

## Learning Effectiveness and Level of Motivation Following Educational Technology Learning During Pandemic to State High School Students in Banyuwangi Regency

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### Abstract

*This research generally aims to determine the effectiveness of learning and motivation to participate in high school student learning during the pandemic in physical education subjects. The research was conducted on public high school students in Banyuwangi Regency. In this case, the sample is 1,061 students, divided into 529 students in independent regional schools and 532 students in developed regional schools. This research is a quantitative descriptive study by obtaining data from questionnaires distributed to students. Students who fill out a random questionnaire in two schools that have been selected in the independent region and two schools selected in the developed region. Based on this research data, the learning effectiveness of public high school students in independent areas in Banyuwangi Regency is in the "good" category with an average value of 2.58. Meanwhile, in developed areas, the learning effectiveness of State Senior High School students in Banyuwangi Regency is in the "medium" category with an average value of 2.50. Data on motivation to participate in the learning of state high school students in independent areas in Banyuwangi Regency is in the "high" category with a percentage of 53.31% of the sample. Meanwhile, in the advanced regions, the motivation for participating in the learning of State Senior High School students in Banyuwangi Regency is also included in the "high" category with a percentage of 59.21% of the sample.*

### Keywords

physical education  
learning; learning  
effectiveness;  
motivation to follow  
learning



## I. Introduction

Education is an important aspect of a nation. Through education, powerful thoughts and strong characters can be formed. Through education the body is forged both physically and mentally. Physical education, sports and health (Penjasorkes) is a subject that is given at a certain school level which is one part of the overall education that prioritizes physical activity and fostering a healthy life for growth and harmonious, harmonious physical, mental, social and emotional development. and balanced (Depdiknas, 2006:131). Teaching and Learning Activities (KBM) for Physical Education, Sports and Health subjects are currently "normal" in the form of face-to-face meetings that make psychomotor abilities an important target. Psychomotor ability is an outcome type in the form of skills and movement abilities. Physical education has received less attention due to the assumption that not all subjects can be assessed for psychomotor aspects (by looking at the basic competencies that are targeted by students).

Face to face is very influential for students and educators in carrying out learning activities. One of them is on the aspect of learning motivation which is certainly very influential on learning outcomes. At face-to-face educators can identify directly and tend to be easier to identify students whose learning motivation is reduced or even their learning motivation is good. Students can also consult directly when learning motivation decreases.

Unwanted time changes occur today that require us to adapt in new habits. All aspects of life, including education, which includes Physical Education and Health subjects, are also affected. Physical education, which is identical to physical activity and movement skills, must also continue to run according to the right rules and goals. If before the pandemic, educators and students could conduct direct learning face-to-face either in class or in the field on a regular basis, but this cannot be done with appeals and rules that give us boundaries for social distancing, and or physical distancing .

Distance Learning can be done in the form of E-learning. According to Dewi (2010) in the process of E-learning ( Electronic Learning ) as a medium of distance learning (distance learning) creates a new paradigm when compared to conventional education. With the use of E-learning , the teacher will play a more role as a "facilitator" and students as "active participants" in the teaching and learning process.

With such a process, without realizing it, education during this pandemic period applies Technological Pedagogical And Content Knowledge (TPACK). TPACK is the application of technology from various subject matter content. The application cannot be separated from the use of online strategies in the teaching and learning process. Meetings in cyberspace become familiar with the process of assisting parents in more intense learning . This will be done with the support of good communication infrastructure. In addition to teachers, students must also be able to get used to new habits at a time like this. Students must be able to carry out activities prepared by physical education teachers independently at home with parental supervision as a substitute for teachers. Students are required to be able to carry out movement activities by looking for as many sources as possible from the internet as well as books in accordance with the guidance of the physical education teacher.

The suitability of learning outcomes during this pandemic is certainly a highlight given that all learning processes are very limited. All interactions are carried out virtually as a process solution with all demands for learning outcomes as desired, as before the pandemic occurred. Activities that are always faced with a glass screen, be it a cellphone or laptop , become a challenge for students. Of course, students must be able to organize and maintain psychology so that learning motivation remains high. The unfamiliarity of students in undergoing the teaching and learning process with this online system can be the cause of the lack of maintained learning motivation. It is also felt in Banyuwangi.

