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## Descriptive Study of Long Jump Learning Development In The Physical Education Process

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ABSTRACT	ARTICLE INFO
<p>This study aims to identify the most effective learning media for enhancing long jump instruction among Grade 7 students at the secondary school level. The research was motivated by the need to improve the quality of physical education through the selection of appropriate instructional tools that facilitate motor learning. A descriptive quantitative method was employed, and the sample consisted of 167 students selected using a random sampling technique. Data collection was carried out using a structured questionnaire distributed via Google Forms, allowing students to evaluate the effectiveness of three different types of learning media. The analysis revealed that all three media demonstrated a fair level of effectiveness, contributing positively to students' understanding and performance in long jump. However, among the three, the bamboo-based media emerged as the most effective, based on its higher percentage rating in student responses. The results indicate that bamboo media not only aids in demonstrating technique but also enhances student engagement through tangible, accessible, and adaptable materials. In conclusion, the study suggests that the bamboo media is more effective than other alternatives for teaching long jump at the junior secondary school level. These findings provide valuable insights for physical education teachers in selecting learning aids that align with student needs and contextual learning environments, thereby optimizing instructional outcomes in athletics.</p> <p>© 2024 UPI Journal and Publication Office</p>	<p><b>Article History:</b> <i>Submitted/Received 13 Aug 2024</i> <i>First Revised 05 Sep 2024</i> <i>Accepted 24 Sep 2024</i> <i>First Available online 28 Sep 2024</i> <i>Publication Date 01 Oct 2024</i></p> <p><b>Keywords:</b> <i>descriptive study,</i> <i>long jump,</i> <i>learning development</i> <i>physical education,</i> <i>instructional media</i></p>

## 1. INTRODUCTION

Physical education is a forum to improve students' fitness and healthy lifestyle habits that aim to stimulate balanced growth and development (Pate et al., 2006). Physical education is also an educational process that utilizes systematically planned physical activities aimed at developing and improving individuals naturally, neuromuscularly, perceptually, cognitively, and emotionally within the framework of the national education system (Brownson et al., 2009). In physical education, educators must be able to teach students various basic skills of games and sports, development activities, techniques, and outdoor activities, values contained in physical education, sportsmanship, honesty, cooperation, discipline, and healthy living habits (Stolz & Pill, 2014). According to (Ferrari & Schoolnet, 2009) Williams physical education is a number of selected human physical activities that are carried out to obtain the desired results. From the explanation, it is clear that Physical Education, Sports and Health (PJOK) is very important. The role of the teacher is required to provide intelligence, innovation, creativity, experience, and motivation in the learning process. It is expected that students can gain knowledge, physical fitness through movement, skills, attitudes, and values contained in the material presented by the teacher. Athletics is a popular sport that is widely loved by the public. Athletics is done by all countries, because the educational values contained in it also play an important role in the development or improvement of optimal achievements for this sport which is considered as the progress of a country, especially in sports achievements.

According to (Brown, 2008) explains that the term athletics is used in Malaysia to mean a branch of sport that includes walking, running, jumping, and throwing. Athletics is also a very important element of sport for other sports because explains that all movements are in athletics, even these movements are the basis and essence of all sports, that's why athletics is called the "mother of sport". Although athletics is an easy, cheap, and fun sport for all ages, unfortunately lately athletics has lost much of its appeal because it is considered boring. In schools, students are more interested in learning materials that are more recreational because of the lack of appeal of athletic activities themselves which are all about the track and field which are less motivating for children (Goudas et al., 2016). In learning athletics at school, there are several materials, one of which is the long jump learning material. Long jump is one of the numbers of athletic sports that have been known by ancient people since they were born, where in their daily lives they were forced by nature to jump or run in order to maintain their lives (Lenoir et al., 2005). According to (Seyfarth et al., 1999) long jump is a movement of lifting the body from one point to another with a running start by supporting one foot and landing with two feet or other limbs with good balance. Long jump movements can be seen from four main phases, namely, (a) the initial phase or approach (approach-Run), (b) the push-off phase (take off), (c) the floating phase in the air or body position in the air (Action In The Air) and (d) the landing phase (Landing). (Sumantri, 2015) Because learning long jump is a boring learning for students, therefore every long jump learning has several factors that influence it.

