

ORIGINAL ARTICLE



Application of YouTube-Based Virtual Blended Learning as a Learning Media for Fundamental Movement Skills in Elementary Schools during the Covid Pandemic 19

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ABSTRACT

Background. The purpose of this study was to obtain an overview of learning outcome using a virtual YouTube-based application as a medium for fundamental movement skills learning at the Elementary School. **Methods.** The method used in this study was classroom action research. The learning system which was created and implemented is a YouTube-based virtual learning system. The design used is a cycle model which includes the steps of planning, implementing, observing, and reflecting. The population used was a purposive sample of 32 students in 5th grade. The instrument used was in the form of field notes (Duration Recording), namely the use of virtual Blended Learning based on physical education YouTube videos for fundamental movement skills through observation with an average of 55% so that the target achievement was determined with an average of 80%. **Results.** Based on research in cycle I (Actions A, I, and W) 80.43%, because it has not exceeded the research target, it was continued to cycle II. Based on the results of data analysis, the actions in second cycles generated a very good change (85.42%). This change can be seen after the application of instructional media and explicit instructions that can be understood by students. Paired sample t-test shows the results of the value of 50.87 with Asymp. Sig. (2-tailed) = 0.000 < 0.05, which means that there is an increase in fundamental movement skills of students. **Conclusion.** The fundamental movement skills learning using a virtual YouTube-based application is quite meaningful in increasing the Learning Media for Sindang Sari 1 Elementary School students.

KEYWORDS: *Blended Learning, Movement Skills, Learning Media, Elementary School*

INTRODUCTION

Education in Indonesia is getting more advanced and developed (1-3). While education in general is improving, there are still some problems in physical education such as; physical education teachers do not explicitly accommodate the key competences in their programmes (4); diverse interests of the stakeholders lead to a disconnect within physical education (5); assessment practices of physical education teachers are still superficial (6), etc. These

problems are increasing along with the Covid-19 pandemic, one of which is large-scale social restriction that can lead to the increasing psychosocial strain (7). Previous studies suggested to implement technology-based intervention in order to improve physical activity and health (8, 9).

There is a paradigm shift in learning which currently being carried out online (10), especially in the covid-19 pandemic, and requires fast

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access. The problems found in online learning include the factors of each student who has different characteristics, different levels of concentration, different passions, and different interests. Moreover, the problems could occur because of less conducive environment, safe and comfortable environment, pleasant learning atmosphere, and sense of competition (11). The rapid development of technology should be supported by the school which is considered as a second home to get interpreted as a place prepared for students to improve the intelligence of both physical, spiritual, intellectual, social, with the aim of teaching students to be able to be a person of strong character to realize the educational goals that have been outlined so that good education always has to start as early as possible through teaching held in school (12), especially in this pandemic situation.

The development of science and technology at this time resulted in the learning media used by learning participants getting better, as we all know with many teaching media that can be used such as: audio media (radio, tape-recorders), audio-visual media (television, video, internet, films, etc.) and printed media (textbooks, modules, and worksheets for learning participants), but now smartphones are also one of the teaching media that can be used by learning participants to get the desired information. Therefore, learning which use technological based media is very effective and is supported by educational institutions, students and, all aspects school (12).

Interesting learning media will attract more interest, attention, and understanding to the information presented. Based on the opinion, it can be concluded that media is a tool that helps in the learning process of teaching so that the purpose of self-learning can be conveyed; this will be more effective if the media used has the value of interest either from the form, appearance or way of use. One of the media that can be used in learning is e-learning. E-learning and the role of technology in learning in schools have become important topics in academic and practitioner developments over the past few years. In practice, e-learning has often been applied while remaining focused on delivering existing content, even though in a flexible multimedia package in each

lesson (13). Learning materials and teaching systems are always evolving, just like current technological developments, especially mobile phones, which have become a multifunctional medium in human life today (14).

