



Development of A Creative Energy Gymnastics Learning Model for Elementary School Children

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Abstract

Physical Education, Sports, and Health (PE) lessons in primary schools require imaginative teaching methods that are well suited to children's nature and current developments. This study aims to develop and test the effectiveness of Creative Energy Gymnastics as PE teaching material, particularly for rhythmic activities. The method used is Research and Development (R&D), which combines quantitative and qualitative elements. Data was collected through several techniques, such as observation, questionnaires, surveys, and assessment sheets, then analysed using descriptive methods in the form of percentages and qualitative analysis. The product was tested in two stages, first on a small scale, then on a large scale. The results were very positive, with interest and satisfaction levels reaching 68.75%, movement comprehension reaching 80.01%, gymnastics benefits reaching 75.37%, and attitude and cooperation reaching 80.01%, all of which were classified as good. Finally, Creative Energy Gymnastics was deemed very suitable as an innovative teaching method for physical education that is appropriate for primary school children.

How to Cite

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INTRODUCTION

Physical Education, Sports, and Health (PE) is one of the most important subjects in the Indonesian education curriculum. Physical Education, Sports, and Health (PE) is an aspect that is very much needed by students to achieve the national education goals, namely to shape attitudes, behaviour, discipline, honesty, cooperation, and to improve physical fitness, health, and resistance to disease (Rozi et al., 2023). The success of physical education in primary schools depends on the creativity of teachers and appropriate teaching methods in line with the material being taught (Badriyah et al., 2024). Sport is an activity undertaken by humans, not only to train the body, but also to develop the mind, strengthen social relationships, and have a positive impact on the economy. Physical education is defined as any activity that is organised in a structured manner to cultivate, train, and improve physical, mental, and social abilities (Irawan & Setiawan, 2021). In shaping a person's character, it is best to use an active, creative, effective, and enjoyable learning environment without pressure, so that individuals can develop according to their own talents and interests without being forced (Wasis, 2022). Student performance in the learning process is influenced by two factors, namely internal and external factors (Pradanto & Darmawan, 2023).

Sport is a series of movements that are arranged in an orderly and planned manner to maintain and develop the human body's motor skills (Argaha & Setiawan, 2022). The benefits of exercise can be felt directly by the human body, such as a healthier, fresher body and more enthusiasm in carrying out

other activities. Exercise has various purposes and functions, such as maintaining physical health, improving social status, providing motivation in activities, and helping someone achieve success if they are a professional athlete (Nugroho & Setiawan, 2023).

Gymnastics is a form of physical exercise that is selected and designed with specific objectives in mind, systematically and purposefully structured to shape and develop individuals holistically and in a balanced manner. Aerobic gymnastics involves individual or group activities performed regularly in rhythm, using large muscles and energy supported by oxygen. Gymnastics plays a major role in the development of a person's physical components and motor skills (Nurcahyo et al., 2023). In addition, gymnastics aims to increase the body's

oxygen absorption efficiency, as well as helping with weight loss, body shaping, and various other aspects (Sulfian et al., 2022). By involving children in regular healthy gymnastics activities, it is hoped that they will understand the benefits of exercise and become more motivated to make it part of their daily routine (Rahmat et al., 2025).

Rhythmic gymnastics, also known as rhythmic exercise, is a type of sport that integrates body movements with music. This activity not only aims to maintain physical health, but also trains coordination, flexibility, and creativity. Especially for children, particularly primary school students, rhythmic gymnastics can be an effective method to support fine and gross motor development, as well as instil healthy lifestyle habits from an early age. In primary school environments such as Bandungan 01 Public Primary School, rhythmic gymnastics is implemented as a learning approach that not only maintains physical health but also encourages creativity and collaboration among students. Based on previous experience, rhythmic gymnastics has been proven effective in improving body movement skills and motivating students to actively participate in physical activities (Sembiring et al., 2025). In the context of creative rhythmic gymnastics, children not only learn to move better, but also learn to communicate, work together, and share tasks with one another (Anjanika et al., 2025).