Factors that influence long jump learning are human resources (HR), facilities & infrastructure and learning methods from the three human resource factors (HR) are divided into 2, namely consisting of teachers and students (Boccia et al., 2017). Teachers are one of the factors that influence long jump learning because if a competent teacher will be better able to create an effective, enjoyable learning environment, and will be better able to manage the class well so that the learning carried out by students will be at an optimal point (Berliner, 2001). If a teacher is not competent in teaching, the learning will also result in not being conducive because a teacher is not able to control the class well (Lim et al., 2003). Based on

the problems that have been described, the researcher concluded that it is very necessary to develop long jump learning and the researcher concluded that student boredom is caused by the characteristics of athletic sports that are individual and contrary to the spirit of children who have a strong desire to play, therefore the researcher wants to develop long jump learning which can later be used as a solution to facilitate students in learning long jump movements effectively and efficiently. Therefore, the purpose of the study is to develop long jump learning with games that are appropriate for grade VII junior high school students.

Until now, the problems faced by physical education teachers in the field are the large number of students in each class, lack of facilities, equipment and facilities in teaching and learning facilities in physical education. The development of sports is increasingly rapid and even easy to spread to the community, so that some people view sports as part of their lives. Even doing sports is as important as doing other needs. It should be realized that facilities and infrastructure are very much needed, it is important to do sports activities because without facilities and infrastructure it will not develop in accordance with the development of sports in other countries. However, the reality in the field, there are still many students who are not interested in athletics lessons and even tend to dislike them (Siegfried & Zimbalist, 2000). This is a challenge for physical education teachers so that athletics lessons are fun lessons for their students. One of the obstacles encountered in the field includes the lack of adequate athletic facilities and equipment, lack of innovation and modification of learning facilities. In fact, most students feel lazy to follow athletics learning, the reason is because athletics learning makes students tired (Hennessy et al., 2005). According to (Mensch & Ennis, 2002) explains that: "When students do not like athletics lessons, it may be because what is taught is the same as athletics done by adults. They will get bored and avoid athletic activities. Meanwhile, according to (Bowman & Dodge, 2013) explains that: Athletics learning at every level of education is one of the boring and less interesting lessons, it needs improvement in presentation and in the approach to make it more interesting and students will be more enthusiastic to follow the athletics learning itself.

From the general problems faced by physical education teachers in delivering material, especially long jump, the researcher is interested in conducting research with the title "Descriptive Study of the Development of Long Jump Learning in the Physical Education Process for Class VII Students of secondary school."

## 2. METHODS

The research method is a step owned and carried out by researchers in order to collect information or data and conduct investigations on the data that has been obtained, explains that the research method is basically a scientific way to obtain data with certain goals and uses. Research method is a branch of science that discusses or questions how to carry out research (which includes activities to search, record, formulate, analyze to compile reports) based on facts or symptoms scientifically. It can be concluded that the research method is a way to obtain or collect data by conducting field research.

The type of research used by the researcher is descriptive. The research method used is quantitative descriptive research. Descriptive research is defined as a research method that describes the characteristics of the population or phenomenon being studied. Descriptive research is generally carried out with the main objective, namely to systematically describe the facts and characteristics of the objects and subjects being studied accurately.

For the research approach in this thesis, a quantitative research approach is used, that the quantitative research method is defined as a research method based on the philosophy of positivism, used to research a certain population or sample, data collection using research

instruments, data analysis is quantitative/statistical, with the aim of advancing the established hypothesis.

Quantitative descriptive research is a type of research that aims to describe systematically, factually and accurately the facts and characteristics of a particular population.

After all the data taken in a study is collected, the next step is to analyze the collected data so that a conclusion can be drawn through the calculation of the data. For an analysis that is in accordance with the research approach, used in this study is as follows:

$$P = n$$

$$\frac{n}{N} \times 100\%$$

Information:

P : Percentage

n : Number of scores obtained

N : Ideal/maximum score

### 3. RESULTS

Respondent characteristics analysis was used to obtain a picture of the respondents studied. The population studied were grade VII students of secondary school. The number of samples taken in this study was 167 respondents. Based on the information obtained from the questionnaire given, respondents were classified into groups based on the gender and class of each student.