The conventional method became the method used in learning before the pandemic in Banyuwangi. During the pandemic, many parents complained about the distance learning process. Even school-age children look cool playing during school hours. As is known, school entry hours are still only a method of using distance learning. Banyuwangi, which is the easternmost district on the island of Java, which has the largest area on the island of Java, even wider than the island of Bali, has diverse geographical conditions. Mountain, forest, rural and urban areas are certainly factors that affect the cultural and economic life of the community so that they are diverse. According to the data from the Development Village Index (IDM) in 2020, the sub-districts in Banyuwangi Regency can be classified into independent regions and developed regions.

Of all the conveniences and constraints of the various aspects described above, of course there is a possibility of an impact on physical education learning during this pandemic. In this case, we will discuss the impact of physical education learning during the pandemic on the effectiveness of learning and motivation to participate in learning for high school students in Banyuwangi district. The classification used in this study is based on the category of the Building Village Index (IDM) in 2020.

## II. Research Methods

This type of research is descriptive quantitative research. The data collection technique used in this study used an instrument in the form of a questionnaire (questionnaire). The variables of this study include:

- a. Physical education lessons during the pandemic
- b. Learning effectiveness
- c. Motivation to follow learning

The populations in this study were students of SMA Negeri in the Banyuwangi Regency area, with a total of 14,473 students. Because Banyuwangi is *geographically* very broad, the researchers used a *cluster sampling technique* ( *sampling area* ). The population of public high schools in the Banyuwangi Regency area is divided into 2 classification areas, namely independent areas and developed areas. The basis of the data is adjusted to the Building Village Index (IDM) 2020. In each classification, 2 public high schools are taken to be studied by students. Furthermore, from the SMA in the classification, *random sampling* will be used to determine the students to be studied.

*Formative Class Evaluation* (FCE) is a questionnaire given to students to find out how effective physical education learning is in terms of students' opinions (Wijaya and Astono, 2006:13). In giving this questionnaire the time is after the teaching and learning process. Here are the FCE validity levels.

**Table 1.** Degree of Validity of *Formative Class Evaluation* (FCE) Instruments

Question Number	Validity Value	Degree of Validity
1	0.83	Special
2	0.71	High
3	0.78	High
4	0.70	High
5	0.72	High
6	0.60	Enough
7	0.72	High
8	0.65	Enough
9	0.70	High

(Wijaya & Astono, 2006:15)

**Table 2.** The Results of the Validity Test of the Motivation Questionnaire for Participating in Physical Education Learning

Variable	item	r	Sig.	r	Note:
		table		table	
The level of student motivation	1	0.473	0.000	0.113	Valid
	2	0.483	0.000	0.113	Valid
	3	0.418	0.000	0.113	Valid

in	4	0.544	0.000	0.113	Valid
participating	5	0.505	0.000	0.113	Valid
in physical	6	0.396	0.000	0.113	Valid
education	7	0.514	0.000	0.113	Valid
learning	8	0.546	0.000	0.113	Valid
	9	0.513	0.000	0.113	Valid
	10	0.529	0.000	0.113	Valid

(Bhetharem, 2020)

**Table 3.** The Results of the Reliability Test of the Questionnaire on the Level of Motivation to Follow Physical Education Learning

No.	Variable	Information
1	Student motivation in participating in physical education learning pembelajaran	Reliability/Consistent

(Bhetharem, 2020)

From the results of the validity test, the questionnaire that will be used for learning effectiveness, namely *Formative Class Evaluation* (FCE) is valid. Furthermore, the motivational questionnaire for participating in learning is also based on the results of the validity and reliability test is valid.

### III. Discussion

This study consists of three variables, namely physical education learning during the pandemic, learning effectiveness and learning motivation of high school students in Banyuwangi Regency. Description of data from each variable as follows:

#### 3.1 Physical Education Learning

Teaching and Learning Activities (KBM) for Physical Education subjects during the pandemic are still carried out in various ways by Physical Education teachers. From the results of asking several physical education teachers who teach at state high schools, the teaching and learning process (PBM) continues but cannot be maximized. Some teachers only communicate via Whatsapp without face-to-face, and there are some teachers who continue to do face-to-face even though they are virtual face-to-face. Birri (2020) Sports and Health Physical Education (Penjasorkes) is a means of encouraging the development of motor skills, physical abilities, knowledge, sportsmanship, habituation of healthy lifestyles and character building (mental, emotional, spiritual and social) in order to achieve the goals of the national education system. Types of exercises plyometric high hurdle jump and forward and lateral hurdle jump are two types of exercises plyometric but different implementation. Sports and Health Physical Education is a learning process through physical activities where each student is obliged to do physical activities to improve his physical fitness (Novianti, 2020).

