

GAME DEVELOPMENT IS DEVELOPMENTALLY APPROPRIATE PRACTICE (DEVELOPMENTALLY APPROPRIATE) PRACTICE BASED EDUCATION FOR ELEMENTARY SCHOOL CHILDREN

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Abstract

This study aims to: The purpose of this study is to develop games in physical education subjects in schools based on DAP (Developmentally Appropriate Practice). Then in this study will produce a product in the form of a game module with the concept of DAP (Developmentally Appropriate Practice) for basic locomotor movements. This type of research is development research based on the Borg and Gall model. The trial subjects consisted of material experts, game experts, and physical education teachers at the Imanuel Medan Elementary School and Methodist 1 Medan. The first stage of this model is the needs research stage, followed by the design stage, and the third stage is development and implementation. In this stage, all stages involve an evaluation and revision process. The assessment of the material expert is 89%, the game expert is 90.8%, and the results of the evaluation of the sports teacher in the first stage is 73.8%, and the second stage is 86%. Results The results of the product assessment have increased with a significant difference of 12.2%. This shows that the product developed on locomotor motion material through game development based on DAP (Developmentally Appropriate Practice) is feasible to be used in the implementation of learning.

Keywords: *Based on DAP (Developmentally Appropriate Practice), Locomotor Movement, Game Development.*

Introduction

In understanding the meaning of physical education, we must also consider the relationship between play and sport, as terms that were popular earlier and are more often used in daily activities. This understanding will help teachers or the community understand the role and function of physical education more conceptually. Class II physical education learning materials in elementary schools include learning locomotor movements. Locomotor motion material (walking, running, jumping) must be packaged in games that are interesting for students and increase student interest to always move actively in the implementation of walking, running, and jumping materials. The basic human movements are

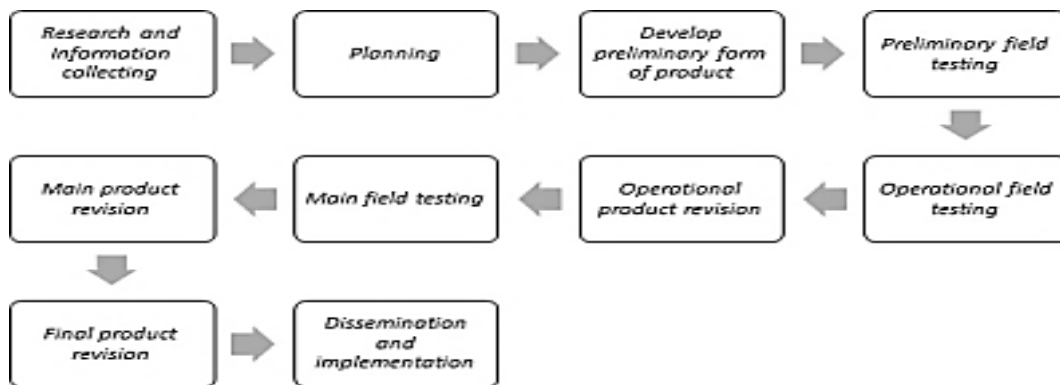
walking, running, jumping, and throwing. Elementary school students have owned this basic form of action. According to Yudha (2000:21), locomotor motion is a movement to move places where certain body parts move or move. Locomotor basic motion is one of the domains of basic fundamental training. Based on the results of the evaluation of the first semester of mastery of locomotor motion material (walking, running, and jumping), it was not satisfactory because the percentage of road material assessment results achieved 70% success, the rate of running material was 60%, and the jumping material was only 60% (Source of Physical Education Teacher at Private Elementary School Immanuel Terrain as an approximate percentage breakdown only). From these results, it can be seen that there are still many student mistakes in doing locomotor movements, including there is still the wrong way of walking, such as when walking students walk with their feet opened too wide, the body is too bent, the position of the legs is not straight, coordination between hands and feet. Not good at running and less than optimal in jumping. According to Engkos Kosasih (1992:4), physical education, sports, and health is education that actualizes the potential of human activities in the form of attitudes and works to be given form, content, and direction towards personality unanimity by human ideals. The meaning of physical education in the Ministry of National Education (2003:6) is also stated. Physical education is an educational process that utilizes physical activity and is planned systematically to improve individuals organically, neuromuscularly, perceptually, cognitively, socially, and emotionally. Physical education treats the child as a unified whole, a total being, rather than only considering him as separated from his physical and mental qualities. Physical education is a vast field of study. The point of concern is the improvement of human movement. One of the education-related to sports is Physical Education, Sports, and Health (Penjasorkes). Physical education is an education that uses physical activity. Bucher (1983:13) states that "physical education is an integral part of the entire educational process, which has the goal of developing citizens physically (physically), mentally, emotionally, and socially through physical activities that have been chosen to realize these goals.

