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The Effectiveness of Using the PBL Models in Physical Education Based on Active Learning Time

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ABSTRACT
This study aims to determine the level of effectiveness of using the PBL learning model in physical education learning based on students' active learning hours. This research is a type of qualitative descriptive research. The population in this study were high school students. with samples of science classes and social studies classes. The results of the study concluded that the level of time effectiveness obtained by physical education teachers using the PBL model on students' active learning time was in the low category. Overall, the results of this study need to be carried out further research so that the results obtained can be generalized.

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INTRODUCTION

In physical education, exercise serves as a vehicle for learning objectives. It is anticipated that physical education would serve as a vehicle for teachers to direct students' growth into their full potential as a result of their education (Rijkiyani et al., 2022)(Mohamad N et al., 2016). Student participation in the learning process influences whether or not potential emerges. There is still a low level of student participation in physical activity, particularly among girls. Female pupils who do not participate in physical education have a propensity to believe that physical education is tedious, dull, and pointless (Bracco et al., 2019).

The 2013 curriculum reflects the government's efforts to produce a better generation that is capable of competing and taking initiative in response to the challenges of the ever-changing 21st century. (Gustiawati, 2017). The 2013 curriculum places a strong emphasis on the idea that student actions should be the main focus of learning, not the teacher. The

use of scientific approaches is suggested in the 2013 curriculum. whereby learning is accomplished through a methodical process of observation that involves locating or identifying difficulties, defining problems, putting forth or creating hypotheses, gathering information, and coming to conclusions. The 2013 curriculum poses unique challenges for educators in terms of its implementation. (Gustiawati, 2017).

Teachers must take into account the circumstances or situations of their pupils, the learning materials, and the available learning resources while selecting a learning model. in order to facilitate students' successful learning and enable the efficient application of learning models. The Problem Based Learning model (PBL) is one method that may be utilized in the classroom to highlight and enhance students' critical thinking skills and their need to examine problems (Sofyan dan Komariah, 2016).

One technique that can be used in the educational process to enhance and raise student learning achievement is the PBL model (Parwata, 2021). With the help of worksheets or teacher assistance, students will use this model to learn how to assess issues and attempt to solve them on their own. The PBL paradigm offers the benefit of boosting students' motivation and critical thinking, which enhances the learning outcomes for physical education (Dupri et al., 2020). If current issues are resolved, physical education instruction can be improved. However, there are a number of flaws or limitations in the way the PBL learning model is being implemented.

One weakness of this learning model is that it can leave students feeling perplexed at times. Additionally, if an issue arises that they are unable to address, they may become uncomfortable and less motivated to study. Finally, the amount of time needed to complete this learning model is lengthy (Muhammad & Setiawan, 2022). In order for students to recognize the issues they are facing, the PBL learning paradigm requires a significant amount of time to apply. Sometimes it cannot be optimized in a lengthy procedure when used in physical education instruction (Prayoga, 2021).

The implementation of this model will undoubtedly fail if its flaws are ignored, which will prevent the learning objectives from being met. Lack of interest, lack of confidence, and the lengthier time required to adopt PBL are some of its primary disadvantages. This is due to the fact that pupils' prior knowledge is insufficient for them to understand the learning process.

Because students in the PBL learning model discuss more, search for information, and solve problems rather than actively moving, it is impossible to say that the implementation of learning using the PBL model is beneficial due to the low and limited movement of students. in order to prevent pupils' skills from coming up in class activities. Additionally, students must actively participate in the continuing learning process when studying sports.

The way the physical education teaching and learning process is implemented is influenced by the students' engagement with the material. Students' engagement and participation from the start of the teaching and learning process until its conclusion can be used to determine the effectiveness of the process. For example, when the instructor teaches, stretches, warms up, or attempts to help the pupils acquire new abilities. The instructor may also provide corrections until the class is dismissed. How to determine how many children actively participate in physical education is an issue that comes up frequently. Analyzing time management during the learning process is one of the techniques to learn how students spend or use their time during the teaching and learning process in physical education. Student traits are one of the many variables that might affect how successful learning is. The study's findings indicate that kids who study science have greater self-esteem than those who study social studies (Fanisa & Muryono, 2023). Students with poor self-esteem may feel fearful of problems, struggle to communicate

effectively, and are not aware of their own sentiments and emotions, which can have an impact on their learning process (Refnadi, 2018). Thus, another goal of this research is to examine how the two class characteristics—the science class and the social studies class—differ from one another. Aside from that, the purpose of this study is to determine whether the PBL paradigm, when applied to science and social studies classes, is beneficial in terms of active learning time. One way to assess how well time is used in the physical education teaching and learning process, also known as "active learning time," is through time analysis in the teaching process, also known as duration recording (Suherman, 2009).

