

11 (1) (2022) : 51-60



https://journal.unnes.ac.id/sju/index.php/jpes

Evaluation of Physical Education Learning During the Covid 19 Pandemic in Elementary Schools in Gayamsari District, Semarang

Alip Purnomo[⊠], Harry Pramono, Endang Sri Hanani

Universitas Negeri Semarang, Indonesia

rch background Several obstacles to studying PE during the COVID-19 mic must be resolved promptly. The research objectives : (1) analyse the
dents of PE learning during the Covid-19 pandemic; (2) analyse PE ng transactions during the Covid-19 pandemic; and (3) analyse PE ng outcomes during the Covid-19 pandemic at Gayamsari District State ntary Schools. Qualitative research, descriptive research design with tion of the Stake model: Antecedent, Transaction, and Outcomes. The
vere collected from school principals, PE teachers, student guardians, and ntary students in the Gayamsari sub-district. Observation, interview, and nentation are all methods of data collection. Triangulation of sources and ques is a technique for data validation. The data were qualitatively ned using the following steps: data collection, data reduction, data tation, and conclusion drafting. The results of this study (1) cendent related to online PE learning planning was made by all teachers, ing PE teachers. The implementation of PE learning during the COVID- ndemic is carried out online. (2) Transactions of online PE learning are d out for only 1 hour of learning and the infrastructure used is the result dent modifications made at home (3) Outcomes of online PE learning in the students become creative and independent in doing learning at home king modification tools. The average student scores above the Minimum leteness Criteria. The conclusion was that PE online learning was well- ed in terms of content and implementation. Continuous evaluations

Correspondence address: Kampus Pascasarjana UNNES Jl. Kelud Utara 3, Gajahmungkur Semarang E-mail: alippurnomo2@students.unnes.ac.id

p-ISSN 2252-648X e-ISSN 2502-4477

INTRODCUTION

Learning is a two-way communication process, teaching is carried out by the teacher as an educator, while learning is carried out by the students (Nurzaqi, Sulaiman, & Rahayu, 2015). Learning as a process designed by teachers to develop students' creativity and ability to generate new information in order to improve students' mastery of learning materials (Agustina & Sulaiman, 2020).

In contrast to other subjects, which require students to sit and pay attention, learning Physical Education for Sports and Health requires students to practise what they have learned (Fika, Soegiyanto, & Setyawati, 2021). This is similar to opinion (Eli, Yuwono, & Priyono, 2012) Physical education is defined as a form of education that makes use of physical activity to improve physical fitness, develop movement skills, knowledge, and healthy living behaviours, as well as to develop emotional intelligence. For instance, if the teacher is presenting learning information for the forward roll movement, the pupils are required to practise the movement after the teacher presents the content and provides an example. Apart from improving student fitness, Physical Education in Sports and Health is aimed to increase students' motor skills, knowledge, attitude formation, and application of a healthy living culture (Irwan & Widodo, Sucipto, 2020).

At the start of 2020, face-to-face instruction was prohibited because to the Covid-19 pandemic. This is in agreement with the government's recommendation made through the Minister of Education and Culture in Circular No. 36962/MPK.A/HK/2020 on Online Learning and Working from Home in the Context of Preventing Corona Virus Disease Spread (Covid-19). Since then, education has been conducted entirely online, including physical education, sports, and health. Online education is viewed as a viable option for implementing education in the midst of a pandemic (Aperribai, Cortabarria, Aguirre, Verche, & Borges, 2020).

In Indonesia, elementary school is the most basic level of formal education.

