Physical Education Teacher Perception in Conducting Online Learning Activities during Covid-19 Pandemic

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Received: 14 Nov 2021 **Accepted**: 26 May 2022 **Published**: 11 July 2022

Abstract

The first covid-19 case was founded in Indonesia on March 2020. Then, Indonesian government then announced the study from home policy a few weeks afterward. The teaching learning activity needs to be conducted by online teaching. This study aimed to evaluate the online teaching process at Physical Education subject. There were 447 physical education teachers were involved in this study. The Physical Education Online Learning Scale (PEOLS) was developed and used as research instrument in this study. The construct validity and reliability of PEOLS are 63.288 % and $\alpha = .880$. The data were analyzed by independent t-tens and one-way anova based on gender (male/female), school status (public/private), and age groups. The result, there are significant different on age and teaching place. Younger teachers are facing less difficulties in online teaching (sig. >0.05). Furthermore, the teachers who teach in the public area have more beneficial in their teaching process (sig. >0.05). In Conclusion, the online teaching learning activity during covid-19 pandemic were influenced by the teachers' capability of using internet and the accessibility of online teaching facility.

Keywords: Covid-19; online learning; physical education

1. Introduction

Covid-19 Pandemic causes dramatic changes in to our society. The deadly affect and rapid spreading of Covid-19 virus were the main reason of this condition. Indonesian Government regulated a national law number 21 2020 about Large-Scale Social Restrictions (PSBB) in order to minimize the spreading of Covid-19 virus. Furthermore, the Indonesian Minister of Health also stated activity regulation in Permenkes No. 9/2020. It mentions six-core regulatory activities i.e., 1) school and workplace holidays; 2) restrictions on religious activities; 3) restrictions on activities in public places or facilities; 4) restrictions on social and cultural activities; 5) restrictions on transportation modes; and 6) restrictions on other activities specifically related to defense and security aspects.

Indonesian Minister of Education and Culture also regulated the education activity in national law number 3/2020. It was concerning about the prevention of Covid-19 in the education unit. The teaching and learning activities were carried out online. It must be implemented form the elementary, junior high, high school and even college levels. Moreover, all subjects or courses (both theoretical and practical subjects) are expected to do online learning. It could lead another challenge in education field. Especially the teaching learning facility in each school in Indonesia is not the same. Physical education mostly uses outdoor activities as the main teaching learning activities (Kristiyandaru et al.,

2020). It is quite different with the online learning characteristics which requires student to stay in front of the computer or any communication devices while they are studying. As a result, there are many challenges which may occur in physical education class especially during the online learning

Physical education is a mandatory subject for elementary school to senior high school level in Indonesia. The learning objectives and curriculum are also regulated by the Indonesian Ministry of Education. Furthermore, physical education teachers are encouraged to provide various learning activities following the guidance in the curriculum. Normally, the learning activity is conducted in an authentic learning activity, which the teacher gives the instruction, example, and evaluation to the students directly at the class. On other hand, during the Covid-19 Pandemic, the learning activity is designed by using distance learning. This procedure was mandated as a national policy to prevent the spread of Covid-19 Virus among the students in the school. This new policy in physical education could possibly influence the teaching learning activity and students' achievement (Lounsbery et al., 2013).

Distance learning uses internet and technology to conduct a teaching learning activity (Guri-Rosenblit, 2005). Distance learning is also very flexible, because student can learn from any places which has internet and supported devise. The huge learning resources in the internet are also available for anyone who wants to study (Yen et al., 2018). However, the implementation of distance learning has more challenges compared with authentic learning (Lowell & Campion, 2020). It has various factors which could determine the learning effectiveness of distance learning (McNaught, 2003). The unique characteristic in physical education which involves the students to perform some curtain skills could make it more complicated for the teacher, especially in designing the suitable learning strategy. In comparison, teacher could provide a demonstration to explain the particular skill for students and give them direct feedback in authentic learning. However, it is much more difficult to be implemented by using distance learning. This challenge could lead incomplete understanding of and poor performance of students. Students' motivation in learning could be decreased due to limited learning activity which can be implemented.

