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Increasing Learning Motivation by Developing Interactive Multimedia in Physical, Sport and Health Education (PJOK) Lessons at SMP Negeri 14 Madiun

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Abstract

This study aims to test the application of interactive multimedia based on an articulate storyline to increase student motivation in PJOK lessons. Work Safety material focuses on research studied by grade VIII students at SMP Negeri 14 Madiun. This research is classified as development research developed using the ADDIE model, which consists of five stages: analysis, design, development, implementation, and evaluation. The data analysis techniques used are quantitative and qualitative descriptive analysis techniques. The results of research on interactive multimedia development based on articulate storyline work safety material developed according to material experts, media experts, and linguists are very valid, with a percentage of 84%, 84%, and 88%. Student learning motivation using articulate storyline learning media is classified as a very high category with an average percentage of 86%. The results of this study show that the development of interactive multimedia based on an articulate storyline can increase student motivation in class VIII PJOK lessons at SMP Negeri 14 Madiun.

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INTRODUCTION

The current implementation of education and learning is contrary to the context of 21st-century learning and the industrial revolution 4.0; a barrier wall causes students to explore less creativity, taste, and charity. The most important aspect of facing global challenges in the 21st century and industrial revolution 4.0 is education. The existence of conscious and planned efforts means that education aims to realize learning and teaching activities by developing students' abilities actively and consistently by Law of the Republic of Indonesia Number 20 of 2003 Article 1. Today, the challenges of the world of education are increasingly complex and demand preparation and severe thinking. These technological advancements allow automation in almost all fields. Not over the hustle and bustle caused by the Industrial Revolution 4.0, which was accompanied by the development of the disruption era, we were suddenly surprised by the emergence of Society 5.0.

KEMENKO PKM (2021). Raden Wijaya Kusuma Wardhana said that the Era of Society 5.0 places humans as its main component. The era of Society 5.0 requires three primary abilities that every individual needs to have, namely: creativity, critical thinking, communication, and collaboration. "Indonesian Human Resources must have basic digital technology skills and a creative mindset because the prerequisites for competence in the 21st century focus on problem-solving, collaboration, critical thinking, and creative abilities," Wijaya said when delivering a speech at the National Conference of Teaching and Learning Summit (TLS). Education plays an essential role in welcoming innovative society 5.0. Education aims to realize an intelligent, characterful, and humane society. There are four critical competencies in learning: knowledge, skills, attitude, and value. Knowledge and skills are closely related to student competence, while attitude and value are related to student character formation.

The signs of an era of disruption are already evident; (1) learning is no longer limited to knowledge packages, (2) more informal learning patterns, (3) self-motivated learning orientation, and (4) many ways to learn with many sources. Human resources with high innovation, learning power, and creativity are the target of many organizations. The skills needed are accommodated in the 4Cs (Creativity, Collaboration, Critical Thinking, and Communication) (Pujiriyanto, 2019, p. 32).

Responding to the challenges of 21st-century learning and the era of society, 5.0 can be integrated through interactive multimedia based on Articulate Storyline to provide opportunities for students to have 4C skills adapted to the 2013 curriculum. In schools, there is learning, a process of teacher interaction and learning in a learning environment accompanied by learning resources. The learning process is said to be successful if students can understand the material compiled previously by the teacher, which is packaged in a fun way so that it can encourage students to be active and creative for the achievement of learning objectives (Suyono &; Hariyanto, 2016: 207).

In PJOK learning, especially regarding affective, cognitive, and psychomotor aspects provided in teaching and learning activities at school. To achieve various affective, cognitive, and psychomotor dominance and overcome various difficulties from students, that are important to pay attention to educators learning strategy factors and ways of delivering learning so that learning strategies are needed (Metzler, 2017: 9).

Physical education is a form of education that is arranged systematically and directed through physical activities which contain cognitive, affective, and psychomotor elements to improve individuals as a whole (Wiarto, 2015: 2). This is supported by the opinion (Loprinzi et al., 2012, p. 606) which states that with the physical activity of a person children have positive changes in psychological health and cardiorespiratory fitness. Various activities in PJOK are directed at mastering the development of movement skills, developing physical fitness, and a healthy lifestyle of big ball games, athletics, martial arts, gymnastics, rhythmic movements, other activities, and health materials.

Based on the results of observations made by researchers while teaching at SMP Negeri 14 Kota Madiun, 1) there are learning support facilities such as computers, whiteboards, and LCD projectors. 2) learning that was initially carried out online changed to face-to-face learning due to the pandemic so that students are accustomed to using technology in their learning, (3) some students are crowded when learning activities take place so that teachers have to reprimand them, 4) lack of learning motivation in students can be seen from the lack of interest in reading so that for PJOK learning materials that require much information by reading.