According to Lumintuarso (2013: 6), multilateral movement combines various basic movements and basic movements of sports skills. Basic motion is divided into three main types of motion, namely locomotor motion, non-locomotor motion, and manipulative motion. Locomotor motion is the whole body's motion through a particular space or distance, such as walking, running, jumping, and so on. In contrast, non-locomotor motion is motion where only part of the body moves, such as pushing, pulling, leaning, and manipulative motion is a skill movement that uses the equipment, such as throwing, catching, hitting, kicking, volleying, and others. According to Bompa (1999: 31), multilateral called multiskill or in German called "vieleseitige" is the development of various motor skills and abilities (motor abilities) with the adaptation of different training load needs to develop overall transformation. According to Yudanto (2005: 68), a Multilateral is a comprehensive development covering only the physical aspects.

Saputra (2001: 9) mentions that multilateral is related to physical activity and total body movements, which have implications for the body to be healthy and fit.

Method

This research on game development in physical education subjects based on DAP (Developmentally Appropriate Practice) consists of 7 stages, with step-by-step design descriptions and explanations aligned with the objectives and actual research conditions, as clearly illustrated in the following figure:



Planning and Modeling

As for the design of game development products in physical education subjects based on DAP (Developmentally Appropriate Practice), which has the following steps:

1) Research and information collecting: literature study related to the problems studied and preparation for formulating a research framework. In this study, the steps taken by the researcher were:

- Collecting information from SD Methodist 1 Medan and SD Immanuel Medan regarding the learning outcomes of basic locomotor movements and games in physical education subjects conducted by the teacher.
- Then interview the physical education teacher
- Collecting literature.

2) Planning: formulating skills and expertise related to the problem, determining the objectives to be achieved at each stage, and, if possible/necessary carrying out a limited feasibility study. In this research, the planning stages are:

- Collect supporting journals on DAP and locomotors.
- Collect supporting books.
- Tracing needs in the field (SD) with the game to be developed.

3) Develop a preliminary form of product; develop the product's initial state to be produced; prepare supporting components, training guidelines, and manuals; and evaluate the feasibility of supporting tools. The steps in this research include:

- Determine the product design to be developed (hypothetical design),
 - Determine the research facilities and infrastructure needed during the research and development process,
 - Determine the stages of implementing the design test in the field;
 - Determine the job description of the parties involved in the research.
- Determine research experts. Expert review consisting of 5 learning experts, five-game experts, and five material experts.
- PJOK teachers are given an understanding of the game flow to understand the concept of the game, understand the purpose of the game and understand the value of the game. Researchers explain the idea in detail.
- 4) Preliminary field testing: conducting initial field trials on a limited scale. By involving as many as 6-12 subjects. In this step, data collection and analysis can be done using interviews, observations, or questionnaires. This step is a limited product test which includes:
- Conduct initial field tests on product designs where game products in physical education subjects based on DAP are first brought to experts,
 - Then, the researchers conducted a small group trial on ten students of SD Methodist 1 Medan.
 - Assessing the students of SD Methodist 1 Medan.
- 5) Main product revision: improve the initial product produced based on the results of the initial trial. According to the results shown in a little practice, this improvement is very likely to be carried out more than once so that the main product (model) draft is ready for broader trials. Revision II is a revision based on the opinions, difficulties, and wishes of the users. Revision of a limited field test improves the model or design based on a bit of field test. Revision III is a revision based on the opinion and input of experts. The steps in this research are:
- Products are brought to experts (PJOK teacher experts, game experts, and material experts)
 - Research videos are brought to experts (PJOK teacher experts, game experts, and material experts).
 - Revision and validation sheets are brought to experts (PJOK teacher experts, game experts, and material experts)
 - The study results in the form of student data reduction were brought to experts (PJOK teacher experts, game experts, and material experts).
 - Researchers work on what is expert revision.
- 6) Main field testing: the primary test involving all students. (1) conduct initial field tests on product designs, (2) are limited in nature, both the substance of the design and the parties involved, and (3) initial field tests are carried out repeatedly

so that appropriate designs are obtained, both in substance and methodology. The steps in this research are:

- Games in physical education subjects were tested on a large scale on 20 students of Immanuel Medan.
- Researchers document

7) Operational product revision: make improvements/improvements to the results of a more comprehensive trial so that the product developed is already a functional model design that is ready to be validated. Revision of Wider Field Test Results: this step is the second improvement after conducting a more comprehensive field test than the first field test. The stages in this research are:

- Large group trial products are brought to experts (PJOK teacher experts, game experts, and material experts)
- Large group trial research videos brought to experts (PJOK teacher experts, game experts, and material experts)
- Revision and validation sheets are brought to experts (PJOK teacher experts, game experts, and material experts)
- The results of the large group trial study in the form of student data reduction were brought to experts (PJOK teacher experts, game experts, and material experts)
- Researchers work on what is expert revision.

Conclusion

Based on the results of research and discussion of the effects of research on the development of locomotor basic movement learning modules based on DAP (Developmentally Appropriate Practice) in grade II students of Imanuel Elementary School Medan and Methodist 1 Medan, it can be concluded as follows:

- a. This research develops and produces learning modules based on the concept of DAP (Developmentally Appropriate Practice). on the locomotor primary motion material for grade II students of Imanuel Elementary School Medan and Methodist 1 Medan.
- b. The feasibility of teaching materials from material experts and game experts obtained perfect criteria. The average acquisition of content experts on the module received 89% with the "very good" criteria and 90.8% for game experts with the "very good" standards.
- c. The results of teacher responses regarding the developed module, which were assessed by five Physical Education teachers in stage I at the primary school teacher Imanuel Medan obtained an average acquisition of 73.8% on the "enough" criteria than in the second stage of testing at school and Methodist 1 Medan with a sample twice larger than before, obtaining an average

presentation result of 86% with the criteria of "very good" with a significance scale of 12.2% from the results of the previous test.

Suggestion

Based on the conclusions and implications above, this research still has many shortcomings and many things that still need to be studied, especially since the assessment of this module is only up to the teacher. This is due to the Covid-19 pandemic. Based on the results of research on game development based on DAP (Developmentally Appropriate Practice), the researchers put forward the following suggestions:

- a. For schools, it is expected to use learning modules through game models with the concept of DAP (Developmentally Appropriate Practice) as an alternative in teaching activities in the field of physical education in basic locomotor movements because the game-based learning model invites students to learn fun while playing.
- b. Teachers can take advantage of learning modules regarding locomotor motion through games based on DAP (Developmentally Appropriate Practice). Teachers can also carry out other developments by developing appropriate learning materials.
- c. Further researchers can develop different materials or the same concept based on DAP (Developmentally Appropriate Practice). With much more extensive testing and up to product implementation in the field.

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