Use of audio-visual media on training basic skills in passing and shooting in futsal sports

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Abstract. This study aims to determine the effect of using audiovisual media in training basic skills in passing and shooting in futsal sports. In this study using the experimental method to 20 futsal players. Based on the results of data analysis shows that the use of audiovisual media influences on improving basic skills of passing and shooting in futsal sports. The influence is due to the use of audiovisual media the players get various examples of movements and techniques that are correct in passing and shooting. This study can be used as a reference for teachers and trainers to use audiovisual technology in the learning and training process.

1. Introduction

Futsal is a dynamic sport that requires fast action and proper movement based on physical, technical, and tactical parameters [1]. Futsal has become one of the sports favored by Indonesian society today. This is evidenced by the many futsal arenas that were built. Futsal is played by 5 players and during the game the number of players is unlimited. As a result, physical demands in futsal games are very high [2]. The futsal players are required to maintain the intensity of the futsal game so that it is always in high intensity. For this reason, futsal players must drain the ball as quickly as possible to reduce the decrease in intensity [3]. In achieving this, futsal players must be able to do various basic techniques in futsal games. The most dominant basic technique in futsal is passing, dribbling and shooting techniques. The flow of the ball in futsal games is more advisable to do through passing techniques because it will save more energy when compared to flowing the ball using dribbling techniques. Besides flowing the ball, scoring goals is the goal of the futsal game. The main technique in scoring goals is shooting techniques. Shooting using the back of the foot is the technique most often used in scoring goals [4].

In learning physical education in schools futsal learning is one of the material favored by students. Many students take part in futsal curriculums to master the techniques of futsal. From the results of observations and observations of futsal learning in Personal Bilingual Boarding School Bandung, it is less effective because of the lack of utilizing the media in the learning process, lack of understanding of basic passing skills, and shooting in futsal learning, lack of utilizing learning approaches and methods. At present physical and sports education needs to improve teaching methodology, especially in terms of the use of technology in the teaching process. Although physical education and sports are practical activities, the use of modern teaching technology is deemed necessary to be used [5]. To improve
students' understanding and skills in futsal sports, students participate actively in futsal training activities at school. It's the same thing as in the learning process, the training process requires media to help achieve the goal of training. The use of audiovisual media is very helpful in the training process. Audiovisual is a good and useful media in learning, it can provide interesting and productive information [6]. In multimedia learning, the use of audio-visual media (video) achieves far better learning and a higher level of satisfaction than other media uses [7]. In this research, he wanted to be seen using audiovisual media (video) to provide use in futsal training.

2. Method
The method used in this research is the experimental method. The study design in this study used a pretest-posttest control group design. The participants in this study were students who took part in futsal at a boarding school private school of 20 students. The sample performed a pretest for passing and shooting skills. Then the sample was divided into two groups, namely the group that received the training using audiovisual media and the control group. The two sample groups will get the same training material but use different media. The participants of the sample will get treatment for 12 exercises. Within 1 week the sample did 3 exercises. The duration of training at each meeting can last from one to two hours depending on the training material given at that time. After 12 meetings the samples conducted a posttest for passing skills and shooting skills in futsal. After the data is obtained, then data analysis will be carried out to determine the effect of using audiovisual media in futsal sports.

3. Result and Discussion

Table 1. Pre-Posttest Results of Futsal Passing and Shooting Skills Treatment Group (audio-visual media)

|       | PASSING | SHOOTING |
|-------|---------|----------|
|       | PRETEST | POSTTEST | PRETEST | POSTTEST |
| RESULT| 132     | 172      | 104     | 158      |
| AVERAGE| 13.2   | 17.2     | 10.4    | 15.8     |
| STANDARD DEVIATION | 3.0111 | 2.2998 | 4.812  | 2.6998  |
| VARIAN | 9.0667 | 5.2889  | 23.156  | 7.2889  |

Table 1 shows the results of the pretest and posttest groups of students who received training treatments using audiovisual media. The calculation of the average skill of the Passing treatment group shows that there is an average difference of 4.0 between the pretest and posttest which has an average increase during the Posttest. It can be seen that the average shown in table 1, there was an increase in the results of the training of students after being treated in the form of Audio-Visual Media at the time of the study. The calculation of the average Shooting group treatment skills shows that there is an average difference of 5.4 between the pretest and the Posttest which has an average increase at the Posttest. It can be seen that the average shown in table 1, there was an increase in the results of the training of students after being treated in the form of Audio-Visual Media at the time of the study.

