JERE 7 (2) (2018) 163 – 173

Journal of Educational Research and Evaluation

http://journal.unnes.ac.id/sju/index.php/jere

The Development of Psychomotor Assessment Instrument Long Jump on Penjaskes Subjects of Class VIII

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Article Info

Article History:
Accepted 17 May 2018
Approved 15 August 2018
Published 24 August 2018

Keyword:
instrument development, psychomotor, long jump.

Abstract

Development of the instrument is very important to know the success of learners instructional practices in the long jump. The research aims to produce teacher assessment instruments on valid long jumps psychomotor, reliability and practical. The design of this research using R & D with by referring to the research procedure Sugiyono. The subject of a number of research participants from 30 students to conduct a small-scale test and 90 students for large-scale trials. Data collection using interview techniques, and studies now document. The data were analyzed qualitatively and quantitatively. The results showed that instrument stated in valid content of 0.68. Reliability of the ICC between appraisers of 0.730. Small-scale trials demonstrated the value of 0.652 KMO. And Bartlett's Test sig 0.000. However, there are items of value the MSA < 0.5. large-scale Test showed the value of KMO 0.756 and sig Tests. Bartlett's 0.000. all grains acquire MSA > 0.5. Form 4 instrument components. Reliability of the instrument on a small scale test of 0.802 and large-scale 0.805. Test score of 123 practicalities that means practical instruments used. The findings of this research are the instrument developed proven valid, reliability and practical. The benefits of this research to teachers can use this instrument in the study of sports material long jumps in order to generate an easy and precise measurements.

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P-ISSN 2252-6544
E-ISSN 2502-356X

Journal of Educational Research and Evaluation 7 (2) (2018) 163 -173

INTRODUCTION

This modern human life cannot be separated from the sports arena, as both the Buffalo and the achievements of the need to maintain the condition of the body to stay healthy. Sport has an important role in human life. Dacica (2015) stated that physical education and sport is an important element in education and training, the goal is to form a strong conception of youth regarding the practice of physical exercises and to assess the budget for spare time the purpose of sanogenik, education and recreation. This research starts from the premise that physical education is a branch of education remain, who wanted the presence of harmonization between the biological and psychological component of the personality of the child. Sports can be formed into a healthy human being spiritual as well as physical, has discipline, personality, a high sportifitas will eventually be formed a quality human being.

2013 curriculum developed over the theory of "education based on standards" and the theory of competency-based curriculum, designed to provide learning experiences widely for learners in developing the ability to behave, knowledge, skills, and Act (Kunandar, 2013). Education as a standard set of the existence of national standards as a minimum quality specified nationals into standard content, standard process, standard of competency graduates, educators and labor standards of education, and education assessment standards. Standard assessment criteria are education about the mechanisms, procedures, and results in assessment instruments learn learners.

Subjects related to psychomotor is a more beorientasi subjects on the movement and the emphasis on physical reactions and skill that involves the manipulation of the muscles. The long jump is a sport that combines speed (speed), strength (stenght), suppleness (flexibility), durability (endurance), and accuracy (acuration) in an effort to obtain the distance of the jump as far. Purnomo & Dapan (2013) stated that the long jump is one of a number of techniques that in competition in the sport of athletics. There are three different styles in the style of: long jump to squat (sail style) style, hang (hang style) and gait aerial (hick kick style).

Patria (2016) stated that the assessment of the long jump at the JUNIOR HIGH SCHOOL students should be more emphasized on the process or teknik-tekniknya i.e. judging began at this stage of the prefix, repulsion, the attitude of the body in the air and body attitude when landing. Therefore, assessing each long jump stages need to be done carefully and not simply by one observer/assessor. In addition to the teacher, the students are also involved in performing the assessment. Assessment remains the same with the instrument is done by the students, it's just that the students are divided into several groups consisting of 5 – 6 persons, then students in turns to assess when to practice the long jump while holding the instrument the assessment was distributed. This kind of assessment technique called rolling-based assessment with the assessment.