Based on the results of the questionnaire answers given by respondents, the following data was obtained:

#### Gender

Based on the results of the questionnaire answers given by respondents, the data is as follows:

**Tabel 1.** Percentage of respondents by gender

<i>Gender</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Man</i>	<i>94</i>	<i>56.3%</i>
<i>Woman</i>	<i>73</i>	<i>43.7%</i>
<i>Total</i>	<i>167</i>	<i>100%</i>

Based on the data obtained above, from 167 respondents of grade 7 students of secondary school, it is known that 94 people (56.3%) of the sample were male and 73 people (43.7%) of the sample were female.

#### Student class

Based on the results of the questionnaire answers given by respondents, the following data was obtained:

**Tabel 2.** Percentage of respondents based on student class

<i>Class</i>	<i>Frequency</i>	<i>Percentage</i>
7.1	18	10.778%
7.2	19	11.377%
7.3	18	10,778%
7.4	19	11,377%
7.5	18	10,778%
7.6	19	11,377%
7.7	19	11,377%
7.8	18	10,778%
7.9	19	11,377%
<b>Total</b>	<b>167</b>	<b>100%</b>

Based on the data obtained above, from 167 respondents of grade 7 students of secondary school, it is known that 18 people (10.778%) each came from classes 7.1, 7.3, 7.5, and 7.8, while 19 students (11.377%) each came from classes 7.2, 7.4, 7.6, 7.7, and 7.9.

### Validity and Reliability Test Analysis

Validity and reliability tests are used to determine whether the research instruments or tools used truly reflect the variables being studied.

### Validity Test

The validity test technique in this study uses the Correlations formula using the SPSS Program. The correlation results in this test can be seen in the *r* column, calculate the value and then compare it with the *r* value. table at the level significance of 0.05 with a 2-sided test and the number of respondents was 167. Decision making was based on on mark  $r_{\text{count}}$  (Correlations)  $> r_{\text{table}}$  as big as 0.1519, For  $df = 167 - 2 = 165$ ;  $\alpha = 0.05$  so item/ question the valid.

**Tabel 3.** Results; validity test of long jump learning development variables

<b>Variables</b>	<b>Item</b>	<b>r count</b>	<b>r table</b>	<b>Decision</b>
	P1	0.422	0.1519	Valid
	P2	0.473	0,1519	Valid
	P3	.467	0,1519	Valid
	P4	.434	0,1519	Valid
	P5	.419	0,1519	Valid

Development Learning Jump Far	P6	.494	0,1519	Valid
	P7	.478	0,1519	Valid
	P8	.541	0,1519	Valid
	P9	.446	0,1519	Valid
	P10	.509	0,1519	Valid
	P11	.481	0,1519	Valid
	P12	.511	0,1519	Valid
	P13	.386	0,1519	Valid
	P14	.425	0,1519	Valid
	P15	.400	0,1519	Valid
	P16	.427	0,1519	Valid
	P17	.361	0,1519	Valid
	P18	.463	0,1519	Valid
	P19	.454	0,1519	Valid
	P20	.489	0,1519	Valid
	P21	.422	0,1519	Valid
	P22	.380	0,1519	Valid
	P23	.470	0,1519	Valid
	P24	.435	0,1519	Valid
	P25	.414	0,1519	Valid
	P26	.473	0,1519	Valid
	P27	.482	0,1519	Valid
	P28	.353	0,1519	Valid
	P29	.495	0,1519	Valid
	P30	.415	0,1519	Valid
	P31	.483	0,1519	Valid
	P32	.425	0,1519	Valid
	P33	.537	0,1519	Valid
	P34	.430	0,1519	Valid
	P35	.446	0,1519	Valid
	P36	.414	0,1519	Valid
	P37	.453	0,1519	Valid
	P38	.415	0,1519	Valid
	P39	.487	0,1519	Valid
	P40	.440	0,1519	Valid
	P41	.393	0,1519	Valid
	P42	.415	0,1519	Valid
	P43	.516	0,1519	Valid
	P44	.518	0,1519	Valid
	P45	.501	0,1519	Valid
	P46	.330	0,1519	Valid

