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DEVELOPING ENGAGING AUDIO-VISUAL LEARNING MEDIA FOR BASIC LOCOMOTOR PATTERNS THROUGH PLAY-BASED ACTIVITIES FOR EARLY LEARNERS

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Abstract. This research aims to develop interactive learning media for physical education, sports and health, based on audio-visual, basic pattern motion materials based on games in elementary schools in Phase A. Based on the researcher's observation, there has been no development of audio-visual learning media at the Phase A level on locomotor motion materials, so the researcher tries to present learning media that is adapted to the Independent curriculum as a solution students who still have shortcomings, such as students' understanding of basic movement materials that are not optimal. This type of research is Research and Development (R&D) using the ADDIE development model, which consists of 5 development steps, namely Analyze, Design, Development, Implementation and Evaluation. This research was assisted by 3 validators. The instrument used in this study is a validation sheet. The data analysis technique uses a scoring scale and a percentage range. From the research that has been carried out, it is found that the validity of the media developed has a percentage of 92.5% with a very feasible classification. Then for the student response, which is 97.92%, with that the audio-visual learning media in PE learning is a game-based basic locomotor movement pattern material at the phase A elementary school level.

Keywords**:** Audio Visual, Locomotor Movement Patterns, Physical Education and Health, Elementary School

I. INTRODUCTION

Over time, science and technology have made human life easier today, changes have occurred in every aspect of life, one of which is in the field of education (Ockta et al., 2024; Umar et al., 2023). The proximity of students to technology is inevitable, because this is their time, because they have been in the digital era (Ferdian et al., 2023; Insani et al., 2024a; Triani et al., 2023). Various kinds of reforms in the aspect of education are carried out in order to improve the quality and quantity of education (Al Zaki et al., 2023; Illahi et al., 2023; Nusri et al., 2024). Education is something that cannot be separated from a person's life. According to Haderani (2018) stated that education will provide various knowledge that is useful for its survival and can even have an influence on the surrounding community. Then according to Tambun, et al (2020) stated that education is one of the needs in the life of the nation and state, because in the progress and backwardness of a country cannot be separated from education. Santika (2020) It also states that education has the goal of improving the quality of a nation's generation, instilling character and educating the personality of students and developing all the potentials possessed by students so that they become full human beings, skilled, knowledgeable, creative, healthy and independent.

According to Rahmatullah, et al (2020) believes that one of the most valuable investments for the progress of the nation is the development of human resources starting from primary education, secondary education, to higher education. According to Humaeroh & Dewi (2021) stated that education plays an important role in the lives of students and education is expected to be able to guide students themselves so that they can be better and dignified. Pranata, (2021) also argues that education is closely related to the learning process, because it

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is basically an effort made by students to obtain behavioral changes towards overall self-maturity and is characterized by changes in the cognitive realm (knowledge), psychomotor realm (skills), and affective realm (attitude), in order to create a change in students towards better things.

In national education, there are subjects that touch these 3 aspects, namely PE (Physical Education). According to Mustafa (2022) stated that PE is a subject that is taught from primary education to secondary education. According to Candra, et al (2023) also stated that through the learning process PE is expected to encourage physical growth, motor skills and knowledge of students. So that PE lessons are no less important than other subjects such as: Mathematics, Indonesian Language, Science, Social Studies and others (Amin et al., 2023; Khani et al., 2024; Likardo et al., 2023). However, not all PE teachers are aware of this, so there are many assumptions that physical education can be carried out haphazardly. This is reflected in various negative statements about PE lessons, ranging from the weaknesses of the learning process, for example by letting children play alone to the low quality of lesson results and very low physical fitness. This is also strengthened by the results of the researcher's observation, that many find that the PE learning process is meaningless.

PE subjects as an integral element of national education, are recognized as important by all parties of the community because their main function is to provide learning experiences through physical activities to develop motor skills, knowledge, values, and healthy lifestyles (Pitnawati et al., 2023; Rambe et al., 2024). The teaching and learning process of physical education emphasizes the full participation of students with the characteristic of "moving". PE teachers must pay attention to the active and equal participation of students, adjusting the material to their ability level. Learning involves various basic movements, namely locomotor, non-locomotor and manipulative movements, both in general and predominantly from various sports (Haris et al., 2024; Insani et al., 2024b). Basic movement activities are used as PE learning materials at the elementary school level which are dominant in Phase A of the Independent Curriculum. According Muhyi, et al(2023) stated that at this time the Merdeka curriculum has been widely used by elementary schools by implementing a phase system, phase A (grades 1-2), phase B (grades 3-4) and phase C (grades 5-6).

