The Develompment of Media Based on Adobe Flash Player in Training Basic Technique of Futsal

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Abstract

This research focused on the development of media in learning by using adobe flash player. This study was research and development form. This product contains material on futsal basic technique practice. Media development was using Adobe Flash CS6 Professional software. The materials presented were (1) Basic futsal technique (2) brief futsal (3) futsal rules (4) field size, line, goal and futsal ball. Based on the stages adapted from the development model of Borg and Gall then obtained the following results: Assessment and validation of the material experts showed that the medium of learning both with a mean value of 3.87. Assessment and validation of media experts showed that the medium of learning both with the average value 4. The results of small group trials showed very good result that is average 4.42. The results of large group trials showed excellent results with a mean of 4.55. In operational test and product effectiveness, pre test and post test of 2 groups were applied. The first group was given media influence, and the second group was control group. Operational test results pretest value was 73.92, so it was included in "enough" category, and the average posttest value was 58.25 that included in "enough" category. The effectiveness test showed that the interactive learning media had significant effectiveness with t-count value> t-table that was 123,922> 1,70329 and p-value (significance) 0.000 <0,05 meaning that the media was effective. As the final conclusion stated that the product proved effective. For the posttest average value of 58.25 seconds was included in "enough" category. As the final conclusion, this product was proven effective.

How to Cite

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INTRODUCTION

Futsal is a new sport in Indonesia and its existence is growing rapidly in big cities and regions throughout Indonesia. This is evidenced by the many competitions between society in many age groups and professions. This growing number of schools that began to hold extracurricular futsal as one of the preferred sports and there are also various futsal academies in many areas in Indonesia. Efforts to increase achievements in futsal are implemented continuously. It should be noted that there are three basic elements that must be controlled by futsal players, these are basic techniques, skills, and individual tactics because whatever pattern/ strategy the trainer gives, the good futsal system will not run well if those components above are not controlled by the player.

The lack of exercise model makes the players tend to be bored with basic training materials provided by the trainer. So that appropriate learning media and help in the learning process are needed. As Sujana (2002: 99) argued that media in teaching is the most important role as a tool for creating good teaching and learning process. Therefore, it is necessary to develop the basic futsal technique that was only conventional in the field before, become an adobe flash player media based so that can ease the trainer in coaching the futsal basic technique materials and attract the interest of the players in practicing the futsal basic technique which was bored before.

Training media based on Adobe Flash Player will provide a different atmosphere that can change the perception of players about the futsal basic technique materials. Adobe Flash Player-based media can also help ease the burden of trainers in providing training materials and it is expected to facilitate the players absorb the material quickly and efficiently and self-training can be applied. Utilizing Adobe Flash Player media in the training process makes the coach is not the only source of training resource and this media is expected to make the futsal player practicing actively.

According to the National Association (NEA) in Agus S. Suryobroto (2001: 15) the media are both printed and audiovisual communication and equipment forms. Media should be able to be manipulated, viewed, heard, and read. The use of media has a variety of cognitive, affective, and psychomotor purposes. According to Criticos (Daryanto, 2010: 5), media is one component of communication that is a messengers from communicators to communicant. Media is a tool and material used in teaching and learning process tends to be interpreted as graphic, photographic, or electronic tools to capture, process and rearrange visual or verbal information (Azhar Arsyad, 1997: 3).

The software selected by researchers to develop the basic futsal technique was adobe flash CS 6 Professional. The adobe flash cs 6 Pro was selected because it was considered lighter run on the computer. Adobe flash is one of the computer software that is the flagship product of Adobe System. Adobe flash is used to create vector and animated images. Files generated from this software have a .swf file extension and can be played on a web browser that has installed of Adobe Flash Player. Flash uses a programming language called Actionscript that appears for the first time in Flash 5. Flash is designed with the ability to create 2-dimensional animation that is reliable and lightweight so that flash is widely used to build and provide animated effects on websites, interactive CDs and more (id.m.wikipedia.org/wiki/adobe_Flash).

Harsono (1988: 32) stated that exercise is a systematic process of rehearsing, increasing the number of training loads and intensity of training. Pate, et al (1993: 317) stated that exercises can be defined as systematic aims to improve the physical functional capacity and endurance of exercise. Exercise determines the incidence of changes in tissues and systems, changes related to the development of the ability to exercise. After those opinions expressed, it was drawn a conclusion about the meaning and understanding of the exercise that is a process of work done continuously, correctly and repeatedly in long time with the aim of improving freshness and physical fitness. Therefore, training is not an attempt to make perfect but training is an attempt to make it permanent.

