Interactive Multimedia Application of Teaching Style as a Learning Medium for Physical Education Teachers

by Imran Akhmad

Submission date: 05-Jul-2022 12:31PM (UTC+0700)
Submission ID: 1866794398
File name: 21797-60531-1-PB.pdf (430.78K)
Word count: 3691
Character count: 19617

Kinestetik : Jurnal Ilmiah Pendidikan Jasmani 6 (2) (2022)
Kinestetik : Jurnal Ilmiah Pendidikan Jasmani
https://ejournal.unib.ac.id/index.php/kinestetik/index
DOI : 10.33369/jk.v6i2.21797

Interactive Multimedia Application of Teaching Style as a Learning Medium for Physical Education Teachers

Agus Salim Samosir[1]*, Imran Akhmad[2], Bangun Setia Hasibuan[3]
[123] Faculty of Sports Sciences, Universitas Negeri Medan, Medan, Indonesia

Article Info

Article History :

Received :May 2022
Revised : June 2022
Accepted : June 2022

Keywords:

Interactive Multimedia, Physical Education Teacher, Teaching Style,

Abstract

The research aims to produce a teaching style application product in health sports Physical Education (PE) teachers based on interactive multimedia. This research is expected to overcome difficulties for Physical Education teachers who have been on the use of teaching styles carried out by Physical Education teachers only centered on teachers continuously and have not fully applied variations in teaching styles so that it causes learners to become bored and can inhibit the potential that exists in learners. In other respects, the lack of knowledge that Physical Education teachers have on teaching style, and the low interest of teachers to read books and find sources for teaching styles. The research stages are; (1) The pre-development stage, at this stage, needs analysis is carried out through a survey of the level of tool needs for users, instrument preparation and consultation with experts. (2) The development phase of developing the product "Teaching Style Application" starting from the initial product development of manuscripts (manuals), designing work and application design, small group trials, stage I improvements, large group trials, phase II improvements, mass production. (3) The evaluation stage of product results implementation and product desimination.

OPEN ACCESS

*Corresponding email : agussalim@unimed.ac.id

ISSN 2685-6514 (Online)
ISSN 2477-331X (Print)

INTRODUCTION

Physical Education has an important role in the implementation of national education, so that Physical Education is an education that uses physical activities designed to improve physical fitness for students, from motor skills, social and knowledge. The implementation of education is inseparable from the role of teachers as one of the learning resources . So educators must have academic qualifications and competencies as a source of learning. The competence that must be possessed by every educator is one of them is pedagogical competence. Teaching style is one example in the application of pedagogical competencies. The delivery of learning can be accepted by learners if the teacher uses the right learning style in the learning process.

The rapid development of technology today makes people want to always create a creation and trigger to create something new that can be applied and can be used effectively and efficiently. The development of this technology also penetrates in a very vital aspect of human life so that it stimulates all human mindsets and is focused on the use of technology including in the field of sports education. This is a basis that the importance of a generation that has new ideas that are more creative and innovative in developing science and technology in the field of sports education.

This condition formulates that the rapid development of technology today makes people want to always be creative to make something new breakthroughs that can be applied and can be used effectively and efficiently. Given the rapid role of science and technology for the advancement of sports, research should be able to produce appropriate technology products to help the implementation of education in the Covid-19 pandemic. The application of science and technology in the world of education in general leads to the fields of Sport Industry, Techno Sport and Sport Science. This is the basis of the importance of research to develop science and technology in sports education.

The thing that happens to the use of teaching styles carried out by teachers of Physical Education sports health (Physical Education) tends to be centered on teachers continuously and has not fully applied variations in teaching styles so that it causes learners to become bored and can inhibit the potential that exists in learners. Another obstacle that Physical Education teachers have in the teaching process where the lack of knowledge that Physical Education teachers have on teaching style, and the low interest of teachers to find the source of teaching style and as we know where so far the source of teaching style that is still centered only on teaching style books only so that it becomes an obstacle for teachers in the application of teaching styles, especially by teachers who do not like to read books.

This condition is very necessary for a collaboration between practitioners and sports academics with experts in various fields. Science and Technology products that will be produced in the form of Interactive Multimedia Applications Where in its manufacture it requires collaboration between sports academics and experts in the field of technology to produce digital learning products that are more effective, efficient, and objective One of the science and technology products that will be produced in this research is the Application of Learning Media With The Application of Teaching Style of Physical Education Based on Interactive Multimedia.

