

## Modifications Futsal Game Development to Learning Sport and Health Physical Education High School Students

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### Abstract

The purpose of this research was to produce a product in the form of a modified futsal game model to learning material for futsal games in physical education subjects and the health at senior high school students (SMA). This research categorized development research (Research and Development) to produce futsal game model products that are in accordance with the characteristics at senior high school students. This research was conducted at Public Senior High School Kebumen 2 on April 4 to May 4, 2014 with a samples of 56 students from grade XI natural science 1 and grade XI sosial science 1. The method used in this research is the Borg and Gall model research with the stages: product analysis to be developed, product development, expert validation, product testing, and product revision. The results of the research based on data analysis note that the average percentage of data analysis from two squares is 90.5% with very good categorization, the average percentage of data analysis from Futsal experts is 88% with very good categories, the average percentage obtained from the small trial data is 90.16% with very good categories, the average percentage obtained from the analysis the data of the big test is 90.46% with very good categories. The conclusions of the results of the research that the game of modified futsal can be developed as a futsal game model that is in accordance with the characteristics at senior high school students and effective to be applied in learning futsal games.

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## INTRODUCTION

Sports physical education and health (Penjasorkes) is one element of subjects that can not be separated in the educational process as a whole is an effort to develop the ability of students through the provision of learning movement skills to achieve improved quality of knowledge, attitudes, and skills. The third element is the potential of the students should be developed systematically, continuously, in a process that has been planned. In essence, the core of physical education is motion (Ratrinigrum, Hartono, & Wahyudi, 2012).

Penjasorkes taught in the school consists of some sort of activity to maximize the involvement of physical components such as endurance, strength, speed and other physical components are well conceived to provide a huge benefit. According to penjasorkes scope of subjects contained in the content standards, there are several activities, including; games and sports, development activities, activities of gymnastics, rhythmic activity, water and education activities outside of school.

In penjasorkes learning competency standards, futsal is one of the ingredients subject matter that falls within the scope of games and sports. Futsal into one big ball game now growing quite rapidly both within the school and the society at large. This game is a mix between football games to basketball, where regulations permananya adopt many of the two branches of the sport. The number of both general and futsal tournament among students, is one proof that this sport can be accepted by all people.

School secondary above in Kebumen, through Deliberation Subject Teacher (MGMPs) penjasorkes incorporate futsal as one big ball games the material taught in the teaching and learning activities. This is because in addition to this sport attractive also because almost all high schools in Kebumen have land or facilities that can be used to play futsal.

Futsal character dynamic, exciting and full of challenges should make students enthusiastic in participating in learning so that students can achieve maximum participation and

one of the goals penjasorkes that physical fitness is also realized.

The basis of the activities carried out every day is moving, which in the context of physical education move to do is move the regularity and purposeful. Games, recreation, agility, sports, competitions, and other physical activities, the material contained in physical education, because it contains the values recognized educational essentials (MONE, 2004)

In the process of teaching and learning activities with materials penjasorkes futsal games can not run as expected. It can be seen from one of the indicators used to assess the participation of students in participating in futsal learning material that is by counting the pulse of students before and after the learning. Based on initial surveys of students when calculating pulse futsal following research found an average increase in pulse rate of students is not significantly increased. Conditioning class is a crucial factor in the achievement of learning goals (Sadimin, Hardyanto, & Slamet, 2017).

Based on the above, it is necessary a real effort to make students enthusiastic, happy, do not get bored for active so that they can support the upgrading of skills and physical fitness of students. Given the teaching of physical education in high school is necessary to teach the sport that is a team or group to mengembangkan psychomotor, cognitive and effective (Putri, Hanani, & Annas. 2012). Therefore, it required the development of a model modification and learning materials futsal game suitable for high school students (ages 16-18 years).

## METHODS

This development research using procedural development model, because this model is descriptive, which is a procedure that describes the steps that must be followed in producing the product. Methods of research and development can also be used in the field of social sciences such as sociology, education including physical education and health (Sugiyono, 2011).