Students can optimize their learning motivation because motivation is one factor that becomes a problem for learning achievement. "Learning motivation is a non-intellectual psychic factor. Its distinctive role is in terms of growing passion, feeling happy, and being eager to learn (Sardiman, 2016)". Students with solid motivation will have much energy to do learning activities. In efforts to attract students' attention and increase student learning motivation, learning aids are needed, including appropriate and effective learning media that can create a conducive, engaging, fun learning atmosphere and encourage the success of teaching and learning activities.

The selection and use of media in learning activities should be adjusted to students' conditions and needs and by the development of science and technology. Media made by teachers can be in the form of electronic media, print media, charts, maps/ globes, appearances, games (games), stories, LKS / LKPD, miniatures, and many more types that can be categorized as learning media. Development of learning media using laptops, computers, or smartphones, one of which is interactive multimedia based on articulate storylines in learning activities. The use of interactive multimedia based on an articulate storyline in learning is still rarely found, even though it already exists. However, its use as a learning medium still needs to be improved.

Articulate Storyline is one of the learning media that is deliberately made to package learning. Utilization of an Articulate Storyline as a learning medium that involves students directly so that students will be actively involved in learning. (Indirawati Leztiyani, 2021: 33) In her research said, "Articulate Storyline is a container or tool that becomes material in interactive teaching that can build student enthusiasm or students in the learning process because it has various practical menus that can support a more enjoyable learning process. Interactive multimedia based on Articulate Storyline can generate student motivation in learning activities. This is supported by research (Rafmana &; Chotimah, 2018: 64), which states that interactive multimedia based on Articulate Storyline potentially increases student learning motivation.

Based on the background that has been studied by previous researchers and problems in the field, it is necessary to develop a learning media entitled "Development of Interactive Multimedia Based on Articulate Storyline to Increase Student Learning Motivation in PJOK Lessons at SMP Negeri 14 Madiun.

METHODS

This research is a Research and Development (RnD) research with the ADDIE development model. This development has five stages: Analyze, Design, Development, Implementation, and Evaluation. In the first analysis stage, researchers collect information on the causes of student learning problems and the most appropriate type of learning media to support the learning process. The second stage of design is the stage of writing ideas into a formulation that describes the learning media in detail. The three stages of development (development) At this stage, media developers must produce complete learning media products. The four stages of implementation are testing learning media on target users and learning environments. The five stages of evaluation aim to analyze user responses to the learning media used and the effect of using learning media.

The data types used in this research and development are qualitative and quantitative. Qualitative data is obtained from inputs provided by experts. In this research and development, quantitative data is obtained from needs analysis and product trials in small and large groups.

The place where the researchers conducted the research was SMP Negeri 14 Madiun. The subjects of this study were 1 Physical Education, Sports, and Health educator, one media expert, and one learning expert. Small group test subjects consisted of 6 grade VIII students, and field trial subjects were conducted on 30 grade VIII students of SMP Negeri 14 Madiun. Data collection techniques in this study are observation, questionnaires, and validation. A validity test is carried out with an instrument in the form of a questionnaire. Articulate storyline learning media about work safety material using validated questionnaires useful for evaluating learning media. Questionnaires are arranged based on Likert scales. After the validity data is obtained, a

questionnaire analysis is carried out on the validity test previously filled in by the validator. Data analysis is carried out by determining each validator's scope by summing each indicator's score and finally providing a valid assessment using a percentage assessment procedure.

FINDINGS AND DISCUSSION

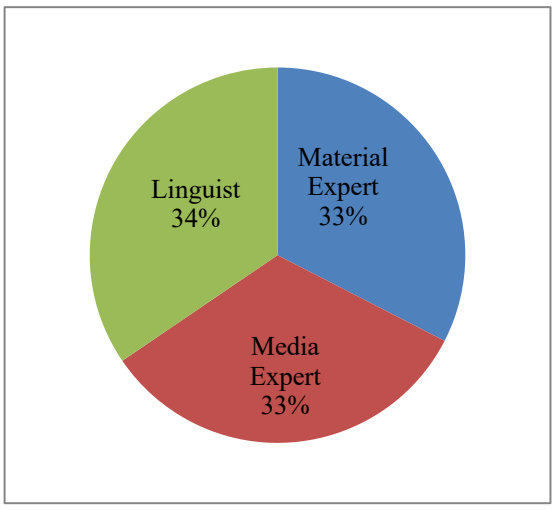
Based on the results of observations in the field of Physical, Sport, and Health Education, some information was obtained about the implementation of Physical, Sport, and Health Education, one of which was the lack of use of digital-based media that can help students in learning and the lack of student learning motivation in Physical, Sport and Health Education material related to material that provides more explanation than direct practice.

In addition, this study also conducted assessment/validation activities by several experts. The media validation assessment results aim to determine how much the validation value will determine the feasibility of Articulate Storylin-based Physical, Sport, and Health Education learning media. The validation analysis of Articulate Stroyline-based learning media in Physical, Sport, and Health Education from two material experts showed a combined percentage gain of 84%. Based on the analysis results, it falls into an excellent category where learning media can be used without revision.

