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## PCMS Traditional Sport Learning Model based on Online Media in Physical Education Learning

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### ABSTRACT:

The research and development of the PCMS Traditional Sport learning model aims to improve student learning outcomes based on online media-based Physical Education. The specific purpose of this research is to improve student learning outcomes of Physical Education, State University of Jakarta using online media. The research method used is a research and development method with development steps designed by Borg and Gall with a total population and sample of 50 students. Based on data processing with statistics with a total sample of 50 Physical Education students, the Mean Preetest value of 87,143 and the mean posttest 95,533, Standard Deviation for pretest 3,512, and posttest 3,710 with the results of the effectiveness test using the t-test. greater than the value of  $t = 0.000$  and the posttest value obtained by the price of  $t_0 = 90.105$  is greater than the price of  $t = 0.000$  (at a significance level of 0.05), then the null hypothesis is rejected. So it can be concluded that, there is a significant difference between the pretest and posttest results of the online media-based Sport Psychometrics course test for physical education students. and then the average price of the pretest with the mean = 87,143 is smaller than the average posttest mean = 95,533. Thus it can be stated that the online media-based Traditional PCMS learning product is effectively used to improve the learning skills of Physical Education students at the State University of Jakarta.

## 1. INTRODUCTION

In 2018 the Ministry of Youth and Sports at the National Level has carried out the National Level Traditional Sports Festival in Jambi Province, which is from 6 to 9 July 2018. As per the annual implementation Previously, participants who took part in this event were the best representatives of each of the traditional provincial sports games. Thirty-two provinces took part in this festival, and various traditional sporting activities, indigenous cultures of the region that had been submerged, finally resurfaced. From this activity, it is increasingly seen that the cultural wealth of the Indonesian nation is extraordinary and diverse.

Tran Ngoc Giang (2014) Folk games may be almost dim as children turn to more sophisticated electronic games. Almost all children's games today use a computerized system in their operation. However, it should be realized that modern games currently have a fairly negative

impact on children. For example, with the development of technology from time to time which causes continuous renewal of the game, causing the tendency of children to demand the latest edition of the game they have, so that in this case it can be concluded that modern games form a demanding child's mentality, due to various environmental factors.

In addition, this also shows that today's modern games cannot instill a good positive impression so that they can be remembered for all time. No matter how advanced a technology is, its benefits must be assessed in order to maintain human dignity so that dehumanization and despiritualization do not occur because it shifts essential human values. But we have to be able to sort out which values actually remain a feature or identity of the nation and which ones can lead to a decline in values. Therefore, how can students practice in the field so that they are more



confident and confident that they can do it, we cannot just rely on the school to develop educational and cultural efforts in instilling values, morals and character in children.

Irawan, Sutadji, and Widiyanti (2017) Education can be carried out through institutionalization, still open arable land that can color the preservation and development of culture. In reality, the young generation's lack of attention to the nation's cultural values is related to very few reading materials or practical methods to introduce cultural values to children. One form of practical method to introduce cultural values is through games. As with traditional games, there are actually many noble meanings that can be explored behind them.

Based on research, all folk games in Indonesia have something in common, namely "self-knowledge, nature, and God." Traditional games have many positive sides that are often overlooked, traditional games teach children many things, so they can be remembered for all time. As evidence, I feel that traditional games are more fun, educate us in playing, and there are many messages in each game, besides that traditional games are very "friendly and friendly", so that all Indonesian children can play, regardless of race, religion, and culture. culture. Traditional games instill a strong "Unity in diversity" from an early age for Indonesian children.

## **STUDY OF THEORY OF ONLINE MEDIA LEARNING ONLINE**

media learning or also known as e-learning is learning using technology-based online is growing day by day, and this is very influential on society. The advancement of communication and information media has become more meaningful in conveying information. In conveying information, a media is needed so that the information we will convey can be received properly. Media comes from the Latin *medius* which literally means middle, intermediary or introduction. In Arabic the media is an intermediary or messenger from the sender of the message to the recipient of the message.

Sujae, Gon, and Hin (2017) This challenge is the basis for the technology approach in delivering information. Gerlach and Elu in Azhar state that the media if understood in broad terms are human, material, or events that build conditions so that students (recipients) are able to acquire knowledge, skills or attitudes (grru, text nails,

environment). In particular, the media in the teaching and learning process tends to be defined as graphic, photographic, or electronic devices that capture, process and rearrange visual or verbal information (Jufrianis, Akbar, and Tangkudung 2019).

