1. Chapter There are differences in the impact of education and training programs on the improvement of APE learning competencies for special education teachers for low competency groups.

Judging from the average score of the Y2 group given education treatment and competency-based training showed better results compared to the Y1 group who were given conventional training education which was 25.78 versus 23.56, this indicates that the competency-based training program group had a better impact compared to conventional training program groups. However, there was no significant difference in the effect of giving conventional training programs with competency-based training on the improvement of APE learning competencies of special PE teachers in low competency groups.

1. There is a difference in the effect of training programs on increasing the APE learning competencies of special education teachers for high competency groups.

Judging from the score of the average Y2 group given the competency-based training program showed better results than the Y1 group given the conventional training program which was 33.11 versus 25.33. This comparison shows a significant difference between the Y1 group data and Y2 group data, namely from the provision of conventional training programs

with competency-based learning to the improvement of APE learning competencies of special PE teachers in the high competency group.

From the results of statistical tests that have been carried out (specifically hypothesis tests 1 and 2), groups given Competency-based training programs show better results than groups given Conventional training programs both for groups of high and low of special PE teachers. This is also proven by the results of further testing (Homogeneous Subsets) seen in the table above.

The table above shows that the group of competency-based training programs (CBT) with high competencies has the highest average increase and has a significant difference to the group of conventional programs both high and low competencies, while the difference with competency-based competency-based training programs is not significant but still shows the best average increase (33.11; 25.78).

Competency-Based education and Training (CBET) is one of recent personnel development that is needed and has begun to be increasingly applied by many organizations. this is felt important for the organization along with the increasing level of workforce needs for high levels of education and skills. CBET is an educational process and specifically so that target-based work can be achieved which is more directed at achieving competency as a final outcome that meets the standards of a process of education and training and previous experience that can be demonstrated by workers or employees in carrying out tasks and work. Therefore CBET is very flexible in the process of opportunity to acquire competencies in various ways. This is different from education and training that is generally carried out (traditional) which focuses on input, processes, and outputs (output) that are very varied and may not fits to the standards of task requirements. What is unique about CBET is that it focuses on what students learn and not on the time spent in class to complete credit. In this approach, students work at their own pace to show mastery in the competencies needed for their chosen field of study.

CBET aims to enable students and trainers to be able to do tasks and work in accordance with the industry standards. In particular, CBET's main objectives are: [29]

- a) Produce competencies in using specified skills to achieve standards in a condition that has been determined in various occupations and positions.
- b) Search (assessment) of competencies that have been achieved and certification. CBET results should be associated with:
 - i. Competency standards that will be given
 - ii. Education and training programs are based on job descriptions
 - iii. Multi-skilling requirements

The Competency Based Education and Training (CBET) program differs from the traditional approach to education and training, placing a heavy emphasis on what a person can do at work after the completion of a training program. The development of students in the CBET program is not time-bound; but that depends on a person's ability to show the competencies needed for the job.

CBET focuses on helping students / trainees to develop and demonstrate competent performance as required by industry-approved competency standards. It aims to prepare individuals to work or become more productive at work.

The results of CBET's research are also supported by several previous researchers who raised the benefits of the CBET approach, among others: [1]. [21]. [18]. [28].

The concept of competency-based education is an effective solution for the implementation of education and training programs, because competency is a strong concept, which shows that students or trained students must be able to understand the content of education and training programs and to apply the knowledge they acquired during this program in practice. We see competence as a holistic concept. This is about the integral ability of people to do adequately in certain contexts.

2. There is no interaction between the training program with the high and low results of the competency test on the teaching competencies of special education teachers in APE learning.

The interaction test results between the type of training and the level of competency on the results of the APE learning competency test of special education teachers obtained an F value of 1,892 with a significance value of 0.175, this

means that there is no joint effect between training programs and competency levels on the learning competency test results of APE special education teacher. However, the Adjusted R squared score of 14.6% (0.146) means that the variability of the results of teacher education learning APE competency test can be explained by training program variables (competency-based and conventional) and competency test results (high and low competency groups) at 14.6%.