The results of the validation analysis of Articulate Stroyline-based learning media experts on physical, Sports, and Health Education from two media experts showed a combined percentage gain of 84%. Based on the analysis results, it falls into an excellent category where learning media can be used without revision.

The results of the validation analysis of Articulate Stroyline-based learning media experts on physical, Sport, and Health Education from two linguists showed a combined percentage gain of 88%. Based on the analysis results, it falls into an excellent category where learning media can be used without revision.

Diagram 1. Percentage of Validation Results



The results of product trials are obtained after conducting trials on test subjects, namely students and educators, to discover shortcomings in Articulate Storyline-based learning media that researchers can use to improve the media for research.

PJOK learning media based on Articulate Storyline to increase student motivation has been validated by six students appointed as trial objects, namely randomly appointed students with the provision of 2 students with low, medium, and high abilities. The results of the validation analysis of Articulate Storyline-based learning media in PJOK learning are presented in Table 1.

PJOK learning media based on Articulate Storyline to increase student learning motivation which has been validated by one designated expert/validator. The results of the validation of teaching staff can be seen in Table 2.

Table 1 Results of Test Subject Validation (Students)

No.	Assessment Components	Validators						Average Percentage of Components
		1	2	3	4	5	6	
1.	Eligibility of contents	96%	93%	89%	89%	89%	86%	90%
2.	Eligibility of presentation	100%	100%	85%	100%	90%	100%	96%
Total Empirical Score of Expectation (TSe)		47	46	42	45	43	44	
Total Expectancy Score (TSh)		48	48	48	48	48	48	
Validation Percentage (V)		98%	96%	88%	94%	90%	92%	
Combined Percentage		**93%**						

Researchers researched to determine whether there was an increase in student motivation after using Articulate Storyline-based media in PJOK learning by distributing questionnaires before and after using the media. The distribution of the questionnaire that was carried out before using the Articulate Storyline media served to determine the initial level of motivation. After learning PJOK based on Articulate Storyline, the researcher distributed another questionnaire to determine how much the learning motivation of class VIII students increased. Based on the pretest and posttest data, it was found that before using the articulate storyline-based learning media, the average percentage of students' learning motivation was 65%, which was in the high category. After using the articulate storyline learning media, the average student motivation was 86%, which was very high. Student learning motivation in PJOK lessons based on articulate storylines has increased by 21%.

Table 2 Results of Test Subject Validation (Teacher)

No.	Assessment Components	Validators
1.	Eligibility of contents	82%
2.	Eligibility of presentation	90%
Total Empirical Score of Expectation (TSe)		41
Total Expectancy Score (TSh)		48
Validation Percentage (V)		**85%**

Based on the data above, it was obtained that learning motivation for indicators of perseverance in facing tasks before using media by 69% while after using media by 87%, an increase of 18%, indicators of tenacity in facing tasks before using media by 74% while after using media by 87%, an increase of 13% was obtained, indicators preferred to work independently before using media by 61% while after using media by 84% then, obtained an increase of 23%, indicators of getting bored quickly on routine tasks before using media by 69% while after using media by 86% then, an increase of 17%, indicators can maintain their opinions before using media by 61% while after using media by 86% then, an increase of 25%, indicators of pleasure to find and solve problems before using media by 54% while after using media by 85%, an increase of 31% was obtained.

Table 3 Results of Test Subject Validation (Students)

No	Indicators	Percentage Before	Information	Percentage After	Information
1	Diligent in facing the task	69%	Tall	87%	Very High
2	Tenacious to face the task	74%	Tall	87%	Very High
3	Prefer to work independently	61%	Tall	84%	Very High
4	Get bored quickly on routine tasks	69%	Tall	86%	Very High
5	Can defend his opinion	61%	Tall	86%	Very High
6	Happy to find and solve problems	54%	Keep	85%	Very High
	Average	65%	Tall	86%	Very High

Thus, before using articulate storyline-based learning media, the average percentage of student learning motivation was 65% which was in the high category. After using articulate storyline learning media, the average student learning motivation was 86%, which was very high. Student motivation in PJOK lessons based on articulate storylines increased by 21%.

CONCLUSION

Based on the results of the development that has been carried out, it was concluded that (1) The product of this development research is an interactive learning media application entitled "PJOK (Road Safety) Learning Media," which is accessed through each student's computer or laptop facilitated by the school; (2) Interactive learning media based on the articulate storyline in PJOK lessons aims to increase learning motivation of grade VIII students of SMP Negeri 14 Madiun; (3) the development of interactive learning media based on articulate storyline can increase student motivation in class VIII PJOK lessons at SMP Negeri 14 Madiun.

It has been proven that the use of interactive learning media based on an articulate storyline can increase student

motivation to learn PJOK subjects for Highway Safety material for grade VIII students of SMP Negeri 14 Madiun, we recommend: (1) As a reference for PJOK teachers to be able to use interactive learning media based on the articulate storyline; (2) there needs to be further studies and development to add benefits to improve PJOK a learning media.

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