Jerver (2009) State that the intent of the take off is a technique in which a Fox running movement into a leap, by doing leaps and perpendicular to the horizontal speed while maintaining the greatest extent possible. The jump is performed with the body bends forward as making an angle of approximately 45 degrees and while maintaining speed while the Agency in a horizontal position. Observationally January 2018, in junior high Country 2 Purwokerto and MTs Country 1 Kendari, found that the assessment conducted on teacher learning longs to jump is still globally that is simply assessing the end result just leaps away or without assessing in detail each stage core in practice long jump. Long jump stages include the prefix, centering, hovering and landing. Instruments used in assessing learning long jump practice only in the form of the usual value of the book to take note of the value students. Therefore, the need for the development of psychomotor assessment instrument is a valid long jump, reliability and effective accompanied

Guidebook about psychomotor assessment instruments in the long jump. The guide book to facilitate teachers in assessing each stage of learning in the core practice of long to jump.

METHODS

The research method used is the research and development (Research and Development/R & D), with reference to procedures development Sugiyono with 9 steps: 1) determine the purpose of drafting instruments; 2) finding relevant theory; 3) compile indicators grain instruments; 4) compose grains of instruments; 5) the validity of the content; 6) Revision based input validates; 7) test; 8) conduct analysis; 9) assemble the instrument. Sugiyono (2015:297) i.e. the research methods used to produce certain products, and test the effectiveness of these products. Research can produce certain products used the nonprofit research and needs analysis to test the effectiveness of the product so that it can function as society at large, then the necessary research to test the effectiveness of product such.

RESULTS AND DISCUSSION

The Results Of The Needs Analysis

Researchers conducting the data analysis to find out the needs of the field. Researchers conduct interviews for teachers of JUNIOR HIGH SCHOOL N 2 Purwokerto and banyumas Regency MTs Country 1 Kendari. Researchers asked some questions related subjects assessment Penjaskes undertaken by teachers to gauge learning long jumps. The interview continued with a study of the documents in the form of assessment instruments used by teachers. Researchers seeking documents instruments drawn up by the teacher to perform measurements of the results of the study. The results of the interviews and document to study conducted by researchers can be described as follows.

Researchers found that the assessment conducted on subjects teachers longs to jump still are common i.e. only assess the results eventually only or away leaps without assessing in detail each stage core in practice long jump. Instruments used in assessing learning long jump practice also still has not been tested for its versatility, reliability, and validity. Researchers concluded the need for the development of psychomotor assessment instrument is a valid long jump, reliability and practical with a guide book on psychomotor assessment instruments in the long jump. Guidebook aims to facilitate teachers in assessing each stage of learning in the core practice of long jumps.

The Results Of The Instrument's Specifications

The development of psychomotor assessment instrument long jump has special specifications. Instruments in the form of performance assessment sheet. The instrument consists of a lattice, the syntax, Rubrics, and assessment sheet. The lattice matched with the basic competence of the subjects Penjaskes VIII class using various motion-specific prefix/accoutrements accoutrements, object, hovering and landing aerial in the form of a race long jump use regulations modified. Assessment using a rating scale of 1 to 3, with the highest scale 3 which means the learners shows maximum ability expected.

Researchers develop Instrument consists of 18 items. The arrangement of the items based on theories that are found. 18 items consist of (1) the speed of the run phase 1, (2) run speed stage 2, (3) running speed stage 3, (4) the position of the point of view of time running, (5) movement of steps to board the repulsion, (6) the use of foot while the repulsion, (7) techniques of the foot while the repulsion, (8) the position of the foot on the Board rejected, (9) the slope of the body while resting, (10) the position of the hand when the aerial, (11) the position of the limbs and feet, (12) aerial view of the Position at the time, (13) the position of the legs when in sandbox, (14) the position of the soles of the feet touching the

sand, (15) the position of the hand when in sand, (16) head Position/views on the sandbox, (17) the position of the weight while in the tub, basir (18) position of buttocks when in sandbox.

The Results Of The Validity Of The Content

The development of psychomotor assessment instrument long jump on subjects Penjaskes class VIII conducted a test of the validity of the contents by 3 experts. The third expert was a teacher in JUNIOR HIGH SCHOOL N 2 Purwokerto. Test the validity of the content is done to look at the suitability of the grain towards the theory and practice that is done in doing the long jump. Test the validity of the contents on the development of psychomotor assessment instrument long jump on subjects Penjaskes Class VIII by practitioners can be seen in table 1.

