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The Basic Movement Skill Test Instrument of Ball Games for Students Aged 13-15 Years

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Abstrak

Penelitian ini pada dasarnya bertujuan untuk memenuhi kebutuhan guru PJOK dalam melakukan proses penilaian pada aspek psikomotor maka dari itu penelitian ini berfokus pada pengujian validitas sebuah instrument tes keterampilan gerak dasar pada permainan bola besar khusus untuk siswa dengan rentang usia 13-15 tahun. Metode deskriptif kuantitatif yang digunakan pada penelitian ini dan dilakukan pada siswa sekolah menengah pertama kelas VII di kota cimahi sebanyak 25 orang. Instrument yang dikembangkan yaitu instrument tes keterampilan gerak dasar permainan bola besar terdiri dari keterampilan gerak passing atas, passing bawah, service atas, service bawah, passing dada, passing pantul, passing atas kepala, menggiring bola, passing kaki bagian dalam, passing kaki bagian luar, passing bagian punggung kaki, dan menggiring bola. Adapun tahapan yang dilakukan yaitu dengan menguji validitas dengan analisis person Product Moment menggunakan composite score dan menguji reliabilitas dengan menggunakan uji tes retest. Skor hasil uji coba yang diperoleh dari siswa dikorelasikan dengan menggunakan teknik pearson product moment. Hasil analisis validitas diperoleh nilai koefisien validitas kriteria terentang antara $r_{xy} = 0,84 - 0,96$ untuk instrument keterampilan gerak dasar permainan bola voli, $r_{xy} = 0,95 - 0,97$ untuk instrument keterampilan gerak dasar permainan sepak bola dan $r_{xy} = 0,93 - 0,97$ untuk instrument keterampilan gerak dasar permainan bola basket. Maka dari itu kesimpulan dari penelitian ini yaitu instrument keterampilan gerak dasar permainan bola dapat dipergunakan untuk menilai kemampuan keterampilan gerak dasar siswa sekolah menengah pertama.

Abstract

This study was basically aimed at meeting the needs of physical Education teachers in conducting the assessment process of the psychomotor aspects, thus this research focused on testing the validity of a basic movement skill test instrument in ball games specifically for students aged 13-15 years. Quantitative descriptive method was used in this study and carried out on 25 junior high school students grade VII in Cimahi city. The instrument developed was the basic movement skill test instrument of the ball game consisting of skill for passing, service up, service down, chest passing, bounding passing (boundpass), overhead passing, overhead dribbling, inner leg passing, outer foot passing, dorsal passing, and dribbling. The validity method used was related validity criteria by using composite scores. The trial results obtained from students were analysed by using the Pearson product moment technique. The results of the validity analysis showed that the value of the validity coefficient criteria was ranging from $r_{xy} = 0.84$ to 0.96 for the basic movement skill instrument of volleyball, $r_{xy} = 0.95$ to 0.97 for the basic movement skill of the soccer game, and $r_{xy} = 0,93 - 0.97$ for the basic movement skill instrument of basketball games. Therefore, the study concludes that the basic movement skill instrument of ball games can be used to assess the ability of basic movement skills of junior high school students.

INTRODUCTION

Educational sports in Indonesia is better known by the community as an educational process that emphasizes on the achievement of the aspect of movement, where it is carried out in the formal education setting from elementary school, junior high school, and senior high school (UU No 3 Tahun 2005, 2005). Educational sports conducted in a formal environment refers to physical education where it has many contributions to the community sustainability and well-being, especially in terms of academic progress and the development of movement skills (Bailey et al., 2009; Kalaja, Jaakkola, Liukkonen, & Watt, 2010). In addition to improving their ability to conduct physical movement, students who actively participate in motion-based activities in the physical education learning process continuously are able to improve their cognitive and social skills (Reiff, 2001). One of the outcomes of physical education learning process is the psychomotor aspect or aspect of motion (Tri, Ronald, & Ray, 2018).

In the achievement of the motion development process in children as a result of physical education, it is necessary to provide learning materials where students are encouraged to actively move and play in various game activities (McKenzie & McKenzie, 2007). The game activities that are learned at school and listed in the physical education curriculum include big ball games consisted of basketball, volleyball, and football. The achievement of movement aspects in children can be seen from the evaluation process carried out by physical education teachers as the forms of overview or learning achievement in aspects of learning objectives (Suherman, 2011). One of the teacher roles is to administer the evaluation of the learning process carried out (Baldwin, 2015). The evaluation can be conducted as long as there is an assessment process, and the purpose of the evaluation itself is to find out to what extent the effectiveness and effectiveness of a learning process are reached (Rosinta & Asrul, 2014; Black & Wiliam, 1998; Tolgfors & Öhman, 2015). To review the extent of the achievement of the physical education objectives obtained by students, an evaluation that utilizes assessment instrument that fits the focus of the assessment needs to conduct (Hay, 2006; Leirhaug & MacPhail, 2015; López-Pastor, Kirk, Lorente-Catalán, MacPhail, & Macdonald, 2013).

In the evaluation process, a measuring instrument is necessary. The instrument is utilized to carry out an assessment process that has good validity so that there is a match between the instrument used and what will be assessed. Validity is a measure that can show the legitimation or authenticity of an instrument (Erward G Carmines, n.d.). The validity level of an instrument will support the constancy of a measuring instrument and later can be used to support the evaluation in the learning process. Moreover, construct validity is used to assess the level of validity of each item on the basic movement skills test instrument in ball games (Beery, 2013).

