

Development of Multifunctional Futsal Goal posts for Physical Education Learning in Elementary Schools, Selosari Village, Kediri Regency

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Abstract

The purpose of this study are: (1) developing multifunctional futsal goalposts for sports and health physical education learning materials, (2) providing learning tools to be more effective and efficient for physical education. The procedure of development research carried out includes several activities including: (1) initial analysis; (2) analysis of needs during sports and health physical education learning (3) analysis of manufacture counts; (4) planning the initial product; (5) expert validation; (6) revisions; (7) small scale trials; (8) revisions; (9) product testing; (10) revisions. The instruments used in this study include (1) assessment sheet/questionnaire; (2) interviews. The results of the validation of material experts I and II which covered all aspects obtained an average value of 88% and 83% with very good categories, while the validation of technical experts I and II obtained an average percentage value that included all aspects of 82% and 85% with very good categories. In small-scale trials, the percentage value obtained by respondents of students and sports and health physical education teachers was 92% and 90% with very good categories. The results of large-scale product testing obtained an average value of percentages with respondent respondents by 95% with a very good category and the respondents are physical education teachers obtained an average value of 94% with the category obtained very well. The conclusions and suggestions in this study resulted in a multifunctional futsal goalpost product for physical education for elementary school students. Suggestions for multifunctional goalpost products can be applied in elementary schools especially in physical education subjects.

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INTRODUCTION

Based on Government Regulation 19 of 2005, one of the subjects taught in schools is physical education (Sukendro, 2017). Learning that takes place certainly has a goal to improve the ability and skills of students. Physical education is an educational process with physical activities that are conceptualized to improve physical fitness, motor skills, knowledge, active behavior, healthy and sporty life, and emotional intelligence. (Sulaiman, 2016). Therefore it is essential to understand the concept of sports physical education and health, for the sake of implementing a quality teaching and learning process. Physical education in general also plays an essential role in all educational programs as integral growth of individuals, because other parts cannot choose their functions. (Patil, and Metri, 2016).

Physical education provide a vehicle for students to learn essential things and develop the interests and talents of students. (Kirkham-Kinga, Brusseau, Hannon, Castelle, Hiltond, and Burnsa, 2017). Also, learning in physical education, sports and health also teach students to become qualified and virtuous individuals. Physical education is education that has strategic potential to educate the individual development of students as a whole. (Winasis, and Rumini, 2016). Physical education are part of the overall process that has a goal in the formation of a person's cognitive, affective, psychomotor and physical. (Rohmawan, 2015)

Quality and good learning process for physical education, it requires smart infrastructure to support the success of learning in physical education teaching in particular. In providing learning facilities, of course, also must pay attention to the security factors of the facilities provided for the learning process (Spica, Giampaoli, Onofrio, and Liguori, 2015). The existence of adequate infrastructure, this will significantly optimize the ongoing learning process. And vice versa, if the condition of infrastructure is inadequate, then this will reduce the interest of students in carrying out physical activities. (Saryono, 2010).

Physical education carried out must be made in such a way that students in learning activities feel successful and experience pleasure and satisfaction (Harsoyo, and Purnama, 2014). Therefore, physical education teachers in implementing learning at schools need adequate learning facilities, and of course following the characteristics of the needs of students to support the success of the teaching done.

Learning facilities that are more complete and adequate can facilitate teachers in carrying out the learning process and help students in fulfilling learning needs especially in physical education subjects. This is in accordance with Suryobroto opinion (2004), that learning facilities become very important because in the absence of proper and appropriate means make learning not optimal.

Discussions related to infrastructure facilities for physical education subjects, in this case, the researchers conducted an initial survey of infrastructure facilities in three elementary schools in Selosari village, Kandat district, Kediri regency, East Java Province.

The focus of the survey on infrastructure and facilities carried out by the researchers was related to the material for big ball games, small balls, and high jump number athletics. Following the results of the survey, three schools did not have futsal goalposts as a means of supporting learning activities in large futsal ball game materials.