Table 1. Expert Data On Test Content Validity

Number of the expert	Competence Of Expert	Education	Description
Expert 1	Practitioner	S1	Teacher Penjaskes
Expert 2	Practitioner	S1	Teacher Penjaskes
Expert 3	Practitioner	S1	Teacher Penjaskes

The experts also gave a questionnaire containing the conclusions of the assessment of experts on psychomotor assessment instrument long jumps on Penjaskes subjects of class VIII. Quantitative-shaped data shown on table 2.

Table 2. The Coefficient Of The Deal Experts

Number of grains	Indeks Aiken's V	Summary	Number of grains	Indeks Aiken's V	Summary
1	0.92	Valid	9	0.58	Valid
2	0.75	Valid	10	0.75	Valid
3	0.92	Valid	11	0.83	Valid
4	0.75	Valid	12	0.58	Valid
5	0.50	Valid	13	0.75	Valid
6	0.50	Valid	14	0.58	Valid
7	0.83	Valid	15	0.67	Valid
8	0.50	Valid	16	0.50	Valid

Based on the results of data analysis in table 2 can be obtained the agreement on information experts. The validity of psychomotor assessment instruments fills the long jump obtained information that all valid and usable. Index of Aiken v. for the instrument's overall worth 0.68, so the instrument as a whole was declared legally valid content by experts.

Validity Of The Test Results Invalid Constructs

The Analysis Of The Test Of The Validity Of Invalid Constructs Small Scale

The development of psychomotor assessment instrument longs to jump on subjects Penjaskes class VIII on small scale test using the draft instrument 2 done to 30 students. The analysis was conducted with the help of IBM SPSS software 24, using exploratory factor analysis approach. Analysis results can be seen in table 3.

Table 3. Feasibility tests results of a small scale Test Instrument

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.652
Bartlett's Test of Sphericity	Approx. Square	Chi-564.065
	Df	153
	Sig.	.000

Based on table 3 results in analysis of the draft instrument on a small scale test retrieved the value of KMO > 0.5 i.e. of 0652, then the sample adequacy requirement is met to be analyzed further. Test Barteletts Test shows sig so that there is a 0.5 <. correlation between variable so it can be analyzed further. The results of the analysis followed by a look at the table of anti image correlation found 4 items show the value of 0.5, which is not < eligible criteria and cannot be analyzed further. Grain that has a correlation between 0.5 is B3 < 0.438

0.440 of, B6, B7 and B8 0.367, registration of 0.338. Analysis results can be seen in table 4.

Table 4. The Results Of Anti Image Correlation

No	Grain	Anti Image Correlation
1	Speed lati stage 1	0.710
2	Running speed stage 2	0.769
3	Running speed stage 3	0.438
4	The position of view when	0.680
5	running	0.690
6	Movement step toward	0.440
7	Board repulsion	0.367
8	The use of the foot while the	0.338
9	repulsion	0.649
10	Techniques of the foot while	0.642
11	the repulsion	0.563
12	The position of the feet on	0.739
13	the Board-rejected	0.892
14	The slope of the body while	0.693
15	resting	0.842
16	The position of the hand	0.822
17	when the aerial	0.699
18	The position of the limbs	0.627
	and feet	
	The position of the aerial	
	view of time	
	The position of the legs	
	when in sandbox	
	Position your feet touch the	
	sand	
	The position of the hand	
	when in the sand	
	The position of the	
	head/view when in sandbox	
	The position of the weight	
	while in the sandbox	
	Position the ass while in the	
	sandbox	

The Analysis Of The Test Of The Validity Of Invalid Constructs Large Scale

The development of psychomotor assessment instruments in the long jump at the class VIII Penjaskes subjects on a large scale test of using the draft instrument 3 done to 90 students. The analysis was conducted with the help of IBM SPSS software 24, using exploratory factor analysis approach. The terms of the adequacy of the sample can be seen from the results of the test of the correlation and the terms Interfaith KMO variable as seen from the Bartlett's test Test. Analysis results can be seen in table 5.