There are several movement assessment instruments commonly used by teachers in supporting their responsibility to carry out a learning evaluation, especially the assessment of movement mastery aspects in students (Arias-Estero & Castejón, 2014; Inan, 2010; Quite, Onofre, Gerlach, Scheur, & Herrmann, 2018). However, there has not been a movement assessment instrument items used in the physical education learning process that could portray the components of movement in detail, either of the hands, feet, body positions and ball movement, in the assignment of the initial gestures, execution, and final gestures. There is not even a movement assessment instrument that is adjusted to the characteristics of students aged 13-15. Therefore, this research was aimed at testing the validity of a basic movement skill test instrument in a ball game that is adapted to the material and physical education learning outcomes at the junior high school level.

METHODS

This research was principally conducted to test the validity of an instrument developed by Juditya (2019), namely the basic movement skills test instrument of ball games which consists of basic movement skills test instruments in volleyball, football, and basketball games. Construct validity was used to test the validity of items contained in the instrument (Beery, 2013). The research employed descriptive methods on a total number of 25 students of junior high school with the age range of 13-15. The administered procedures were validity tests with Pearson Product Moment (PPM) analysis using composite scores and reliability tests using

retest tests. The process was carried out by conducting two-time tests on the same subjects on two different occasions, then the data obtained from the first test and the second test were correlated.

RESULT AND DISCUSSION

The result of data obtained from the calculation process of construct validity test using pearson product moment (PPM) analysis to test the feasibility of the basic movement skill test instrument of ball games is shown in the following table.

Table 1. The Results of Construct Validity Test of Basic

Basic Movement Skill Test Instrument of Basketball Game				
Validity	Chest Pass	Bound Pass	Overhead Pass	Dribbling
	0,970	0,934	0,937	0,954
Score Criteria	Very High	Very High	Very High	Very High
Basic Movement Skill Test Instrument of Football Game				
Validity	Push Pass	Long Pass	Backward Pass	Dribbling
	0,956	0,957	0,957	0,955
Score Criteria	Very High	Very High	Very High	Very High
Basic Movement Skill Test Instrument of Volleyball Game				
Validity	Overhand Serve	Underhand Serve	Overhead Pass	Forearm Pass
	0,841	0,935	0,943	0,963
Score Criteria	High	Very High	Very High	Very High

Table 1 shows the four construct validity scores of the four basic movement skills in basketball, from the basic chest pass, bound pass, overhead pass, to dribbling skills. The validity score of basic movement skills test instrument of the chest pass was 0.970, with a very high criterion score, of the bound pass was 0.937, with a very high score criterion, the overhead pass was 0.937, also with very high score criteria, and finally, the validity score of the basic movement skills test instrument of dribbling was 0.954, with very high score criteria. The validity scores obtained from the four basic movement skills test instruments in the big ball, which were on high category, signified that the four basic basketball motion skills test instruments including chest pass, overhead pass, bound pass, and dribbling could be used to measure basic movement skills from each basic move in a basketball game and was considered valid.

In football, the table shows four construct validity scores of the four football basic movement skills, which were push pass, long pass, backward pass, and dribbling. The validity score of the basic motion skills test instrument of push pass was 0.956, with very high score criteria, the validity score of the long pass was 0.957, with the very high score criteria, the validity score of backward pass was 0.957, with very high score criteria, and finally the validity score of dribbling was 0.955, with very high score criteria. Based on the data, it is evident that the four basic movement skills test instruments of football including push pass, long pass, backward pass, and dribbling could be used to measure the basic movement skills of each basic motion in a football game and is considered valid.

Further, the same table also portrays the four construct validity scores of passing and serving skills in the volleyball game. The validity score of overhand serve was 0.841, which was categorized high in the score criteria. While the validity scores for underhand serve, overhead pass, and forearm pass are 0.935, 0.943, and 0.963, respectively with all categorized very high in the score criteria. It indicates that, though one of the instruments was only high in the score criteria, all of the basic movement skills test instruments of volleyball could be used to test the motion of each basic movement in a volleyball game and was considered valid.

DISCUSSION

The results of basic movement skills test instrument analysis of football revealed a very high validity score for all four instruments of basic movement skills test instrument of the ball games including push pass, long pass, backward pass, and dribbling. Based on those findings, the instrument was feasible and proper to be used to assess or measure the four basic motion skills in football games.

In volleyball instruments, the overhand serve gained a high score criterion, while underhand serve, overhead pass and forearm pass were scored very high in the criteria. It means that its was feasible and proper to be used to assess or measure the four basic movement skills in volleyball games, namely overhand serve, underhand serve, overhead pass, and forearm pass.

The basic movement skill test instrument in basketball showed very high validity scores, which means the instrument for basketball games was feasible and could be appropriately used to assess or measure the four basic movement skills in basketball consisting of basic chest pass, overhead pass, bound pass, and dribbling.

The validity rate of all the basic movement skills test instruments of big games was high and very high obtained from the construct validity analysis. The construct validity was performed when analyzing the basic movement skills test instruments of ball games consisting of basic movement in basketball, football, and volleyball by using the validity method of criteria related validity with different force types. The validity of instruments analyzed in a constructive way could provide an overview of the ability of an instrument to assess what to be assessed (Boddington et al., 2019) and could be used as a rational basis for establishing an instrument (Beery, 2013). Even the instruments with construct validity levels could test the extent of compatibility between the content and the performance to be measured on the instrument when it is to be used (Bejerholm & Eklund, 2006).

CONCLUSION

The basic movement skill instrument of ball games ranging from basketball, volleyball, and football had a high degree of validity with the result that they could be used to measure basic movement skills. Therefore, it's can be used by physical education teachers to assess students' basic movement ability, especially students aged 13 to 15 year old.

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