The focus of this research is on the development of learning media, especially on basic motion materials in elementary schools, especially in Elementary School 13 Tanjung Beringin in Phase A based on Audio Visual as an effort to improve the teaching and learning process. The goal is to make learning more enjoyable, improve physical fitness, and enrich the experience of basic motion Learners. According to previous research conducted by Nurdianti & Danang Dwi Basuki (2023) stated that the use of Audio Visual learning media in PE subjects in elementary schools has proven to be effective. The positive response and excitement of students to learning is very striking. The majority of elementary school students enjoy learning that involves motion and sound animation, allowing them to quickly understand the material. Then the research conducted by Defa Saputra, et al (2023) stated that the results of the research and data interpretation on "The Effectiveness of the Use of Audiovisual Media on Physical Education Learning" showed good and effective results in Penjas learning. Audiovisual media is one of the alternatives to delivering learning materials both directly and indirectly. This is also strengthened by research conducted by Ahmad Edo Erdian, et al (2023) based on the results of the research, the learning process has used Audio Visual is also declared feasible and effective to be used at the elementary school level.

However, it was found that there was no "research gap" that there was no development of audio-visual learning media at the Phase A level on locomotor motion materials, so the researcher tried to present learning media that was adapted to the Independent curriculum as a solution for students who still had shortcomings, such as students' understanding of basic motion materials that were not optimal. Therefore, it is necessary to develop a learning model in phase A, especially the basic motion model, so that students can better participate in learning in a fun way according to the needs and development of children. Thus, this research is expected to be a teaching material that contributes to improving the teaching and learning process of physical education in elementary schools, especially in Phase A.

II. METHODS

This research is a research and development that focuses on product development media, as explained by (Sugiyono, 2015) the purpose of this study is to produce new findings that are in accordance with the needs of the field of study through a systematic process, including structured data collection and analysis. In the context of learning, this research aims to develop and validate educational products such as teaching materials and learning media. The research method used adapts the ADDIE model, which consists of five stages: Analysis, Design, Development, Application, and Evaluation. The ADDIE model was chosen because of its ability to describe a systematic approach to educational product development. The process begins with a needs analysis to identify problems and design the product. Furthermore, the product is developed and tested, before finally being implemented in real conditions. Evaluations are carried out to improve the product based on feedback from trials.

This research procedure involves analyzing the needs of students and existing media, designing audio-visual-based learning media, developing the product, applying it in a small group trial, and finally, evaluating and revising based on the feedback obtained. This research involves validators such as lecturers, media experts, material experts, linguists, and students to assess the feasibility of the product developed. Data collection instruments include validation sheets designed to obtain corrections and advice from experts, as well as questionnaires filled out by students during field trials to assess the ease and clarity of learning media. The data analysis technique in this development research uses validation sheets to assess the media that has been designed. A team of expert validation sheets is used to collect validators' opinions on the designed media, with the assessment

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following a predetermined scale. The assessment scale consists of four categories, namely: 1) Suitable for use without revision, 2) Suitable for use with small revisions, 3) Suitable for use with major revisions, and 4) Not suitable for use. To analyze the data from the validation sheet of the expert team, the steps taken include summing up the scores obtained from each category, determining the score category according to what has been determined, and calculating the score percentage using the formula

$$\text{Value Validity} = \frac{\text{Score Total}}{\text{Score Max}} \times 100\%$$

The percentage of assessment results is then compared with the criteria set out in the validation sheet percentage criteria table, which include:

Table 2. Validity Category

No	Interval	Category
1	81-100	Highly Valid
2	61-80	Valid
3	41-60	Quite Valid
4	21-40	Less Valid
5	0-20	Invalid

III. Result and Discussion

A. Result

The development used by the researcher is an audio-visual learning media based on game-based locomotor basic motion patterns for Phase A students which contains an introduction, core and closing. The research steps used are the development of the ADDIE model**.**

a) Analisis (Analysis)

Analyze school conditions in conducting learning through observation and interviews with teachers and students at State Elementary School 13 Tanjung Beringin. Observations and interviews have been conducted to analyze the learning process, teaching resources, student assignments and online media used. This analysis is needed to determine the next steps that will be taken by the researcher. Based on observations and interviews, the subject of Physical Education, Sports and Health is a subject that requires theory and practice, so it requires creative and innovative media. Then students are very close to the world of IT and social media. So, electronic learning can be easier for students to give and understand.