Table 5. Feasibility tests results of a large scale Test Instrument

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.756
Bartlett's Test of Sphericity	Approx. Chi-Square	1231.023
	Df	153
	Sig.	.000

Based on table 5 results in analysis of a draft instrument on the large scale test 3 obtained the value of KMO > 0.5 i.e. of 0756, then the sample adequacy requirement is met to be analyzed further. Test Barteletts Test shows sig so that there is a 0.5 <. correlation between variable so it can be analyzed further. The results of the analysis followed by a look at the table of anti image correlation. Analysis results can be seen in table 6.

Table 6. The Results Of Anti Image Correlation

No	Grain	Anti Image Correlation
1	Speed lati stage 1	0.722
2	Running speed stage 2	0.710
3	Running speed stage 3	0.727
4	The position of view when	0.722
5	running	0.722
6	Movement step toward	0.654
7	Board repulsion	0.580
8	The use of the foot while the	0.722
9	repulsion	0.659
10	Techniques of the foot while	0.707
11	the repulsion	0.648
12	The position of the feet on	0.668
13	the Board-rejected	0.790
	The slope of the body while	

	resting	
	The position of the hand when the aerial	
	The position of the limbs and feet	
	The position of the aerial view of time	
	The position of the legs when in sandbox	
14	Position your feet touch the	0.900
15	sand	0.838
16	The position of the hand	0.801
17	when in the sand	0.930
18	The position of the head/view when in sandbox	0.827
	The position of the weight while in the sandbox	
	Position the ass while in the sandbox	

The next step that is seeing a lot of factors which might form into the analysis of the factor of the number of samples 90 learners in large scale trials. After an exploratory factor analysis was conducted with the help of IBM SPSS program version 24. Following is the result of Total Variance Table Ecplaoned in the table 7.

Table 7. Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.406	30.031	30.031	5.406	30.031	30.031
2	3.198	17.766	47.797	3.198	17.766	47.797
3	2.584	14.356	62.153	2.584	14.356	62.153
4	1.995	11.085	73.238	1.995	11.085	73.238
5	.870	4.832	78.070			
6	.794	4.412	82.481			
7	.657	3.648	86.129			
8	.457	2.539	88.668			
9	.435	2.419	91.087			
10	.351	1.952	93.040			
11	.270	1.501	94.540			
12	.244	1.356	95.897			
13	.214	1.186	97.083			
14	.184	1.023	98.106			
15	.115	.639	98.745			
16	.107	.597	99.341			
17	.068	.377	99.718			
18	.051	.282	100.000			

Extraction Method: Principal Component Analysis.

Table 7 shows there are 4 components are formed and can represent the number of indicators. 18 items analyzed turned out to have a value of 1 means that the eigenvalues > 18 grain item can be grouped into 4 factors. To determine how a component/factor used in order to explain the diversity of the total then is seen from the great value of the eigenvalue component of the eigenvalues > 1 is the components used. Overall results of Total Variance can be described in Figure 1.

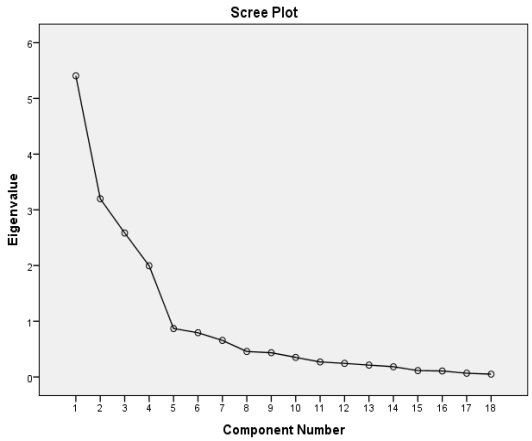

Figure 1. Screen Test Plot Large-scale

Based on the above Plot Screen is visible that there are 4 points is above the value of the eigenvalue 1 and the other dots are below a value of 1. This lyric that there are 4 components that have value of eigenvalue 1. Next do the determination of each grain is going fit into factors anywhere from the fourth factor. Grouping of grains and magnitude of loading factor one factor seen from the value of the factor value is loadingnya > 0.3. Grouping of grain of the factors can be done by viewing the Table Rotation Matrix Componen. Following is the results of the Rotation Matrix Component in table 8.