Blended Learning (BL) is one of the most important pedagogical formats that can improve the learning quality of students, optimize the use of active learning strategies, and potentially improve the learning outcomes of students (15). BL centered on the development of current technology by combining face to face, offline and online learning, and assisting the process of accelerating education one of them by implementing flip classroom based on information and communication (16). BL allows students to become more motivated and more involved in the learning process, thus increasing the commitment and perseverance of students (17). It is not surprising that the term BL is applied to a variety of models and methods in the learning process (18).

BL aims to combine e-learning with the advantages that exist in traditional learning, so that BL methods can solve the problems that occur in learning practical methods. BL can also be described as a learning that facilitated by an effective combination of various ways of delivering material, teaching, and learning (19). BL method using interactive media is a solution to adjusting learning styles at this time. BL aims to establish a balance between online learning and face-to-face learning (20).

The use of offline and online learning in BL can help facilitate the delivery of aspects of knowledge to students and can help students in understanding the process of learning fundamental motion. Constructivistic learning theory allows learners to build knowledge and learning skills in BL through their actual experience professionally (21). Thus BL can be considered a profitable learning model because it can be designed in such a way that it can encourage students to be actively involved in the learning process (22). Blended methods can stimulate students to learn independently and continuously. BL is a seamless merging of carefully selected online modules with face-to-face instructions (23), because each participation encourages children to do activities with pleasure.

The main purpose of physical education learning based on BL is to improve the fundamental skills of motion for students.

This study describes several examples of media research results through YouTube for virtual in the emphasis of football learning for elementary school students. This is important, because the process of delivering materials from educators to learners must be targeted and easy to understand, so that the learning process takes place well in order to produce a generation capable of competing and answering future challenges. Previous study states that Activity-Based Learning in elementary school can be integrated with the use of Mobile devices (24), while other study shows that video based learning improved the learning outcome of elementary school students (25). In this study, a virtual YouTube-based application was used for physical education fundamental movement skills learning at the elementary school.

MATERIALS AND METHODS

The method used in this study is the Qualitative & quantitative Research approach through classroom action research which includes four stages, namely 1) planning, 2) action, 3) observing, 4) reflection, on each cycle. The role of researchers in this study were physical education teachers which directly involved in the entire research process, from planning activities, to the reflection step in each cycle. In addition, researchers act as planners, observers, data processors, and data analyzers.

Participants. The classroom action research was carried out on students of Sindang Sari 1 elementary school with research samples of 32 elementary school 5th grade students, consist of 18 boys and 14 girls. In order to prevent the sample characteristics deviates from the desired population, it is necessary to determine inclusion criteria prior to sampling. Inclusion criteria are criteria that need to be met by every member of the population that can be taken as a sample. The determined criteria for the sample in this study includes: 1) had good communication skills with the teacher, 2) were in the 5th grade of Sindang Sari 1 elementary school, Indonesia, 3) can read and write, 4) the ages were between 11-12 years old, 5) mastered fundamental movement skills. The reason the author chose 5th grade because of

the condition of the class and the students themselves according to the problems taken with consideration of the many problems that exist in elementary school physical education learning, as well as the connectedness between the title of this study and the problems present in the elementary.

BL Design. The system design which was created and implemented is virtual-based YouTube application in physical education BL for grade 5 Sindang Sari 1 Elementary School. Previous studies used BL as a learning approach in elementary school (26, 27), while others used BL in physical education learning (28, 29).

A survey by Sloan Consortium showed that 55% of the institutions (e.g., universities) in the United States applied BL (30). The scheme of BL is presented in Figure 1.