MATERIALS AND METHODS

The analytical description approach is a strategy used to see phenomena that occur during the learning process based on the objectives that have been defined. Researchers make an effort to characterize the degree of efficacy of the time invested in the PBL-based physical education learning process.

The population in this study was all class XI consisting of classes XI IPA 1,2 and 3, XI IPS 1, 2 and 3. The sample used in this study was a random class. Where classes XI IPA 1,2 and 3 were randomly selected to be used as samples, as were classes XI IPS. This aims to see whether the characteristics of science and social studies classes influence the effectiveness of the learning process.

Researchers employed direct observation techniques to gather the necessary data. An active learning time device with duration recording features is the tool used for the observations. (Suherman, 2009). These are markers for documenting duration in order to collect observational data:

Table 1. Active Learning Time Observation Indicator

Indicator	Forms of activity	Participan
Managment (M)	Appreciation exercises, attire changes, equipment preparation, following guidelines, and heeding cautions	> 50%
Instuction (I)	Activities watching videos and listening to information	> 50%
Active Learning (A)	Engaging educational activities	> 50%
Other	Students who wait their turn, wait for the teacher to explain things, and remain passive.	> 50%

For 105 minutes, the learning process was observed in order to collect the data. Without assistance from researchers, the teacher implements the learning process in accordance with the learning design. This action was taken to preserve the uniqueness of the data needed for this study. Following the acquisition of the data, the researcher used data description techniques to examine the data.

RESULTS AND DISCUSSION

Results

based on findings from observations that lasted for 105 minutes. Two distinct classes—science class 2 and social science class 1—were the subjects of observations. Table 1 displays the time duration's results.

Table 2. Active Learning Time Observation Results 1

Indicator	IPA	IPS
Management (M)	20 minutes	14 minutes
Instuction (I)	22 minutes	30 minutes
Active Learning (A)	41 minutes	40 minutes
Other	22 minutes	21 minutes
Total Time	105 minutes	105 minutes

Table 1's data indicates that the science class needs 20 minutes to complete management indicators, while the social studies class needs 14 minutes. The two courses' management activities differed by four minutes. Less time is needed for social studies classes than for math classes.

Science classes need 22 minutes, whereas social studies classes need 30 minutes for instructional activities. It is evident from this exercise that there is an 8-minute time gap, with the scientific class needing less time than the social studies class.

For scientific classrooms, the duration of active learning activities is 41 minutes, whereas for social studies classes, it is 40 minutes. The time difference in this task between the two classes is essentially nonexistent, at just one minute.

Kegiatan lain-lain membutuhkan waktu 22 menit untuk kelas IPA dan 21 menit untuk kelas IPS. Pada kegiatan ini, selisih waktu antara kedua kelas tersebut hanya 1 menit atau hampir tidak ada perbedaan.

In the science classroom, students engage in 41 minutes of active learning, whereas in the social studies classroom, it is 40 minutes. The majority of the students waited their turn to practice or do motions because of poor infrastructure, therefore this activity was combined with other activities. Nevertheless, the researcher saw that the students were actively studying for more than 50 minutes throughout the observation.

The majority of students spend their time on activities that are not listed in the previous category, such as waiting for their turn, for the teacher to explain something, or just sitting there and doing nothing. The remaining twenty-two minutes of the physical education lesson are devoted to additional activities in the science and twenty-one minutes in the social studies classes.

Based on observations, it can be concluded that management activities in the science class take longer than in the social studies class for a number of reasons. For example, physical education classes in the science class are scheduled on Mondays, which means students need time to change clothes. In contrast, physical education classes in the social studies class are scheduled on Tuesdays, meaning students in the social studies class don't need time to change clothes because they already wear athletic attire from home.

The instructor gives pupils instruction or guidance after engaging in management activities. One part of teaching and learning in schools is the dissemination of knowledge through instructions. Informative teacher-to-student or student-to-teacher exercises are the foundation of each successful lesson. Usually conducted at the start of the meeting, these educational exercises are done directly to let the pupils know what they can perform.

When it comes to instructional activities, science classes are less time-consuming than social studies classes because science students are more adept at organizing their thoughts and grasping the material being taught. As a result, teachers in science classes don't need as much time to explain concepts or summarize instructions. In contrast, social studies professors have a harder difficulty keeping up with their unruly students, which means they have to take their time explaining the content and repeating directions.