Elementary school is six years long. Elementary school is a type of educational institution that offers a six-year programme of learning program (Nurafiati, Rahayu, & Sugiharto, 2021). Physical Education, Sports, and Health instruction at the primary school level is mainly about steering students toward the correct and appropriate basic movements for their age and level of education (Marunda L, 2021). For instance, in grade 1, students enrolled in Physical Education, Sports, and Health will learn how to walk, run, roll, and jump, as well as participate in a variety of game activities designed to improve students' coordination. As education attains a higher level, the curriculum becomes more varied. Additionally, when students are learning Physical Education, Sports, and Health at the elementary school level, numerous games will be used to develop which students' attitudes. will include sportsmanship, social, discipline, and honesty (Kim, Yu, Park, Ha, & Baek, 2021). Thus, it can be concluded that learning Physical Education, Sports, and Health (PJOK) in elementary schools is critical and can have a significant impact on children's physical and emotional growth and development (Laar et al., 2021).

During the Covid-19 pandemic, learning that cannot be done face to face may influence children's growth and development in areas relating to learning. Sports, Physical Education, and Health (Centeio et al., 2021). Because with the recommendation for the implementation of online learning, it eliminates several important points in learning in general (Varea, González-Calvo, & García-Monge, 2022). Gayamsari District, Semarang City, has 16 public elementary schools. Not all of the 16 schools' Physical Education, Sports, and Health programmes can successfully and efficiently include online learning.

Researchers conducted initial observations to determine the learning process for Elementary School Physical Education, Sports and Health during this pandemic in three schools, namely SD Negeri Gayamsari 02, SD Negeri Sambirejo 01 and SD Negeri Kaligawe 01. The school selection was based on the location of the school, where SD N Gayamsari 02 is a school located in an urban area, SD N Sambirejo 01 is a school that is geographically located in the middle of Gayamsari District, Semarang City, while SD N Kaligawe is a school located in a suburban area. The following is a table of the initial location for the implementation of the Observation of Physical Education, Sports and Health during the Covid-19 pandemic.

The implementation of Physical Education, Sports, and Health learning at SD Negeri Sambirejo 01 is not different to the process at SD Negeri Gayamsari 02; there are only a few exceptions where students are unable to follow the course of learning due to the absence of mobile phones to assist in the learning process. Thus, tasks are assigned through the chairman of the student's parent/guardian organisation. Additionally, on certain instances, assignments are collected directly from students' parents/guardians.

These preliminary observations provide an overview of the implementation of Physical Education, Sports, and Health curriculum at three public elementary schools in Semarang's Gayamsari District. On the basis of table 1.3, some information about the implementation of learning in three public elementary schools in Gayamsari District, Semarang City, was gathered, specifically the principals of each school making policies regarding the implementation of non-face-to-face learning. Teachers deliver Physical Education, Sports, and Health instruction via Zoom Call, Google Meet, and Whatsapp. Parents embrace this faceto-face learning, but challenges remain in its implementation since some parents lack helpful communication tools. Students can participate effectively in learning, yet there are still certain obstacles due to a lack of supportive communication tools.

So, based on the results of these initial observations, researchers want to conduct research on the implementation of Physical Education, Sports and Health learning during the Covid-19 pandemic at State Elementary Schools in Gayamsari District, Semarang City. Physical Sports and Health during the Covid-19 pandemic.

METHODS

This study utilized a stake approach to qualitative research. Stake evaluation is an analysis of the evaluation process that has a significant impact by creating a simple foundation for future developments in the field of evaluation. Stake distinguishes between two sorts of operations, namely descriptions and judgments, and three phases: Antecedent, Transaction, and Outcomes (Puspayanti, 2017). Qualitative research was chosen because the researcher intends explore to descriptive phenomena that cannot be quantified (Armanjaya, Rustiadi, & Rumini, 2021).

The descriptive research design is used in this study. The descriptive method is a technique for examining the current state of a human group, a subject, a collection of conditions, a system of ideas, or a class of events (Johan & Akhiruyanto, 2020).

The study was conducted at six public elementary schools in Semarang's Gayamsari District. The study took place between March 25 and March 31, 2022. The primary data source for this study was interviews with school principals, Physical Education and Health (PJOK) teachers, parents/guardians, and public elementary school students in Gayamsari District, Semarang City. Secondary sources of data include lesson plans (RPP), syllabus, and teacher teaching journals.

