



Physical Literacy Assessment of Elementary School Children in Indonesian Urban Areas

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Abstract

Currently, physical literacy recognizes as a critical part of physical education. The purpose of this study was to measure Physical Literacy Elementary School Children in Indonesian Urban Areas, a total of 60 students (23 girls, 38.3%; 37 boys, 61.7%) grade 5 (aged 11-12 years) as a participant for survey studies. The instrument used to measure PL is the Canadian Assessment of Physical Literacy (CAPL). It's used survey research methods. The analysis technique in this study uses descriptive statistical analysis to investigate the results of students' physical literacy based on the data that has been collected—technical data analysis using SPSS software. The result showed that students have good motivation and confidence. However, the level of knowledge and understanding of data is still relatively low, as well as the physical competence.

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INTRODUCTION

Physical literacy is a relatively new idea that has grown in Indonesia as one of the objectives that must be realized during a physical activity at school, at home, and in the community. Some experts associate physical literacy with the idea of "physically educated," while others refer to the standard of competence attained due to purposeful learning. Physical literacy development in Indonesia has been slow, as indicated by a limitation study related to the use of physical literacy. (Friskawati & Stephani, 2021). Physical literacy, according to Whitehead, is a holistic concept (Whitehead 2007). The concept was seen as a tool to encourage children to be physically active (Barnett et al., 2022). According to the International Physical Literacy Association (IPLA), physical literacy is the motivation, confidence, physical competence, knowledge, and understanding to value and accept responsibility for engaging in physical activities for life. Physical literacy was defined as integrating physical, psychological, social, and cognitive capacities that allow people to live active, healthy, and fulfilling lifestyles (Sport Australia 2020).

Although researchers have used the term "physical literacy" for over 50 years, physical literacy has grown in importance over 20 years (Jurbala, 2015; Hyndman and Pill, 2018). The United Nations Educational, Scientific, and Cultural Organization (UNESCO) has identified physical literacy as one of the critical pillars of quality sports and educational programs. In addition, it has been recommended that policymakers pay more attention to physical activity to promote health and well-being (UNESCO, 2015). Physical literacy development is characterized by inconsistencies in definitions and concepts. The concept of physical literacy is controversially put into practice in sports policy guidelines and national curriculum documents, with different policy agendas leading to different conceptualiza-

tions of physical literacy (Macdonald and Enright, 2013; International Physical Literacy Association, 2016; Green et al., 2018; Young et al., 2019).

Physical literacy is a contentious subject, with numerous contextual interpretations proposed globally. Nonetheless, these many definitions represent a comprehensive perspective of physical literacy that emphasizes the affective, physical, and cognitive attributes and personal characteristics required to participate in physical activity across the life span (Shearer et al., 2021). The majority of previous physical literacy research has concentrated on children and adolescents in educational settings (Edwards et al., 2017). In the context of education, physical literacy is the estuary of physical education. Therefore, physical education in schools is ideally able to lead students to become physically educated or literate human beings due to experience in learning activities through physical activity.

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traits required for lifelong physical activity, health, and well-being (Belanger et al., 2018).

Physical education needs to be directed at learning outcomes in the form of student learning directed at the socialization of movement to be physically educated. Literacy competence is included in the physical domain aimed at individuals who can continue to develop skills increase variety of motion, intensity, and duration. Understanding and knowledge in the cognitive domain is focused on individuals who know and understand a healthy lifestyle and the benefits of physical activity based on knowledge. Finally, the involvement of physical activity in lifestyle is included in the domain of behavior aimed at individuals who have responsibility for healthy lifestyle choices and the challenges of other physical activities as part of life. So Indonesian physical education teachers should think about the benefits of physical literacy as an object.

One measurement of physical literacy often used by researchers is the Canadian Assessment of Physical Literacy (CAPL) (Longmuir et al., 2015; Longmuir & Tremblay, 2016). By measuring physical literacy, teachers will get data to be used as evaluation material in their learning. Concerning the Covid-19 pandemic situation, physical education learning has changed to the delivery of teaching materials. Although it is believed that the quality of movement learning has degraded, physical education teachers are required to make every effort to deliver the best possible content of teaching materials to students. This study aimed to measure the physical literacy of students in an elementary school in an urban area.

