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## DEVELOPMENT OF PHYSICAL EDUCATION LEARNING ASSESSMENT INSTRUMENTS

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**Abstract.** This study aims to develop a valid, reliable and effective physical education learning assessment instrument for use in physical education learning. This instrument is designed to measure various aspects such as cognitive, apactive and psychomotor of students comprehensively. The method used in this study is Research and Development (R&D), which involves 3 experts, consisting of physical education experts, measurement test experts and language experts, for the field trial group involving 20 small groups and 30 large groups, after the data is obtained and analyzed using statistical analysis with the SPSS application with the r correlation method. The results of the study showed that the resulting instrument had a "very good" level of validity and reliability. Physical education teachers assessed that the instrument created helped in conducting objective assessments. But it still requires further development such as combining with digital technology to make assessment data more efficient and accurate.

**Keywords:** Development, Assessment Instruments, Physical Education, School

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### I. INTRODUCTION

Physical Education (PE) is one of the important subjects in the education curriculum, especially at the elementary and secondary school levels (Insani et al., 2024b; Likardo et al., 2023; Nusri et al., 2024). This subject not only aims to improve students' physical fitness, but also to shape character, discipline, cooperation, and development of motor and social skills and can increase moderate to heavy physical activity (Amin, Wahyuri, Irawan, Welis, Gusni, et al., 2023a; Atradinal & Ockta, 2024; Insani et al., 2024a; Sasmita et al., 2023). PE in various countries is found to be 97% of the requirements not to be taught in the compulsory school phase (Karisman et al., 2024; Rambe et al., 2024; Sasmita et al., 2023; Triani et al., 2023; Yuliana et al., 2023). Therefore, evaluation of the PE learning process must be carried out comprehensively, covering cognitive, affective, and psychomotor aspects (Insani et al., 2024c; Ockta et al., 2024; Pranoto et al., 2024; Safitri et al., 2023; Umar et al., 2023).

Assessment in PE learning has an important role in measuring the extent to which learning objectives are achieved, both in terms of knowledge about sports, motor skills, and students' attitudes towards physical activity (Adrizal et al., 2024; Al Zaki et al., 2023; R. R. Illahi et al., 2023; Revalina et al., 2024). However, in reality, the assessment instruments used are often less precise or do not meet the expected validity and reliability standards (Andika et al., 2024; Arfi et al., 2024; Chinta et al., 2024; Ockta & Hardiansyah, 2023). Many teachers still use subjective assessment methods, relying only on observations without structured instruments, so that the assessment results are less objective (Hambali et al., 2024; Haris et al., 2024; Ismail et al., 2024; Khani et al., 2024). Thus, it is necessary to develop more effective and systematic assessment instruments, which are able to measure various aspects of PE learning accurately (Amin, Wahyuri, Irawan, Welis, Gusni, et al., 2023b; Pitnawati et al., 2023; Safitri et al., 2024; Ulfani et al., 2024). This instrument must meet the criteria of validity, reliability,

and suitability for use in the context of learning in schools (Febriani et al., 2024; Febryani et al., 2024; R. F. Illahi et al., 2024; Sari et al., 2024). With a good assessment instrument, teachers can provide more meaningful feedback to students, so that PE learning can run more optimally (Apriady et al., 2024; Budiman & Ockta, 2024; Hadinata et al., 2024; Purwanto & Ockta, 2024). In this study, we will discuss how to develop valid, reliable, and practical physical education learning assessment instruments for use by PJOK teachers in schools. This development is expected to make a significant contribution to improving the quality of assessment in PJOK learning, as well as supporting the achievement of overall learning objectives.

## II. METHODS

This study uses a Research and Development (R&D) approach, which aims to develop and produce valid, reliable, and practical assessment instruments in physical education learning. This R&D approach involves several systematic stages starting from problem identification, product development, validity and reliability testing, to product implementation in the learning context. This study involved 3 experts from the field of physical education, measurement test experts, and language experts, which aimed at the validation stage, to determine the advantages and disadvantages of the assessment instruments that had been designed. After carrying out the validation stage, the resulting instrument will be tested in the field. After the instrument was tested, 3 experts conducted a reliability test to assess whether the designed instrument was reliable in data collection. This research involved 3 experts, physical education experts, measurement test experts and language experts, for the field trial group involving 20 people in small groups and 30 people in large groups. Statistical analysis using SPSS application with rcorrelation method.