In relevant research conducted with the title Digital Based Learning

Media Development to Increase Baseball Technique for Grade VI Elementary School Studen. In this study the method used is to use a research and development (R&D) approach with the Borg and Gall model consisting of 10 (ten) research steps: (1) to collect information; (2) planning; (3) product development; (4) the test field; (5) revision of the main product; (6) main field tests; (7) revision of operational products; (8) operational field trials; (9) final product and (10) socialization and implementation . Based on 3 questions (hitting, catching and throwing technique) tested on 30 people in the Pre-Test obtained quite good scores and in the Post-Test the score improved in a good way. angket and media test questionnaire for Physical Education teachers. Instrument identification is structured with the aim of obtaining data about a teacher's opinion of the media they are using or using, and the type of media they want. Trials of small and large groups of instruments are based on the concept of evaluation of Physical Education teachers who have been given media treatment.

Given the importance of a learning media application with the application of teaching style in the field of Physical Education based on interactive multimedia, a teacher must have a knowledge of the teaching style as a reflection in the management of the learning process in learners. This research will produce a learning media application with the application of teaching styles that aim as a tool in Physical Education teachers as a learning resource for the learning process to learners. This product is designed to make it easier for teachers to know what teaching style is appropriate to use to learners with customized materials.

How the application of learning media works with the application of teaching style where the application contains a model of teaching style as well as the appearance of video tutorial teaching style Muska Mosston packaged in the form of animation, so that teachers can do learning before carrying out the learning process to learners. By developing the application of learning media with the application of this teaching style, it is expected that unimed will be one of the state universities that directs a right more to the science and technology in the field of sports education so that it can be more independent and able to catch up in the field of science and technology, and also may be able to increase teacher knowledge in the learning process in Indonesia, especially in North Sumatra.

METHODS

This research uses a Research and Depelopment approach or development research [13] which will be grouped into 3 stages, while the resistance is (1) the pre-development stage, which is in The Year stage is carried out needs analysis through surveying the level of application product needs for users, instrument preparation and consultation of experts. (2) The development phase of developing a product "teaching style application" starting from the initial product development of manuscripts (manuals), designing work systems and application product design, small group trials, stage I improvements, large group trials, phase II improvements, mass production. (3) The evaluation stage of product implementation and product desimination.

Figure 1. Research flow diagram

The study instrument used closed and open questionnaires. Closed questionnaires are used to determine the effectiveness and efficiency of the product. Open questionnaires are used to determine the weaknesses and nonconformity of the product to the needs of the product and are used during focus group discussions (FGD). The data analysis techniques used in this study are: (1) needs analysis using percentage techniques to see the level of product needs, (2) To measure the effectiveness and efficiency of products using as a validity test with FGD techniques by 3 experts, namely lecturers in learning strategies, lecturers / IT experts and PHYSICAL EDUCATION teachers. (3) to see the effectiveness and efficiency of the product used phase I trials as many as 30 people and group II trials as many as 60 people using percentage and quantitative.

The research used by researchers in the validation process of the feasibility of android-based "Chemical lab Work Guide" application as a medium of sma chemistry practicum guidance is qualitative validation with data retrieval techniques in the form of questionnaires / questionnaires directly with the type of choice. Data analysis in the form of product development process data, namely information data from media experts and material experts and data on assessment of the feasibility of learning media products by media experts and material experts. Here's the average and conversion formula in quantitaive analysis:

Table.1. Konversi Qualitative Data

Scala	Criterion	Interval formula	Average score
5	Excellent	X ≥ Xi + 1,8 SB	X > 4,2
4	Good	Xi + 0,6 SBi <X≤ Xi + 1,8 SBi	3,4 <X≤4,2
3	Enough	Xi-0,6 SB <X ≤ Xi +0,6 SBi	2,6 <X≤3,4
2	$\bar{X} = \frac{\Sigma x}{N}$	Xi-1,8 SB <X ≤ Xi -0,6 SBi	1,8 <X≤2,6
1	very less	X ≤ Xi - 1,8 SB	X≤1,8

RESULT

From the needs analysis that has been done to 35 Respondents consisting of Physical Education teachers so that 89% of respondents said that they have never done learning on understanding teaching styles using interactive media and 11% never know learning to understanding teaching styles by using interactive media.