No	Data Objects	Variable Data	Variable
1	Person	Head of School, Physical	Knowing the Antecdents, Transactions,
		Education Teacher, Students,	Outcomes of Physical Education Learning
		parents of students	during the Covid 19 Pandemic Public
2	Place	Research during the covid 19	Elementary Schools in Gayamsari District,
		pandemic at SDN Gayamsari	Semarang
		Seamarang	
3	Paper	Documents about lesson plans,	
		syllabus, lesson plans, teacher	
		teaching journals	

Table 1. Data Source

The researcher collected data through (Rumini, 2015). Researchers act as research observation, interviews, and documentation instruments as well as data collectors.

		Evaluastion	Evaluastion		
No	Indicator	Antecedent	Transaction	Outcome	
1	Online Planning				
2	Online Implementation		\checkmark	\checkmark	
3	Facilities and infrastructure	\checkmark	\checkmark	\checkmark	
4	Online Assessment	\checkmark	\checkmark	\checkmark	

Table 2. Research Data Collection

The data validity technique (data validity) of this research is triangulation technique. The data analysis technique used in this study is based on an interactive analysis model developed by (Miles, M. B., humberman, A.M., & Sldana, 2014) Data analysis consists of 4 interacting components, namely, Data Collection, Data reduction, Data Display and Conclusion. The four components are a continuous cycle.

RESULT AND DISCUSSION

The purpose of this study was to determine how Physical Education, Sports, and Health learning is implemented in elementary schools in Gayamsari District, Semarang City, during the Covid-19 pandemic. The researcher observed and interviewed Physical Education, Sports, and Health teachers, school principals, parents/guardians, and students.

Analyzing the Antecedents of Physical Education Learning During the Covid-19 Pandemic in Public Elementary Schools in Gayamsari District

Planning

The results of interviews with research subjects included school principals, PE teachers, guardians, and students. Previous to the pandemic, PE learning was carried out through field interaction; during the pandemic, it was planned that PE learning would be carried out online; however, online learning planning had not yet been completed. developed by the PE teacher, including the covid emergency response plan and instructional media. PE teachers must prepare innovative PE online learning during this pandemic to ensure that online PE learning continues to meet the intended learning objectives.

Implementation

The implementation of PE learning in schools during this pandemic is entirely online, utilising the WA, YouTube, Google Class, and video apps shared by teachers and students through WA groups. Due to the fact that learning takes place online at home during this time, I am frequently required to join children while they do the chores assigned by the PE teacher. During this pandemic, implementation is carried out online through the use of online media and with the assistance of parents who always assist their children in completing online lesson assignments assigned by school.

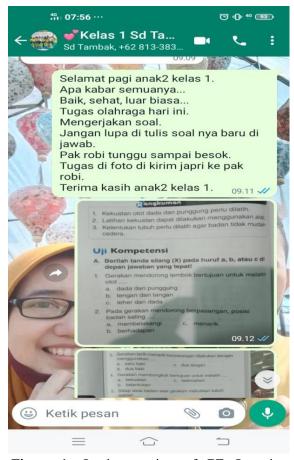


Figure 1. Implementation of PE Learning through the WA Group

Infrastructure

According to the findings of interviews with researchers and resource persons, the school's PE online learning infrastructure provides wifi for teachers, and we have prepared PCs for teachers who wish to communicate with students via zoom meeting. The school provides the infrastructure for online learning; there is wifi for internet access, laptops, and teaching aids for me to create learning videos. The school's infrastructure has enabled PE teachers to conduct PE learning online more easily. Wifi has been supplied in every school as a means of accessing the internet, which is critical when online learning is used.