Table 8. Rotation Matrix Componen

	Component			
Item	1	2	3	4
Speed lati stage 1	-.133	.788	-.149	.139
Running speed stage 2	-.142	.789	-.033	.136
Running speed stage 3	.173	.635	.156	.177
The position of view when running	.093	.682	.053	-.137
Movement step toward Board repulsion	-.002	.749	-.045	.177
The use of the foot while the repulsion	.211	.678	.070	-.177
Techniques of the foot while the repulsion	.036	.018	.965	.054
The position of the feet on the Board-rejected	.096	.043	.927	.008
The slope of the body while resting	.077	-.024	.912	.059
The position of the hand when the aerial	.187	-.012	.041	.852
The position of the limbs and feet	.195	.139	.030	.918
The position of the aerial view of time	.171	.117	.053	.807
The position of the legs when in sandbox	.940	.180	.047	.146
Position your feet touch the sand	.923	-.007	.046	.142
The position of the hand when in the sand	.863	-.094	-.005	.215
The position of the head/view when in sandbox	.853	.169	-.045	-.036
The position of the weight while in the sandbox	.782	.006	.138	.199
Position the ass while in the sandbox	.798	-.024	.139	.103

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]
a. Rotation converged in 4 iterations.

Based on Table 8 shows the results of factor rotations to see that grouping indicator into the factor and the magnitude of loading which can be seen in the table above. See that the determination of the input indicator to factor certain factors follows on massive correlation between variable factor, namely the great korelasinya. Thus, the factors that form along the grain is presented in table 9.

Table 9. Grouping in a factor

Number of grain	Grains of Instrument	Factor	Correlation values	Name factor
13	The position of the legs when in		.940	

	sandbox	1		Touch down
14	Position your feet touch the sand		.923	
15	The position of the hand when in the sand		.863	
16	The position of the head/view when in sandbox		.853	
17	The position of the weight while in the sandbox		.782	
18	Position the ass while in the sandbox		.798	
1	Speed lati stage 1		.788	
2	Running speed stage 2		.789	
3	Running speed stage 3		.682	prefix
4	The position of view when running	2	.682	
5	Movement step toward Board		.749	
	repulsion			
6	The use of the foot while the repulsion		.678	
7	Techniques of the foot while the repulsion	3	.965	push
8	The position of the feet on the Board-rejected		.927	
9	The slope of the body while resting		.912	
10	The position of the hand when the aerial	4	.852	sail
11	The position of the limbs and feet		.918	
12	The position of the aerial view of time		.807	

Based on Table 9 according to the results of the grouping of 18 rounds of 4 factors that are formed as well as the naming of each factor. Components that formed on the factor 1 was named Land, grain instrument consisting of grains of 13, 14, 15, 16, 17, and 18. Components that formed on the factor 2 was given the name

prefix, the instrument consists of grains grains of 1, 2, 3, 4, 5, and 6. Factor 3 named Repulsion, the instrument consists of grains grains 7, 8, and 9. A factor of 4 is named Float, grain instrument consisting of grains of 10, 11, and 12.

The Results Of The Reliability

Reliability tests for reliability of expert assessment test, test a small scale and large scale trials. Reliability tests using SPSS version application 24. Based on the analysis of the obtained results of Table 10.

Table 10. Data Analysis Of Reliability Test For Small Scale

Test	Cronbach's Alpha	Intraclass Correlation Coefficient	N of items
ICC Expert	0,890	0,730	16
Small scale	`0,802		18
Large scale	0,805		18