In the field of education, research and development can be used to develop learning models, materials and learning materials, media, models of curriculum, educational and other management (Samsudin, 2005)

Research and development undertaken to produce a component in the education system through the steps of development and validation. Early product development models futsal game as a learning medium Penjasorkes high school students of class XI, before in a small-scale test needs to be validated by experts in accordance with this research field. To validate the product to be produced, researchers recruited 1 (one) person futsal game expert and two (2) people Penjasorkes high school teacher. Model development product validation sheet futsal game modification is a tool used to provide an assessment by experts of the developed learning tools. Validator experts choose one of the available quantitative answer. Assessment of each indicator of the assessment sheet pengembangan modifikasi futsal game models are categorized in category (4) is excellent; (3) good; (2) poor; and very poorly. This validation sheet consist of: (1) The syllabus validation sheet, (2) copies of the validation of RPP, (3) sheet product validation futsal game modifications.

The data used in this research is qualitative and quantitative data. The qualitative data obtained from the wawanca, observations, advice from experts, gym teacher and speaker both orally and in writing. While quantitative data obtained from taking the pulse, the effect of using the product. The research population is students of SMA Negeri 2 Kebumen, while samples were students of class XI SMA Negeri 2 Kebumen totaled 288 students.

Instruments used in product development in the form of interviews, observations, questionnaires, documentation, pulse, and the student's skills in playing futsal. Interviews are used to search for and collect information in a systematic and purposeful from experts and resource persons. Observation is used to determine the state of the infrastructure and the implementation process futsal learning at the

school. A questionnaire was used to obtain indormasi of experts, professors, teachers Penjasorkes to provide input and advice on the products produced and the students as users of the product. The questionnaire used by students in the form of a number of questions to be answered by the student with an alternative answer. Factors used in the questionnaire include psychomotor domain, cognitive and affective.

## RESULTS AND DISCUSSION

Based on data obtained attachment average percentage corresponding answer options 90.06%. Based on predetermined criteria then modifications to the passing game this futsal has met the criteria very well so it can be used by high school students. Aspects of quality modification is a modification passing futsal game that is easy to put into practice, obtained a percentage of 94.11%. Based on the criteria established futsal game modification aspect has met both criteria so that this aspect can be used. Aspects of engineering practice existing games on futsal game modification obtained a percentage of 100%. Based on pre-defined criteria then modifications aspect futsal game very well have met the criteria so that this aspect can be used. Aspects difficulties when practicing the techniques of games available on the futsal game modification obtained a percentage of 61.20%. Based on the criteria established quality aspects of futsal game modification meets the criteria well enough that this aspect can be used (conditional).

Aspect coaches often practice futsal game techniques, obtained a percentage of 85.29%. Based on the criteria established quality aspects of futsal game modification has met both criteria so that this aspect can be used. Aspects of coach you ever practiced technique of playing futsal as on the modification of futsal game well and properly obtained a percentage of 58.82%. Based on the criteria established quality aspects of futsal game modification has fulfilled well enough that this aspect can be used (conditional). Aspects you think futsal game modification in accordance with the training programs obtained a percentage of 58.82%. Based on pre-defined criteria then

modifications aspect futsal game meets the criteria well enough that this aspect can be used (conditional). Aspects of his own practice techniques that have diajarkan obtained a percentage of 91.17%. Based on the criteria established quality aspects of futsal game modification has met the criteria very well that this aspect can be used.

Aspectmodification futsal game more easily practiced obtained a percentage of 94.11%. Based on the criteria established quality aspects of futsal game modification has met the criteria very well that this aspect can be used. Aspects of your motivation to practice futsal gained increasing percentage of 94.11%. Based on pre-defined criteria then passing the modified model quality aspects of the game of futsal has met the criteria very well that this aspect can be used. Aspects easy to practice passing technique properly obtained a percentage of 79.41%. Based on the criteria established quality aspects of futsal game modification passing meets the criteria well enough that this aspect can be used (conditional). Aspects studied futsal game passing modification obtained a percentage of 100%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used. Aspects of the same material taught by physical education teachers and coaches futsal obtained a percentage of 88.23%. Based on the criteria established quality aspects of futsal game modification passing either fulfill criteria so that this aspect can be used.