Figure 2. Wifi

Assessment

The assessment aspect research indicates assessing PE learning that during the pandemic is certainly quite challenging, as it is typically done through direct practise at this time; nevertheless, you can only observe this through the videos that are given and through assignments. Evaluation of the PE pandemic pandemic pandemic pandemic pandemic pandemic pandemic pande PE teachers have some difficulties, but in this pandemic era, there must be a significant amount of understanding, and we make assessments based on more than exam or assignment results. Due to the fact that practise assessments cannot be conducted directly (offline), PE teachers overcome this limitation by conducting attendance discipline collecting assessments, assignments, and creatively creating PE practise videos.



Figure 3. Student Practice Assessment

Planning for online PE learning during the COVID-19 pandemic at Gayamsari District

Elementary Schools went well; the principal was assisted by the teacher in making planning preparations by examining the shortage of available equipment. Physical education teachers who often teach and practise it directly confront challenges due to their inability to meet students face to face (Duta, Sembiring, & Wicaksono, 2021).

The planning of the online PE learning process is possible because of the cooperation of all parties to ensure the success of learning during this pandemic. Physical education is a medium for promoting physical development, development, psychological motor skills development, knowledge and reasoning development, and an understanding of values (mental-emotional-sports-spiritual attitudes and social habits and healthy lifestyle habits that lead stimulating balanced growth to and development) (Nurdiansyah, 2015).

Analyzing Physical Education Learning Transactions During the Covid-19 Pandemic Public Elementary School in Gayamsari District

Planning

Interviews with research subjects included principals, PE teachers, student school guardians, and students at the transaction stage. To ensure that PE learning objectives are implemented appropriately, PE teachers have developed a Covid emergency response plan and online teaching materials. All primary school teachers and staff are involved in the planning process for online learning. Online PE learning is going successfully in elementary schools in Semarang's Gayamsari District. Each school offers both online and PE learning through the use of existing facilities

Implementation

Based on the researchers' observations, interviews, and recording of online learning transactions during the elementary school pandemic in Gayamsari District. Physical education teaching is limited to one hour per week during the COVID-19 pandemic. Due to the cost of calculating the quota, the implementation of learning is time-limited. Typically, the teacher provides content, assignments, and instructions for creating practical videos, and then the children are requested to create practical videos in the manner demonstrated by the teacher.



Figure 4. Assignment of making gymnastic videos

Infrastructure

According to the findings of interviews with researchers and resource individuals regarding the transaction of infrastructure facilities, the pandemic's learning infrastructure relied entirely on equipment found at home, such as basketball hoops constructed from trash boxes. During the COVID-19 pandemic, students are encouraged to use tools found around their houses as props for exercise. Students are also challenged with adapting objects to mimic actual tools.



Figure 5. Modification of sports equipment (javelin)

Assessment

The assessment is given to children by considering a variety of factors based on the outcomes of observations, interviews, and documentation by researchers with data sources regarding online learning assessment transactions during the elementary school pandemic in Gayamsari District. Due to the many obstacles encountered during this online process. Teachers must take this into account when assigning grades to students, particularly PE learning.

The implementation of PE learning during the pandemic is carried out online by utilizing online media such as WA, Google class, YouTube (Vilchez, Kruse, Puffer, &Dudovitz, 2021). Teachers must also interact with students' parents and guardians to assist them in creating PE practise videos and completing assignments during the pandemic. Online learning is defined as learning that takes place over an internet network and is characterised by accessibility, connectivity, flexibility, and the potential to develop a variety of different sorts of learning interactions (Mercier et al., 2021).

Implementation of online PE learning for one hour. The cost borne by students is the reason for this limitation on online learning. The teacher must evaluate several parts of the PE assessment while online in this case. The term "learning outcomes" refers to the behavioural changes that occur as a result of the learning process. These changes manifest themselves as changes in knowledge, understanding, skills, and attitudes, which typically include the cognitive, affective, and psychomotor domains (Sebtika, Winarno, & Sugiyanto, 2017).