Futsal is a ball game played by two teams, each consisting of five people. The goal is to enter the ball in the net of the opponent, by manipulating the ball using the foot. In addition to the five main players, each team is also allowed to have a backup player. Futsal field is bounded by lines, not net or board. According to Justinus Lhaksana (2011: 13), futsal game can be said almost similar to the game of football, which distinguishes by the size of the field, the number of players, the rules in the game, and the weight of the ball in futsal. According to Justinus Lhaksana (2011: 5) futsal (futbol sala) in Spanish means indoor football that is a football game that is done indoors. Field and ball size are smaller than in football. The team which put ball more into the opposing goal net is the winner.

According to Justinus Laksana (2011: 29), the basic techniques in futsal are passing, controlling, dribbling, blow baiting (chiping), and kicking the ball (shooting). The smaller size of the futsal field, the fewer number of players, and the faster movement makes the more number of goals. Futsal game is more emphasis on the ability (skills), so the tactics and strategies are easy to apply in this game. Compared with football games, futsal players must master the skills of the game better. The mastery of playing skills requires regular coaching and directional, so that futsal players can play well. This sport forms a player to always be ready to receive and feed the ball quickly in the opponent team pressure. With a narrow field, futsal demands high ball possession techniques, cooperation between players, and team cohesiveness (Tenang, J. D, 2008: 15).

According Poerwadarminta (2002: 322), extracurricular activities are defined as activity, liveliness, and very tough effort. Extracurricular in the Indonesian Dictionary means the activities concerned outside the curriculum or outside the composition of lesson plans (The Center of Dictionary and Language Development Author Team, 2002: 479). Extracurricular activities are activities conducted outside the lesson or done during school holidays developed in the school or outside the school. The purpose of outside school hours is activities that are conducted outside the compulsory school hours and have been prepared and planned in the education syllabus and part of the curriculum.

To develop effective and efficient learning, the physical education teacher must know, understand, and pay attention to the student's developmental stage and curiosity. In high school level between in the ages of 16-18 years is a period of adolescence. According to Sri Rumini and Siti Sundari (2004: 53-54), Adolescence is a period of transition from childhood to adulthood that develops all aspects/ functions to enter adulthood. The transition period to maturity in looking for the individual's own identity. In this period there will be an unstable upheaval in adolescence, a sense of intense curiosity and not infrequently to try new things, and that happens sometimes fall into a social mistake leading to actions that violate norms or criminal acts. Characteristics of students aged 16-18 years or teenager according to Education and Culture Department (1997: 66) is covering age, gender, pre-school experience, socio-economic ability, intelligence level, creativity, talents and interests, basic knowledge, learning motivation, and student attitudes.

Given the activity described above will sti-mulate the growth that all members of the body participate actively move. Changes in the increase in the formation of characteristics will occur in adolescence, both from birth, childhood, to adolescence. Futsal sport is very suitable when taught in high school because the whole body parts contribute to move (Machfud Irsyada, 2000: 11). From the fact above, the move will stimulate the good growth for the student.

METHOD

The development model in this study was adapted from Borg & Gall (1983: 775-776). The research development steps undertaken by Borg & Gall were: (1) research and information collection, (2) planning, (3) development of product draft, (4) initial field trials, (5) trial result revision, (6) field test, (9) final product refinement, (10) decimation and implementation. This development research procedurally went through several stages, as had been explained by Borg & Gall.

The test of questionnaire and instrument was conducted on four coaches from two schools, SMA N 1 Bawang and SMA N 1 Banjarnegara. Small group trial involved four coaches from two schools: SMK HKTI 2 Kelampok and SMA N 1 Kelampok. The big group test involved 8 coaches from 4 schools: MAN 2 Banjarnegara, SMK N 1 Bawang Banjarnegara, SMK N 2 Bawang, and SMA N 1 Purwanegara.

The data obtained in this study were qualitative and quantitative data. Qualitative data was data obtained based on the validation results of media experts and material experts, coaches, players, and peers in the form of comments, input or suggestions to determine the feasibility level of adobe flash media products engineering futsal basic techniques. Quantitative data were data obtained from the score of responses of experts and students to measure the feasibility of media, as well as the pretest and posttest score to determine the effectiveness of the developed learning guide book. The research instruments used in this research were: (1) Observation, (2) Interview, (3) Questionnaire, and (4) Test.