METHOD

Participants

The participants in this study were private elementary school students in the city of Bandung. A total of 60 students (23

girls, 38.3%; 37 boys, 61.7%) in grade 5 (aged 11-12 years) provided parental consent and agreed to participate in this study. However, all participants are also free to withdraw at any stage. This study has received ethical approval from the Medical and Health Research Ethics Committee (MHREC) No. KE/FK/1370/EC/2021.

Sampling Procedures

The selection of participants adjusted to the criteria set by the researcher. The criteria for the participants in this study were grade 5 elementary school students who obtained approval from their parents through the consent form to participate in the study. The selection of participants used the intact group technique. The intact group is a research sample selection often done in educational research because it takes all participants in an existing class (Fraenkel et al., 2012; Fraenkel & Wallen, 2009). This study used 5th-grade elementary schools with a total of 60 participants.

Materials and Apparatus

This study's instrument used to measure physical literacy is the Canadian Assessment of Physical Literacy (CAPL) (HALO, 2017). CAPL-2 is a protocol that comprehensively, accurately, and reliably assesses a child's physical literacy level (Taplin, 2019). This instrument has been used in the US and Canada and its assessment benchmarks (Whitehead, 2007). The Canadian Assessment of Physical Literacy (CAPL) monitors Physical Literacy among children ages 8-12 to improve students' learning of Physical Literacy. The essence of the assessment is to follow the child's development through a process-oriented assessment protocol. Assessment evaluates the stages of achievement determined as competencies that emerge, develop, are acquired and are achieved.

CAPL-2 measures physical literacy through 4 competencies: daily behavior, knowledge and understanding, motivation & confidence, and physical competence

(HALO, 2017). In this study, researchers measured students' Physical Literacy levels using three components: physical competence (PACER Shuttle Run & Plank Torso), Knowledge and Understanding, and motivation and confidence.

Procedures

The procedure in this study starts from analyzing the problems that occur in elementary school students by conducting a literature review related to physical literacy and sedentary behavior in elementary school students. Furthermore, the researchers set the appropriate instrument to measure the level of physical literacy for children aged 8-12 years. The determination of the sample is carried out using the intact group technique, namely sampling by taking all participants in the class. In this study, the researchers collaborated with physical education teachers at the schools used as research samples. Researchers provide training to teachers related to data collection and CAPL-2 data collection procedures.

Before taking data, the researcher asked the parents for approval to fill out the consent form to participate in this study, and the student has the right to decide to stop at any time. The procedure for collecting PACER Test data is as follows:

1. Students run across a distance of 15 meters at an increasing speed.
2. One foot must cross the line by the time the beep sounds.
3. The student must wait for the beep before running in the other direction.
4. The first time a child does not reach the line before the "beep" sound, he must stop and immediately turn around and continue running.
5. Students must stop as soon as they fail to reach the line a second time.
6. The teacher then records the number of laps the students have successfully

taken through the PACER test score sheet.

The torso plank data collection procedure is for students to take a push-up position with both hands straight and shoulder-width apart, then stay in that position for as long as possible. When the student's position is not by the provisions for two times, the student must stop. The teacher then calculates the time using a stopwatch and records the final time on the plank torso score sheet. Data collection on Knowledge and Understanding, and motivation and confidence using a questionnaire. Students fill out the questionnaire according to the instructions that have been given.



Figure 1. Plank Torso Body Position

Design or Data Analysis

Data analysis is an activity after all respondents, or other data sources are collected. Activities in data analysis are grouping data based on variables and types of respondents, tabulating data based on variables from all respondents, presenting data for each variable studied, performing calculations to answer the problem formulation, and performing calculations to test hypotheses that have been carried out. The analysis technique in this study uses descriptive statistical analysis to see the results of students' physical literacy levels based on the data that has been collected—

technical data analysis using SPSS software.

RESULT & DISCUSSION

The research data are in physical literacy measurement data for elementary school students in Grade 5. The data obtained are Knowledge and Understanding, Motivation, Torso Plank, and Pacer Test data. The measurement of these various components describes the physical literacy skills possessed by students. The data obtained were then analyzed using SPSS software.

5.68 ± 3.7 including the beginning category.