The initial product design of interactive media teaching style is a product that can help teachers in understanding teaching styles in the time of the covid-19 pandemic. This interactive multimedia work system teaching style begins by accessing this interactive multimedia application teachers can find out the implementation of Musca Moston's teaching style such as examples of command teaching styles, inclusions, exercise styles and several others.

The application product that has been designed is further assessed by media experts and learning strategists and after this stage will be conducted a phase I product trial with a sample. The results of media validation provide some input.

Table 2. Validation of Media Expert Assessment Stage I

No	Indikator	Score	Kategory
1	Display Design	3,5	Good
2	View Text	3	Enough
3	Programming	3,5	Good
4	Video	3	Enough
5	Audio	3	Enough
Sum		16	
Average		3,2	
Media Quality Category		Enough	

The table above shows the results of media experts' assessment of this teaching style interective media product only display design and programming that get a score of 3.5 with a good category, the rest get a score of 3 and are still categorized enough. The results of the assessment of the teaching style interactive media indicator with a score of 3.2 and still categorized enough and need improvements to improve the product so that it can be tested to users.

Table 3. Validation of Expert Assessment of Material Stage I

No	Indikator	Score	Kategory
1	Learning Images	3,5	Good
2	Vidio Learning	3,5	Good
3	Learning Materials	3,5	Good
4	Material Explanation	3,7	Good
Sum		14,2	
Average		3,55	
Media Quality Category		Good	

From the material expert to the interactive media assessment shows the results of the four indicators of the assessment of the teaching style's external media products show the results of assessments of learning images, learning videos, and learning materials get a score of 3.5 and the material explanation indicator gets a score of 3.7 with a good category. The results of the assessment of the teaching style interactive media indicator with an average score of 3.55 and categorized well and need improvements to improve the product so that it is better.

After the validation of phase I and getting some improvements to the improvement of the product, the researcher made improvements to the improvement of the product which will be carried out to the validation of phase II by experts. The validation results of phase II are as follows:

Table 4. Validation of Media Expert Assessment Phase II

No	Indikator	Score	Kategory
1	Display Design	4,5	Excellent
2	View Text	4,3	Excellent
3	Programming	4,5	Excellent
4	Video	4	Good
5	Audio	4,2	Good
Sum		21,5	
Average		4,3	
Media Quality Category		Excellent	

The results of phase II validation by media experts above show an assessment of this teaching style interective media product from display design indicators, display text and programming that get scores of 4.5 and 4.3 with excellent categories, while vidio and audio indicators with scores of 4 and 4.2 with good categories. The results of the assessment of the teaching style interactive media indicator with an average score of 4.3 and categorized very well and furthermore the product can be tested for pain.

Table 5. Validation of Material Expert Assessment Phase II

No	Indikator	Score	Kategory
1	Learning Images	4,3	Excellent
2	Vidio Learning	4,4	Excellent
3	Learning Materials	4,3	Excellent
4	Material Explanation	4,5	Excellent
Sum		17,5	
Average		4,37	
Media Quality Category		Excellent	

After improvements from the vaidasi material expert stage I, then the researchers validated phase II. The results of phase II validation on the learning image indicator and learning meteri get a rating score of 4.3 with excellent categories. While learning videos get a score of 4.4 and the explanation material gets a score of 4.5 with an excellent category. The results of the assessment of all indicators on material experts with an average score of 4.37 and categorized as excellent and worthy of product trials.

After improving the validation results of both experts, each provides input for interactive multimedia products that can later be used as a learning medium for teaching style materials to teachers. This became the basis for researchers to conduct trials on sempel. So from the results of improvements that have been made, the interactive multimedia product of this basic teaching style technique can be used in tests I and II on sempel.

The group I trial was conducted by 30 Physical Education teachers with the aim of assessing the feasibility of interactive media by filling out user eligibility test questionnaires. This questionnaire is divided into media aspects, material aspects, and learning aspects. Data generated from phase I trials is:

Table 6. Phase I Trial Results

Indikator	Score	Kategory
Media Aspects	4,07	Good
Material Aspects	3,58	Good
Learning Aspects	3,67	Good

The results of early field trials showed that the interactive multimedia teaching style developed by researchers scored 4.07 for media aspects, 3.58 for material aspects, and 3.67 for learning aspects so that it scored an average score of 3.79 or fall into the category of "Good". Media in this category is worth using as a learning medium..