## III. RESULTS AND DISCUSSION

Table 1.  
Validity questionnaire scores for physical education assessment instruments

Expert	Aspect	Score	Relative Frequency
Physical education expert	Suitability	14	19%
	Accuracy	20	27%
	Convenience	16	21%
	Practicality	25	33%
	Amount	75	100%
Measurement expert	Suitability	19	24%
	Accuracy	15	19%
	Convenience	20	25%
	Practicality	26	33%
Linguist	Amount	80	100%
	Suitability	20	27%
	Accuracy	16	21%
	Convenience	17	23%
	Practicality	22	29%

Amount	75	100%
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Based on the assessment of the three experts, the physical education assessment instrument can be tested on the research sample.

Table 2.  
Percentage and Level of Expert Validity

No	Expert	Percentage	Validity Level
1	Physical education expert	96%	Very good
2	Measurement expert	80%	Well
3	Linguist	98%	Very good

Table 3.  
Reliability Analysis Alpha Coefficient Reliability Test

Group	n	Alpha Coefficient	Reliability
Small	20	0,80%	High
Big	30	0,78%	High

Based on the results of the alpha coefficient reliability test on the long throw measuring instrument, it is said to be reliable and consistent with data collection. Based on the results of expert assessments, it can be said that this physical education research instrument has a "very good" level of practicality.

Table 4.  
Practicality Percentage Results from Expert Assessment

No	Expert	Percentage	Validity Level
1	Physical education expert	100%	Very good
2	Measurement expert	90%	Very good
3	Linguist	85%	Very good

Table 5.  
Effectiveness Percentage Results from Expert Assessment

No	Expert	Percentage	Validity Level
1	Physical education expert	99%	Very good
2	Measurement expert	89%	Very good
3	Linguist	85%	Very good

Based on the results of the three experts, it was obtained that the level of effectiveness of the physical education assessment instrument had a "very good" level of effectiveness. With the implementation of this research, the results that the researcher wanted were a physical education learning assessment instrument. This instrument is recommended to measure learning assessment at the high school level. This study obtained the results of the validity test from three experts, namely physical education experts, measurement test experts, and language experts, the level of feasibility is included in the very good category, so that the instrument design that the researcher designed can be continued with a trial on the research subjects. The results

of the coefficient that the researcher developed as a physical education learning assessment instrument obtained the first and second results with a very high correlation so that it can be said that this instrument design is reliable and consistent in development. Validity in research is a truth, accuracy or level of trust (Amin, Wahyuri, Irawan, Welis, & Ockta, 2023; Ferdian et al., 2023; Iqbal et al., 2024; Oktadinata et al., 2024; Sepriani et al., 2024). By obtaining high validity, it certainly makes the level of accuracy and helps in acceptance by the wider community. The validity of the test items is questions that refer to test items that represent the desired scope of content, the validity of the sample point is how well the test represents the overall scope of the content as a whole (Amin, Wahyuri, Irawan, Welis, & Ockta, 2023; Kurniawan et al., 2024; Oktadinata et al., 2024; Ramadaniaty et al., 2024). Validity is often associated with reliability. The instrument provided aims to measure and improve learning in the classroom based on recent research that the instrument used has a valid and reliable level for use in actual research, and has a fairly high construct coefficient level. After the construction testing by experts and based on empirical experience in the field is complete, it is continued with instrument testing. High reliability indicates consistency in the measurement (Febriani et al., 2024; Febryani et al., 2024; Karisman et al., 2024; Pranoto et al., 2024; Sari et al., 2024; Ulfani et al., 2024). PE teachers consider this instrument practical to use, because it helps them conduct more objective and structured assessments. However, some teachers proposed simplification of the affective aspect to make it more efficient to use in the field. This instrument has a positive impact on the learning process, because it helps teachers provide more appropriate feedback to students, and can be used to evaluate the effectiveness of physical education programs in schools. However, limited trials and manual assessments are challenges that need to be improved. Further development can focus on the use of digital technology to improve the efficiency and accuracy of assessments.

#### IV. CONCLUSION

This study successfully developed a valid, reliable, and practical assessment instrument for physical education learning. This instrument covers cognitive, affective, and psychomotor aspects, so that it is able to provide a comprehensive assessment of students' abilities. Expert validation and field trials showed that this instrument is consistent and easy to use, although there are suggestions to simplify some aspects to make it more efficient.

The use of this instrument supports teachers in providing more objective assessments and providing more appropriate feedback to students. However, limitations in the trial scale and manual assessment indicate that further instrument development, especially by utilizing digital technology, is needed to improve the efficiency and accuracy of the assessment.

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