The type of media used in learning activities by involving hearing and sight at the same time in a process is known as audio-visual media. Examples of audio-visual media include films, videos (youtube), and television programs. The media has a huge influence. Media is a tool that is used as an intermediary to convey information or messages so that it can be fully received by the recipient of the information (Dwiyoogo, 2010). Another type of media is multimedia, namely media that involves several types of media and equipment that are integrated in one learning process. In general, multimedia is a combination of audio and visual representations. This representation can include elements of text, graphic art, sound, animation, and video. However, multimedia is limited to systems such as digital digitization which is processed in a computer (Batsila, Tsihouridis, and Vavougiou 2014)

Delivering this information can be done with safe multimedia that is understood by the senses of hearing, sight, smell, touch and so on (Munadi, 2008). Sales and Rickey define multimedia as a collection of material from a variety of different media (text, graphics, audio, visual, etc.) which are designed and presented in an integrated manner through the use of a medium (ie computer) (Barbara Sales, 1994). Multimedia is any combination of text, graphic art, sound, animation, and video that is delivered by computer (Tay Voughan, 2012). When assessing the end user of the multimedia project, controlling what and when what elements are delivered, the multimedia becomes interactive multimedia.

The main function of supporting media is to streamline data processing, making it more effective (Wahjoedi, 2016). When providing a structure of related elements that the user can navigate, interactive multimedia becomes hypermedia. The essence of interactive multimedia is its characteristics. Multimedia involves learners to make transfer choices according to the desired material through meaningful ways.

Munir, (2013) multimedia only includes media that is consumed by the sense of sight (still images, text, motion pictures, videos, and motion pictures recording / animation), and consumption of the sense of hearing (sound). The development of multimedia includes kinetics (movement) and smell which is the consumption of the



sense of smell." In addition, Lie and Drew define multimedia as follows: Multimedia consist of : application that use multiple modalities to their advantage, including text, images, drawings (Graphich), animation, video, sound (include speech) and most likely, interactivity of the same kind . Lie explained that multimedia is an application that uses several components / modalities consisting of text, images(graphics), animation, video, and most likely interactive of several types (Lie, Ze-Nian & DrewMark, 2010). Multimedia is a combination of various media (file formats) in the form of text, images (vector or bidmap), graphics, sound, animation, video, interaction and others that have been packaged into digital files (computerized), used to convey or message to the public. to thepublic (Munir, 2013)

Media applications can be used as a medium in the learning process or delivering information in accordance with the wishes and expectations, so that this media is not only usedin games but has become part of technology where we not only help in work but also help in the process of understanding because almost all the five senses are used.

## PHYSICAL EDUCATION

Jufrianis et al. (2021) reveals: Physical Education is an educational process that utilizesphysical activity that is carried out consciously and systematically through various activities inorder to acquire physical abilities and skills, growth, intelligence, emotional and character formation. In teaching physical education, a teacher must be able to adapt teaching materials to situations and conditions, as well as to the characteristics of students.

Firdaus et al. (2023) the Physical Education program has 4 main components, namely: (1) Stimulate organic growth and development, (2) Motor neumuscular skills, (3) Intellectual development, (4) Emotional development." Husdarta (2009) Physical education is an educational process through selected physical activities, games or sports to achieve educational goals. The difference between physical education and other subjects is that the toolused is motion, where students move consciously. Movement is designed by the teacher and given in the right situation, in order to stimulate the growth and development of students.

Physical education is an integral part of an overall education that contributes to the growth and development of every child. Physical education according to UNESCO

in the "international charter of physical education and sport" as follows: Physical education is a process of education of a person as an individual or a member of society that is carried out consciously and systematically through various physical activities in order to improve physicalabilities and skills, growth of intelligence. and character formation.

According to Dini Rosdiani (2014) Physical Education is an educational process that utilizes systematic planned physical activities aimed at developing and improving individuals organically, neuromuscularly, perceptually, cognitively, and emotionally, within the frameworkof the national education system. Physical education is not just a decoration or ornament attached to a school program as a tool to keep children busy. But through well-directed physical (Enriquez 2014) education. Students will develop skills involved in conducive activities, develop themselves socially, and develop physically and mentally. (Banyen, Viriyavejakul, and Ratanaolarn 2016) Physical education is a learning process through physical activities designed to improve physical fitness, develop motor skills, knowledge and behavior of healthyand active living, sportsmanship, and emotional intelligence. Physical education plays a positiverole in the world of education. Through physical education students can develop the skills and values contained therein through physical activity.