Table 2. Pre-Posttest Results of Futsal Passing and Shooting Skills Control Group (audiovisual media)

|       | PASSING | SHOOTING |
|-------|---------|----------|
|       | PRETEST | POSTTEST | PRETEST | POSTTEST |
| RESULT| 122     | 128      | 81      | 94       |
| AVERAGE| 12.2   | 12.8     | 8.1     | 9.4      |
| STANDARD DEVIATION | 2.3476 | 2.1499  | 2.5582  | 2.3664  |
Table 2 shows the results of the pretest and posttest groups of control students (non-audiovisual media). The calculation of the average Passing skills of the control group shows that there is an average difference of 0.6 between the pretest and posttest which has an average increase during the Posttest. It can be seen that the average shown in table 2, there is a rise in the control group in student learning outcomes, however, the increase tends to be slightly compared to the group given the treatment of Audio-Visual Media. Calculation of the average Shooting skills of the control group shows that there is an average difference of 1.3 between Pretest and Posttest which has an average increase at the Posttest. It is seen that the average number in table 2 shows that the control group increased in student learning outcomes, however, the increase tends to be slightly compared to the group given Audio-Visual Media treatment.

### Table 3. Results of the Passing Hypothesis Test

| T     | Sig. | explanation       |
|-------|------|-------------------|
| 5.850 | 0.000| Positive effect   |

### Table 4. Results of the Shooting Hypothesis Test

| t   | Sig. | explanation       |
|-----|------|-------------------|
| 3.486 | 0.003| Positive effect   |

In table 3 the results of testing the passing skills hypothesis. It can be seen in the value in the table above the value of $t = 5.850$ and $\text{sig.} = 0.000 <0.05$. This exercise uses audio-visual media for passing skills in futsal sports. In table 4, make the results of the marksmanship hypothesis test. It can be seen in the value in the table above the value of $t = 3.486$ and $\text{sig.} = 0.003 <0.05$. This value indicates that there is influence through audiovisual media on futsal shooting techniques.

From the results of the research obtained, shows that the training process using audiovisual media influences on improving the basic skills of passing and shooting. This supports the predetermined hypothesis that training using audiovisual media has a positive influence on improving mastery of technical skills with passing and shooting in futsal sports. This was supported by Zhang who stated that teaching using audiovisual media (video) achieved higher effectiveness [7]. The use of media in training or learning is very important as a tool to stimulate student learning [8]. In this study, the students can run the training material well. This is because with the help of audiovisual media students receive training material through hearing and also in the form of visualization [9]. Unlike the control group which receives more material through audio media only. Only using audio media takes longer to complete tasks than students who use multimedia [10].

This study has several limitations. First, the audiovisual media used is very limited so that students are often disturbed in the training process. Secondly, the results of the study may be different if given for sports that have a higher level of difficulty. The three students in this study were students aged 13-15 who easily understood each material given, if given to younger students it could give different results.

### 4. Conclusion

Researchers have reported mixed results regarding the use of audio-visual media in learning. This study shows that by adding audiovisual (video) media in the learning or training process can improve the results of learning (practice) passing and shooting in futsal sports. Audio-visual media guidance can lead students to better learning outcomes and higher levels of satisfaction from students. The results of this study also showed a higher level of student participation in following the learning process.
5. References

[1] Castagna C, D’Ottavio S, Vera J G, Álvarez J C B 2009 *Journal of Science and Medicine in Sport* **12** pp 490–494.

[2] Barbero JC, Soto VM, Granda J. 2007 *Match analysis and heart rate of futsal players during competition*. J Sports Sci **27**: 1–11.

[3] Castagna C, Belardinelli R, Impellizzeri F M, Abt G A, Coutts A J, D’Ottavio S 2007 *Journal of Science and Medicine in Sport* **10** pp 89–95.

[4] Lapresa D, Álvarez L, Arana J, Garzón B and Caballero V 2013 *Journal of Sports Sciences* **31** pp 1731–1739.

[5] Corina C, Marius S, Monica S 2011 *eLearning and Software for Education* **1** pp 540-545.

[6] Sorensen C, Baylen DM 1999 *Interaction in interactive television instruction: perception versus reality*, in Proceedings of the Annual Meeting of the American Educational Research Association, Montreal, Quebec, Canada.

[7] Zhang D, Lina Z, Robert O, Nunamaker Jr.c. 2006 *Journal of Information & Management* **43** pp 15–27.

[8] Julianne et al, 2012 *Belajar Pembelajaran Penjas*. Bandung: FPOK UPI.

[9] Anderson, Ronald.H 1994 *Pemilihan dan Pengembangan Media Video Pembelajaran* Jakarta: Grafindo Pers.

[10] Lai SL 2000 Influence of audio-visual presentations on learning abstract concepts. *International Journal of Instructional Media* **27** p 199.

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