Teacher usually utilizes online learning materials i.e., videos, photos, book, etc. to help student understand the topic. These online learning resources could also improve student motivation in learning (Kazakova et al., 2021). However, physical education does not only teach the knowledge, but also the skills. Physical education utilizes physical activity or sport to enhance students physical development and motoric skill improvement (Adhe et al., 2018). In addition, healthy body could support student to get higher academic achievement (Al Ardha, 2013). During this Covid-19 Pandemic, Teacher could use advance technology on multimedia resources to provide a skill demonstration for the students (Ge, 2021). Furthermore, there are some assignments and homework which usually given to the students to practice their skills. Based on these situations, this research aims to analyze the implementation of distance learning in physical education. There are many factors which may interact with the implementation of online learning. Teaching strategy is one of critical factor to guide the teaching learning activities become effective (Indahwati et al., 2019). In addition, the teachers' skill and experiences in utilizing online resource and digital media could be the important factor to make the teaching learning activity more effective (Annetta & Minogue, 2004). The research questions in this study are:

1. Does the Physical Education Online Learning Scale achieve validity and reliability in this population?
2. Is there any significant different between male and female physical education teachers?
3. Is there any significant different between public and private physical education teachers?
4. Are there any significant different among age groups of physical education teachers?

2. Method

Research Design

This is comparative research that was conducted by a quantitative approach. The dependent variables in this study are gender, school, and age. Furthermore, the independent variables in this research are teaching preparation, teaching media, and teaching evaluation. The null hypotheses were derived based on the three research questions below:

Ho : There is not any significant different between male and female teachers
Ho : There is not any significant different between public and private teachers
Ho : There are not any significant different among age groups

Research Sample

There were 447 physical education teachers were participated in this study. The samples were selected by using random sampling method. They were involved the research by providing the responds on google form. The sample was varied in range of gender, status, and age factors as shown in table 1.

Table 1. Summary of Samples

Factors and Items	Frequency	%
Gender		
Male	362	81.0
Female	85	19.0
School Status		
Public School	316	70.7
Private School	131	29.3
Age		
17-25 years old	58	13.0
26-35 years old	217	48.5
36-45 years old	96	21.5
46-55 years old	62	13.9
56-65 years old	14	3.1
Total	447	100

Data Measurement and Analysis

The Physical Education Online Learning Scale (PEOLS) has three predicting dependent variables i.e., teaching preparation, teaching media, and teaching evaluation. The predicting dependent variables were concluded by literature review below.

Table 2. Predicting Dependent Variables

Teaching Preparation
- Preparation is an essential part in teaching learning activity during the COVID-19 pandemic. The teaching preparation refers to preparing learning materials which is suitable for students (Daniel, 2020).
- Teaching preparation is strongly associated with teaching quality, it is including the lesson plan and learning media which were chosen (Kim & Corcoran, 2017).

Teaching Media
- Teacher ability in selecting and utilizing media is very important to achieve the instructional goals (Rynearson & Kerr, 2005).
- Teaching media in distance learning including web based learning, virtual classroom, and electric devices (Guri-Rosenblit, 2005).

Teaching Evaluation
- Teaching evaluation is used to evaluate the teaching strategy and instructional objectives (Chan et al., 2003).
- Teaching evaluation is associated with student achievement as an indicator of teaching effectiveness (Anthony et al., 2019).
- Physical education has three main domains to be observed i.e., cognitive, affective, and psychomotor (Al Ardha et al., 2019).

The predicating variables are also used as a dimension to be interpreted in questioner items. There are 14 questioner items which were developed from the literature review. The Likert scales are used to quantify the sample perspective with the score range from (1) strongly disagree to (5) strongly agree. The principal component extraction and varimax rotation were performed to measure the construct validity and reliability of Physical Education Online Learning Scale (PEOLS). Furthermore, Cronbach's alpha was used to measure the internal consistency of each dimension. The data were analyzed and tested by independent t-test and one-way Anova from SPSS Version 25 OS Program.

3. Results

PEOLS Validity and Reliability

The items of Physical Education Online Learning Scale (PEOLS) were categorized in three factors. These items were derived based on literature review and pilot study which were conducted to inquire the physical education teaching especially by online learning. The result, three factors accounted for 63.288% of the total variance. The factor loading of PEOLS was intended to measure each factor with the overall Cronbach's α is .880 (Table 3).

