



# Students' Perceptions of Online Physical Education in Indonesian Elementary School

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**Abstract.** The COVID-19 pandemic makes online learning a must. Similarly, learning Physical Education in elementary school. This study aims to determine the perception of elementary school students towards online Physical Education learning during the COVID-19 pandemic. This research is a Collective-Case Study consisting of an analysis of a survey on students' perceptions of their online learning during the pandemic. Eighty-four elementary school students, Grades 4–6 in eight elementary schools namely four elementary schools in Singaraja district and four elementary schools in Jembrana district, the city of State of Bali were involved. Their perceptions of their online classroom were recorded through a survey. The recorded perceptions are in terms of students' participation, accessibility, material and assignment delivery, and the use of e-learning platforms. The results are divide into three obstacles such as availability and sustainability of internet connection, the second is the accessibility of the teaching media, and the last is the compatibility of tools to access the media. Most of the students' perceptions showed positive things, quite enthusiastic, and motivated. However, in terms of assignments, it still feels difficult and makes students stressed. So there needs to be a lighter and clearer assignment.

**Keywords:** students' perception · online learning · physical education · elementary school

## 1 Introduction

The Covid-19 pandemic is an epidemic that attacks the human respiratory system [1]. Caused by the Sars-Cov-2 virus which causes a very dangerous infectious disease [2]. Attacks the human respiratory organs by infecting and inhibiting the respiratory system, causing disease in the form of pneumonia [3–5]. The respiratory system becomes so heavy that it can cause flu, cough, fever, shortness of breath, heart failure, and other complications. Complications of disease can occur if it infects patients who already have previous comorbidities, such as pneumonia, heart disease, diabetes, and other dangerous diseases.

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Indeed, from the trend of daily cases, it is known that this virus attacks adults more and causes death. Cases in children do exist but are still far less than cases in adults [6, 7]. In cases that occur in children, it is rarely found until it ends in death. However, recently the government has the policy to vaccinate adolescents and children from the age of 18 to 11 years [8–10]. 12th grade to 6th-grade elementary school children. Children from 10 to 0 years old have not been vaccinated to date.

However, the government feels that the COVID-19 pandemic is still very dangerous for children [11]. The unfinished significant reduction in daily cases still makes the government afraid to open face-to-face offline classes [12, 13]. The proof is that the government still relies on distance learning, either online, offline, or mixed. Uncertain daily cases make it difficult for the government to determine when offline face-to-face learning can be carried out. Although there is pressure from the community to hold face-to-face learning on a limited basis while still following very strict rules.

Distance learning has been carried out for almost the past year and a half. Various problems have also been found in the field [14]. On the one hand, distance learning is the best thing to do right now [15, 16]. Either using online internet applications or by giving assignments offline. Then various problems arise, whether it is related to online learning support infrastructure, human resources, namely teachers in providing learning, as well as supporting factors such as geographical location, signal stability, parental participation in accompanying children in learning from home, and other factors [17].

Likewise, learning itself, not everything can be done remotely or online. Although in the end it could be done with various limitations in some aspects and there are also improvements in other aspects. Learning about theoretical material will certainly be very well done online, in fact, it will provide a new variation by using various learning applications [18]. Students will be more challenged by the use of new applications or media in learning. However, if the learning is more practical, it will be difficult to do [19, 20]. Although recently we are familiar with learning through Artificial Intelligence.

Practical learning such as Physical Education learning is very difficult to do. Moreover, learning Physical Education for elementary school students [21, 22]. Children will find it difficult to accept learning from the teacher by practicing at home. Physical education includes learning about body movements, how to properly and correctly cultivate the body to stay healthy as much as possible, keep body proportions in shape, and be resistant to various diseases [23]. A variety of good and correct exercise techniques are also needed to obtain optimal results. There are also various types and types of Physical Education, be it athletics, games, to traditional games that have different playing rules. Various techniques and rules in Physical Education education must be exemplified and visually must be carefully considered by students.