The process of learning rhythmic activities basically involves structured activities that can be done with or without using tools. However, survey results from face-to-face interviews with physical education teachers in elementary schools show different findings in practice. Rhythmic activity learning is usually done in a traditional way, with limited movement variations, not much use of helpful tools or supportive materials like creative music, and not enough development of creative teaching methods. This situation causes the rhythmic activities to not be fully able to optimize students' aspects of fitness, movement coordination, and creativity as expected in the ideal learning concept. The obstacles faced include limited movement variations, a lack of innovation in learning methods, and low student enthusiasm for participating in rhythmic gymnastics. This situation indicates the importance of improving creative and innovative gymnastics learning models that are in line with the times. Thus, educators need to master various learning methods applied to students to enable them to hone their creativity (Kusuma et al., 2024). Referring to the existing problems, this study designed Creative Cheerful

Energy Gymnastics as an alternative model for learning rhythmic activities, which is tailored to the characteristics of primary school students in phase B. This learning model is expected to encourage students' interest in learning, improve their understanding of movements, and foster a positive attitude during PE learning.

METHOD

According to Borg and Galli, the ten phases of R&D research can be described as follows: First, pre-research (pre-interview) to gather information (literature review, classroom observation), identify and summarise learning problems. Second, planning (identifying and defining skills, formulating objectives, defining the learning cycle and small-scale trials or peer reviews). Third, developing the type/form of output products, including preparing teaching materials, compiling the learning cycle, evaluating guidebooks and tools. Fourth: Conducting initial field tests, carried out in 2-3 schools using 6-10 places of experience. Collecting information or data through observation, interviews and questionnaires, followed by data analysis. Fifth, revising the main product based on input and feedback from the results of the first field test. Sixth, conducting field trials. Subjects, completed in 3-5 schools, with 30-80 subjects. Student performance tests/assessments are conducted before and after learning. Seventh, revise functional products based on input and feedback from the main field test results. Eighth, conduct field tests with ready-to-use products (with 10-30 schools, 40-200 subjects). Information is collected through interviews, observations and questionnaires. Ninth, revise the final product based on suggestions provided during field testing. Tenth, disseminate and distribute the product, report and disseminate the product through conventions and scientific journals, collaborate with publishers to commercialise the product, and oversee distribution and quality control. From this, it can be concluded that the general stages of research and development are product design, development, and evaluation.

Data collection was conducted through observation, questionnaires, and surveys. A large-scale trial was conducted at Bandungan 01 Public Primary School with 28 respondents, while small-scale trials were conducted at Jetis 02 Public Primary School (18 respondents) and Sadeng 02 Public Primary School (23 respondents). Subsequently, data processing was carried out manually with the aid of calculators. Data analysis in this study involved descriptive techniques

in the form of percentages for quantitative data, while data in the form of suggestions and reasons for choosing answers were analysed using qualitative techniques (Hidayah & Setiawan, 2022). To produce a new, tested product, a research stage is required to develop a design, as well as a development stage that includes product creation and testing. The procedures for implementing development and research in this study adopted the research and development steps illustrated in the following **Figure 1**.

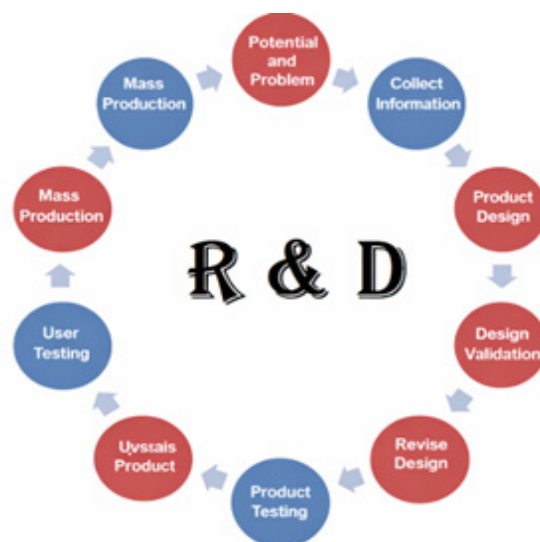


Figure 1. Model Steps Research Development (Okpatrioka, 2023).