Of the three indicators showed the results of the implementation of phase I trials for the whole still in the category of "Good" with a note that still has to be improved to get maximum results in the phase II trial.

DISCUSSION

Research conducted on the influence of interactive media as an optimization of teaching style understanding for Physical Education teachers. It can be believed that the learning process becomes an obstacle by teachers who on understanding are still minimal in the application of teaching styles. These obstacles need an innovation in the learning process by using interactive media to improve the understanding of teachers in the teaching process. The findings in this study are in line with previous research showing that there needs to be an innovation in the teaching process, in order to improve the skills of the teacher independently.

This study was conducted on high school teachers with different schools in phase I and stage II trials. The results of the study in the phase I trial of the three indicators of media aspects, meteri aspects and learning aspects for the whole

are all in the category of "Good". While the results of the phase II trial of the same three indicators showed the results of the implementation of the phase II trial for the whole in the category "Very Good" so that later it can be implemented and desiminated on the product.

CONCLUSION

The results of this study concluded that the development of learning innovation is very necessary one of them by making interactive media learning media teaching style. Furthermore, from the results that have been able to use interactive media teaching style may improve the understanding of teachers in knowing what teaching style can later be applied in the subject of Physical Education [18]. In addition, the effectiveness and efficiency of the product in learning becomes a plus in the learning process by Physical Education teachers

ACKNOWLEDGEMENT

The learning process is a series of information transmissions carried out by teachers and later must be conveyed to students properly and correctly. This makes the teacher must understand the overall type of teaching style that is right so that later it will be adjusted and teaching material. This condition requires teachers to understand more about the process of good teaching style. Advice in this implementation can later be used by teachers of other subjects for the occurrence of a good teaching process as expected. This in the future will be carried out the development of applications similar to the implementation adapted to the subjects in the school.

REFERENCES

Agustrianita, A., Suherdi, D., & Purnawarman, P. (2019). Teachersâ€™ Perception on Studentsâ€™ Learning Style and Their Teaching. Indonesian Journal of Curriculum and Educational Technology Studies, 7(1), 11-19.

Awla, H. A. (2014). Learning styles and their relation to teaching styles. International journal of language and linguistics, 2(3), 241-245.

Droter, J. R. (2020). T-Scan as an Education Tool. In Handbook of Research on Clinical Applications of Computerized Occlusal Analysis in Dental Medicine (pp. 1316-1356). IGI Global.

Guest, A. M., Siamoo, P., & Maige, G. (2021). Integrating global and local best practices for youth development afterschool: Constructing the Kilimanjaro extracurriculars self-assessment. Cogent Education, 8(1), 1982600.

Kapulin, D. V., Chemidov, I. V., & Kazantsev, M. A. (2017). The design of the automated control system for warehouse equipment under radio-electronic manufacturing. In Journal of Physics: Conference Series (Vol. 803, No. 1, p. 012064). IOP Publishing.

Kattayat, S., Josey, S., & Asha, J. V. (2017). Mobile Learning Apps in Instruction and Students Achievement. Int. J. Interact. Mob. Technol., 11(1), 143-147.

Keiler, L. S. (2018). Teachers' roles and identities in student-centered classrooms. International journal of STEM education, 5(1), 1-20.

Kunda, D., Neudorf, E. G., Perris, N., Szeto, L. M., & Krause, D. V. (1994, May). Electrical impact of a NUG under 5 MW rating when connected to a distribution feeder with various transformer connections. In Proceedings of Industrial and Commercial Power Systems Conference (pp. 273-284). IEEE.

Kuswanto, J. (2019). Perancangan Media Pembelajaran Model Game Mata

Pelajaran Penjaskes Kelas V. Jurnal SITECH: Sistem Informasi dan Teknologi, 2(1), 103-108.

Lin, M. H., & Chen, H. G. kuang-S. Liu,"A Study of the Effects of Digital Learning on Learning Motivation and Learning Outcome," EURASIA J Math Sci Tech Ed, 13(7), 3553-3564.

Mupa, P., & Chinooneka, T. I. (2015). Factors Contributing to Ineffective Teaching and Learning in Primary Schools: Why Are Schools in Decadence?. Journal of education and practice, 6(19), 125-132.

Nguyen, T. (2015). The effectiveness of online learning: Beyond no significant difference and future horizons. MERLOT Journal of Online Learning and Teaching, 11(2), 309-319.