RESULT AND DISCUSSION

Needs analysis was including of observation, interview, and questionnaire filling. Observations were made during extracurricular activities Futsal SMA N 1 Banjarnegara to observe the training process, what were the difficulties experienced by futsal players. The interview was conducted on futsal coach, Mr. Rully, to determi-

ne the most essential material to be developed. Beside observation and interviews, needs analysis was done by spreading a questionnaire containing difficulties in basic futsal technique exercises, the need for media use to help the basic futsal technique exercise.

This test was the step that must be passed to get the coach/ trainer data assessment to the media developed by using the questionnaire instrument, while for the effectiveness of the developed media measurement was done by using the test instrument. The test phase was divided into 3 stages: small group trial, large group trial, and operational test.

Data was taken from the coach extracurricular futsal of SMK HKTI 2 Purwareja Kelampok and SMA N 1 Purwareja Kelampok, with the number subject of 4 people. Data obtained from the questionnaire, then analyzed to serve as the basis of revision. The data obtained from small group trials consists of three aspects of the assessment of content or content aspect, and learning.

Data from small group trial results were then analyzed. The data obtained using questionnaire instrument consists of three aspects of the assessment of aspects of the display, content or material aspects, and aspects of learning. Assessment of coach can be seen in the following frequency census Table 2.

Based on the frequency distribution data, the display aspect, the content aspect, and the training aspect by the trainer above, for the display aspect there was 25% assessment that included in "Very Good" criteria, there are 75% assessment that included in "Good" criteria. For the content or material aspect assessment, it indicated that there was 100% assessment of the trainer that included in "Very good" criteria. While the aspect

of the exercise there was 100% assessment that incuded in the criteria of "Very Good".

Table 1. Small Group Trial Data Results

Re-spon-dent	Mean Score			Mean	Cri-te-ria
	Dis-play Aspect	Con-tent As-pect	Train-ing Aspect		
1	4,00	4,40	4,40	4,26	SB
2	4,00	4,40	4,54	4,31	SB
3	4,80	5,00	4,90	4,90	SB
4	4,10	4,00	4,60	4,23	SB
Mean Score	4,22	4,45	4,61	4,42	SB
Criteria	SB	SB	SB		

Table 2. Small Group Trial Frequency Distribution

Criteria	Display Aspect		Content Aspect		Training Aspect	
	F	P	F	P	F	P
Very good	1	25 %	4	100 %	4	100 %
Good	3	75 %	0	0 %	0	0 %
Enough	0	0 %	0	0 %	0	0 %
Bad	0	0 %	0	0 %	0	0 %
Very bad	0	0 %	0	0 %	0	0 %
Total	4	100 %	4	100 %	4	100 %

Large group trials involved futsal extracurricular trainers of 4 schools with 8 subjects. In this trial, the coach facilitated the Android phone

Table 3. Large Group Trial Results Data

Respondent	Mean Score			Mean	Criteria
	Display Aspect	Content Aspect	Training Aspect		
1	5,00	4,60	4,90	4,83	SB
2	4,80	5,00	4,80	4,86	SB
3	4,20	4,80	5,00	4,70	SB
4	4,70	4,80	4,70	4,73	SB
5	4,10	4,60	4,80	4,50	SB
6	3,30	4,00	4,10	3.80	B
7	4,70	4,80	4,80	4,76	SB
8	3,50	4,40	4,70	4,20	B
Mean score	4,29	4,62	4,72	4,55	SB
Criteria	SB	SB	SB		

personally as the media. The coach was asked to respond to the media being used. Then the feedback and information on comments and suggestions from the coach on the media were observed and documented by the researcher.

Data from large group trials were then analyzed. The data obtained using questionnaire instrument consists of three aspects of the assessment of display aspects, content or material aspects, and training aspects. Assessment of coach can be seen in the following frequency distribution table.