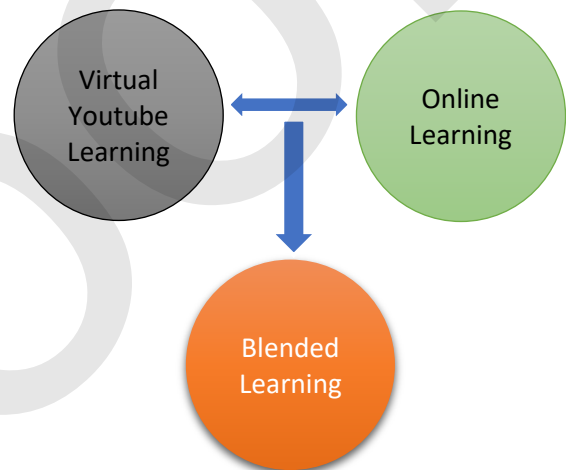




Figure 1. BL Scheme

BL is a highly flexible learning model (31), as it does not depend on time and space for learning and is accessible anytime, anywhere. The activities commonly included in BL include asking, answering, or interacting between students and lecturer and between students. BL is a mix of face-to-face and online interactions that enable collaborative and interactive learning, which is increasingly used as a strategic curriculum (32). Through BL, students will be actively involved in the teaching and learning process, thereby helping them develop their skills of self-reflection, self-direction, and self-management (33). In addition, BL has the potential to lead students towards developing their learning autonomy and responsibility as well as metacognitive processes (34). BL

implementation can facilitate communicative learning environment, creating meaningful learning outcomes (35). However, teachers' lack of a proper understanding of BL will inhibit the attainment of expected learning outcomes (36).

Previous studies have been done on the effectiveness of BL at the level of individual courses, but there has been a dearth in research that can provide guidelines at the level of institutions (37).

Table 1. Virtual Learning Plan

NO	Resulting Learning Media	Description
1	Media Virtual, Warming Up : Static, dynamic warm up Core exercises : run 5 m in front of the house with bottles as the obstacles, Cooling down: dynamic cooling down and PNF	 