Students must be able to imitate and try firsthand how the movement techniques in each type of Physical Education [24, 25]. For example when hitting a shuttlecock in a badminton Physical Education. There are two types of ways to serve. How to position the legs, body, and hands holding the shuttlecock and holding the racket. The same is true for athletic Physical Education such as running. The position of the feet, body, and hands when running must be correct so that it can be done comfortably and obtain optimal results. Learning like this at this time must be done remotely.

As is done in various schools in the city of Singaraja and the State of Bali. Physical Education teachers provide learning to students mostly online. Although sometimes it is interspersed with offline learning by giving theoretical assignments. Face-to-face contact is also inserted to demonstrate various movements that are difficult for children to follow and do at home. It is difficult to do, but this is for the sake of continuing Physical Education learning. Learning Physical Education during the COVID-19 Pandemic is very important, how to educate students to stay healthy and fit, maintain their immune system, and be able to do joint activities so that students have good enthusiasm and motivation.

A year and a half have been taking place online Physical Education learning with various polemics and problems faced, it is deemed necessary to survey in determining student perceptions of online Physical Education learning. So far, online Physical Education learning has been widely and commonly done. However, elementary schools in Singaraja City and the State are only carried out during this COVID-19 Pandemic. This is still done on a limited basis, and some schools even choose not to provide Physical Education learning or PJOK. Only theoretical ones for grades 4–6, and inserted into thematic learning for grades 1–3. It's really unfortunate where it should be during the COVID-19 Pandemic, Physical Education learning has a very important role in educating students to maintain student health and fitness.

A survey on students' perceptions of online Physical Education learning must be conducted to find out how far Physical Education learning has been achieved during this COVID-19 pandemic. In a study conducted by Messakh et al. in 2021, it was found that online Physical Education learning at SMP in Salatiga City was very useful during this COVID-19 Pandemic. Online learning is done through WhatsApp (WA) as the main platform [26]. Research conducted by Amran et al. in 2021 on high school students of class XI also agrees with research conducted by Messakh et al. Learning Physical Education or PJOK is effective. Even learning Physical Education online can motivate and get good results [27]. Adi & Fathoni in 2020 regarding Blended Learning in Physical Education learning also obtained results that showed positive learning. Although in various skills must need to be improved. Likewise, blended learning is increasing after various improvements have been made [28].

Research that examines student perceptions of Physical Education learning, especially in elementary schools, is still very minimal. In a study conducted by Haryanti et al. in 2021 at SD Muhammadiyah PK Baturan regarding students' perceptions of the use of android-based learning media in Physical Education learning. The results found where students were accustomed to using android-based learning media in Physical Education learning. Then the Physical Education teacher there became more creative in using this media [29]. There is also a study conducted by Ghafar et al., in 2021 but conducted on students of SMA Negeri 1 Ulujami, where students' perceptions are very positive about distance Physical Education learning [30].

The studies above show a positive outcome for distance learning of Physical Education during the COVID-19 Pandemic. However, this research was mostly conducted on junior and senior high school students. This means that more of the research subjects are students in secondary education. Although there is one study that has determined the results of student perceptions of Physical Education learning using android media,

it is still investigating within the scope of the learning media only. There has not been a thorough investigation into online learning. This must be reviewed from all aspects, both aspects of student participation rates, accessibility, delivery of materials and exercises, use of e-learning platforms, and in-depth interviews regarding the perceptions of elementary school students. Thus, the researcher investigates further this in more depth on Physical Education learning in elementary schools in Singaraja and Negara, Bali.

## 2 Method

This research is quantitative analysis research. This collective case study involves analyzing a survey on students' perceptions of online Physical Education learning during the COVID-19 pandemic. The student's perception is explained narratively [31]. Eighty-four students at an elementary school in Singaraja and Negara, Bali. Consisting of three levels, namely Grades 4, 5, and 6 which were taken randomly at 8 different schools in two cities, namely, four elementary schools in Jembrana Regency, State city area and four elementary schools in Singaraja Regency, Buleleng city area.

