BirLE-Journal
Budapest International Research and Critics in Linguistics and Education
p.ISSN: 2655-2647
e.ISSN: 2655-1470
Budapest Institute

Development of Basic Volleyball Learning Media Based on Web Learning Materials Towards KKNI at Universitas Negeri Medan

Indrakasih[1], Bangun Setia[1], Onyas Widianingsih[1], Deni Rahman[1]
[1]*Universitas Negeri Medan*
indra_ksh@yahoo.co.id

Abstract: *This research is funded by BOPTN funding. This research is focused on the Development of Basic Volleyball Learning Media Based on Web Learning Materials Towards KKNI at Faculty of Sports of Universtas Negeri Medan. This research is a research and development. After researching the results of volleyball basic technical skills based on learning groups, namely the posttest experimental group (new model, web learning) and the pretest experimental group (old model), it is found that the results of basic ball technical skills volleyball in the posttest experimental group ie the lowest score of 80 and the highest score of 90. Whereas in the pretest experimental group, the results of volleyball basic technique ability obtained the lowest score of 70 and the highest score of 90. The average score and standard deviation in the posttest experimental group were 82.00 and 4.14, while in the pretest experimental group amounted to and 8.62. When viewed from the distribution of questionnaires to see new model learning is more effective than old model learning. The average effectiveness of the old model learning outcomes indicator is 86.57% and the learning model is new or uses web learning 98.77%. So it can be concluded that learning new models is more effective than learning models.*
Keywords: *development; volleyball; learning media; web learning materials*

I. Introduction

Teaching and learning, it is known, is not a process of emptiness, but a process of meaning, in which there are a number of values conveyed to students. These values do not come by themselves, but are drawn from various sources to be used in the teaching and learning process. Many learning resources that can be used to support learning one of them by using the internet. With the existence of internet resources, teaching staff will be able to apply several learning methods. One of the learning methods is ICT-based learning. Learning with ICT is learning based on the concepts of computer and multimedia learning. ICT-based Education (Information Communication Technology). Currently there are still many learning activities that are carried out on the conventional concept so that students still have competency achievement problems. In the National Curriculum Framework curriculum (KKNI) which is treated in tertiary institutions, one of them is Medan's state university. In achieving competence in Unimed, one of its faculties is the faculty of sports science in the implementation of the IQF there are still some problems where from the series of face-to-face meetings 16 in volleyball practice courses with the achievement of 4 final competencies, it is very difficult to achieve it, so from the problems There is a need for efforts to apply appropriate, effective and efficient learning methods.

II. Review of Literature

2.1. Concepts of Development

Research & development (R&D) can be defined as a research method that intentionally, systematically, aims/is directed/directed to find, formulate, improve, develop, produce, test the effectiveness of products, models, methods/strategies/ways/services, certain superior procedures new, effective, efficient, productive, and meaningful. Research and development is

a quite effective strategy or research method. Development research is research that is used to produce certain products and test the effectiveness of these products. Nusa Putra explained that research can be divided into several forms, namely basic, applied, evaluation, development and urgent research. In various studies based on the function and its application in education and how long the results can be used. One research model that is relevant and can always be used is development research. In this R&D research, what will be developed is the development of a basic volleyball learning model based on web-learning material towards KKNI at Fik, Medan State University.

2.2. Learning Media

1. Understanding Learning media is a tool that helps students so that the learning process occurs. According to Arsyad (2004: 7), learning media has the understanding of aids in the learning process both inside and outside the classroom.
2. Functions and Benefits of Learning Media in the process of learning media is useful as a stimulus presenter (information, attitudes, etc.), increasing harmony in receiving information.
3. Utilization of Learning Media, According to Agus S. Suryobroto (2001: 9), the use of media is the systematic use of learning resources. The decision to try or use learning resources must pay attention to students' characteristics and learning objectives.

2.3. Volleyball Game

What is a volleyball game? In general, the notion of volleyball is one of the branches of soccer where you play it by dropping the ball on the opponent's field as much as possible to achieve a certain score. Another opinion says, the notion of volleyball is a sport that is played by two opposing groups where each group has six players. Between the two groups/teams the field is limited by a net barrier with a certain height.

1. Passing Down

According to M. Yunus (1993: 79) explains "Passing is to feed one's own ball in a team with a particular technique as a first step to arrange attacks to the opposing team". Barbara L. Viera (2004: 19) stated "Passing down or forearm operand is a basic volleyball technique.