Physical education is implemented through physical activity in order to develop physical abilities and skills. Physical education is an integral element of human life; it enables humans to develop their affective, cognitive, and abilities. Implementing psychomotor PE learning online presents both teachers and students with difficulties. In this online PE learning era, creativity and independence are critical. The goal of game-based learning is to fulfill students' desire for movement (Hanief, Mashuri, & Agiasta Subekti, 2018). Education in the emergency period of the spread of Covid 19, the learning process is carried out at home through online/distance learning to provide a meaningful learning experience for students (Ilmi, Darma, & Azis, 2020). Online learning is carried out with parental guidance. Online learning is different from offline learning.

Analyzing Physical Education Learning Outcomes During the Covid-19 Pandemic Public Elementary Schools in Gayamsari District

Planning

According to the findings of researchers' observations, interviews, and documentation of the outcomes of online learning planning throughout the pandemic, elementary schools in Gayamsari District School always plan learning to achieve a good learning process. As a consequence of our learning planning efforts throughout this pandemic, it is clear that our elementary school is operating normally and that learning can continue without interruption. The outcomes of teacher-prepared learning plans in schools are positive. Although there are certain hurdles, such as assigning excessively difficult assignments and materials, we continue to evaluate them.



Figure 6. Lesson plan PE During the Covid 19 Pandemic

Implementation

According the researchers' to observations, interviews, and documentation of the outcomes of implementing online learning during the elementary school pandemic in Gayamsari District. the outcomes of implementing PE learning by empowering children to be creative and independent in their learning, creating videos, and exercising responsibility empower children to be selfsufficient. Online PE education develops teachers and students who must be able to use technology, particularly cellphones. There are numerous benefits to online PJOK learning. Children can use homemade tools to create their own modification tools at home.





Figure 7. Football Game Video Making

Infrastructure

make Students are required to modifications to their respective homes based on results of researchers' observations. the interviews, and documentation with data sources regarding the outcomes of online learning facilities during the pandemic. Elementary Schools in Gayamsari District, and PE learning infrastructure. With little sports infrastructure available to each student, students are forced to be creative in order to create tools that resemble real tools. Students are assigned to modify the tool using current resources in their homes via their online PE learning infrastructure facilities. Additionally, the teacher provides examples of how sports equipment is manufactured upon request, requiring students to be creative and self-sufficient while making tools.

Assessment

According to the findings of researchers' observations, interviews, and documentation of the outcomes of online learning evaluation during the elementary school epidemic in Gayamsari District, I believe that the results of PE's online learning assessment were fairly good. While children are capable of successfully completing projects and assessments regardless of whether they were at home with their parents, we believe there is something to be learned from children in PE learning online. The online PE learning assessment receives favourable ratings. The average child achieves a score more than the specified Minimum Completeness Criteria (MCC), and learning objectives can be met effectively.

Table 3. F	PE Score	Mean
------------	----------	------

Grade	MCC	Mean Score	
Grade 4	70	90	
Grade 5	72	94	
Grade 6	75	92	

The method that can still be used is through Distance Learning by giving printed learning aids through the platforms that have been supplied, such as SMS, e-learning, or by following the government-issued platforms, specifically the Home Study Program broadcast by TVRI (Raibowo & Nopiyanto, 2020). Students who have an active role in the learning process are more likely to have a strong sense of interest and passion for participating in the teaching and learning process (Naziaha, Maula, & Sutisnawati, 2020).

Online learning used the internet network in the learning process. Online itself is an abbreviation of the network related to technology and the internet (ariyadi, rumini, & privono, 2021). Online learning is a learning method that uses internet-based interactive models and LMS, such as the Zoom application, Google Meet, etc. (lópez-fernández, burgueño, & gil-espinosa, 2021). The assessment of PE's online learning results was quite good, even though many children receive assistance from their parents at home when completing assignments and tests. Additionally, there are other benefits to online learning; children become more creative and self-sufficient in their learning, and teachers are able to incorporate technology and be more creative.