There is one school that has a volleyball net pole facility namely Public Elementary School Selosari II, but in the net installation it still uses nylon rope, while Public Elementary School Selosari I has a facility for a badminton net and Public Elementary School Selosari III does not have physical education learning facilities. For the equipment such as futsal goalposts, handball goalposts, sepak takraw poles, volleyball net poles, tennis/tonic, badminton and also high jump, the three schools do not have these facilities.

Following the background of the problems that exist and pay attention from several previous studies or findings related to research on the development of facilities, facilities, and

infrastructure, then further formulated research concepts related to multifunctional futsal goalposts that are following the conditions of the problems in the field. The idea of a multi-purpose futsal goalpost can be one solution to these problems.

The goalpost multifunctional futsal is portable, easy to install, has a container or pole equipment, economical price, and of course can be following the characteristics and learning needs of students. In its function, futsal goalposts multifunction can be used as a means of learning material such as handball, futsal, hoky, basketball and can also be used as a net buffer in volleyball, sepak takraw, badminton, tennis, tonic, or usable learning materials. in athletic equipment the high jump number is a crossbar buffer and can be used as a measure of low body height.

The purpose of this study was to develop a multifunctional futsal goalpost for learning material for physical education and to provide learning tools to be more effective and efficient for physical education.

With this research, it can also be useful for students to fulfil the learning activities and facilitating the teachers in carrying out the learning and alleviating schools in the provision of teaching facilities, especially in physical education.

METHODS

This research is a research on the development of a multifunctional futsal goal post for learning physical education. The procedure of development research carried out includes several activities including (1) initial analysis, (2) analysis of needs during physical education, sports, and health learning, (3) analysis of manufacture, (4) initial product planning, (5) validation experts, (6) revisions, (7) small scale trials, (8) revisions, (9) product trials, (10) revisions.

The trial subjects were selected using a purposive random sampling technique. The research subjects included: (1) four expert experts as validators, namely: two experts in physical education, sports, and health and two engineering people; (2) one physical, sports and

health education teacher and 22 students (small scale test); (3) two physical, sports, and health education teachers and 40 students (product trials/large scale).

The type of data used in this study is a quantitative and qualitative data. Quantitative data is obtained from the results of expert validation assessments, and the results of the questionnaire filling scores by respondents (users).

The assessment category consists of 5 assessment criteria, namely: very poor/very less precise/very less clear (value 1); not good/less right/less clear (value 2); quite good/quite right/quite clear (value 3); good/right/clear (value 4); and very good/right/clear (value 5). While qualitative data is obtained from the results of interviews, as well as some input, and criticism given by expert speakers or other research subjects. The data analysis technique used is percentage by dividing the acquisition score divided by the total score at times 100%.

RESULTS AND DISCUSSION

Following the results of existing research, data obtained from the steps of the research development procedures used by researchers. This research is only related to physical education, sports, and sports subjects. The purpose of this study was to develop a multifunctional futsal goalpost for physical education learning materials and to provide learning tools to be more effective and efficient for physical education.

The results of the validation of the material I and material II experts obtained a percentage value the percentage of material experts obtained I which included material quality aspects of 89% and 82% and those that contained the content aspect I 88% and material experts II 85%. While for all aspects obtained the value of the percentage of material experts I 88% and material experts II 83%. In the category results from the assessment of material experts who cover aspects of material quality, and content and the overall aspects get a very good category.

The technical validation of the multifunctional futsal goalpost product obtained the percentage value for the content aspect of 81% of technical experts I and 83% of engineers II. In the usability aspect, the percentage of 84% of engineering experts and 88% of engineers II was obtained. The results of the overall aspects of the percentage value obtained were 82% of engineering experts and 85% of engineers II. In the category results from the assessment of technicians who cover aspects of content and usability, and the overall aspects get very good categories.

In a small scale test conducted at Public Elementary School Selosari II with 23 respondents consisting of 22 students and 1 physical education teacher, the results of the assessment of effectiveness aspect and function were obtained and the overall aspects of getting a very good category. The following table 1 describes the results obtained from a small scale test.

