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Development of Teaching Materials for Physical Fitness Materials Based on AutoPlay Media Studio 8 Application for Students of MTsN 1 Malang City

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Abstract

AutoPlay Media Studio 8 is an interactive multimedia application with many features, this study was developed to facilitate students in understanding physical fitness material. The purpose of this study is to add and develop fitness teaching materials based on AutoPlay Media Studio 8 for students of MTsN 1 Malang City. This type of research is included in research and development. The development model used in this study is ADDIE, which consists of 5 stages, namely (1) analysis, (2) design, (3) development, (4) implementation, and (5) evaluation. The sample involved in this study was 60 students of MTsN 1 Malang City. In addition, several experts were involved in product validation, namely 1 physical education learning expert, 1 physical fitness material expert, 1 media expert and 4 practitioners, namely MTsN 1 Malang City PJOK teachers. The instruments used in this study were interview guidelines, product assessment questionnaires, documentation. Based on the data obtained from the results of data analysis by experts, namely learning experts obtained results of 89%, material experts obtained results of 90%, media experts obtained results of 99%, class VII PJOK teacher practitioner experts obtained results of 94%, class VIII PJOK teacher practitioner experts obtained results of 96%, class IX PJOK 1 teacher practitioner experts obtained results of 90%, class IX PJOK 2 teacher practitioner experts obtained results of 83%, class VII field trials 97%, class VIII field trials 98%, class IX field trials 96%. The results of data analysis from experts, practitioners and field trials obtained the results of "Very Suitable for Use". Data collection techniques were carried out through questionnaire instruments. It can be concluded that this application development product can help the PJOK learning process at MTsN 1 Malang City.

Keywords: teaching materials; physical fitness; interactive multimedia, SDGs quality education

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Author's Contribution: a – Study Design; b – Data Collection; c – Statistical Analysis; d – Manuscript Preparation; e – Funds Collection

A. Introduction

The development of globalization has had a major impact on the field of education, requiring it to adapt to technological advancements in order to improve learning quality. One way to achieve this is through the integration of information and communication technology in teaching and learning activities (Hanifah et al., 2021). Technology plays a crucial role in supporting education by facilitating problem-solving and goal achievement (Mesra et al., 2023). Therefore, education must be capable of responding to the demands of the times to prepare a qualified future generation (Samsudin, 2019).

Indonesia implements a national education system designed to produce high-quality human resources, as regulated by national standards. One important subject mandated in Law No. 20 of 2003 is Physical Education, Sports, and Health (PJOK), which contributes to the physical, spiritual, moral, social, and cultural development of students (Harris, 2018). PJOK aims to develop the whole personality of students through physical activity, enhancing cognitive, affective, and psychomotor abilities (Kurniawan et al., 2022).

Physical fitness is a key component of PJOK, as it supports students' ability to perform daily activities productively and healthily. The 2022 Ministry of Education regulation emphasizes fitness development through the FITT principle (Frequency, Intensity, Time, and Type). Components of physical fitness include cardiovascular endurance, muscular strength, agility, and coordination (Lengkana et al., 2021; Nasrulloh et al., 2021). However, a lack of innovation in instructional media has contributed to low student engagement and interest in learning PJOK.

21st-century learning emphasizes the use of technology, critical thinking, creativity, collaboration, communication, and digital literacy (Effendi & Wahidy, 2019). In this context, interactive multimedia is highly relevant, as it can increase students' interest and understanding (Akbar & Noviani, 2019). The integration of various media elements—text, images, audio, and video—provides a richer and more engaging learning experience (Riyana, 2012).

A needs assessment at MTsN 1 Malang City revealed that despite having supporting infrastructure such as projectors and laptops, PJOK learning media remains limited to student worksheets (LKPD), PowerPoint presentations, and YouTube videos. Of 231 surveyed students, 41% reported never using interactive multimedia during PJOK lessons. Teachers also expressed the need for innovation that aligns with students' learning styles and technological trends.

Based on these findings, the researcher developed interactive multimedia teaching materials using **AutoPlay Media Studio 8** for physical fitness content. This application was selected because it can present material in an engaging format using a combination of text, visuals, audio, video, and interactive quizzes. Its implementation fits the school's facilities and aims to enhance student motivation and learning outcomes. This innovation is expected to overcome current media limitations and promote a more modern, engaging PJOK learning experience.

B. Methods

This research applies the ADDIE development model R&D approach by (Branch, 2010) there are 5 stages namely (1) analysis, (2) design, (3) development, (4) implementation, (5) evaluation (Cahyadi, 2019). This process researchers conducted a product validation test of the results of development research before conducting field trials, the product validation test included 1 learning expert, 1 physical fitness material expert, 1 media expert, and 4 practitioners, namely physical education teachers in grades VII, VII, IX MTsN 1 Malang City, after

fulfilling all validations and feasible to use researchers conducted field trials with a total of 60 research subjects MTsN 1 Malang City consisting of 20 students from class VII, 20 students from class VIII and 20 students from class IX in the selection of subjects researchers applied non probability sampling techniques (purposive sampling). This research data, namely qualitative and quantitative data. Initial data collection techniques researchers conducted (need assessment) by conducting observations, interviews and distributing questionnaires to PJOK teachers and students of MTsN 1 Malang City. For qualitative data obtained from observations during product trials. While quantitative data is obtained from the results of questionnaires distributed to research subjects, namely students in grades VII, VIII, and IX MTsN 1 Malang City. The data analysis process involves the use of quantitative descriptive statistical analysis and the use of a Likert scale to measure data (Sugiyono, 2022). Responses to each question in an instrument that uses a Likert scale will vary from very negative to very positive. The data obtained will be organized based on the percentage that has been obtained. Then, the product quality criteria will be determined for the final conclusion. (Akbar & Sriwijaya, 2011).