## PSYCHOMETRICS TRADITIONAL SPORT

Traditional sport or traditional sport is an original folk game as a national cultural assetthat has elements of traditional physical exercise. Folk games that have developed for a long time need to be preserved, because apart from being a sport of entertainment, fun, and the needfor social interaction, this sport also has the potential to improve the physical quality of the players.

Kogoya et al. (2023) Traditional sports were originally created from folk games as spare time fillers. Because the game is very fun and does not require a very large cost, the game is growing and loved by the surrounding community. This game is played and loved from children to adults, accordingto the character of the game used.

Traditional sports are one of the cultural heritages of their ancestors that have the purityand style of local traditions. Indonesia is known to have a very diverse traditional culture.

However, along with the rapid development of technology



in this era of globalization, the richness of traditional culture is sinking more and more. Everything began to sink along with the influence of foreign cultures, the rise of playstation games, game watch, computer games, etc. Nofrizal et al. (2023) The sinking of the traditional game culture is certainly a concern for all of us. If the current generation does not try to preserve it, then gradually traditional culture will sink and one day will become extinct, so that the identity of the Indonesian nation as a nation with high culture will be lost. sustainable.

Law No. 3 of 2005 concerning the National Sports System, the government's attention to creating and preserving and redeveloping traditional game culture is increasingly visible. This, seen at the opening of a national sporting event, is always displayed among other attractions, which is one type of traditional sport displayed. In fact, the Ministry of Youth and Sports of the Republic of Indonesia has rolled out two (2) programs of superior activities at the national level, namely the Traditional Sports Festival and the National Sports Invitation. These two national scale events are held alternately every two years. For the Festival falls on an even year and the Invitation is held on an odd year.

Irfan et al. (2023) This traditional sport is not lost, so we have to make new innovations through learning by making measurements and learning models, so that the development of this traditional sport comes back to life and can be competed at the regional, national and even international levels, therefore based on the explanation above, the researcher will make a new innovation to create a traditional sport psychometrics learning model.

**2. METHOD**

Research Development of the traditional sport psychometrics learning model to improve the learning outcomes of doctoral students of Physical Education

based on online and offline media uses the Research and Development method from Borg and Gall which consists of ten steps, including: (1) Conducting research and information gathering (library review, subject observation, preparation of the subject matter report) (2) Planning (defining skills, formulating goals, determining teaching sequences, and small-scale trials) (3) Developing initial product forms (preparing teaching materials, drafting handbooks, and evaluation equipment) (4) Conduct initial field tests (using 6-12 subjects) (5) Revise the main product (according to the suggestions from the results of the initial field tests) (6) Conduct main field tests (with 20-50 subjects). (7) Revise the product (based on suggestions and results of the main field trials). (8) Field testing with 30-100 subjects (9) Final product revision (10) Reporting on products in journals, working with publishers who can do commercial distribution

**3. RESULTS**

After going through small group trials and revising the second phase of the product component of learning development for the doctoral study program Physical Education based on online and offline media, followed by field trials and revision of the third phase of product development components. Physical Education doctoral study program learning based on online and offline media to determine the effectiveness of the product, carried out the implementation process using a pre-experimental research design in the form of "one group pretest-posttest design". The product trial was carried out on postgraduate Physical Education doctoral students at the State University of Jakarta with a total of 30 students taking the *Sport Psychometrics*.

To test the effectiveness of the application of this online and offline media-based textbook product, the "t-test" technique was used. data from the *pretest* and *posttest* material knowledge skills *Sport Psychometrics* test *Lillifors* at a significance level of 0.05.