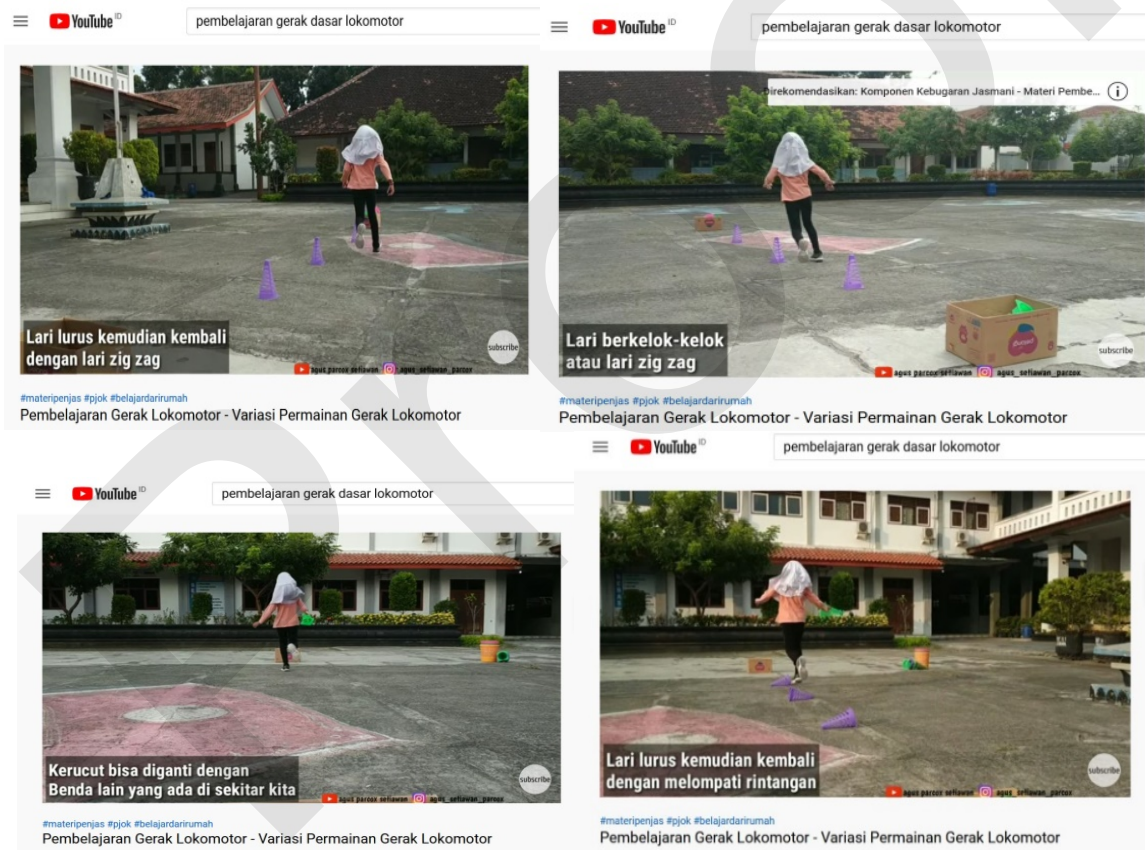


Figure 2. YouTube Media Learn Online

Data Collection. Data collection techniques are carried out using a qualitative & quantitative approach through classroom action research. In general, the data collection activities are carried out through the following steps: (a) Studying all the data that has been collected. The data collection was conducted through a fundamental motion understanding tests using Google Form,

(b) Producing advanced data by performing treatment activities using fundamental motion learning, and (c) conclude and verify with the final test results of learning outcome with the final test movement through fundamental motion understanding tests using Google Form.

Data was collected through Google Form and structured interviews. The findings suggest that

the briefing model should consist of: 1) core competencies and basic competencies; 2) Collaboration of Teachers and Students with multi-aspects, namely pedagogy, personal, professional, and social aspects; 3) share learning resources by leveraging the advantages of learning resources on campus and partner schools. Table 1 shows an example of the virtual learning.

Data Analysis. Data analysis is done descriptively by comparing achievement results with success indicators. Qualitative method was used to explain the events carried out in this study so as to get a complete picture and explanation in the implementation of action research. Quantitative method was used to analyze data on the results of the learning process and compare students' learning outcomes before and after the action. Paired sample t-test was conducted to observe the effect significance of the treatment.

RESULTS

Before carrying out the action, researchers carried out pre-observation activities with the aim

of identifying problems in classroom action research. This initial observation activity was carried out and centered on the implementation of learning that aims to know the extent of learning activities teaching physical educational mobility skills implemented at Sindang Sari 1 elementary school, so that it can be raised problems that occur and find solutions in solving the problem mentioned. The most important observation in this action study is directed at the problem of student motion skills at home that students use in the learning process.

The mechanism of the results obtained in learning has changed slightly with the emergence of covid-19 which has created major changes in the implementation of learning assessments which using assistive instruments such as Google Form or other online instruments. This Study used Google Form and structured interviews to collect data.

The result of this initial observation is a step as an overview to determine the classroom action research steps.

