

# The Use of Blended Learning Model Integrated with Learning Management System in Beach Volleyball Learning Subject in Faculty of Sports Science State University of Malang

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**Abstract**—The purpose of this research was to develop beach volleyball learning product using blended learning model integrated with E-learning of State University of Malang (UM). The research method used was the research and development method (R&D), with the following steps (a) needs analysis, (b) initial product development and expert judgment in the form of (1) video of beach volleyball learning, (2) textbook (E-book) of beach volleyball, and (3) blended learning model of beach volleyball integrated with learning in UM. The result of the research obtained a valid product from beach volleyball experts, teaching media experts, and blended learning experts. This product was effectively used by a small group which was 84% and a large group which was 95%. The product created by the blended learning model was integrated with learning management system of State University of Malang which consists of a video of beach volleyball learning, E-book of beach volleyball learning.

**Keywords**— Learning, beach volleyball, blended learning

## I. INTRODUCTION

History of blended learning based on learning began when the computer was invented, although before that there had also been blended in the learning process. The learning process initially occurs only face to face and interaction between the teacher and the learner, after finding various electronic media, the teacher uses it to support the learning process. Blended learning terminology arises after the development of information technology so that learning resources can be accessed by students both offline and online. Nowadays blended learning based learning is done by combining face-to-face learning, printing technology, audio technology, audio visual technology, computer technology, and m-learning technology (mobile learning). [3] describes the history of blended learning that developed in the world of

training initially as well as what was done in educational institutions, namely the main learning resources were trainers / facilitators. "blended learning mixes face to face and on line system activities, some performed synchronously, some asynchronously" [8]. Provides the definition of "Blended learning is learning that combines different technologies, in particular a combination of traditional (face to face instruction) and online teaching approaches and media"[10]. At present almost all educational institutions use blended learning methods to improve learning outcomes.

Malang State University (UM) which is a higher education institution also utilizes information technology to support the learning process. E-learning facilities are provided by the campus. In the Malang UM sports science faculty (FIK) the learning process is expected to utilize the available facilities, but in fact less than 10% of lecturers who have used e-learning facilities provided by the institution.

Researchers developed the blended learning process that is integrated in the UM e learning system in practical subjects. The beach volleyball course was chosen by researchers because beach volleyball is one of the most popular sports in the world. Beach volleyball is also always competed in all multi-event championships, both national and international levels. In the physical education curriculum in Indonesia, beach volleyball is included in the category of big ball sports. Beach volleyball regulations are not much different from indoor volleyball regulations. Beach volley is played by four players, each team is two players, but in the beach volleyball there is no reserve player. The gameplay is the same as indoor volleyball. The beach volleyball field is narrower than the indoor volleyball field with reason for the number of players and the conditions of the field made of sand. Beach Volleyball has now become a branch of popular sports in

Indonesia. This is evidenced by the many beach volleyball championships in Indonesia such as national Junior competition, PON young, POPNAS, Indonesian Open Circuit and PON (National Sports Week).

Beach Bollywood is included in the learning curriculum at the poor FIK UM. Coastal volleyball learning in the FIK of poor state universities is a group of elective courses. Elective courses mean that the course can be chosen by students or not. Beach volleyball courses have a load of 2 credits. 2 credits mean that students have to meet face to face with the lecturer for 100 minutes, 120 minutes to work on structured tasks and 120 minutes for independent assignments. The lecture process of the beach volleyball at the sports science faculty of the poor state university is still carried out with a conventional system, face to face as well as structured and independent tasks performed by students by manual method. With conventional methods student learning outcomes are less than optimal, due to lack of systemic control from the lecturer. Blended learning method is expected to improve student learning completeness, especially in structured tasks and independent tasks.

Beach volleyball lecture materials at FIK UM Malang include basic techniques of beach volleyball and beach volleyball matches. The basic techniques of beach volleyball include bottom for arm pass, top tide, service, smash and block. In the lecture process, the beach volleyball lecture material is delivered directly by the lecturer in the course of a face-to-face meeting. With the blended learning method integrated with UM e learning, lecture materials in the form of basic technical videos and e books can be uploaded into e learning and can be accessed at any time by students.

## II. METHOD

The design of this research used research and development method (R&D). The development model used by the researchers was a procedural development model. This research and development procedure applies the following seven steps: (1) analysis of blended learning needs, (2) initial product development; (3) expert evaluation, (4) product revision I, (5) small group trial, (6) product revision II, (7) revision of product I, large group trials.

The instrument of data collector was observation conducted by the researchers that was nil participation observation by observing the learning condition of volleyball and participant observation observing the small group trial process and large group trial and product effectiveness test. The field note in this research was used to obtain information of the implementation of the initial conditions of volleyball learning process, expert test and field trials.

Based on the type of the obtained data, the data in this study were processed using quantitative and qualitative approach. The description is as follows. (1) The quantitative approach was used to collect the data of (a) the assessment of volleyball experts, qualitative approaches were used to collect the data from expert evaluation, consisting of 2 beach volleyball and 1 instructional media experts. The obtained data were assessed regarding the product design to be developed.

(b) The data of student assessment were obtained through small and large group trials. (2) A qualitative approach used the steps including data reduction, data categorization, synthesizing and compiling work hypothesis.

## III. RESULT AND DISCUSSION

### Needs analysis

The result of requirement analysis in this research indicate that lecture beach volleyball coastal course still use conventional method, lecture plan delivered by lecturer at first face time. The execution of the lectures was conducted during 16 meetings with face to face, the assignment was done manually and there was no independent task that could be controlled by the lecturer of the course lecturer. Assessment of learning outcomes based on semester exam scores and final semester examinations in the form of basic skill tests beach volleyball beaches and the value of structured tasks that are collected manually. In FIK UM Malang is still a lecturer who make us of e learning system in the process of learning.