There are 31 (36.9%) Grade 4 students, 24 (28.6%) Grade 5 students, and 29 (34.5%) are in Grade 6. Students in this Grade are included in the high class with ages 9–12 years. Of these eighty-four students, there were 36 (42.9%) male and 48 (57.1%) female. In terms of skills in using technology, there are 12 (14.3%) students who are still weak in using technology, 52 (61.9%) are classified as having moderate or intermediate skills in using technology, and 20 (23.8%) students can use technology very well. Then viewed from the online learning access point, 58 (69.0%) students access from within the city of Singaraja and the State, and 26 (31.0%) access from outside the city, namely suburban areas.

Where to access online learning is also very influential. Several obstacles, such as the difficulty of getting a stable signal, became one of the challenges, there were 31% of students accessing online Physical Education learning from out of town. Areas outside the city of Singaraja and the State are still limited in internet access. Often they have to find a difficult position to get a stable signal. They lived in the city before the pandemic, but since the pandemic, their parents prefer to return to their hometown. This limited area will be a variation of its research in researching student perceptions of online Physical Education learning (Table 1).

The data of this study were collected through analysis of students' perceptions, based on their perceptions of personal experiences during online learning. The questionnaire was designed based on the construction of perception theory [32, 33]. As stated earlier, this research focuses on 4 main topics, namely student participation, accessibility, delivery of materials and assignments, as well as e-learning platforms that suit their needs and conditions. Thus, the questions are structured based on these main topics. Questionnaires were distributed and collected in the form of a Google Form with a combination of closed and open questions. Closed questions were used to get the percentage of topics analyzed [34, 35]. Meanwhile, open-ended questions were used to obtain students' perceptions about the topic of implementing online learning. The final number of responses (NS) received were counted, analyzed, and explained by their topic.

In a closed question, students can only choose based on the choices provided by the researcher in the Google Form application. While open-ended questions can be filled with

**Table 1.** Description of Participants

Student Grade	Grade 4	36.9%
	Grade 5	28.6%
	Grade 6	34.5%
Gender	Male	42.9%
	Female	57.1%
Skill in Technology	Poor	14.3%
	Medium	61.9%
	Advance	23.8%
Place during online Learning	Central Town	69.0%
	Out of Town/Rural Place	31.0%

answers that are not specified, freely according to perception. For example, questions that are intended to provide explanations beyond the general one and when you need a more original answer. Then the data obtained will be written in a narrative, descriptive manner, by describing the data that has been filled in the Google Form into a table. The table will be displayed simply, showing original data regarding student perceptions of online Physical Education learning.

### 3 Result and Discussion

The results of this study will be displayed in tabular form so that the density and clarity of information on the results will be optimal. Then the results and discussion will be displayed in several sections, namely Student Participation in learning, Accessibility, Material and Assignment Delivery, The Use of Learning Platform, and Students' Perception. Of the eight schools whose data was taken, all Physical Education teachers conducted online learning. However, only 43.1% are actively and regularly using it. Some teachers are only active on one learning platform such as using Whatsapp groups. In some conditions, the teacher has not given clear instructions or directions so that communication is often disorganized. For more data, see the following sections.

#### 3.1 Students' Participation

Student participation in learning boldly in elementary schools in Singaraja and the State of goodness is positive. This data is seen from the attendance list recorded in the daring learning. Students fill out or write their own reviews in the comments column of the learning platform used. Student activity can be seen from student activity by responding to each activity or by sending assignments quickly and not late. Of course, this must also be supported by several things, such as good internet devices, a stable signal, and an affordable place. The following is a table of student participation in bold learning.

**Table 2.** Students' Participation

Student' Involvement		Interactive Response	
Yes	No	Yes	No
94.3%	5.7%	63.9%	36.1%

The data in Table 2 shows that as many as 94.3% of students are involved in online Physical Education learning given by their teachers, while there are 5.7% who do not follow because there are several problems, such as unavailability of devices, unavailable internet network, cannot be accompanied by parents, and less stable signals. During this online Physical Education learning, there were 63.9% of students were active to very active in responding. Participate in all learning activities and respond actively both in the form of questions, follow movements, and answer all assignments given. Meanwhile, 36.1% of students are passive to very passive in learning. This is caused by several things, such as the character of students, less familiarity with online learning, and lack of enthusiasm for learning.