Table 10 shows that the estimation of reliability assessment of experts using the ICC of 0.730 shows appropriates experts on assessing the psychomotor assessment instruments in the long jump. Reliability tests for small scale of 0.802 greater than 0.7 so that it can be interpreted that the instrument Reliability. Catalano et al. (2014) stated that the instrument of self-evaluation can help teachers to reflect on their own education practices and to improve professional skills. The purpose of this research is: (a) analyse the internal validity of a new self-evaluation instrument, called a questionnaire and teacher education Practices, (b) to examine the possibility of the use of this instrument in training teachers pre-job title. The sample consists of 307 teacher in-services from Northern, Central and southern Italy. The results of the three Principal Axis Factor Analysis that stand out with Promax Rotation reveal two factors structure for communication and Organization area of the class and the structure of one factor for the relationship. Significant differences appear to be the kind of school, teachers and years of teaching. For the second objective, the TEP-Q is used for various groups of pre-service teacher training and in-service is effective to increase the level of professional skills through shared reflection on educational practices. Large scale tests results indicate the reliability coefficient of large scale trials of 0805 greater than 0.7, so that it can be interpreted that the instrument Reliability. This is in line with the expressed Dragon that reliability coefficient of 0.5 and above are quite sufficient to be accepted as a good reliability (Khumaedi, 2012:13).

Discussion

The instruments developed in the learning material penjaskes valid content of the long jump, valid and invalid constructs in reliability. Rahmawan et al. (2016) stated that an instrument designed to measure the performance of students and the instruments are made in the form of Android applications. The technique of data collection methods performance tests, documentation, observation, interviews, and question form. Data analysis on initial product validated by experts to get the validity of the content. Furthermore, the instrument tested is limited to students in junior high Country 2 Purwokerto and tested wide scale of SMP Negeri 3 JUNIOR HIGH SCHOOL Muhammadiyah Purwokerto and Purwokerto 1. Stralen et al. (2012) stated that health benefits can be achieved when physical activity in children from low socioeconomic status was promoted and mediation mechanisms determine intervention disquiet. This is in line with the research Fuadi's et al. (2015), the results showed that PAP-IPA instrument material competency-based green plants feasible and can increase the mastery of psychomotor competence. On the application, the entire instrument is valid, the reliability, and practical. Research conducted by Sujarwanto & Rusilowati. (2015), the results showed that performance assessment instruments developed already reliability

reliability coefficient, with an average rating of three people ratter reliability coefficient of 0.837 and average rating for each raternya of 0.659. The research also suggests that highly skilled 81.25% of students in practical activity, while the remaining 18.75% in the skilled criteria. This is in accordance with the research of Amalia & Susilaningsih (2014), the results showed that the assessment Instrument was developed are a test essay analysis, activity sheets, and test students ' problem solving skills-oriented think critical students. Leo et al. (2015) stated that confirmatory factor analysis of acyl group is consistent with the structure of multi scale hypothesized and shows the measurement invariant between gender. The reliability of the scale in terms of internal consistency ranged from 0.74 to 0.79. Perceived competence in the Educational decision-making process Questionnaire can be very useful in the context of Italy, in which students are asked to make important choices about their future educational path at the end of junior high school. This is particularly relevant given the numerous recent changes have been done in organizing high school in Italy. The assessment instruments have been developed in this research were declared valid and reliable and influential positive cognitive learning results of students. This is in line with the research Nugroho et al. (2016), results show that performance assessment instruments to draw IT-based pieces developed valid and reliability.

CONCLUSION

The results of the validation of content and reliability as well as by experts of invalid constructs showed decent assessment instruments used. Trials conducted in high school (JUNIOR HIGH) and indicates that the instrument skills earn a percentage value practicality is very high. Based on this analysis it can be concluded that the psychomotor assessment instruments longs to jump on subjects of class VIII valid penjaskes, reliability, and practical to use in the assessment process. The development of psychomotor assessment instrument longs to jump on penjaskes subjects of class VIII. Therefore, the need for further research and development to create assessment instruments in the realm of skills to other materials. Research results dissemination can further the development of assessment instruments, skill on a wider scale.

ACKNOWLEDGMENTS

Thank researchers tell the parties that have helped during the research process, including; 1) Dwiwanto, s. Pd as experts in the field validate penjaskes, 2) Asriningsih, s. Pd as experts in the field validate penjaskes, 3) Azaluddin, s. Pd as experts on the field validate penjaskes, 4) JUNIOR HIGH SCHOOL N 2 Purwokerto researches as a place that has given the opportunity for researchers to conduct research activities.

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