Aspects encourage more active high school student obtained a percentage of 94.11%. Based on predetermined criteria then the aspectmodification passing game futsal has met the criteria very well that this aspect can be used. Aspects seeks to add horizons obtained a percentage of 82.35%. Based on the criteria established quality aspects of futsal game modification passing either fulfill criteria so that this aspect can be used. Aspects of necessity need futsal game techniques obtained a percentage of 97.05%. Based on the criteria established quality aspects of modification passing game futsal has met the criteria very well that this aspect can be

used. Aspects comply obtained a percentage of 94.11% game. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used. Aspects of playing ability obtained a percentage of 91.17%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used. For Master aspects of physical education and coaches ever show you modifications passing game futsal obtained a percentage of 100%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used.

Aspects giving a warning to the player who commits an offense obtained a percentage of 100%. Based on predetermined criteria then the aspectmodification passing futsal game very well have met the criteria so that this aspect can be used. Technical aspects of the game become better obtained a percentage of 88.23%. Based on the criteria established quality aspects of futsal game modification passing either fulfill criteria so that this aspect can be used. Aspects like whether or not to modify the passing game futsal obtained a percentage of 97.05%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used. Aspects of interest in the game obtained a percentage of 100%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used. Aspects of seriousness in the play obtained a percentage of 94.11%. Based on pre-defined criteria then modify aspects of the passing game futsal has met the criteria very well that this aspect can be used. Aspects of the need to obey the rules when playing the player obtained a percentage of 79.41%. Based on the criteria established quality aspects of futsal game modification passing meets the criteria well enough that this aspect can be used (conditional). Aspects of whether or not to cooperate with a team of friends obtained a percentage of 97.05%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that

this aspect can be used. Based on pre-defined criteria then modify aspects of the passing game futsal has met the criteria very well that this aspect can be used. Aspects of the need to obey the rules when playing the player obtained a percentage of 79.41%. Based on the criteria established quality aspects of futsal game modification passing meets the criteria well enough that this aspect can be used (conditional). Aspects of whether or not to cooperate with a team of friends obtained a percentage of 97.05%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used. Based on pre-defined criteria then modify aspects of the passing game futsal has met the criteria very well that this aspect can be used. Aspects of the need to obey the rules when playing the player obtained a percentage of 79.41%. Based on the criteria established quality aspects of futsal game modification passing meets the criteria well enough that this aspect can be used (conditional). Aspects of whether or not to cooperate with a team of friends obtained a percentage of 97.05%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used. Based on the criteria established quality aspects of futsal game modification passing meets the criteria well enough that this aspect can be used (conditional). Aspects of whether or not to cooperate with a team of friends obtained a percentage of 97.05%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used. Based on the criteria established quality aspects of futsal game modification passing meets the criteria well enough that this aspect can be used (conditional). Aspects of whether or not to cooperate with a team of friends obtained a percentage of 97.05%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used.

Aspects of cooperation necessary to win the game or not obtained a percentage of 94.11%. Based on pre-defined criteria then passing

modification quality aspects futsal game very well have met the criteria so that this aspect can be used. Aspects of the referee's decisions may oppose least obtained a percentage of 97.05%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used. Aspects players must abide by the regulations obtained a percentage of 100%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used. Aspects recognize the benefits of the opposing team obtained a percentage of 91.17%. Based on pre-defined criteria then passing modification quality aspects futsal game very well have met the criteria so that this aspect can be used. Studying modifications sustainably passing futsal game again obtained a percentage of 100%. Based on the criteria established quality aspects of modification passing game futsal has met the criteria very well that this aspect can be used,

The results of the data analysis expert evaluation of physical education, obtained an average percentage of 88%. Based on the criteria that have been applied then Learning modification passing futsal This has met both criteria so that it can be used for high school students. The factor that makes this acceptable learning high school students is on learning assessment conducted by experts on aspects of physical education 2, 6, 11, 12, 14 and 15. The sixth aspect of the assessment meets the criteria very well is getting points 5. In addition to the sixth aspect, 7 aspects of quality assessment of learning that aspect 1, 4, 5, 7, 8, 10, and 13 that have met both criteria for each aspect gets 4 points. While the 3.9 aspect gets 3 points, which means meeting the criteria quite well.