### 3.2 Accessibility

Accessibility to the internet network is one of the supporters of the success of online learning. Without the internet network, it is impossible for online learning to be carried out. Likewise, being able to learn Physical Education online is very dependent on this network. Students' perceptions of online learning are also influenced by these supporting factors. Considering that there are students who access learning from within the city of Singaraja and the State itself, and there are also those who access learning from outside the city, which is still a rural or suburban or rural area. The following table will show the data on the ability of students to access Physical Education learning online.

From the data in the Table 3, it is known that as many as 79.8% of the eighty-four students have internet access at home. Meanwhile, 20.2% are not available or do not have access at home. Then the quality of the internet signal strength they use during online Physical Education learning is 33.3% their signal is stable, 44.1% unstable, and 22.6% poor. Signal strength is greatly influenced by the location of access and the hardware they use. As many as 76.2% of students have their internet data quota fulfilled, and the remaining 23.8% are not fulfilled or only have a limited internet data quota. Devices that are used more often use cellphones or smartphones, which are 70.2%. Students who use tablets and laptops are 17.9% and 11.9%, respectively. The devices they use are very influential on this online learning. Is the device they are using is compatible with the platform they are using, or can it be used but does not fit the proper version. As many as 57.1% of their devices are compatible, while 42.9% of their devices are not yet compatible.

So that the fulfillment of internet access is quite good, but there are still students who have not accessed the internet from their homes. Especially students who live outside the city or rural areas. The internet network infrastructure is still limited, and the ability to obtain data is still very limited. Likewise with their signal strength. This

**Table 3.** Students' Accessibility

Accessibility Indicators	Categorize	Percentage
Internet Access at Home	Available	79.8%
	Not Available	20.2%
Signal Strength during Online Learning	Stable	33.3%
	Unstable	44.1%
	Poor	22.6%
Sufficiency of Internet Data	Sufficient	76.2%
	Not Sufficient	23.8%
Device Used	Cellphone	70.2%
	Tablet	17.9%
	Laptop	11.9%
Compatibility of the Device	Compatible	57.1%
	Not Compatible	42.9%

is also influenced by the internet network infrastructure, devices, and software they use. There are also students whose internet quota has not been met [36]. This could be due to economic factors because buying a data package is still very expensive. The devices that students use are also very influential, where more students use cellphones so that eyesight will be more difficult than students who use tablets or laptops. Then lastly, almost half of their devices are still not compatible with the latest updated version of the learning application used. This will be a bit annoying as some features they may not be able to use.

### 3.3 Material and Assignment Delivery

In the teaching and learning process, the delivery of the material and how the exercises can be instructed clearly are the most important things. Students can easily understand, follow all the activities given such as exercises and assignments. But in online learning will be a bit complicated. Communication between teachers and students and assistance from parents will be things that must be considered. Then whether the material is following learning, especially with lesson plans, syllabus, and what is needed by students at this time. Feedback on how students respond to each instruction given. The provision of training must also be following the ability and not burden the students while studying from home [37]. The suitability of the exercises with the material and with the development of students' skills. How instructions can be carried out clearly, as well as feedback or feedback from students. The following is a table of survey data regarding material and assignment delivery.