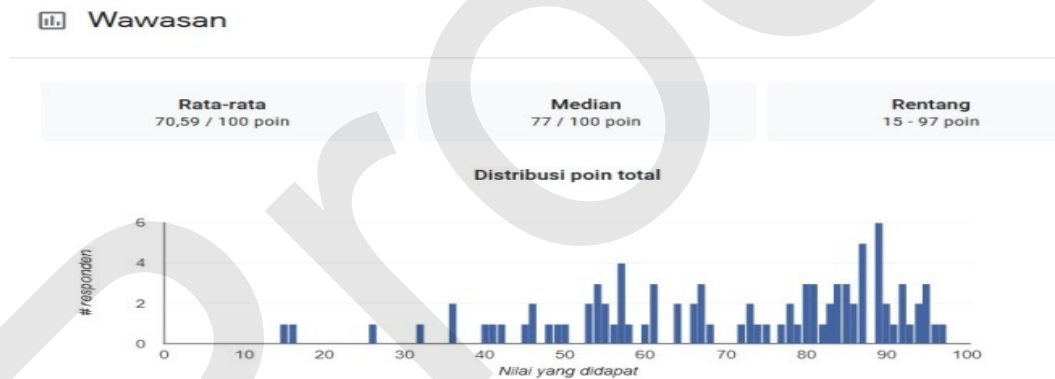


Figure 3. Analysis of Google Form Results

Table 2. Results of Pre-Action

Action	A	I	W	Amount
Pre-action	55.64%	60.16%	65.54%	181.34 %

Table 3. Results of Cycle I

Action	A	I	W	Amount
Cycle I	74.13%	78.99%	85.42%	238.54 %

Table 4. Results of Cycle II

Action	A	I	W	Amount
Cycle II	76.16 %	79.90%	86.67%	242.27%

Table 5. Average Results

Action	Amount	Average
Pre-cycle	181.34 %	60.45%
Cycle I	238.54 %	79.51%
Cycle II	242.27 %	80.43%

In the course of several actions and in the learning process, in an effort to improve the skill of motion through the utilization of virtual learning media namely YouTube physical education, it is confirmed that the ability of students in each activity undergoes a little change that is felt sufficient, nevertheless has not reached the target stipulate.

Then the results obtained by using the results obtained that the ability of elementary school students of Sari 1 session with the use of the Google Form instrument gets the results then the stages of using virtual learning using YouTube and BL here can achieve good results.

Changes that expected to appear were the category of learning activities (A), instruction category (I), or waiting category (W), before the action can be seen in [Table 2](#).

The learning activities of students before the action was 55.64%, while instruction category and waiting category respectively 60.16% and 65.54%. Total percentage of three categories is 181.34%.

There were significant changes in the category of learning activities (A), instruction

category (I), or waiting category (W) after the BL application in cycle I, which can be seen in [Table 3](#).

The results of cycle I show that there are significant improvements in students' three categories. The learning activities of students after the action in cycle I was 74.13%, while instruction category and waiting category respectively 78.99% and 85.42%. Total percentage of three categories is 238.54%.

While there are improvements in the category of learning activities (A), instruction category (I), or waiting category (W) after the BL application in cycle II, the changes is not as significant as in the cycle II, which can be seen in [Table 4](#).

The results of cycle II show the changes in students' three categories were not as much as in cycle I. The learning activities of students after the action in cycle II was 76.16%, while instruction category and waiting category respectively 79.90% and 86.67%. Total percentage of three categories is 242.27%. The average results of every cycle can be seen in [Table 5](#). The table above can be interpreted into diagram as follows:

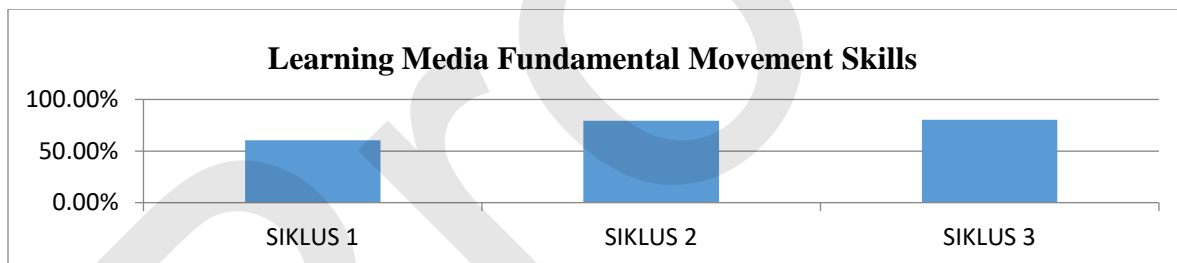


Figure 4. Diagram Cycle Results

Table 6. Paired Two Sample T-test for Means

	Variable 1	Variable 2
Mean	0.604466667	0.8091
Variance	0.002456413	0.002838
Observations	3	3
Pearson Correlation	0.993414907	
Hypothesized Mean Difference	0	
df	2	
t Stat	-50.87122651	
P(T<=t) two-tail	0.000386193	
t Critical two-tail	4.30265273	

Based on the diagram above, this study shows that there is a significant increase in each category in learning after students show a satisfactory response when the researcher applies the learning method by utilizing physical education learning media which is marked by student activities in PBM. To observe the effect significance of the

treatment, paired sample t-test for means was conducted which can be seen in [Table 6](#).