Then the lack of student motivation is due to the lack of interesting and effective media to support learning and students have difficulty in practicing locomotor movements in Phase A. For the stage of product analysis, this consists of curriculum, teaching materials, and other supporting media, which to continue to the next stage**.**

b) Planning stage (design)

In Phase A, the material developed focuses on the basic motion of the locomotive, with the aim of providing understanding and practical skills to students in basic movement activities such as walking, running, and jumping. This material is packaged in the form of interactive learning videos designed using several applications such as Canva, Capcut, Inshot, PowerPoint, and Word. The video development strategy includes several important elements, from Learning Outcomes and Learning Objectives, to detailed explanations of the basic motion of locomotors and traditional games. The planning stage involves collecting locomotor motion materials from the latest Ministry of Education and Culture's Physical Education, Sports and Health Physical Education Book, making audio visual video drafts that are in accordance with odd semester teaching materials, and designing video designs relevant to Tanjung Beringin State Elementary School 13. In addition, researchers also prepare additional materials for video development such as editing tools, images, and stickers. The validation of the questionnaire was carried out from three aspects: material, language, and media/IT. The video framework of locomotor motion audio visual in Phase A includes preliminary activities consisting of an opening video, learning achievements, and learning objectives. Introductory activities include things to do before doing sports. Core materials include basic movements such as walking, running, jumping, and traditional games. The video ends with a closing that explains the things to do after a workout**.**

c) Development stage

The results of the development of audio visual learning media for basic locomotor motion materials designed using the Canva and Capcut applications. After completing the editing process, proceed to the stage of publishing the audio visual video that has been completed. After all the learning videos are completed, they are compiled by opening access such as google drive so that they can be seen by everyone who accesses them, then change the name of the Learning Media link according to the author's wishes online using bit.ly. After the link is copied, the link is ready to be shared to be sent to validators and used by students. In this development, the link that will be shared with important points can be easily accessed by all Android smartphones with that will make it easier for students to access it anytime and anywhere.

At this stage, the results of the finished development will be tested for feasibility using validation sheets by validators divided into 3 categories, including 1) media validation tests, 2) language validation tests, 3) material validation tests. The purpose is to find out whether or not the products used for students are feasible or not as learning media that can help students during learning with the rapid development of science and technology as it is today. After conducting a product validity test by the validator, Mr. Dr. Nofrion, M.Pd., there were several comments and suggestions to improve the product produced by the researcher. The comments include the presentation of the material that is expected to be made per material as well as the use of more attractive images. Based on these suggestions, revisions have been made by improving the presentation of materials that are now created per material and adding more attractive images. The validity test of the material, Mr. Dr. Masrun, M.Kes, and the results

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showed a score of 91.6%. This indicates that audio-visual-based learning media is very suitable for PJOK learning, especially in locomotor motion material in phase A. Based on the results of this test, several comments and suggestions were given, including: (a) adding Learning Outcomes and Learning Objectives, (b) improving every word in the learning media, (c) making the game more interactive, and (d) adding information about locomotor motion in phase A. The revision was carried out by adding Learning Outcomes, Learning Objectives, correcting incorrect sentences, adding interactive game forms, and providing additional information about locomotor motion in phase A.

The language validity test was carried out by Mr. Dr. Ridha Hasnul Ulya, S.Pd., M.Pd. The test results showed that the audio-visual-based learning media was declared very feasible to be used in PE learning, especially in the locomotor motion material in phase A. Comments from language validators mentioned the repetition of words in the video. Revisions for improvement are done by removing the repetition of words on some basic movements and exercises. From the three validity tests—namely the media validity test, the material validity test, and the language validity test average score of 92.5% was obtained, which is included in the very feasible category. The distribution of each expert's assessment can be seen in the following graph:

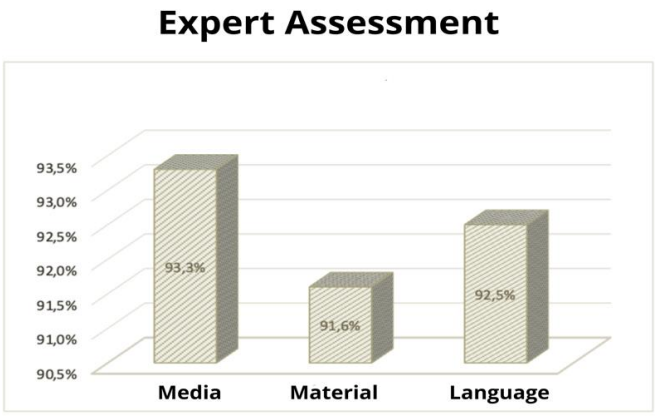

Figure 1. Expert Assessment

d) Implementation stage

This step is to implement learning media in the learning process in schools. By conducting a small group trial involving students to find out the student response and the attractiveness of the learning media of the Game-Based Locomotor Basic Motion Pattern Material. This small group trial involved 28 students from Phase A Elementary School Students in Grades 1 and 2 at Elementary School 13 Tanjung Beringin school. Trials were carried out to find out the response of the developed product.