### 3.2 Data study

The effectiveness of learning SMA Penjasorkes time to the pandemic in the region of Banyuwangi district is divided into two parts, namely in the area of data and data on the self-developed regions.

#### a. Independent Regional High School

The independent questionnaire areas were distributed to two SMANs, namely SMAN 1 Genteng and SMAN 1 Giri. From the two schools, the following results were obtained:

**Table 4.** Data on the Effectiveness of Learning for Physical Education in SMAN Pembelajaran in the Independent Region in the District Banyuwangi

Aspect	Question Number	Average Score	Category
Results	1	2.40	Good
	2	2.56	Good
	3	2.78	Good
	<b>Component Mean</b>	2.58	Good
Will	4	2.67	Medium
	5	2.75	Medium
	<b>Component Mean</b>	2.71	Medium
Method	6	2.64	Good
	7	2.54	Medium
	<b>Component Mean</b>	2.59	Good
Cooperation	8	2.36	Less
	9	2.50	Medium
	<b>Component Mean</b>	2.43	Medium
<b>Total</b>		2.58	Good

Seen results from the FCE questionnaire in total of 2.58. This figure is included in the "Good" category. This means that the effectiveness of physical education learning in public high schools during the pandemic in Kab. Banyuwangi is still going well. According to the aspect of the question, the results can be seen in more detail. In the aspect of results, the average score is 2.58 in the "Good" category. In the aspect of willingness to get a score of 2.71 with the "Medium" category. In the method aspect, the average score is 2.59 in the "Good" category. Meanwhile, in the collaboration category, the score was 2.43 with the category "Medium".

If we look at the percentage of results from research on the effectiveness of physical education learning in public high schools during the pandemic in Kab. Banyuwangi in the independent area as much as 17.77% is in the "very less" category. While the "less" category was 11.15%. The "medium" category was 17.77%. The "good" category was 2.84% and the "very good" category was 50.47%.

#### b. Advanced Regional High School

For advanced areas, the questionnaire was distributed at SMAN 1 Purwoharjo and SMAN 1 Srono. The results of the distribution of the questionnaire are as follows

**Table 5.** Data on the Effectiveness of Learning for Physical Education in SMAN Pembelajaran in the Advanced Region in Kab. Banyuwangi

Aspect	Question Number	Average Score	Category
Results	1	2.23	Medium
	2	2.46	Medium
	3	2.63	Good
<b>Component Mean</b>		2.44	Medium
Will	4	2.63	Medium
	5	2.77	Medium
	<b>Component Mean</b>	2.70	Medium
Method	6	2.52	Good
	7	2.56	Medium
	<b>Component Mean</b>	2.54	Medium
Cooperation	8	2.26	Less
	9	2.45	Medium
	<b>Component Mean</b>	2.36	Medium
<b>Total</b>		2.50	Medium

It can be seen that the results of the FCE questionnaire totaled 2.50. This figure was included in the "Medium" category. This means that the effectiveness of physical education learning in public high schools during the pandemic in Kab. Banyuwangi is still running at a moderate level. According to the aspect of the question, the results can be seen in more detail. In the aspect of results, the average score is 2.44 with the "Medium" category. In the aspect of willingness to get a score of 2.70 with the "Medium" category. In the method aspect, the average score is 2.54 with the "Medium" category. Meanwhile, in the cooperation category, the score was 2.36 with the category "Medium".

If we look at the percentage of results from research on the effectiveness of physical education learning in public high schools during the pandemic in Kab. Banyuwangi in the developed region as much as 23.86% is in the "very less" category. While the "less" category was 12.03%. The "medium" category was 19.17%. The "good" category is 4.51% and the "very good" category is 40.60%.