### Product development

The result of the product development is a coastal beach volleyball learning model that integrates e-learning of the poor UM system in which there is a one period learning scenario, a coastal beach volleyball learning module in the form of e book, as well as basic learning techniques of beach beach volleyball that can be accessed by students anytime. In addition to supporting learning media lectures also pinned sistematic tasks and independent tasks tailored to the needs of the lecture.

### Product trial

The product test to determine the reliability of the product is done in two stages. The first stage is evaluated by a coastal beach volleyball and learning media expert. In this study used two coastal beach volleyball experts with an average yield of 83.5%. The results of the evaluation of media learning experts with an average yield of 88%. The next trial is a small group trial with a student subject of 30 people with 84% results which means that product development can be accepted and continued to large group trials. Large group trials used the subjects of all students who followed the course of a coastal beach volleyball of 80 people with 95% of the results.

Learning beach volleyball at this point using conventional methods. SKS system serves to (1) The amount of student study load. (2) The amount of recognition for the success of the student's learning. (3) The amount of effort required to learn the student to complete the program, whether the program semester and complete the program. (4) The amount of effort providing education for teachers. That function has not gone up because the process is still conventional. With develop methods blended learning credits system is able to run and controlled. At the present time there is a change big in the world of technology. The development of information and communication technology advancements currently taking place so rapidly, it is called a revolution. The

world of education is directly to be involved in the industrial revolution to 4 this. The use of technology could well enhance the learning process. But if the wrong in using technology could be bad.

The term Blended Learning in language consists of two words, Blended and Learning. Blend means "a mixture of together to improve quality to improve" (Collins Dictionary), or the formula of a combination or combination of alignments (Oxford English Dictionary) [9], while Learning has a general meaning that is learning, thus meaningfully learning patterns that contain elements of mixing, or a combination of one pattern with another. Blended learning is a learning method that is done by a mixed method, between face to face, on line and off line. blended learning is "It represents the opportunity to integrate the innovative and technological advances offered by online learning with interaction and participation offered in the best of traditional learning [13]. On line learning is divided into two, namely synchronous and asynchronous. The amount of time face-to-face can vary greatly from one learning program to another program. Some times one-to-one face-to-face class meetings are held in one period. Blended learning can be done with twenty-five percent through attendance and seventy-five percent without attendance. who conducts learning with fifty percent face to face and fifty percent through e-learning, and similarly, there is a one-hundred percent face-to-face presence with a combination of physical and virtual presence, although there is no standard proportion of face-to-face attendance and physical absenteeism, but that is definitely in learning based blended learning always combines face-to-face activities and e-learning as an effort to facilitate learning [12]. More blended learning on line is also not good, the results of research conducted by Dziuban, Hartman, and Moskal found that blended learning programs have the potential to improve student learning outcomes and also reduce dropout rates compared to full learning. online learning [6].

The forwarding of blended learning must also pay attention to the subject, damer and time of use. the benefits and challenges of applying each approach and providing recommendations about when and how each approach should be used. [1]. In the learning process should be able to see the potential that exists and take advantage of loopholes to improve learning outcomes with a new system based on technology approaches [14]. Blended Learning methods combine the benefits of face-to-face courses with the benefits of online courses that facilitate increased student academic performance through adequate feedback, active and interactive participation, collaborative assignments and practical teaching and learning methods [7]. The results of the study from Anaraki reveal that by using blended learning students understand the subject better and score in the middle and final exam [2].

The course on beach volleyball has a weight of 2SKS 2 hours of face-to-face 2 hours of structural and independent assignments, from the lecture it is expected that students will gain knowledge, skills and attitudes about the rules of the beach volleyball game, the basics of moving without balls in

the field, basic passing techniques, basic techniques top passing and baiting, basic smash techniques, basic service techniques, basic block techniques, defensive tactics and attack tactics. The beach volleyball game is a variant of the volleyball game played by two teams separated by a net or net which is stretched in the middle of the field and hits the ball by using a hand with a certain pitch and ball. the game of beach volleyball is played on the beach sand which consists of two teams in which each team consists of two players so that if summed up, the total players of the beach volleyball game amount to 4 people. The players try to hit the ball over the net to enter the area in the opponent's area and try to hold the ball so as not to fall in the defense area themselves to get as many points or points as possible. In volleyball games consists of several techniques, including techniques using ball which include service, under passing, top passing, smash bait, and block.

Beach volleyball courses can improve students' skills and improve their physical abilities. Bishop is likely that the height of vertical jumps on sand is lower than that of the soil due to a decrease in soil reaction force, so that the energy used on the passive field is different from the usual field [4]. With good physical condition, students will be easier to do various types and forms of training, so that the lecture process is more interesting and able to improve students' skills. Winarno also said that blended learning can be applied in practical learning[11].

Stage field trial was conducted to test the product development of the research subject, aim to determine the application of the products developed and to obtain feedback on the study subjects developed product. Subjects trying ie PKO Faculty of Sport Science students who follow courses beach volleyball. The field trials carried out 2 times cu trials small groups and large groups. The next trial is a small group with a student subject trial of 30 people with 84% results the which means that product development can be accepted and continued to large group trials. Large trials group used the subjects of all students who Followed the course of a coastal volleyball of 80 people with 95% of the results.

#### IV. CONCLUSION

Learning beach volleyball using blended learning model integrated with learning management system is very suitable to apply. Blended learning can facilitate student learning activities to always be implemented anywhere and anytime. Students can take advantage of all learning resources to increase their skill level in a beach volleyball game beyond the lecture schedule with materials which are accessible via e-learning. It is expected to meet the elements in the established semester credit program and become the control of the task that must be accomplished by the students.

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