However, in this case it can be concluded that for the relationship between the provision of competency-based and conventional training there is a significant difference in the level of competency in the learning of APE as indicated by the acquisition of 6,128 F scores with sign scores. 0.016. Whereas the relationship between the level of initial competency test results (low and high competency groups) with the results of the APE learning competency test of special education teachers, shows the score of F score of 5.088 and the value of sign. 0.028, this means that the classification of the level of results of the initial competency test between low and high competencies has a significant difference to the results of the APE learning competency test of special education teachers.

Tracy et al. 2002 in [29] states that developing and implementing an effective training program is not an easy job, however, the program is absolutely necessary. The HR development program is a force that is expected to create new nuances in an effort to accelerate the development of human resources with competencies, abilities, and levels of professionalism that are in line with the needs of the workforce. Performance is a result, in the presence of people, sources and in certain work environments together bring the final results based on the quality level and standards that have been set. Many aspects affect the success of a performance such as clarity of role, competency level, environmental conditions, and other factors such as value, culture, preferences, rewards and recognitions. Through management intervention in the CBET field, it is expected that HR can develop in accordance with the demands of the world of work and provide many benefits for improving performance.

Increasing the capacity of APE teachers is a very important concern in carrying out their professional duties. The implementation of

professional duties if they lack professional standards can be improved through education and training. Determination of Minister of State PAN and RB Regulation Number 16 of 2009 [23] concerning the Functional Position of Teachers and their credit, is motivated by the fact that teachers have a strategic role in improving the learning process and the quality of students. Functional training is included in the category of in-service training carried out to achieve competency requirements that are in accordance with the types and levels of each functional positions.

In Permendiknas Number 35 of 2010 [17] it is stated that functional training is the activity of teachers in participating in education or training that aims to improve the professionalism of the teacher concerned in a certain period of time. Professional development and development activities can be carried out by government institutions, non-government training providers, organizers, or educational units. At the level of the education unit, this program can be carried out by the instructor teacher, core teacher, class teacher coordinator, and the like appointed by the best teacher and assigned by the principal.

Training programs are needed in an effort to improve knowledge, skills, attitudes and competencies, to enable teachers to be more effective in implementing learning process. A teacher training program is a process that develops, availability of information, and maintains attitudes, can help teachers to be more efficient in their work [2]. Thus, training is carried out as a solution to the lack of teacher competence or when there is a need to make changes in the way things have been done. The training program helps teachers develop knowledge, gain new knowledge, and engage with colleagues in their schools and other schools. Training programs are needed to re-orient teachers for new goals and values, train teachers in teaching and use learning methods, prepare teachers to deal with curriculum changes, and to provide teachers with new teaching knowledge and skills. The training program also helps teachers develop their own work as a whole. In line with the opinions of other experts such as; [11]; [3]; [24].

The importance of teacher preparation generally arises because it prepares teachers and provides them with the competencies needed to achieve success in their work, and this leads to

the emergence of the concept of Competency-Based Training in the field of Education. This training aims to provide teachers with knowledge, skills and attitudes that enable them to recognize and solve complex problems in their domain of learning or working in the future [15].

3. Conclusion

ClosingBased on the findings in this study, it has been shown that competency-based training programs can improve APE learning competencies in special education teachers. This shows a significant difference between competency-based training programs to the improvement of special education teachers' PE learning competencies compared to conventional training programs.

The provision of competency-based training programs in high-competency groups showed a significant difference compared to the conventional training program group with low and high competencies towards increasing PE learning competencies in special education teachers, while those with competency-based training programs that had low competency groups were not significant differences.

The interaction test results between the types of training and the level of competency on the learning outcomes of the APE learning competency test of special education teachers show no interaction, this means there is no joint effect or joint effect between the training program and the level of competence on the results of the teacher special education.

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