Based on the response test of Phase A Elementary School students in Grades 1 and 2 in a small group trial, the product trial involving 28 respondents was obtained that the audio-visual learning media was very feasible with a percentage of 97.92%.

e) Evaluation stage

Based on the implementation stage, the learning media for the basic pattern of locomotive motion in Phase A. Needs to be evaluated. At the evaluation stage, improvements are made to the product developed based on the suggestions and input of students during the implementation stage. Based on the students' responses, suggestions were obtained for the locomotor archetype motion learning media, namely the media displayed is very good and easy to understand and makes it easier to understand the material and can be used as independent learning material at home. Researchers can find out that the learning media for basic movement pattern motion material for Phase A students is very suitable for use in the learning process from the results of the responses from the results of product validation and in terms of student responses, it is found that the media developed is suitable for use in the learning process.

B. Discussion

This research is a development research that aims to create audio-visual-based learning media and evaluate its feasibility. This research answers the problem explained in the background, namely the lack of creativity in the use of learning media, especially in PE learning. The learning media used must be adjusted to the material to be delivered and the characteristics of the students. This audio-visual-based learning media is a reflection of the advancement of science and technology in the era of globalization. With many human activities facilitated by technology, such as the use of mobile phones among students, the author takes advantage of this to offer solutions to existing problems. Audio-visual learning media for locomotor motion material in phase A is prepared in accordance with the independent curriculum and adjusted to the characteristics of students who are close to the media. The development of this media uses the ADDIE model, and students can access it anytime and anywhere using a cellphone or Android. Research by Ramadhan et al (2021) shows that the use of learning that combines writing, images, audio, and video can increase students' curiosity and motivate them, so that it can improve learning outcomes.

Learning media is a combination of text, images, videos, sounds, and graphics used in the teaching and learning process. With the development of existing technology, students are required to learn digitally. One way to increase learning motivation is through audio-visual-based learning media, which allows students to understand the material better and repeat it at home. Research by (Waskito et al., 2024) shows that augmented reality (AR) technology in learning media can improve student motivation and learning outcomes through interactive and visual elements added by AR. This research aims to provide a solution to the problem by producing learning media that is tested for feasibility through validation tests by experts. Each validator provides criticism and suggestions for the improvement of the learning media, including improvements to the presentation of the material, language, appearance, and materials used. The results of the validity test showed that this learning media was very feasible with an average score of 93.3% for media validity, 91.6% for

material validity, 92.5% for language validity, and average of 92.5% for all three aspects of validation. The students' responses also showed very decent results with an average score of 97.92%.

This learning media has several advantages, including making it easier for teachers to teach locomotive movements, attracting students' attention, and having clear learning goals. The material in this learning medium is complete, makes it easier for students to understand, and can be repeated outside of class hours. The media design is attractive to Phase A learners, and the language used is easy to understand. However, this media also has its drawbacks, such as the need for sufficient storage capacity and the need for a stable internet network to download media. The limitations of the study include the use of the Android operating system below 5.0 with RAM below 1 GB which can hinder maximum access, as well as dependence on the availability of a stable internet network. In addition, the media produced is still in the validity test stage by experts for locomotor motion materials in Phase A.

IV. Conclusions

Based on data analysis and research results regarding the development of audio-visual-based learning media for locomotor motion materials in Phase A, it can be concluded that the audio-visual learning media with an average validation score of 92.5% is declared very feasible to use. This media has proven to be effective as a tool in learning PE on locomotor motion materials for Phase A.

Based on the results of this study, there are several implications that need to be observed. Theoretically, the achievement of learning objectives is highly dependent on the way interesting information is presented. In this digital era, where the current generation is exposed to various sources of information, involving many senses in the learning process can improve students' understanding, skills, and physical fitness. The use of media in learning has a positive impact in this regard. Practically, the results of this study offer solutions for educators and prospective educators to overcome the limitations of facilities and infrastructure in schools by utilizing existing technology and presenting interesting learning materials to achieve the educational goals that have been set.

Based on the conclusion of this study, some suggestions can be conveyed as follows. For teachers, the products of this research offer practical solutions in overcoming the limitations of facilities and infrastructure in schools. Teachers are advised to take advantage of the results of this research to create a more effective learning environment and support the learning process of students to the maximum. In addition, to increase student motivation, teachers should present learning materials in an interesting and creative way, so that students are more enthusiastic and encouraged to repeat the material outside of class hours. For school principals, it is expected to support the implementation of this research product in schools by providing the necessary facilities and ensuring that all teachers receive appropriate training. This support will help maximize the benefits of the learning media produced. School principals are also advised to evaluate and pay attention to feedback from teachers and students regarding the use of learning media, in order to identify areas that need further improvement or development. For educational units, it is recommended to consider and support the application of the ADDIE method in the development of learning media in the future. This will ensure that the products developed meet the required quality standards for teaching materials. Further research needs to be focused on refining the ADDIE method to the next stage to prove the effectiveness and feasibility of this learning medium at the Phase A level.

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