

# Development of Volleyball Smash Aids Media in FIK Students of Medan State University in 2019

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**Abstract-** When this research was conducted after the revision of the proposal seminar and validation test, it was estimated in July 2019. Then the place of research was conducted at Medan State University, Faculty of Sports Science. In media development research, smash tools are a process used to develop and validate learning products. Research and development in learning uses the Research & Development (R&D) development model which consists of ten steps. Target clients or users who are targeted in the research development of instructional media on the process of volleyball smash technique mastery in students majoring in physical health leisure recreation third semester majoring in physical health recreation education. For small trials 20 students (randomly selected), and for large trials 40 students (randomly) are chosen. The selection of client targets for small and large trials is based on random sampling of students taking volleyball courses in the 2018/2019 school year. The conclusion is the creation of a smash training tool in volleyball games, as input to lecturers and physical education teachers in increasing student learning motivation while developing students' abilities to be able to integrate science and technology and learning

**Keywords:** *smash, volleyball, tools*

## I. INTRODUCTION

Medan State University (UNIMED) as one of the tertiary institutions that will produce graduates who are superior, professional, competitive, and disseminate knowledge, sports, technology / art, innovative and productive works in response to all challenges and changes that occur in the midst of middle of the community. So far, Unimed has managed seven faculties and thirty-three study programs, one of which is the Faculty of Sports Science (FIK).

The Faculty of Sport Science, Medan State University is one of the higher education institutions producing superior and professional graduates in Physical Education, Coaching and Sports Science. Unimed Sport Science Faculty has three departments namely the Department of Physical Education in Health and Recreation (PJKR), Sports Training Education (PKO) ) and Sports Science Department (IKOR). The Department of Physical Education for Health and Recreation has two Study Programs namely: School Physical Education and Recreational Health Education.

The high demand of the community for educational services in each school makes universities need to improve the quality of graduates in order to answer the increasingly urgent needs. Various improvements have been made by the government in improving the quality of graduates, one of which is improving curriculum and the welfare of educators by increasing the teacher welfare budget. The efforts of the government have had an impact on the desired improvement, but this phenomenon has not been all answered, because various other problems have arisen.

One of them is the quality of graduates, where the users of graduates still lack an impact on changes in the skills and competencies of students. Educators are role models for students to gain knowledge. Among the various fields of study taught are the fields of physical education studies. Physical education workers are still being replaced by former athletes and other subject teachers who have not graduated from tertiary educational institutions, especially physical education, but many service users believe that former athletes can provide better changes to students.

The root of this problem must be resolved by improving the quality of college graduates, including improving the teaching system by providing additional knowledge for teaching staff. In tertiary institutions various learning materials are studied in accordance with the existing curriculum and one of them is volleyball courses.

Volleyball game is a game played by two teams, each of which has 6 people. Each player has special skills such as hitter, feeder, and libero. The main objective in this game is to hit the ball in the direction of the opponent's field so that the opponent cannot return the ball. One of the most important techniques in volleyball is smash. Smash is the act of hitting the ball down with full force, usually jumping up, into the opponent's field (Robinson, 1993: 13). The smash technique is the most difficult and has complex movements so the smash technique must be trained properly and correctly.

From the above expression it is known that the smash skill is the most difficult and most important skill compared to other volleyball skills. The researcher continued the observation to several classes and at FIK Unimed, that the researcher saw that in the variation of the smash practice there

was still a lack of variation given to the students. From the 2016 class of student data for three classes with a total of 93 students of the Department of Physical Health Recreational Education, Medan State University still experiencing a learning result that did not increase. From the results of the volleyball advanced course graduates, among others, only 57% (53) of students passed the volleyball smash material.

The large number of students who did not pass the volleyball smash material was caused by the technique that was done was still not good and not in accordance with the indicators on the implementation of volleyball smash, namely the attitude of wearing a hand with a ball (punch) where the feet were not relaxed and not flexible when jumping the hand did not besides the head and not doing a blow in front but besides and the case when hitting is not the top of the ball, the attitude when landing is weak when landing with one foot and the body does not lean forward.

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Volleyball game is a game that is not easy for everyone to do. In this game good coordination of motion is needed which can be used effectively and efficiently and of course is very supportive for the team as the game progresses. According to Nuril Ahmadi (2007: 20) volleyball game is a complex game that is not easily done by everyone. Because, in volleyball games, motion coordination is really needed that can be relied upon to do all the movements in volleyball

Then based on the analysis of learning needs in volleyball courses where the questionnaire distributed to students answered "yes" in item: 1) Is smash material difficult to do ?, 2) Is smash only possible with trained athletes ?, 3) Many difficulties Smash especially the ability to jump. Then many students answered "no" in item: 1) Have you ever used a smash study aid ?, 2) The need for aids in learning smash or other volleyball material.

The needs analysis above clearly makes it clear that many students stated that the volleyball smash material was difficult, and there were many difficulties in doing the smash. Then from the students' statement that many answered were never given smash learning aids or other volleyball material.

The needs analysis above is the reason researchers want to develop a smash tool because learning to smash a volleyball is at least two people or a pair by bouncing the ball into the air and receiving the ball to smash. But having a labor problem is wasted, and learning volleyball smash won't be easy.