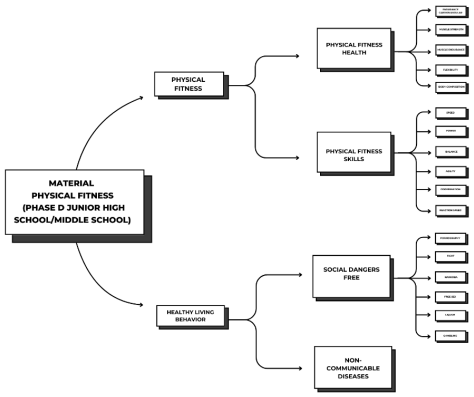

Figure 1. Outline of Product Content

C. Results and Discussion

Results

The data analysis aims to determine the feasibility of the developed product. The product was evaluated by a team consisting of one instructional design expert, one media expert, one physical fitness expert, four practitioners (PJOK teachers from grades VII, VIII, and IX at MTsN 1 Malang City), as well as students through field trials. The content of the developed product focuses on **physical fitness material for Phase D**, aligned with the applicable national curriculum.

The learning objectives include enhancing students' understanding of physical fitness within the context of a healthy lifestyle and personal development. Students are expected to recognize key components of physical fitness, design appropriate exercise programs based on individual needs, and perform physical activities safely and correctly. Additionally, students are encouraged to practice values such as discipline, responsibility, and teamwork through physical education activities to support their overall physical and mental well-being.

3.1 Expert Validation

3.1.1 Instructional Design Expert

The instructional expert gave a validity score of **89%**, indicating that the product is **very valid** and suitable for field implementation.

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3.1.2 Media Expert

The media expert provided an average score of **99%**, demonstrating that the product is **highly valid** and ready for field trials.

3.1.3 Physical Fitness Expert

The physical fitness expert rated the product with a score of **90%**, signifying that it is **very valid** and feasible for use in learning.

3.2 Teacher (Practitioner) Reviews

Grade VII PJOK Teacher
The review yielded an average score of **94%**, categorized as **very valid**, and deemed appropriate for field application.
Grade VIII PJOK Teacher
The product received an average score of **96%**, confirming that the interactive multimedia product using AutoPlay Media Studio 8 is **very valid** for classroom use.
Grade IX PJOK Teacher 1
The evaluation result was **90%**, which falls into the **very valid** category based on the feasibility qualification table.
Grade IX PJOK Teacher 2
The product was scored at **83%**, which also meets the **very valid** criteria for field implementation.

3.3 Field Trials

The field trials were conducted with students from grades VII, VIII, and IX at MTsN 1 Malang City. The results are as follows:

- **Grade VII**: Average score of **97%**, indicating the product is **feasible and ready for implementation**.
- **Grade VIII**: Average score of **98%**, showing the product is **very valid and applicable**.
- **Grade IX**: Average score of **96%**, confirming the product's **high feasibility and suitability** for PJOK learning, especially on physical fitness material.

Discussion

This research creates a product in the form of an AutoPlay Media Studio 8 application for MTsN 1 Malang City students containing physical fitness material. This development product can be used as a lesson material in class to achieve clear, accurate, easy to understand, complete, appropriate, and interesting variable indicators, in this way, junior / senior high school students can use multimedia (Arzani, 2020). In this development product, the material is in line with the applicable curriculum both at school and the curriculum from the Ministry of Research and Technology, namely the independent curriculum. The material contained in the application consists of 2 chapters, namely physical fitness (health physical fitness, skill physical fitness), and healthy lifestyles (prevention of promiscuity and non-communicable diseases). The components of physical fitness and student physical activity related to health have similarities in almost all countries, namely: flexibility, muscle strength, muscle endurance, cardiopulmonary endurance, and body composition. The only difference is that the type of test given is adjusted to the physique of each individual in each country. In addition, each level has a different level of achievement or intensity (Rohmah, L., 2021). In the application of health material, researchers use 5 similar components by providing clear concepts according to the focus of each component. A good level of physical fitness means that students can carry out the learning process well and all learning abilities possessed by students will flow optimally for the desired goal, namely getting success in the learning process aimed at achieving maximum scores on physical education, sports and health exam results (Widodo, A., 2016).