Table 4.7. Learning Model *Sport Psychometrics* based on online and offline media with t-test **Paired Samples Statistics**

			Statistic	Bootstrap <sup>a</sup>			
				Bias	Std. Error	95% Confidence Interval	
						Lower	Upper
Pair 1	Pretest	Mean	97,73	,00	,32	84,73	86,40
		N	50				



	Std. Deviation	2,110	-,051	,357	1,768	2,792
	Std. Error Mean	,323				
Posttest	Mean	90,23	,05	,57	91,30	93,17
	N	50				
	Std. Deviation	2,361	-,050	,195	2,116	2,888
	Std. Error Mean	,369				

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

**Paired Samples Correlations**

	N	Correlation	Sig.	Bootstrap for Correlation <sup>a</sup>			
				Bias	Std. Error	95% Confidence Interval	
						Lower	Upper
Pair 1 Pretest & Posttest	50	,561	,050	,005	,155	,006	,632

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

**Paired Samples Test**

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Pretest - Posttest	-6,700	2,769	,505	-7,734	-5,666	13,255	49	,000

**One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
Pretest	50	85,53	2,315	,423
Posttest	50	92,23	2,569	,469

**One-Sample Test**

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pretest	175,532	49	,000	87,143	86,67	90,40
Posttest	190,105	49	,000	95,533	94,27	97,19

**Description:**

Mean : Average test results  
 N : Number of samples  
 Sig : Significance level 0.05

Sport Psychometricsteaching material, there are several suggestions and inputs used for product development revision, namely: (1) the implementation must be clearer and more detailed, (2) the theory of the material must be relevant, (3) the instrument made based on conceptual and

Based on the results of the effectiveness test using the t-test operationaldefinitions, (4) the Edmodo learning model must (see Table 4.7), from the difference in the results of the be in accordance with the material displayed.

*pretest* , the value of  $t_{175.532}$  is greater than the value of  $t_t = 0.000$  and the *posttest* is obtained by the  $t_{190.105}$  greater than the small trial process and getting suggestions and input from price of  $t_t = 0.000$  (at a significance level of 0.05), then the Physical Education doctoral students who took part in small null hypothesis is **rejected**. So it can be concluded that, there group trials. The data obtained during the small group trial is a significant difference between the *pretest* and *posttest* was used as a basis for revising phase II on the development results of *Sport Psychometrics* for doctoral program students. of Sport Psychometrics teaching materials. Based on the From the research data (see Table 4.7), the average *pretest* results ofsmall group trials, it is known that the product with a mean = 87,143 is more smaller than the average development of Sport Psychometrics teaching materials is *posttest* mean = 95,533. Thus, it can be feasible to use and the indicators contained in this product stated that online and offline media-based learning products meet the standards. To further refine this development are **effectively** used to improve the learning skills of doctoral product, there are several suggestions and inputs for revising, students in the *Sport Psychometrics* at the Jakarta State namely: (1) adding the latest theory and research journals, (2) Universitypostgraduate program. improving the difficulty level of e-learning learning, (3) creating an official edmodo account with the Sport Psychometrics group.

**4. DISCUSSION**

The data from small group trials, field trials, which have been After going through the field trial process and receiving described, have shown that the online and offline media- suggestions and input, a phaseIII revision or final revision of based Sport Psychometrics teaching materials developed in this development product was carried out. The reference for this study were considered effective and qualified to be revising the final stage of this product is the data obtained applied to doctoral students. Based on the data that has been during field trials or large group trials on the product collected from Sport Psychometrics experts, as well as data development of Sport Psychometrics teaching materials. during small group trials and field trials from doctoral Based on the results offield trials, it turns out that there is no students, there are several parts of the product that need to be need to revise the product development of Sport revised. This is done to further optimize the benefits of Psychometrics teaching materials, all indicators have met the learning development. The following will describe matters standards and are suitable for usein KKNi Level 9 learning in relating to the revision of stage 1, revision of stage 2, revision accordance with KKNi learning outcomes.

of stage 3, supporting and inhibiting factors, as well as the strengths and weaknesses of the product development of 5. online and offline media-based Sport Psychometrics learning models

for physical education doctoral students as follows: :

This phase I revision was carried out after getting advice and input from sports andpsychology experts. The data obtained is used as a reference for the next revision, namely atthe small group trial stage. Based on the results of the validation process from the three sports and psychology experts, it was found that the product development of Sport Psychometricsteaching materials based on online and offline media was able to meet the standards and wasvery feasible to use. However, to further refine the design product of the

**CONCLUSION**

From the results of field trials and discussion of research results, it can be concluded asfollows:

Based on the results of expert evaluations and trials that have been carried out, the finalproduct or the final product of textbooks can improve learning outcomes for the Sport Psychometrics course with 11 online media-based learning development materials and offline,namely: (1) Benjang, (2) Blockade, (3) Dagongan, (4) Stilts, (5) Block Running, (6) Sepak Rago, (7) Chopsticks, (8) Tug of War, (9) Long Terompah, (10) Eagle Sambar, (11) Cuddle Pillow.