Based on Table 2, the average results of measuring knowledge and understanding for female students are 5.83 ± 1.92, including the progressing category, the results of the motivation measurement are 23.39 ± 4.11 including the achieving category, the results of the torso plank measurement are 105.28 ± 72.96 is included in the excelling category, and the results of the pacer test measurement are 5.65 ± 3.58 including the beginning category.

Table 1. Results of Physical Literacy Measurement of Boys (n: 23)

| Component | Mean ± SD |
|------------------------------|-----------------|
| Knowledge and Understandings | 6,14 ± 2,05 |
| Motivation | 27,71 ± 30,1 |
| Torso Plank | 151,84 ± 214,24 |
| Pacer Test | 5,68 ± 3,7 |

Table 2. Results of Physical Literacy Measurement of Girls (n: 37)

| Component | Mean ± SD |
|------------------------------|----------------|
| Knowledge and Understandings | 5,83 ± 1,92 |
| Motivation | 23,39 ± 4,11 |
| Torso Plank | 105,28 ± 72,96 |
| Pacer Test | 5,65 ± 3,58 |

Based on Table 1, the average results of measuring knowledge and understanding in male students are 6.14 ± 2.05, including the progressing category, the results of the motivation measurement are 27.71 ± 30.1, including the excelling category, the results of the torso plank measurement are 151, 84 ± 214.24 including excelling category and the results of the pacer test measurement of

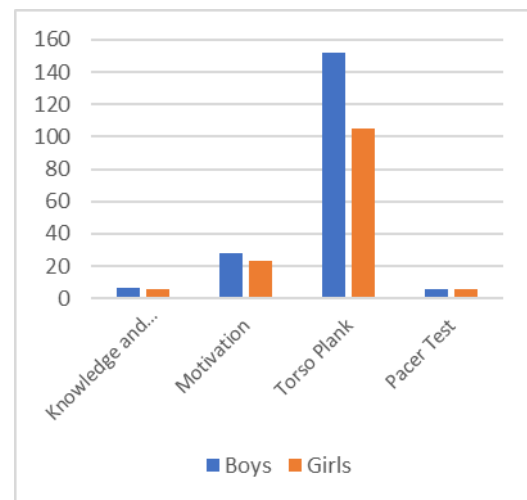


Figure 2. Differences in the results of measuring physical literacy between boys and girls.

Based on the picture in graph 1, it can be seen that there are differences in results between boys and girls students. The average physical literacy measurement of each component in boys students is higher than in girls students. Therefore, it can be interpreted that boys students have a better level of physical literacy than girls.

Physical literacy can be the ultimate goal of physical education by conceptualizing student movement as a whole human being who moves to learn to become a child who is knowledgeable in movement (Chen, 2015). Physical literacy is believed to have

contributed to the concept of fundamental movement skills and to be able to identify sports talents that can be improved through physical education learning (Lundvall, 2015). On the other hand, physical activity has an inseparable relationship with physical literacy. The importance of increasing physical literacy contributes to increased physical activity and participation in physical activity (Li et al., 2020). Furthermore, physical literacy interacts with other physical components to influence children's physical activity patterns (Brown et al., 2020). To focus on the study of sports development, physical literacy promotes the development of sport in Australia (Scott et al., 2021).

Based on the results of measurements of PL in lower grade elementary schools, in general, the level of PL is in the low to moderate category. Elementary school students were found to have knowledge and understanding in the low category. This should get serious attention from Physical Education teachers considering the importance of knowledge-based on various literature studies that have been delivered. In contrast to motivation in the good category, so does the torso plank measurement. Physical education teachers in Indonesia are believed to convey teaching materials quite interestingly because students' motivation in participating in physical education learning is relatively high. Physical education activities with the nuances of playing adapted to the level of child development are allegedly able to develop the participation rate of students involved in physical education.

CONCLUSION

Students in one of the private elementary schools in Indonesia, aged 11-12, have good motivation and strength of the torso plank. However, the level of knowledge and understanding and aerobic endurance data is still low. This, of course, requires the attention of the Physical Education Teacher so that the child can grow and develop as a whole. Further research is needed in the form of research that can develop students' physical literacy, especially in the context of physical education.

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CONFLICT OF INTEREST

The authors declared no conflict of interest.

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