CONCLUSSION

The Principal, PE teachers, and school staff plan the antecedents to learning planning in order to successfully implement online learning. This online PE learning transaction requires only one hour of learning time when students' quota fees are considered. Learning through wa groups, youtube, or learning videos. Students' infrastructure generates modification tools from materials found in their homes. According to the outcomes of the online assessment of PE learning, the average student achieves a score higher than the Minimum Completeness Criteria (MCC) and is capable of successfully managing the daily and semester assessment processes.

REFERENCES

Agustina, E., & Sulaiman. (2020). Proses Pembelajaran Penjasorkes dalam Situasi Pandemi Covid-19 pada Siswa Kelas XI SMA N 1 Paguyangan. Journal for Physical Education and Sport, 1(2), pp.568-573.

- Aperribai, L., Cortabarria, L., Aguirre, T., Verche, E., & Borges, Á. (2020). Teacher's Physical Activity and Mental Health During Lockdown Due to the COVID-2019 Pandemic. *Frontiers in Psychology*, *11*(November), 1–14.
- Ariyadi, J. I., Rumini, R., & Priyono, B. (2021). The Evaluation of Physical Education Sport and Health during the Covid-19 Pandemic at Junior High Schools in Central Semarang Indonesia. 10(3), 250–256.
- Armanjaya, S., Rustiadi, T., & Rumini, R. (2021). The Sports Industry in the Service Sector During the Covid 19 Pandemic in Bandar Lampung. Journal of Physical Education and Sport, 10(2), 177–184.
- Centeio, E., Mercier, K., Garn, A., Erwin, H., Marttinen, R., & Foley, J. (2021). The success and struggles of physical education teachers while teaching online during the COVID-19 pandemic. *Journal of Teaching in Physical Education*, 40(4), 667–673.
- Duta, D., Sembiring, F. K., & Wicaksono, L. (2021). Pelaksanaan Pembelajaran Penjas di SLB Kota Bandar Lampung pada Masa Pandemi Covid 19 Tahun 2020. Journal of Sport Science and Physical Education, 2(1), 37–52.
- Eli, E., Yuwono, C., & Priyono, B. (2012). Pengembangan Model Permainan Lompat Halang Dalam Penjasorkes Siswa Kelas V Sekolah Dasar. ACTIVE: Journal of Physical Education, Sport, Health and Recreation, 1(3), 104–109.
- Fika, M. A., Soegiyanto, S., & Setyawati, H. (2021). Evaluation of Physical Education Online Learning of Junior High School During the COVID-19 Pandemic in Cepiring, Kendal Regency. Journal of Physical Education and Sports, 10(3), 305–311.
- Hanief, Y. N., Mashuri, H., & Agiasta Subekti, T. A.
 (2018). Meningkatkan Hasil Belajar Passing Bawah Bolavoli melalui Permainan 3 on 3 pada Siswa Sekolah Dasar. Jurnal Pendidikan Jasmani Dan Olahraga, 3(2), 161–166.
- Ilmi, Z., Darma, D. C., & Azis, M. (2020). Independence in Learning, Education Management, and Industry 4.0: Habitat Indonesia during COVID-19. Journal of Anthropology of Sport and Physical Education, 4(4), 63–66.
- Irwan, M., & Widodo, Sucipto, A. (2020). Keterlaksanaan Permainan Sederhana dan Tradisional dalam Pembelajaran Penjasorkes.

Indonesian Journal for Physical Education and Sport, 1(2), 315–322.