P47	.470	0,1519	Valid
P48	.538	0,1519	Valid
P49	.445	0,1519	Valid
P50	.455	0,1519	Valid
P51	.385	0,1519	Valid
P52	.451	0,1519	Valid
P53	.392	0,1519	Valid
P54	.353	0,1519	Valid
P55	.498	0,1519	Valid
P56	.532	0,1519	Valid
P57	.328	0,1519	Valid
P58	.443	0,1519	Valid
P59	.431	0,1519	Valid
P60	.334	0,1519	Valid
P61	.333	0,1519	Valid
P62	.426	0,1519	Valid
P63	.497	0,1519	Valid
P64	.396	0,1519	Valid
P65	.504	0,1519	Valid
P66	.458	0.1519	Valid
P67	.488	0.1519	Valid
P68	.393	0.1519	Valid
P69	.423	0.1519	Valid

The results of the validity test of the long jump learning development variables consisting of 69 questions, all question items are said to be valid in the validity test because the rcount (Correlations) value > rtable of 0.1519.

### Reliability test

Reliability test is conducted using Cronbach Alpha Formula technique. The result of the test will be obtained by Cronbach Alpha price, to interpret the level of reliability of the instrument.

**Tabel 4.** Interpretation of r value:

<i>Interval</i>	<i>Interpretation</i>
<i>0.80 - 1.00</i>	<i>Very Strong</i>
<i>0.60 - 0.80</i>	<i>Strong</i>
<i>0.40 - 0.60</i>	<i>Enough strong</i>
<i>0.20 - 0.40</i>	<i>Low</i>
<i>0.00 - 0.20</i>	<i>Very low</i>

**Tabel 5.** Results of the reliability test of the long jump learning development variables  
Reliability Statistics

Cronbach's Alpha	N of Items
0.940	9

Reliability testing is carried out on question items that are declared valid. A variable is said to be reliable if the answers to the questions are always consistent. So the results of the instrument reliability coefficient carried out on the questionnaire and obtained a value of 0.940 for the long jump learning development variable so that it can be concluded that the long jump learning development variable has a "Cronbach's Alpha" value greater than 0.600, which means that the long jump learning development variable is declared reliable or meets the requirements with an interpretation at a very strong reliable level.

#### Descriptive analysis of research data

From the analyzed research subject data, a statistical description of the research data can be obtained on each scale. In this analysis, there are several stages of analysis carried out with the help of SPSS software version 23. Categories can be used to determine the subject's score is included in the high, medium, or low level. This study uses 3 categorizations. The data analysis process is carried out by doing the following:

#### Categorization

Effective :  $X \leq \mu + 1.0\sigma$

Quite Effective :  $\mu - 1.0\sigma \leq X < \mu + 1.0\sigma$

Less Effective :  $X < \mu - 1.0\sigma$

**Tabel 6.** Average results of media assessment scores

No. Media Average Score Assessment Result
1. Cardboard Media 77.1856
2. Bamboo Media 81.9281
3. Media Ban 79,1018

#### Cardboard media

Medical cardboard variables are divided into three categories as follows:

Quite Effective :  $\mu - 1.0\sigma \leq X < \mu + 1.0\sigma$

**Tabel 7.** Frequency of bamboo media categorization

Category	Frequency	%
Effective	27	16,2%
Moderately effective	123	73,7%
Less effective	17	10,2%
Total	167	100%



Based on the data obtained in the table above, it is known that the majority of samples in this case felt that learning was quite effective. jump Far using bamboo media as much as 73.7% or 123 people, then as many as 16.2% or 27 people felt effective using bamboo media, and the remaining 10.2% or 17 people felt less effective. This means that out of 167 respondents, most respondents felt that it was quite effective to carry out long jump learning using bamboo media as much as 73.7%.