The results of this study indicate that there are differences in the learning effectiveness of state high school students in Kab. Banyuwangi is between an independent region and a developed region. This can be seen from the questionnaire data that has been distributed, there are differences in the components of the results and methods. In the independent area the average of the result component and method component is in the "good" category. However, in developed regions, the two components above fall into the "medium" category.

These two components are related to each other. With the right method and in accordance with the character, it will get good learning outcomes. Buna'I (2008) said that the method and learning outcomes are a system that cannot be separated because there will be phenomena on the learning outcomes side if we change the method.

Actually, to know the effectiveness of learning does not have to be seen from the point of view of students, it can also be seen by peers or principals and even supervisors. However, in this study, effectiveness was seen from the students' point of view with a *formative class evaluation* (FCE) questionnaire. Bayu, Synthiawati, and Setyawan (2014) said that FCE can be applied at the elementary, junior high and high school levels.

### 3.3 Motivation to Follow Learning

In this study, there are motivational data for participating in physical education learning at public high schools in an independent area in Banyuwangi Regency and motivational data for participating in physical education learning at public high schools in the Maju area in Banyuwangi Regency.

#### a. Independent Regional Public High School

The motivation data for participating in Physical Education learning in independent areas is as follows:

**Table 6.** Motivation Data for Participating in Physical Education Learning in SMAN in an Independent Region in Kab. Banyuwangi

Score Interval	F	f %	Category
10 – 15	7	1.32	Very low
16 – 21	6	1,1 3	Low
22 – 27	90	1 7 , 01	Medium
28 – 33	282	53.31	High
34 – 40	144	27.22	Very high
Total	529	100	

The motivation for participating in learning during the pandemic period in independent areas in Banyuwangi district was on average in the "High" category with 282 children or 53.31% of the total respondents. In addition, there is a "Very High" category of 144 children or 27.22%. In the "Medium" category, there were 90 children or 17.01%. In the "Low" and "Very Low" categories, there are 6 and 7 children with a percentage of 1.13% and 1.32%.

#### b. Advanced Regional High School

After displaying the motivational data for participating in physical education learning in independent areas, then the motivation data for participating in physical education learning in SMA Negeri in developed areas in Banyuwangi Regency.

**Table 7.** Motivation Data for Participating in Physical Education Learning in SMAN in the Advanced Region in Kab. Banyuwangi

Score Interval	F	f %	Category
10 – 15	5	0.94	Very low
16 – 21	6	1,1 3	Low
22 – 27	103	19.36	Medium
28 – 33	315	59.21	High
34 – 40	103	19.36	Very high
Total	532	100	



The motivation to participate in learning during the pandemic period in developed areas in Banyuwangi district is on average in the "High" category with as many as 315 children or 59.21% of the total respondents. In addition, there were 103 children in the "Very High" and "Medium" categories or 19.36%. In the "Low" and "Very Low" categories, there are 6 and 5 children with a percentage of 1.13% and 0.94%, respectively.

Motivation is a very important factor for humans in living life, because without motivation humans will not have the enthusiasm to pursue goals or dreams in life. Motivation is something that can move a person's desire to take action to achieve goals. As stated by Oktavian & Hariyoko (2020) motivation is an impulse that can make someone take action.

Physical education is one of the most important subjects for students to learn during this pandemic, because it contains knowledge about health and sports practice so that students can fortify themselves. One of them is by exercising regularly and maintaining a healthy lifestyle in order to increase body resistance (immunity) to prevent COVID-19.

Based on the results of research that has been done in SMA Negeri in Banyuwangi Regency with a total of 1,061 students. Of this number, they were divided into 2 groups, namely 529 State Senior High School students in independent areas and 532 State Senior High School students in developed regions. It is known that the average level of motivation of public high school students in Banyuwangi Regency in both independent and developed areas in participating in physical education learning during the pandemic which is carried out *on-line* is in the high category.

In this case the level of motivation in students will certainly have an impact on learning outcomes. According to Emda (2017), students who have high learning motivation towards learning will be moved or moved to have the desire to do something that can get certain results or goals. From the results of this study, it can be understood that there are factors related to the level of motivation of state high school students in Banyuwangi Regency in participating in physical education learning during the pandemic, including the following:

#### 1. Physical Education Learning (Online)

Physical education learning during a pandemic is a new experience. Students who previously received material and carried out physical activities in the open field or at school, but currently the implementation must be done from home using a network.