- Johan, D. R., & Akhiruyanto, A. (2020). Motivasi Kehadiran Suporter Perempuan dalam Pertandingan Sepakbola Liga 1 David. *Indonesian Journal for Physical Education and Sport*, 1(2), 521–529.
- Kim, M., Yu, H., Park, C. W., Ha, T., & Baek, J. H. (2021). Physical education teachers' online teaching experiences and perceptions during the covid-19 pandemic. *Journal of Physical Education and Sport*, 21(3), 2049–2056.
- Laar, R. A., Ashraf, M. A., Ning, J., Ji, P., Fang, P., Yu, T., & Khan, M. N. (2021). Performance, health, and psychological challenges faced by students of physical education in online learning during covid-19 epidemic: A qualitative study in China. *Healthcare* (Switzerland), 9(8).
- López-Fernández, I., Burgueño, R., & Gil-Espinosa, F. J. (2021). High school physical education teachers' perceptions of blended learning one year after the onset of the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 18(21).
- Marunda L, H. (2021). Students' learning style in relation to service P.E. performance. *International Journal of Health, Physical Education and Computer Science in Sports, 41*(1).
- Mercier, K., Centeio, E., Garn, A., Erwin, H., Marttinen, R., & Foley, J. (2021). Physical education teachers' experiences with remote instruction during the initial phase of the COVID-19 pandemic. *Journal of Teaching in Physical Education*, 40(2), 337–342.
- Miles, M. B., humberman, A.M., & Sldana, J. (2014). *Qualitative Data Analysis*. Arizona: State University.
- Naziaha, S. T., Maula, L. H., & Sutisnawati, A. (2020). Analisis Keaktifan Belajar Siswa Selama Pembelajaran Daring Pada Masa Covid-19 Di Sekolah Dasar. Jurnal JPSD, 7(2), 109–120.

- Nurafiati, S., Rahayu, T., & Sugiharto, H. P. (2021).
 Strategy for Strengthening Character Education in Physical Education Learning at Makassar City Elementary Education Level. Journal of Hunan University ..., 48(6).
 Nurdiansyah, I. (2015). Survei Tingkat Keterlaksanaan Pendidikan Jasmani, Olahraga, Dan Kesehatan Di Smp Negeri Surabaya Selatan. Jurnal Pendidikan Olahraga Dan Kesehatan, 3(3), 812–821.
- Nurzaqi, A., Sulaiman, & Rahayu, S. (2015). Materi Pembelajaran Tematik Pendidikan Jasmani Olahraga Dan Kesehatan Untuk Siswa Sekolah Dasar. *Journal of Physical Education and Sports*, 4(1), 1–7.
- Puspayanti, A. (2017). Evaluasi pembelajaran diklat menggunakan model Countenance Stake. Andragogi Jurnal Diklat Teknis, (1), 143–167.
- Raibowo, S., & Nopiyanto, Y. E. (2020). Proses Belajar Mengajar Pjok Di Masa Pandemi Covid-19. STAND: Journal Sports Teaching and Development, 1(2), 112–119.
- Rumini. (2015). Manajemen Pembinaan Cabang Olahraga Atletik Di Pusat Pendidikan Dan Latihan Pelajar (Pplp) Provinsi Jawa Tengah. Journal of Physical Education Health and Sport, 2(1), 20–27.
- Sebtika, A. N., Winarno, M. E., & Sugiyanto. (2017). Evaluasi Program Pembelajaran Pendidikan Jasmani Olahraga Dan Kesehatan Menggunakan Analisis Swot Kelas X Di Sma Negeri 1 Kesamben. Gelanggang Pendidikan Jasmani Indonesia, 1(2), 219.
- Varea, V., González-Calvo, G., & García-Monge, A. (2022). Exploring the changes of physical education in the age of Covid-19. *Physical Education and Sport Pedagogy*, 27(1), 32–42.
- Vilchez, J. A., Kruse, J., Puffer, M., & Dudovitz, R. N. (2021). Teachers and School Health Leaders' Perspectives on Distance Learning Physical Education During the COVID-19 Pandemic. *Journal of School Health*, 91(7), 541– 549.