From Table 4, it can be seen that the comprehensive material shows that 73.8% can be understood, while 27.2% feel that the material provided is difficult to understand. The relevance of the material to the needs of students and the syllabus is appropriate, even

**Table 4.** Material and Assignment Delivery

Material and Assignment Delivery	Categorize	Percentage
Comprehensive Material	Yes	73.8%
	No	27.2%
Material Relevancy	Yes	100%
	No	0%
Discussion, Question, and Answer Session	Available	85.7%
	Not Available	14.3%
Feedback on Material Delivery	Available	92.9%
	Not Available	7.1%
Assignment	Yes	100%
	No	0%
Assignment and Material relevancy	Yes	96.4%
	No	3.6%
Comprehensive Direction	Yes	57.1%
	No	42.9%
Feedback on Assignment Delivery	Yes	86.9%
	No	13.1%

showing the number of 100%. In the delivery of the material, there are discussions and question and answer sessions, but the teacher does not always provide these sessions. From several meetings as many as 85.7%, there were discussion and question and answer sessions, while the remaining 14.3% of teachers did not provide discussion and question and answer sessions. Feedback from students on the material provided was quite good, whereas many as 92.9% of students gave responses or responses, while 7.1% of students did not respond. Then for assignments, from all learning activities, the teacher always provides exercises in the form of modeling various movements in Physical Education and doing Physical Education activities at home with parents. This is indicated by 100% of the teachers giving assignments. The suitability of the exercise with the material was also appropriate, 96.4% of students considered the exercise to be very appropriate to the material being taught and only 3.6% answered that it was not appropriate. The directions given by the teacher are also quite clear, as many as 57.1% have understood the training directions given by the teacher, while those who do not feel clear are 42.9%. Indeed, there are still many who feel it is not clear, but that is because of the difficulty of communication. Finally, feedback on the exercises given where 86.9% have responded by doing the exercises, only 13.1% has not responded to the exercises given.

Overall the materials and exercises have been delivered well, it's just that there is still a lot that the teacher needs to improve in providing materials and exercises. Like communication with students, parents should also involve. Teachers must establish intense communication with parents. Parents as a bridge between teachers and students.

This will make the delivery of material and exercises better and the level of student understanding will also increase. Likewise, the directions or instructions in the exercise must be simple and clear. More simple exercises or assignments can be given so that it will be easier for students to understand and work on. To increase student feedback, teachers must be more active in preparing and providing learning, so students are more motivated and more active.

**3.4 The Use of E-learning Platform**

The learning platform used is indeed less varied, the teacher only uses a few applications or learning platforms such as Google Classroom, Whatsapp, Zoom, and Googe Meet. This learning platform was chosen because students and parents at home are used to it. However, teachers use the Google Classroom application as an e-learning platform. Learning platforms greatly affect online learning, especially online Physical Education learning. Teachers need an application that can send photos and videos quickly, providing examples of various Physical Education techniques and movements. Likewise in providing explanations, directions, or instructions quickly to students. Teachers prefer the Google Classroom application as the main application, then it is supported by other applications. The following is an E-learning platform used by teachers and which ones are chosen by teachers and students.

Based on Table 5, teachers prefer the Google Classroom platform, which is 36.4% of the total eleven Physical Education teachers in eight elementary schools. Teachers who chose the WhatsApp application were 27.3%, Zoom was 18.2%, and Google Meet was 9.1%. Teachers choose Google Classroom because in this application teachers can easily manage classes, give assignments, provide exercises, insert learning materials that can be taken from other applications. Assessment is also easier to do in this application. Then the second is the WhatsApp application because it is considered easier to use. In this application also communication will be easier to do, discuss, and question and answer. Because this platform is a chat-based application. Then the Zoom application allows face-to-face learning virtually. Similar to Zoom, Google Meet is also a platform

**Table 5.** The Used of E-learning Platform

Indicators	E-learning Platform	Percentage
E-learning Platforms Used by Teachers	Google Classroom	36.4%
	WhatsApp	27.3%
	Zoom	18.2%
	Google Meet	9.1%
E-learning Platforms Recommended by Students	WhatsApp	64.3%
	Google Classroom	22.6%
	Google Meet	7.1%
	Zoom	6%

based on virtual face-to-face applications, but both require a stable signal and consume large data packages.