2. Passing Over Volleyball

Named passing over because the passing is done by hand over the front of the player's face. Passing is one of the basic techniques of volleyball that is very important that must be mastered by the players, especially for the toser / set-upper, because in addition to being used to withstand opponent attacks, passing over also serves to provide feedback / passes to teammates so they can arrange an attack well.

3. Service Definition

Servicing is a sign of the start of a match by one of the teams. According to M. Yunus (1992: 67), service is the act of turning the ball into a game made by a defender, who hits the ball with his hand (open or closed), to proceed into the opponent's plot through the net.

4. E-Learning

Definition of e-learning: (1) E-learning is a type of teaching and learning that enables the delivery of teaching materials to students using the internet, intranet or other computer network media (Hartly, 2001). (2) E-learning is an educational system that uses electronic applications

to support teaching and learning with internet media, computer networks, or standalone computers.

1. **Benefits of E-Learning**
   Some of the benefits of e-learning in general have been written by experts or practitioners who directly use e-learning, at least the benefits that can be obtained are, as follows: 1). Flexibility. 2) "Independent Learning". 3) Costs.

2. **E-Learning Characteristics**
   Utilizing electronic technology services, Using teaching materials are everywhere, can be seen at any time on the computer.

3. **Strengths and Weaknesses of E-Learning**
   Realizing that through the internet can be found various information that can be accessed easily, anytime and anywhere, then the use of the internet becomes a necessity. Not only that, internet users can communicate with other parties in a very easy way through e-moderating techniques available on the internet.

III. Research Method

This research is a research development using a qualitative and quantitative approach and uses the Research & Development (R&D) development research method with the chosen development design referring to the development proposed by Borg and Gall.

Schematically, the development procedure can be seen in the image below:

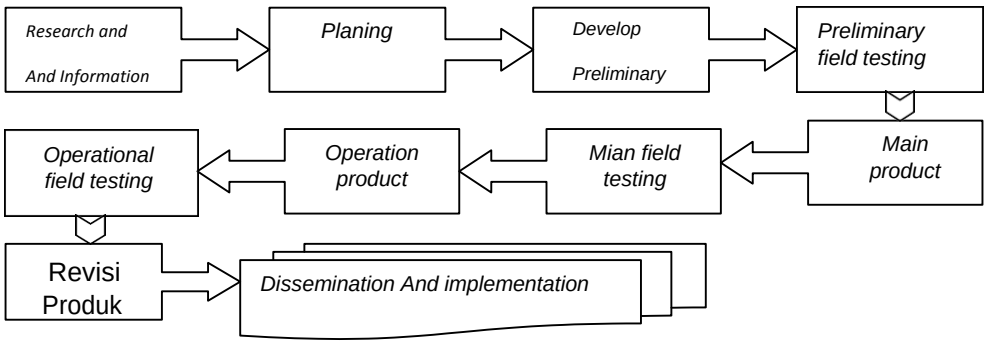

Figure 1. *Stage of Development of the Borg and Gall Model*

This research was conducted at the Faculty of Sport Science, Medan State University. The population of this research is the Physical Education and Recreational Education Study Program. The sampling technique uses purposive random sampling.

IV. Result and Discussion

This research was conducted at the Faculty of Sport Science, Medan State University. The population of this research is the Physical Education and Recreational Education Study Program. The sampling technique uses purposive random sampling. Learning Performance Results of Volleyball Basis Basic Technical Skills Based on Learning for Grade A. Data Description in Grade A Pre-test and Post-test Experiment Groups

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Pre-Test	30	80.33	7.184	1.312	77.65	83.02	70	90
Post-Test	30	86.00	4.983	.910	84.14	87.86	80	90
Total	60	83.17	6.763	.873	81.42	84.91	70	90

Based on the data obtained from the results of the basic A grade volleyball technical skills based on learning groups namely the posttest experimental group (new model, web learning) and the pretest experimental group (old model), the posttest experimental group ie the lowest score of 80 and the highest score of 90. Whereas in the pretest experimental group, the lowest score was 70 and the highest score was 90. The average score and standard deviation in the posttest experimental group were 86.00 and 4.98, while in the pretest experimental group were 80.33 and 7, 18. The frequency of pretest experimental group score data that has the largest percentage is a score of 80, as many as 15 students or 25.0%. While the percentage score below an average of 7 with a score of 70 or 11.7% and a score of 90 the percentage of 13.3% many students who get each 4.