Based on the results of product trials carried out in this study,



it can also be concluded that Sport Psychometrics teaching materials products based on online and offline media are effective for improving learning outcomes for Sport Psychometrics courses in accordance with KKN level 9 learning. This can be seen from the results of product trials, meaning that Sport Psychometrics teaching material products based on online and offline media are effective for improving the learning skills of Doctoral Physical Education students.

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## REFERENCES

1. Banyen, W., C. Viriyavejakul, and T. Ratanaolarn. 2016. "A Blended Learning Model for Learning Achievement Enhancement of Thai Undergraduate Students." *International Journal of Emerging Technologies in Learning* 11(4): 48–55.
2. Batsila, M., Ch Tsihouridis, and D. Vavougiou. 2014. "Entering the Web-2 Edmodo World to Support Learning: Tracing Teachers' Opinion after Using It in Their Classes." *International Journal of Emerging Technologies in Learning* 9(1): 53–60.
3. Enriquez, Mark Angelo S. 2014. "Students' Perceptions on the Effectiveness of the Use of Edmodo as a Supplementary Tool for Learning." *DLSU Research Congress*: 6–11.
4. Firdaus, Kamal et al. 2023. "Evaluation of Several Factors That Affect the Learning Outcomes of Physical Education." *International Journal of Human Movement and Sports Sciences* 11(1): 27–36.
5. Irawan, Vincentius Tjandra, Eddy Sutadji, and Widiyanti. 2017. "Blended Learning Based on Schoology: Effort of Improvement Learning Outcome and Practicum Chance in Vocational High School." *Cogent Education* 4(1): 1–10. <http://dx.doi.org/10.1080/2331186X.2017.1282031>
6. Irfan, M. et al. 2023. "Development of Traditional Sports-Based through Educational Tourism Model: Edu Ortrad as a Sports Industry Model." *International Journal of Human Movement and Sports Sciences* 11(2): 411–17.
7. Jufrianis et al. 2021. "THE EFFECT of KNOWLEDGE LEVEL (IQ) and PHYSICAL CONDITIONS (POWER, FLEXIBILITY and COORDINATION) on SMASH TECHNIQUE LEARNING SKILL in SEPAK TAKRAW." *Teoria ta Metodika Fizinogovihovanna* 21(3): 264–72.
8. Jufrianis, Jufrianis, Akbar Akbar, and James Tangkudung. 2019. "The Effect of Eye-Foot Coordination, Flexibility of the Limbs, Body Balance and Self-Confidence To the Accuracy of the Football of Sepak Takraw." *Jipes - Journal of Indonesian Physical Education and Sport* 4(2): 39–45.
9. Kogoya, Toni et al. 2023. "Developing the Value of Peace in Sport, Health, and Physical Education Lecture through Traditional Games." *International Journal of Human Movement and Sports Sciences* 11(2): 268–75.
10. Nofrizal, Dedi, Hari Setijono, Heny Setyawati, and Nasuka. 2023. "The Tual Sagu and Golek Sagu: Traditional Sports of the Meranti Archipelago Community, Indonesia." *International Journal of Human Movement and Sports Sciences* 11(2): 285–91.
11. Sujae, Ian Harris, Kim Chung Gon, and Michael Koh Teik Hin. 2017. "Technology Enhanced Teaching and Coaching of Complex Sport Skills – An Example of the Acro-Volley (Sepaktakraw) Power Smash (Kuda) and Normal Relay (Sila) Serve Techniques." *International Journal of Performance Analysis in Sport* 8(2): 82–93.
12. Tran Ngoc Giang, Nguyen Van Minh. 2014. "Edmodo - A New and Effective Blended Learning Solution." *Edmodo - a New and Effective Blended Learning Solution* (June): 1–6. [http://14.161.11.88/InternationalConference2014/Materials/NgocGiang\\_VanMinh.pdf](http://14.161.11.88/InternationalConference2014/Materials/NgocGiang_VanMinh.pdf).