Pratama, D. S., Sumarni, S., Safaruddin, S., & Iyakrus, I. (2021). Digital Based Learning Media Development to Increase Baseball Technique for Grade VI Elementary School Students. Journal of Research and Educational Research Evaluation, 10(1), 19-27.

Ridwan, H., Sutresna, I., & Haryeti, P. (2019, October). Teaching styles of the teachers and learning styles of the students. In Journal of Physics: Conference Series (Vol. 1318, No. 1, p. 012028). IOP Publishing.

Romanelli, S., & Bottai, L. i in., 2001. In Evaluation of forest fire risk in Tuscany (central Italy) by the use of GIS and satellite data. Materiały I Krajowej Konferencji: System Informacji Przestrzennej w Lasach Państwowych. Rogów (pp. 3-5).

Syahputra, F., & Maksum, H. (2020). The Development of Interactive Multimedia Learning in Information and Communication Technology Subjects. Journal of Education Research and Evaluation, 4(4), 428-434.

Thomas, J. R., Thomas, K. T., & Williams, K. (2008). Motor development and elementary physical education are partners. Journal of Physical Education, Recreation & Dance, 79(7), 40-43.

Wijaya, M. A., & Kanca, I. N. (2019). Media pembelajaran aktivitas pengembangan PJOK untuk Pendidikan Dasar dan Menengah. JOSSAE (Journal of Sport Science and Education), 4(1), 1-6.

Interactive Multimedia Application of Teaching Style as a Learning Medium for Physical Education Teachers

ORIGINALITY REPORT

15%	12%	7%	6%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	journal.unnes.ac.id Internet Source	3%
2	download.atlantis-press.com Internet Source	2%
3	eprints.uny.ac.id Internet Source	2%
4	ejournal.unib.ac.id Internet Source	2%
5	Rifqi Aufan, Abdul Haris Handokko. "Design Aktifitas Fisik Dan Lafit Berbasis Android Untuk Meningkatkan Kebugaran Jasmani Para Lansia", Journal Coaching Education Sports, 2022 Publication	1%
6	Nuryadi Nuryadi, Luky Kurniawan, Isna Kholifa. "Developing mobile learning based on ethnomathematics viewed from adaptive e-learning: Study of two dimensions geometry	1%

on Yogyakarta palace's chariot", International Journal of Education and Learning, 2020
Publication

7	Syamsul Gultom, Dewi Endriani, Agustin Sastrawan Harahap. "Less Emotion but More Fatigue: Social-Emotional Learning (SEL) Competencies, and Compassion Fatigue among Educators during the COVID-19 Pandemic", Kinestetik : Jurnal Ilmiah Pendidikan Jasmani, 2022 Publication	1 %
8	garuda.ristekdikti.go.id Internet Source	1 %
9	Submitted to Universitas Jember Student Paper	1 %
10	Submitted to Universitas Negeri Medan Student Paper	<1 %
11	Citra Azhariat Malasari, Pasha Erik Juntara. "Development Of Basic Gymnastics Course Textbooks For Students Of Physical Education Study Program", Kinestetik : Jurnal Ilmiah Pendidikan Jasmani, 2021 Publication	<1 %
12	dokumen.pub Internet Source	<1 %
13	e-journal.stkipsiliwangi.ac.id Internet Source	<1 %

14	ejournal.undiksha.ac.id Internet Source	<1 %
15	www.grafiati.com Internet Source	<1 %
16	Veramyta Maria martha Flora babang, Maria Andriani Barek Ladjar, Lukas Maria Boleng. "The Influence Of Reciprocal Teaching Style, Exercises And Command On The Learning Outcomes Of Pencak Silat Tepak Paleredan", Kinestetik : Jurnal Ilmiah Pendidikan Jasmani, 2020 Publication	<1 %
17	files.eric.ed.gov Internet Source	<1 %
18	journal.uad.ac.id Internet Source	<1 %
19	Wahyu Nuning Budiarti, Mawan Akhir Riwanto. "Development of Indonesian Language Learning Videos for Elementary Schools Storytelling Activities for Distance Learning", Proceedings of the 4th International Conference on Learning Innovation and Quality Education, 2020 Publication	<1 %

Exclude quotes	Off	Exclude matches	Off
Exclude bibliography	On		