The results of observations of the situation on the volleyball learning field by PJKR FIK UNIMED students who conducted volleyball smash techniques manually were thrown mostly failed. In addition, in terms of the existing volleyball smash aids still have shortcomings namely the mechanism of action still uses 1 hook so it becomes less efficient. Therefore, researchers want to develop existing tools using 2 hook mechanisms.

Volleyball game is one of the sports that is often played by the people of Indonesia, this game can be done by all levels of society, ranging from children to the elderly, men and women, rural and urban communities. Evidence that this sport is loved by volleyball players because the game is quite easy to play and one thing is sure to be healthy.

In volleyball games consist of several techniques, including techniques using balls which include service, bottom passing, top passing, smash, and block. To master these basic techniques requires basic technical exercises continuously and repetition from the easy level to really mastering.

Volleyball is played using one ball reflected from one player to another by passing which ends with a smash on the opposing team, and for the two teams separated by the net with a certain height. The main purpose of volleyball is to enter the ball into the opponent's area as much as possible. The beginning of a series of learning to play volleyball is a physical education lecturer who diagnoses the results of the initial conditions of his students and analyzes the techniques taught. In this way, the lecturer will know the initial conditions of students, so they can choose the right form of training and in accordance with their conditions.

The progress and development of the volleyball game that is happening right now is very good for that it is hoped that many will contribute to the development, creation of new media findings in the form of better forms of training for the future covering physical aspects, techniques, and tactics / strategies as well as mentally. So that every problem that will be faced can be overcome by continuing to improve themselves, by developing, evaluating and improving from all supporting sectors and continue to look for methods and

techniques that are more effective and efficient in order to produce a better performance Sissa and finally get a more accomplished team .

Learning media is a means of delivering learning messages in relation to the direct learning model by means of the teacher acting as a conveyor of information and in this case the teacher should use a variety of appropriate media. Learning media is a tool for teaching and learning process. Everything that can be used to stimulate the mind, feelings, attention and abilities or skills of students so that it can encourage the learning process. According to Heinich cited by Azhar Arsyad (2011: 4), learning media are intermediaries that carry messages or information aimed at instructional or contain teaching purposes between the source and recipient.

According to Dina Indriana (2011: 32) identified nine key factors that must be considered in choosing teaching media. The nine key factors include the limitations of institutional resources, the suitability of the media with the subjects taught, the characteristics of students or students, educator behavior and skill levels, subject learning objectives, learning relationships, learning locations, time and level of media diversity.

One of the most important techniques in volleyball is smash. Smash is a technique that has a greater chance of getting numbers than other techniques. In addition, smash is a technique that athletes or spectators prefer when watching volleyball matches. Smash is the act of hitting the ball down with full force, usually jumping up, into the opponent's field. Smash is a blow that is done hard and sharp with the way the ball pierced into the opponent's field.

From the above statement it can be concluded that the smash skill is an easy skill for volleyball players who understand it and it is very difficult for players who do not understand the game of volleyball, therefore if the players master the smash skill means they can run the game well, by mastering the skills our smash is very easy to attack opponents well and outwit them so that we can produce better numbers too.

The product developed in this research development is a new smash tool for FIK Unimed students. The product that is expected in this research development seeks to make good, effective and efficient smash technique capabilities, so that it is expected to be an attraction for students and lecturers.

## II. METHOD

In media development research, smash tools are a process used to develop and validate learning products. Research and development in learning uses the Research & Development (R&D) development model of Borg & Gall (1983: 776) which consists of ten steps including:

1. Conducting research and information gathering (literature review, observation of subjects, preparation of reports on issues).
2. Planning (defining skills, formulating goals, determining the order of teaching, and small-scale trials)

3. Develop initial product forms (preparation of teaching material, preparation of handbooks, and evaluation equipment).
4. Carry out an initial field test (using 6-12 subjects).
5. Revise the main product (in accordance with the recommendations of the initial field test results).
6. Conduct major field tests (with 30-100 subjects).
7. Conduct product revisions (based on suggestions and results of key field trials).
8. Field test with 40-200 subjects.
9. Revision of the final product.
10. Make a report about the product in a journal, working with publishers who can distribute commercial

## III. DISCUSSION

Research targets or users who are targeted in the research development of volleyball smash learning tools. For lecturers, coaches, coaches and coaches of volleyball, it is easier for lecturers / teachers to control their students when doing volleyball smashes. And this tool was developed in the context of mastery of the smash technique to make this tool as a means to facilitate students or athletes in smash. The results of the study in this study were where in the small group there were 76.67% which included the quite valid category, while in the large group there were 86.67% which included in the valid category. And this research has stated that the product can be used. II. Conclusion This research is expected to be beneficial for: 1. Academic: As the development of science and technology. The creation of smash training aids in volleyball games, as input to lecturers and physical education teachers in increasing student motivation while developing students' ability to be able to mix and match science and technology and learning 2. Practitioners: Can provide an experience to students developing media in accordance with the problems faced at the University, especially for students of the faculty of sports science, State University of Medan.

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