Active learning and active movement comprise the two components of active learning time in physical education. All activities that are done during the learning process, whether they be spiritual or physical, are considered learning activities. In question, active learning refers to behaviors that facilitate learning, including as posing queries, offering comments, completing tasks, being able to respond to inquiries from teachers, cooperating with other students, and accepting accountability for the duties assigned.

Here, students actively learn by talking and searching for information rather than by doing tasks. In contrast, students must be more engaged in their psychomotor, or movement, skills when participating in physical education classes. since psychomotor scores of pupils are only acquired during physical education classes. This sets physical education classes apart from other courses at the institution. The second and third hours were when pupils were moving around, based on the research findings.

Since physical education emphasizes movement activities during the learning process and physical exercise necessitates pupils to move, physical education incorporates physical activity into the curriculum. Students' active movement in physical education lessons is still low, nevertheless, as evidenced by observation data, which shows that students' mobility is still below 50%.

Students wait for their time to take an exam as one of the additional activities; this typically occurs after the main events. There was a line of children waiting for their turn to complete the big activity at the conclusion. During the direct learning process, students are given alternative tasks to occupy their time while waiting for their turn. Because of the researchers' findings, it is also possible to divide up which group will present first. During the physical education learning process at school, once students have completed searching for information to solve a problem that the teacher has given them, group representatives step forward to decide which group will present first. Thus, this is a part of other endeavors.

Discussion

Student movement activity in physical education classes employing the PBL learning approach is still low, according to observational data. Students are more engaged in problem-solving, discussion, and observation when employing the PBL paradigm than they are in movement activities. While it is true that children are very engaged in their study, physical education classes are supposed to encourage pupils to move around. Since the teacher just serves as a facilitator and students participate more actively in teaching and learning activities, the PBL model is better suited for application in different subject areas.

The reason for the low amount of student movement activity in the PBL model physical education learning process is that students are more engaged in problem-solving, discussion, and observation than they are in movement activities (Schiff, 2020). While it is true that children are very engaged in their study, physical education classes are supposed to encourage pupils to move around. Discussions and vigorous exercise constituted the 40 minutes of active learning, which were based on field observations. Since discussion is a component of the affective aspect of value, it is included in the active learning process. In the meantime, problem-solving involves kids actively using their minds to respond to and resolve challenges. Instead of active discussion, researchers believe that physical education is characterized by active movement. It is possible to conduct the discussion process in subjects other than physical education. But the only way to get moving is through physical education.

A measure of a learning process's effectiveness is its active learning time. Students can immediately attain their learning objectives through these activities. Students will gain more experience the more learning activities they engage in. This type of experience

involves active movement in the cognitive and emotive domains in addition to the psychomotor domain. Children must be able to comprehend and carry out motions, think critically and creatively, and interact socially with the learning environment in order to participate in the PBL paradigm (Parwata, 2021). Students are given the flexibility to learn in their own way when utilizing the PBL methodology. (Sofyan & Komariah, 2016).

The PBL model's implementation tends to focus pupils on problem-solving, which lessens the active motions that are essential to physical education. Nonetheless, this aligns with the qualities that high school students aspire to attain, including the capacity for critical and imaginative thought. Physical education attempts to instill a love of physical activity in youngsters, with the intention that this will become an after-school habit of healthy living. Consequently, the goal of physical education is to prepare pupils for daily tasks by making them fit. (Sobarna et al., 2020).

The PBL paradigm is well-researched and has been shown to improve learning outcomes. (Festiawan et al., 2021). What happens if the youngster can explain why they are unable to perform a movement activity? Naturally, mobility skills must be taught, even if PBL focuses more on conversation and problem solution. If the student is unable to perform movement activities, how can they grow intellectually and physically fit? how the student enjoys sports while receiving little movement instruction in physical education.

CONCLUSION

Based on the number of hours of active learning time, it can be said that the effectiveness of physical education instruction utilizing the PBL learning model is in the low range. Due to the fact that the duration of the student learning activities in the scientific and social studies classes, respectively, is forty minutes and forty minutes of the entire learning hour. Based on the learning results, it appears that this PBL model is better suited for application in other subject areas since students use their search and discussion skills to find answers to the teacher's concerns without having to move or engage in physical activity. As a result, an educator needs to establish a learning environment where cognitive, emotive, and psychomotor components all function together.

CONFLICT OF INTEREST

No affiliations with or involvement in any organization or entity with any financial interest.

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