[Table 6](#) shows the results value of 50.87 with Asymp. Sig. (2-tailed) = 0.000 < 0.05, which means that there was a significant improvement in fundamental movement skills of students.

DISCUSSION

The findings of each implementation of this action research are as follows: 1) before the implementation of BL in cycle I, the average results of pre cycle in all categories were: action A 55.64%, action I 60.16%, and action W 65.54%. The students before action have not focused on the learning media which shown a number of things happening such as the task of movement was not very well done. In the end, students do the task of moving carelessly and their active learning time is not used properly. 2) In the implementation of cycle I the average result of the action in all categories were: action A 74.13%, action I 78.19%, and action W 85.42%, which indicates a very good change. Although there was a change in the percentage of learning activities, but it was not reached the predetermined target and continued to the cycle II. 3) In the implementation of cycle II the average result of the action in all categories were: action A 76.16%, action I 79,90%, and action W 86,67%.

These changes can be seen starting from the number of learning media used, then providing clear directions so that they can be understood by students. The actions given by the researchers were the implementation of physical education learning media and movement tasks that were explained before the learning and providing sufficient learning tools so that no time was wasted during the learning process. Based on the results of the analysis of this study, there was an increase in each category even though the increase in cycle II was lower compared to cycle I. This was because in cycle I, the learning media had begun to attract students' attention, while in the cycle II students had already adapted to the learning. This means that all students have used the learning tools and minimized waiting time to do motion assignments. Previous study mentioned that physical educators must create a learning environment with decreased teacher management time and waiting time, and increased overall academic learning time (38).

Based on the three points above, the research results were obtained in the form of an increase in the learning achievement of physical education using BL can be described as follows: students become more focused, disciplined, innovative, creative, and interactive in physical education learning. Based on the average of the actions A, I and W (80.43%), the implementation of BL in

cycle II exceeded the research target and did not continue to the cycle III.

In line with previous studies which show that BL can improve students learning outcomes (23, 39), the results of the paired sample t-test in this study shows an increase in the fundamental movement skills of students with the application of blended learning using the YouTube application. Based on this analysis, it can be said that there is an increase in the application of YouTube-based virtual blended learning as a learning medium for fundamental movement skills in elementary schools during the Covid-19 pandemic. This is in accordance with several previous studies that used YouTube as a complementary learning tool for teaching and learning (40-42). It can be concluded that learning outcome using a virtual application based on YouTube is quite meaningful in improving the Learning Media for Fundamental Movement Skills at Sindang Sari 1 Elementary School.

This study was limited by time and conditions of the Covid-19 pandemic so that the sample taken is limited to 5th grade students only. Future research can use a wider range of sample so that the results of fundamental motion learning through BL for all grade levels of elementary students can be seen.

CONCLUSION

The application of BL, especially in physical education in schools, serves to assist and facilitate the learning process starting from introduction, core to closing on each core / fundamental competency based on scientific methods. Based on the results of the analysis and the results of data processing, it can be concluded that the use of physical education learning media in understanding fundamental movement skills in the background of classroom action research through virtual learning with YouTube has a significant impact on students' fundamental movement skills learning outcome, or it can be said that students' have a better understanding of fundamental movement skills. Future research can use different media platforms and a wider range of sample grades.

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APPLICABLE REMARKS

This study supports that YouTube based virtual BL can improve fundamental movement

skills learning outcome of 5th grade students in elementary school.

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No potential conflict of interest was reported by the authors.

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PROOF