From a health perspective, this has a positive impact and is believed to reduce the spread of the COVID-19 virus. In terms of education, we also get a positive impact for students and educators, which is a place to find innovations and creations that are in accordance with the current pandemic conditions.

However, the negative impact must also be there when learning from home for a long time and continues to be sustainable, there will be a psychological impact for students. Students feel bored or bored because of the lack of interaction between students and teachers. In addition, the tendency of teachers who only give training assignments to students can also add to its own burden for students. Therefore it can be related to the level of student motivation.

#### 2. Direct Interaction between Students and Teachers

This pandemic has changed a lot of past habits. One of them is in the world of education, namely the direct interaction of students and educators in schools having to move places in cyberspace. If for a long time this process continues, it is impossible for students to be bored with learning from home through the network, also the educators will



run out of creations and innovations to always make the class interesting for their students. This impact is also felt in physical education subjects who are identical to physical activity outside the classroom and developing cooperation. Currently, students must carry out activities that have been given by the teacher in their respective homes with all the limitations of the tools and under the supervision of parents.

### 3. Physical Education, Sports and Health are underestimated.

It is common knowledge that physical education subjects are considered less important, as if these subjects are only complementary fillers and are considered one eye. This is a joint task as physical and physical education personnel to change the thinking of students and educators of other subjects towards physical and physical education subjects.

The role of physical education teachers in creating a good teaching and learning atmosphere is very large. Teachers who can carry out their roles well in learning, the learning will run smoothly and conducive. Moreover, if it is accompanied by innovations and creations from teachers related to changes in the teaching and learning process during this pandemic, the learning will be more interesting. In this case, the teacher's role is not only to transfer subject knowledge, but also as a motivator for students so that these students have enthusiasm and are motivated in learning, especially in physical education learning.

### 4. Physical Education Learning Model during the Pandemic

The pandemic period requires all levels of education to carry out the teaching and learning process through the network (online) with *on - line* media, including physical education teachers. This pandemic has become an entry point for changing textual learning to be contextual. Contextual learning is a learning concept that links the subject matter in everyday life.

It is very closely related to the appropriate way of presenting material from a teacher, especially during a pandemic where its implementation has limitations. Teachers must be aware and know very well in carrying out their role during the teaching and learning process so that the transfer of knowledge can run well, because the teacher's role in the teaching and learning process is the teacher as a mediator, facilitator and evaluator.

Based on the observations of several public high school physical and education teachers in Banyuwangi district that during this pandemic physical education learning continues by utilizing free applications that can be *downloaded* by students in the form of *Google Classroom*, YouTube, WhatsApp and Telegram as media and several virtual face-to-face applications. This can be done during a pandemic by maximizing what you have in all the current limitations.

## IV. Conclusion

After conducting research by distributing questionnaires to students, it can be concluded:

1. The results of the study on the effectiveness of learning by distributing FCE questionnaires to groups of State High School students in independent areas with an average of being in the "good" category of a total sample of 529 with an average value of 2.58. From a total of 529 respondents, the "very good" category is the largest number of respondents as much as 50.47%. However, it is different in developed regions which are in the "moderate" category from a

total sample of 532 respondents with an average of 2.50. From a total of 532 respondents, the "very good" category is the largest number of respondents as much as 40.60%. If detailed the differences that occur in aspects of results and methods. In the aspect of results for independent regions, it is in the "good" category with an average value of 2.58, while for developed regions it is in the "moderate" category with an average value of 2.44. For the method aspect in the independent region it is in the "good" category with an average value of 2.59 while in the developed region it is in the "moderate" category with an average value of 2.54. These two aspects make the category of physical education learning effectiveness in independent areas better than the physical education learning effectiveness in developed areas.

2. On the motivation to participate in physical education learning during the pandemic, the average in the independent area is in the "high" category, the percentage is 53.31% of the total sample. In the advanced region, the percentage was 59.21% of the total sample. There is no difference in motivation to participate in physical education learning during the pandemic, both in independent and developed areas.

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