The results of the data analysis of the expert evaluation of futsal 1, obtained an average percentage of 89.33%. Based on predetermined criteria then Learning modification passing futsal This has met both criteria so that it can be used by students. The factor that makes this acceptable learning high school students is on the assessment of the quality of Learning modification passing futsal conducted by experts on aspects of futsal 2,

4, 6, 10, 13, and 14. The sixth aspect of the assessment meets the criteria very well is getting points 5. In addition to the eighth aspect, there are nine aspects of quality assessment Learning modification passing futsal namely the aspect 1, 3, 5, 7, 8, 9, 11, 12 and 15 who have met both criteria for each aspect gets 4 points.

The results of the data analysis of the expert evaluation of futsal II, obtained an average percentage of 93.33%. Based on predetermined criteria then Learning modification futsal. This has met both criteria so that it can be used for high school students. Factors that made learning modification futsal, this unacceptable high school students is on the quality assessment learning modification passing futsal conducted by experts on aspects of futsal II 1, 2, 4, 7, 9, 12 and 13. The seventh aspect of the assessment meets the criteria very well is getting points 5. In addition to the five aspects, there is a quality assessment Learning modification futsal namely the aspect 3, 5, 6, 7, 8, 10, 11, 14 and 15 who have met both criteria for each got 4 points.

The results of data analysis the small group trial gained an average percentage of choice answers 91.42% appropriate. Based on predetermined criteria then learning modification passing futsal, this has met the criteria very well. Factors that made learning modification futsal, this unacceptable high school students can practice well. Neither of understanding of the rules of the game, the application of attitude in the game and basic engineering applications futsal game in accordance with the rate of growth and development. Overall learning modification futsal can be used for high school students. The results of field trial data analysis obtained on average percentage corresponding answer options 90.06%. Overall learning modification futsal high school students can be received well, so from field trials learning modification futsal this can be used for high school students.

## CONCLUSION

In development research modifications futsal game in penjasorkes learning at high school students packed in a guide book learning. Based

on the data collected from the research that consists of expert validation, testing and piloting a small group of large groups as well as the discussion of the results of the research, the researchers can draw the conclusion that:

1. Development of a model obtained on the whole of the physical education learning experts stating that the developed model included in both categories and fit for use,
2. Development of a model obtained overall from futsal game expert stated that the model developed included in the excellent category and fit for use,
3. Development of a model obtained on the whole of instructional media experts state that guide books modifications learning model developed futsal game included in the excellent category and fit for use,
4. Trials small group and large group trial was declared effective for use,
5. Through the development of the learning model modification futsal game in penjasorkes learning at high school students who have researchers developed, Making students more active and enthusiastic in following study material penjasorkes especially in futsal game,
6. Development of a model obtained can improve the quality of teaching futsal game that can make the learning of students actively participating in futsal, which is expected to improve the physical fitness of students,
7. From the results of the research, the development of futsal game modification in penjasorkes learning for high school students can help teachers of physical education, sports and health to provide learning materials futsal game.

Application of learning models that have been developed by researchers considered suitable for use in the learning process, especially in the matter of learning the game of futsal. Based on the research results, findings and analysis were conducted in the development of modifications to futsal at high school students, it can be concluded that by using instructional modified and developed, to increase knowledge about futsal and can physical fitness of high school students as

well as to foster the spirit of active students in conducting learning activities physical education. This study through the stages of development of futsal modification of high school students are at the initial stage is to define the needs of high school students learning futsal gamemakes an interesting learning effectively, and efficiently, so as to give a good contribution in the learning process of physical education, sports and health without a student loses his playing world. In connection with the products developed the model of learning volleyball passing researchers will provide suggestions include advice utilization, dissemination advice and suggestions advanced development.

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