In the study, the results for cardboard media reached 68.3% (Quite Effective), then for bamboo media the results were 73.3% (Quite Effective), and for tire media the results were 65.3% (Quite Effective). Of the three media, all three have a fairly effective level of effectiveness, but when viewed from the percentage value, bamboo media is superior. Thus, it can be concluded that of the three media, bamboo media is more effective for long jump learning for grade 7 students of secondary school compared to other media.

In the research, the results obtained for cardboard media reached 68.3% (quite effective), then for bamboo media the results obtained were 73.3% (quite effective), and for tire media the results obtained were result 65.3% (Enough Effective). From to the three media, all three have a fairly effective level of effectiveness, but when viewed from the percentage value, bamboo media is superior. Thus it can be concluded that from to three media In this regard, bamboo media is more effective for long jump learning for 7th grade students of secondary school compared to other media.

In the findings that occurred in the field based on the results of data processing and data analysis, it can be concluded that there is a fairly effective influence by using cardboard and tire media. However, in the development of long jump learning, it is more effective to use bar media. The results of this study indicate that there is a significant influence of learning media. For achievement learning long jump. So this researcher entitled "Study descriptive development of long jump learning in the educational process jasamani" showed significant results using cardboard, bamboo/slats and tires. Who stated that "media Cardboard, bamboo/bars and tires are effective learning media because they are easy to move and easy to get." Cardboard media, slats/bamboo And tires are Wrong One tool which is used for the process of learning the sport of long jump in the squat style which is made from used goods that are no longer used.

Long jump is defined as a form of jumping movement by lifting both legs up and forward in an effort to carry the center of gravity as long as possible in the air (floating in the air) which is done by bending the push on one of the strongest legs to reach the farthest distance. The long jump carried out in this study used modified cardboard media, bamboo/bar media and tires.

The results of this study state that the bamboo/bar media is more effective to use in developing long jump learning at secondary school because it is able to attract students' attention to want to follow the learning well. However, on the other hand, there are weaknesses and shortcomings during the study. that is limitations access Internet from students, or limited understanding of students to fill out the questionnaire because it is done online.

#### 4. DISCUSSION

The results of this study provide insightful conclusions regarding the effectiveness of different teaching media in the long jump learning process among 7th-grade students at secondary school. Specifically, the findings indicate that bamboo media is more effective compared to cardboard and tire media. The study shows that 73.7% of respondents found the bamboo media to be quite effective, which is higher than the effectiveness ratings for cardboard and tire media, which were 68.3% and 65.3%, respectively.

Assertion that cardboard, bamboo, and tires are effective learning media due to their ease of use and accessibility. However, bamboo media stood out as the most effective tool, suggesting that its physical properties or the way it engages students might be particularly beneficial in the context of long jump training. This could be due to its sturdiness, visibility, or the tactile experience it provides, which might help students better understand the mechanics of the long jump.

Moreover, the study highlights a significant influence of learning media on long jump achievement, underscoring the importance of selecting appropriate tools in physical education. Who emphasized that these media, especially when made from easily available materials like bamboo, can effectively facilitate the learning process.

However, the study also encountered some limitations, particularly concerning the online administration of questionnaires. Students' limited internet access and potential difficulties in comprehending the questions may have affected their responses. These challenges suggest the need for future research to consider alternative data collection methods, perhaps involving more direct, in-person assessments to ensure that students' understanding of the questions is clear and that their responses accurately reflect their experiences.

In conclusion, while the study confirms the effectiveness of using bamboo media in long jump training, it also calls for further investigation into how different teaching tools can be optimized in various learning environments. The findings contribute valuable insights to the field of physical education, particularly in terms of how simple, cost-effective materials can significantly enhance the learning experience and outcomes for students.

#### 5. CONCLUSION

The results of this study state that the bar media is more effective to use in developing long jump learning at secondary school because it is able to attract students' attention to want to follow the learning well. However, on the other hand, there are weaknesses and shortcomings during the study, namely limited internet access from students, or limited understanding from students to fill out the questionnaire because it is done online.

#### 6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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