Physical fitness can be assessed using tests and measurements. Measurements are made with a physical fitness test, while to carry out the test a measuring instrument is needed, namely the Indonesian Student Fitness Test (TKSI). This test is a measuring instrument or test instrument that is adoption, modification, and innovation where this test aims to measure students' physical fitness and has been adapted to the level of education (Kuning, P. W., 2024). In line with previous research in the material in the application there are components of the TKSI test where there are assessment instruments and implementation videos in each component so that educators who will later conduct assessments already know and have been included in the application, on the other hand students can learn from videos before the test and its technical implementation. A person will not get good (optimal) learning results without being accompanied by good physical fitness. Thus physical fitness is a very important factor in relation to a person's learning ability and success (Saputra, D., 2024).

Promiscuity is a form of social interaction that goes beyond the limits of prevailing religious, cultural, or moral norms, often involving negative behaviors such as drug abuse, premarital sex, or other irresponsible actions. Teenage promiscuity will have an impact on psychology, self-behavior, education, health, religion, and on family life and the surrounding community (Darnoto, 2020). Included in the material in the prevention of promiscuity application which includes: pornography, fighting, drugs, free sex, drinking alcoholic beverages, and gambling. A good understanding in the student learning process in promiscuity, students will experience changes in behavior and attitudes regarding social procedures in accordance with character education in anticipation of juvenile delinquency that students often commit while at school (Lubis, A. 2022). Adolescents have an important role in NCDs, unhealthy lifestyle patterns since adolescence can be a risk factor for NCD problems in the future. Non-communicable diseases (NCDs) are diseases that are not caused by microorganism infections. Health education is a means of increasing the knowledge of female students in preventing NCDs (Kartika, 2024). In line with previous research, adolescents need to understand NCD risk behaviors and NCD protective factors that can affect NCDs (Afandi, 2024). From the description of the material and theory used, this application has advantages in features, namely: text, images, audio, dubbing, video, interactive games, learning questions, and discussion forums. This development product is in the form of interactive multimedia which is used as teaching material for physical fitness material in class by operating on each student's laptop, besides that this application can be studied at home or outside not only in the classroom. Researchers present a variety of materials with various current platforms such as YouTube, quiz, and paddlet so that they collaborate with existing technological developments. In addition to the advantages previously described, this application product also has disadvantages where users can only operate via laptop only, and must be connected to the internet.

Based on the results of learning experts, there are suggestions to maximize the content of the material so that students are clear and understand the learning process. Such as the addition of images that support the discussion, and links in the form of references taken. Therefore, the researcher revised it so that the content contained in the material could be maximally learned. In line with research (Wulandari, E. 2022) the appearance that matches the material presented can make students interested in better understanding the content of the material. Based on the results of material experts, this research is good but can be multiplied for a variety of physical fitness exercises, with this similar research by (Fitrian, 2023) that with the presence of

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varied physical exercises students are helped to understand physical fitness and foster ambition and desire to participate in sports lessons. Based on the results of media experts, the content in this application is good but there are suggestions for determining color gradations that can be adjusted to the research subject. In line with research (Purnama, 2010) the selection of the right color is an important factor for the success of a multimedia program as a whole, so that it will invite a positive response for the user. Based on the results of the practitioner, namely the PJOK teacher MTsN 1 Malang City, there are suggestions in the application of the application, the teacher must later understand in terms of classroom management because the learning process uses the application, with this researcher (Kurni & Susanto, 2018) saying that classroom management is an important key to effective learning. An important task for educators is to manage the class in order to create a situation that facilitates educational interaction between students and teachers. So, in order for the learning process to be good, the need for organized classroom management.

learning physical education health and recreation through the AutoPlay Media Studio 8 application of physical fitness material, so that in the learning process students are enthusiastic and eager to explore the material and learn together. The initial application, the researcher provides a link for downloading the application before learning, the response from students is no problem because the researcher has presented a video tutorial to install the application. Second learning process, students are smooth in the stage of opening the application there are no obstacles. The third process, researchers explained the features contained in the application, students understood and had no difficulties. The fourth process is the material, the researcher explains the material contained in the application starting from the health component, skills, and TKSI, students feel clear and understand the concepts and explanations of the material. The fifth process is the game, students are enthusiastic and excited in playing the game, there are no obstacles. The sixth process of self-reflection contains a discussion forum and glossary, researchers provide topics in the discussion forum and students discuss in the forum. The last process, exiting the application, students find it easy because the display features and instructions are very clear. It is hoped that the creation of the AutoPlay Media Studio 8 application of physical fitness material can increase learning interest, motivation, and student interest in physical fitness material and can be implemented both in school and everyday life besides that it is useful for teachers in adding references in learning physical education sports and health, especially in physical fitness material.

D. Conclusion

The results of research and development of teaching materials for physical fitness materials based on the AutoPlay Media Studio 8 application for MTsN 1 Malang City students, it can be concluded that this product is suitable for use as teaching materials for physical fitness materials in the PJOK subject MTsN 1 Malang City, and has been adjusted to the learning outcomes used. The creation of this product is expected that all elements of educators and readers in the future can be used as a reference to improve the product, adding to the diversity of PJOK learning through the AutoPlay Media Studio 8 application, the limitations of this research are only focused on one school, it is hoped that further researchers can complete with other PJOK materials and with a larger number of schools.

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