Table 4. Large Group Trial Frequency Distribution

Criteria	Display Aspect		Content Aspect		Learning Aspect	
	F	P	F	P	F	P
Very good	4	50 %	7	87,5 %	7	87,5 %
Good	4	50 %	1	12,5 %	1	12,5 %
Enough	0	0 %	0	0 %	0	0 %
Bad	0	0 %	0	0 %	0	0 %
Very bad	0	0 %	0	0 %	0	0 %
Total	8	100 %	8	100 %	8	100 %

Based on the frequency distribution of the three aspects by the coach above, there was 50% assessment that included in "Very good" criteria in display aspect, and there was 50% assessment that included in "Good" criteria. For the assessment of the content aspects, there was 87.5% assessment that included in the criteria "Very Good", and there was 12.5% assessment including the "Good" criteria. While the training aspect was 87.5% that included in "Very Good" criteria, and there was 12.5% assessment that included in "Good" criteria.

Operational tests were carried out to assess the product readability by the trainers and the effectiveness by the students. The operational test involved 4 trainers to assess the legibility of the guidebook, and 51 students of Futsal extracurricular in 4 schools. There was also data presentation as Table 5.

Based on pretest data Table 5, there was 35.29% assessment that included in "Good" criteria, 33.29% assessment that included in "Enough" criteria, 17.65% that included in "Bad" criteria, and 13.73% assessment that included in "Very Bad".

Based on the posttest data Table 6, there was 1.96% assesement of the "Very Good" category, 41.18% assesement that included in "Good" criteria assesement, 19.61% assesement that included in "Enough" criteria, 31.37% assesement that included in "Bad" criteria, and 5.88% assesement that included in" Very bad" criteria.

Based on the implementation of pretest and regarding to student's ability about futsal basic technique, score was obtained from each student which then searched the difference from result of pretest and posttest. Then, after the calculation, the authors looked for the mean value of pretest and posttest students with the following

Table 5. Pretest data of futsal basic techniques

SCORE	CATEGORY	FREQUENCY	PERCENTAGE
X≤70,13	VERY GOOD	0	0,00 %
70,13≤X<72,65	GOOD	18	35,29 %
72,65≤X<75,17	ENOUGH	17	33,33 %
75,17≤X<77,69	BAD	9	17,65 %
X≥77,69	VERY BAD	7	13,73 %
	TOTAL	51	100

Tabel 6. Posttest data basic futsal technique Posttest data of futsal basic techniques

SCORE	CATEGORY	FREQUENCY	PERCENTAGE
X≤50,04	VERY GOOD	1	1,96 %
50,04≤X<55,51	GOOD	21	41,18 %
55,51≤X<60,99	ENOUGH	10	19,61 %
60,99≤X<66,46	BAD	16	31,37 %
X≥66,46	VERY BAD	3	5,88 %
	TOTAL	51	100,00 %

calculations.
Pretest Mean= 73.92 seconds
Posttest Mean = 58.25 seconds

Based on the calculations, it was concluded that before the treatment, the mastery level of the subject regarding to the result of pretest value was 73.92. After using the media the mastery level of the students' basic techniques increased to 58.25. From the calculation of the average obtained above, there was an increase in mastery of futsal basic technique before and after given media. The difference between the pretest and posttest values was 15.67 seconds. It showed that learning using learning media of futsal basic technique was effective in improving mastery of futsal basic technique materials.

The learning media of futsal basic technique training was developed using research and development (R&D) approach with these stages (1) needs analysis, (2) design making, (3) product validation, (4) field trial, and (5) operational test.

Based on the validation from the experts and group trials, material experts who judged from aspects of material quality and content gave the Mean score of 3.87 that included in good category, while media experts who judged from the aspect of display and programming gave the Mean or average score of 4 that included in good category. Assessment of trainer through small group trial, based on aspect of display, content, and learning aspect, it was obtained average score of 4.42 that included in very good category. The results of large group trials, based on aspects of display, content, and learning, it was obtained the average score of 4.55 that included in very good category. While the operational test results, the average value of pretest was 73.92 seconds that included in the enough category, and the average value of posttest was 58.25 seconds that also included in enough category.

CONCLUSION

The product of research and development of futsal basic technique learning media was valid and effective. While the guide book for the trainer was easy to understand as a guide in applying the learning media.

Trainers, extracurricular trainers or PSHE teachers are expected to use this product as an example of a variety of instructional media products. By using independent learning media, students can better understand by repeating the material in anytime they want.

Socialization of learning media products is also required. So that it can help the role of trainers or teachers in the learning process and can be applied to all levels of education that can be developed better, more creative, and more innovative

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