Learning Performance Results of Volleyball Basis Basic Technical Skills Based on Learning for Class B. Description of Data in Group B Pre-test and Post-test Experiments

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Pre-Test	37	80.54	5.747	.945	78.62	82.46	70	90
Post-Test	37	86.76	4.746	.780	85.17	88.34	80	90
Total	74	83.65	6.098	.709	82.24	85.06	70	90

Based on the data obtained from the results of the basic technique skills of volleyball class B posttest experimental group that is the lowest score of 80 and the highest score of 90. While in the pretest experimental group, the results of the basic volleyball technique ability obtained the lowest score of 70 and the highest score of 90. The average score and standard deviation in the posttest experimental group were 86.76 and 4.76 respectively, while in the pretest experimental group were 80.54 and 5.74. As for the frequency data of the volleyball basic technical skill score of the pretest experimental group that the score that has the largest percentage is a score of 80, as many as 25 students or 30.5%. While the 70 score the number of students who get 5 or 6.1% and 90 many students who get 7 or 8.5% each Learning Performance Results of Volleyball Basis Basic Technical Skills Based on Learning for Grade C. Description of Data in Group C Pre-test and Post-test Experiments.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Pre-Test	32	79.38	7.594	1.342	76.64	82.11	70	90
Post-Test	32	85.00	5.080	.898	83.17	86.83	80	90
Total	64	82.19	7.008	.876	80.44	83.94	70	90

Based on the data obtained from the results of the basic C class volleyball technical skills of the pretest (old model) experimental group, the posttest experiment is the lowest score of 80 and the highest score of 90. Whereas in the pretest experimental group, the results of the basic volleyball technique ability obtained the lowest score of 70 and the highest score of 90. The average score and standard deviation in the posttest experimental group were 85.00 and 5.08, while in the pretest experimental group amounted to 79.38 and 7.59. As for the frequency of pretest data is a score of 80, as many as 14 students or 21.9%. While the smallest percentage is a score of 90 which is only 8 students or 12.5% and a score of 70 percentages of 12.5% or 10 people. Large Group Test Development of Basic Volleyball Learning Model Based on Web Learning. Learning Results of old and new models by developing learning models web learning table follows:

Table 1. Total Learning Model Test Results

Learning	**Score Item Problem**						**Total**
	Indicator A	**Indicator B**	**Indicator C**	**Indicator D**	**Indicator E**	**Indicator F**	
Conventional Model	1567	1565	1564	1571	-	-	6267
Web Learning Model Learning	2354	2737	2745	2741	2745	1570	14892

Table 2. Comparison of Learning Model Effectiveness

Old Model Learning		**Rating Indicator**	**Web Learning Learning**	
Test Results	Percentage of Effectiveness		Test Results	Percentage of Effectiveness
1567	98,7%	A	2354	84,9%
1565	98,8%	B	2737	98,8%
1564	98,7%	C	2745	99,0%
1571	99,1%	D	2741	98,8%
-	-	E	2745	99,0%
-	-	F	1570	56,6%
6267	98,9%	Learning result	14892	99,89%

Based on the table above, each indicator of learning assessment of new models is more effective than learning old models. The average effectiveness of the old model learning outcomes indicator is 98.9% and new model learning or using web learning is 99.89%. So it can be concluded that learning the new model is more effective than learning the old model.

References

Barbara L.Viera, Bonnie Jill Ferguson (1996) Volley ball steps to Sucses

Borg and Gall (1983). *Educational Research, An Introduction*. New York and London. Longman Inc.

Federation Internationale de Volley Ball, 1989, *Coaches Manual* 1, FIVB, Lausanna (CH)

Gay, L.R. (1991). *Educational Evaluation and Measurement: Com-petencies for Analysis and Application.* Second edition. New York: Macmillan Publishing Compan.

Dewi Salma Prawiradilaga, Diana Ariani,Hilman Handoko (2013) Mozaik Teknologi Pendidikan *E-Learning*

Kasih Indra (2016) Belajar dan Berlatih Pass Bawah dan Pass Atas

Nana Sudjana (1991:152) dalam strategi belajar mengajar penerbit Rineka Cipta

Sugiyono. (2011). *Metode Penelitian Kuantitatif, Kualitatif, dan R & D*. Bandung: Alfabeta.

Vernon A Magnesen. Model-model, media dan Strategi Pembelajaran Konstektual (inovatif) Zainal Aqip penerbit Yrama Widya

Punaji Setyosari, *Metode Penelitian Pendidikan dan Pengembangan,* Jakarta: Prenada Media Group, 2010. h.154.

Zainal Aqip., (2013) Model-model Media,Startegi Pembelajaran Konstektuan Inovatif., CV.Yrama Widya