Table 1. Small Scalability Test Results in Public Elementary School Selosari II

No	Information	%	Category
Students			
1	Effectiveness aspects	92	Very good
2	Function aspects	91	Very good
3	All aspects	92	Very good
Total		22	
Teacher of physical, sports and health education			
4	Effectiveness aspects	86	Very good
5	Function aspects	96	Very good
6	All aspects	90	Very good
Total		1	

Source: Research results, 2019

While the large-scale product trials conducted at Public Elementary School Selosari I was combined with respondents Public Elementary School Selosari III with a total of 42 respondents in total consisting of 2 physical education teachers and 40 respondents. The results of the assessment on effectiveness aspect, and the functions and overall aspects of large-scale testing products get a very good category. For more details, the following table 2 describes the results obtained from large-scale product trials.

Table 2. Large Scale Test Results in Public Elementary School Selosari I and III

No	Information	%	Category
Students			
1	Effectiveness aspects	96	Very good
2	Function aspects	95	Very good
3	All aspects	95	Very good
Total		40	
Teacher of physical, sports and health education			
4	Effectiveness aspects	95	Very good
5	Function aspects	96	Very good
6	All aspects	94	Very good
Total		2	

Source: Research results, 2019

The development of a multifunctional futsal goalpost product for learning physical sports education and health in Elementary School, Selosari village, Kediri regency indeed starts with examining existing problems related to the implementation of physical education learning. In the initial analysis activities in the research procedure stage, one of the fundamental problems that occur during the learning process of physical education at Public Elementary School in Selosari village, Kediri regency is related to learning facilities that are not yet adequate.

Search for better problem-solving alternatives that are needed for modification or development of learning facilities. Change of the learning facilities developed must undoubtedly pay attention to or adapt to the characteristics of the students, so that the modifications made can help students in the learning process, especially in physical education subjects. (Susana, 2014). In physical education subject, facilities infrastructure is one of the main factors that supporting the implementation of teaching and learning activities. (Pratama, and Kuntjoro, 2018).

In the initial planning, the cost of making multifunctional goalpost products was one million five hundred thousand rupiahs. After the stages of research, and revision of the product through relevant experts and through small-scale tests and large-scale product trials, the calculation of the cost of making a product of one million seven hundred fifty thousand rupiahs was obtained. Changes in the estimate of the cost of making multifunctional goalposts for physical education, sports, and health learning due to

some input, and improvement to produce an ideal, effective and efficient product.

Physical education as part of the education that is held has a massive contribution to the development of individuals through physical activity. (Kurniawan, Pramono, and Fakhruddin, 2016). In this case the relevant research is among others (1) Principles and applications in the modification of infrastructure facilities for physical education, sports, and health (Saryono, 2010); (2) Development of a multipurpose basketball hoop for physical, sports and health education at the level of V-grade elementary school in the city of Semarang (Albab, Rahayu, and Sugiharto, 2016); (3) Modification of multifunctional sport court facilities in physical education learning for Elementary Schools in Surakarta City (Indarto, 2014). The purpose of the researchers pay attention from several previous studies or findings related to research on the development of facilities, facilities, and infrastructure is to gather information from earlier researchers as a comparison of both the short comings or advantages that already exist.

In this study, this learning uses multifunctional goalposts portable, which easy to dismantle pairs, economical prices, and of course can be following the characteristics and learning needs of students. In the multifunctional futsal goalpost, it has function as a means of learning material such as handball, futsal, hoky, basketball and can also be used as a net buffer in volleyball, sepak takraw, badminton, tennis, tonic, or can be used in high jump number athletic material as a crossbar buffer, and can be used as a measure of low body height

CONCLUSION

Based on the results of the research the development of a multifunctional futsal goal post for physical education learning in Elementary School Selosari village, Kediri regency, it can be concluded: (1) produce multifunctional futsal goalpost products for learning physical education; (2) The results of the development of multifunctional futsal goalpost products, in the assessment of material experts, and techniques

that cover content, usability and overall aspects of getting a very good category. In small-scale trials and large-scale product tests, an assessment was obtained from respondents consisting of students and physical education teachers who covered aspects of effectiveness, and functions and overall aspects of getting a very good category

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