Table 3. Summary of Construct Validity and Reliability of PEOLS

Factors and Items	λ	%	α
Teaching Preparation		7.703	.524
1. The lesson plan refers to the original syllabus	.441		
2. There are many changes in the lesson plan	.441		
3. Online learning media is not easy to be implemented	.795		
4. The teaching activity was modified to fit with Covid-19 Pandemic condition	.561		
Teaching Media		12.072	.650
1. I have a good internet to support my teaching	.774		

Factors and Items	λ	%	α
2. I am familiar with the online resource	.700		
3. I have a good ability at operating computers	.686		
Teaching Evaluation		43.512	.939
1. Students are able to participate in learning activities well	.882		
2. Learning materials can be delivered optimally	.880		
3. Learning activities can be executed	.872		
4. Learning objectives can be achieved	.851		
5. Evaluation of cognitive aspects can be implemented	.824		
6. Evaluation of psychomotor aspects can be implemented	.818		
7. Evaluation of affective aspects can be implemented	.680		
Overall		63.288	.880

Gender

The data were analyzed by independent t-test to compare the mean difference between male and female teacher. The result, there is no significant different between male and female physical education teachers. However, based on the mean of the data, male teachers have slightly higher overall score (57.72 ± 7.63) than female (57.38 ± 7.64). Furthermore, male teachers also have higher score mean in teaching preparation while female teachers have higher mean in teaching media factor.

Table 4. Mean Difference between Gender

Factors	Mean		Sig.
	Male	**Female**	
Teaching Preparation	16.78	16.62	.472
Teaching Media	12.31	12.46	.181
Teaching Evaluation	28.63	28.29	.782
Overall PEOLS Score	57.72	57.38	.900

* Significant less than .05

School Status

The mean different of public and private school was tested by using independent t-test. The result, private school teachers significantly have higher result on overall PEOLS score (58.11 ± 8.537) than public teachers (57.47 ± 7.224). However, public school teachers have higher score in teaching preparation (16.78 ± 2.095) than private school teachers (16.67 ± 2.564) in teaching preparation factor. There are many factors which may influences the result on school status, curriculum development and online system are critical.

Table 5. Mean Difference between School Status

Factors	Mean		Sig.
	Public	**Private**	
Teaching Preparation	16.78	16.67	.006*
Teaching Media	12.31	12.44	.590
Teaching Evaluation	28.38	29.00	.143
Overall PEOLS Score	57.47	58.11	.011*

* Significant less than .05

Age

The mean difference among ages was analyzed by using one-way anova (Table V). The result, there is significant different among age groups in teaching media with significant value .020 (<.05). This result implicates that the using of online media among different age groups are not equal. Based on the mean calculation, teachers in age 56 – 65 years old group have the lowest (11.07 ± 2.495) and the highest score is the teachers in age 17 -25 years old group (12.69 ± 2.045). The capability on using online devises and digital resources could be the reason of this finding. However, the teacher competencies could be improved to support the online learning activities (Sudarso et al., 2019).

Table 6. Mean Difference between Age

Factors	Age					Sig.
	17-25	26-35	36-45	46-55	56-60	
Teaching Preparation	16.79	16.80	16.35	17.05	17.21	.308
Teaching Media	12.69	12.52	12.02	12.21	11.07	.020*
Teaching Evaluation	27.95	28.65	27.77	29.71	30.31	.108
Overall PEOLS Score	57.40	57.97	56.15	58.97	58.50	.185

4. Discussion

The online learning activities in physical education class are important to be discussed. Based on the research questions and hypotheses which were developed in the introduction, the discussion will be followed by providing the data to answer the research questions. The Physical Education Online Learning Scale (PEOLS) has achieved the satisfaction validity (63.288%) and reliability score (Cronbach's α is .880). However, the null hypothesis in the gender is accepted, because there is not any significant different between male and female physical education teachers. The null hypothesis on school status is rejected due the significant differences which were found at teaching preparation between public and private physical education teachers (significant value .006). The last, null hypotheses among ages is accepted. However, there is a significant different in the ability of using teaching media among different age groups of physical education teachers (significant value .020). The teacher ability could influence the teaching strategies which were chosen to facilitate all student to participate in those activities well (Campbell & Storo, 1996). Moreover, school has an important role to support the online learning activities by providing funding and facilities to support the teaching learning activities (Shih et al., 2016).

5. Conclusion

The online teaching learning activity in physical education during covid-19 pandemic were influenced by the teachers' capability of using internet and the accessibility of online teaching facility. The support and assistance in conducting the online learning could be provided to improve the teachers' ability in using the internet and online teaching facility. It is also suggested to develop a digital learning resource and evaluation. Furthermore, the similar study in different setting could be conducted to inquire more perspectives about online teaching in physical education.

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