It can also be seen in the table of e-learning platforms recommended or chosen by students themselves. Most choose the WhatsApp application, which is 64.3%. A total of 22.6% of students chose Google Classroom, 7.1% chose Google Meet, and 6% chose Zoom Meeting. This is based on the quite familiar with the WhatsApp application among the public, both students and their parents are accustomed to using it. In addition, this application is quite easy to use, and fast in responding to information. The Google Classroom application is quite difficult for students and their parents to use, opening this application is also quite difficult. Compared to the Zoom Meeting application, students prefer to use the Google Meeting application, because it is considered lighter and does not need a stable signal.

### 3.5 Students' Perception

Based on the student participation data above, there are 94.3% follow this online Physical Education learning well. Although there were 5.7% of students could not participate due to various obstacles such as the unavailability of the internet network, unstable signal, as well as the inability to fulfill the needs of internet data packages. Students' perceptions of the overall learning both in terms of material delivery and training, as well as the selection of the use of learning platforms, are divided into three aspects, namely Students' Enthusiasm, Students' Perception of Assignment, and Students' Motivation. These three aspects are very important to know as a description of the success and effectiveness of online Physical Education learning in this elementary school. The following is the student perception data contained in the Table 6.

Based on this perception survey, students are quite enthusiastic about participating in online Physical Education learning, around 57.1%. Although almost half of the respondents said they were not enthusiastic about learning, that was 42.9%. Indeed, the student participation data above shows a large number in the level of attendance or participation in this online Physical Education learning, but there are still many who do not feel enthusiastic about participating in learning. Then students' perceptions of the exercises and assignments given show negative numbers, where students say that the exercises given are very difficult and make students stressed. Around 60.7% said the training is

**Table 6.** Students' Perception

Indicators	E-learning Platform	Percentage
Students' Enthusiasm	Yes	57.1%
	No	42.9%
Students' Perception of Assignment	Fun but Heavy	39.3%
	Heavy & Stressful	60.7%
Students' Motivation	Motivated	54.7%
	Not Motivated	45.3%

given, both theoretical and practical, was very difficult. Only 39.3% said the exercise provided was fun even though it was a bit strenuous. For student motivation, 54.7% said they were motivated, even though the exercise was quite heavy, and 45.3% said they were not motivated. Quite a lot of people assume that they are not motivated in learning Physical Education online.

So that online Physical Education learning is indeed quite successful during this COVID-19 pandemic. This can be seen from all the data obtained above, both data on student participation, accessibility to the internet network, delivery of materials and exercises, the use of e-learning platforms that are following student conditions. Then the perception of students in enthusiasm for participating in learning, perceptions of the given exercise or task, as well as the motivations that arise in students during this online Physical Education learning. Indeed, it shows more positive numbers, which means that the overall perception of students is positive. However, there are still many students' perceptions that show a negative trend. This is indeed influenced by several factors, such as the difficulty of accessing the internet, the delivery of materials and exercises that are still considered heavy and difficult to understand.

#### 4 Conclusion and Suggestion

The COVID-19 pandemic has forced learning to be done online. The learning of Physical Education in elementary school is no exception. Physical Education learning must be held to keep students healthy and fit. Keeping students immune to be protected from all types of viruses and diseases. However, online learning has complex problems. The difficulty of internet access, the availability of devices, the fulfillment of internet data packages, the preparation of materials and exercises that burden students, as well as communication that is not established between teachers and students, will become serious problems in online learning. Thus, in this study, it is necessary to conduct an in-depth investigation of online Physical Education learning. So that the results were found where students participated well, although activity still needed to be improved. Access to the internet is good enough, although there are still obstacles, such as incompatibility of devices with the platform used, insufficient internet quota fulfillment, and unstable signal strength. Although the delivery of materials and exercises has shown a positive value, exercises and assignments are still considered difficult and burdensome for students. Overall, students are very enthusiastic about learning this online Physical Education and many feel motivated. In the future, Physical Education teachers must pay attention to all aspects that become obstacles to the success of online learning. Prepare fun materials, provide clear and light exercises, and choose a platform that suits the student's condition.

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