RESULTS AND DISCUSSION

In an article developed from a study, the initial results and discussion section should follow these ten main steps: (1) identify existing potential and problems, (2) collect relevant data and information, (3) design the product initially, (4) validate the design, (5) improving the design based on feedback, (6) testing the designed product, (7) revising the product if necessary, (8) conducting field trials, (9) revising the product again after testing, and (10) mass producing for wide distribution. (Khoirul & Setiawan, 2022).

Efforts to identify problems in the PE learning process, especially in rhythmic activities in Bandungan District and Semarang City, require a needs analysis to find solutions. To identify existing problems, researchers need to conduct preliminary observations and preliminary studies.

In the process of identifying the potential and problems of the learning process implemented by physical education teachers at Bandungan 01 State Elementary School in Bandungan District, the researcher found several things, including: (1) students' difficulty in performing rhythmic

activities demonstrated or given by teachers. (2) students' limitations in finding new and enjoyable rhythmic gymnastics movements.

Results of Small-Scale Trials

The results of small-scale trials conducted at Bandungan 01 State Elementary School showed that student responses were evaluated through four main aspects: interest and enjoyment, understanding of movements, benefits of gymnastics, and attitude and cooperation.

Table 1. Student Response Results

Aspect	Percentage	Category
Interest and enjoyment	86,00%	Very Good
Understanding of movement	71,75%	Good
Benefits of gymnastics	87,75%	Very Good
Attitude and cooperation	83,50%	Very Good

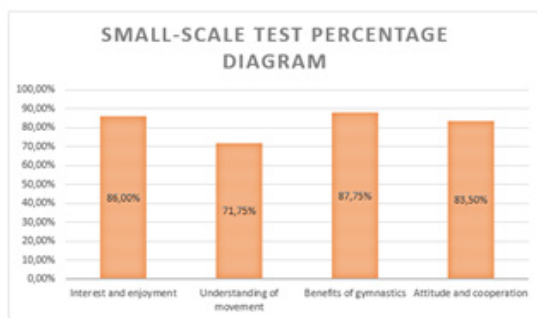


Diagram1. Small-scale trial results

The implementation of a small-scale trial at Bandungan 01 State Primary School showed that Creative Energy Cheerful Gymnastics received a positive response from students. The product was assessed based on four main aspects, namely interest and enjoyment, understanding of movements, benefits of gymnastics, as well as attitude and cooperation.

The results of the data evaluation revealed that the interest and enjoyment aspect reached 86.00% and was classified as very good. This indicates that the students had a high level of interest in the gymnastics that had been developed. The aspect of movement comprehension achieved a percentage of 71.75%, which is categorised as good. This shows that most students are able to perform the series of gymnastics movements adequately, although some movements still need improvement. The benefits of gymnastics reached 87.75%, which is classified as excellent, indicating that this activity contributes positively to the physical fitness of students. Meanwhile, the attitude and collaboration aspect scored 83.50%, which is classified as excellent, indicating that

gymnastics activities are able to foster positive attitudes and strengthen cooperation among students.

Overall, the findings from the small-scale trial indicate that Creative Energy Gymnastics meets sufficient eligibility standards and is suitable for implementation as a PE learning approach. Thus, this activity is worthy of proceeding to the large-scale trial phase, with minor adjustments based on the feedback obtained.

Large-Scale Trial Results

Large-Scale Trial Results Based on large-scale research conducted at Jetis 02 Public Primary School and Sadeng 02 Public Primary School, student reactions were analysed through four aspects: interest and enjoyment, understanding of movements, benefits of gymnastics, and attitude and collaboration.

Table 2. Student Response Results

Aspect	Percentage	Category
Interest and enjoyment	68,75%	Good
Understanding of movement	80,01%	Good
Benefits of gymnastics	75,37 %	Good
Attitude and cooperation	80,01%	Good

This shows that Creative Energy Gymnastics effectively increases student engagement, understanding of movements, physical benefits, and cooperative attitudes.

Based on the findings from large-scale trials at Jetis 02 Public Primary School and Sadeng 02 Public Primary School, final data was obtained showing student assessments in four aspects. These aspects include interest and enjoyment, understanding of movements, benefits of gymnastics, and attitude and cooperation. Data for these four aspects were collected through questionnaires filled out by students, as well as from observation and evaluation sheets for students. The results of these aspects are presented in the following **Diagram2**.

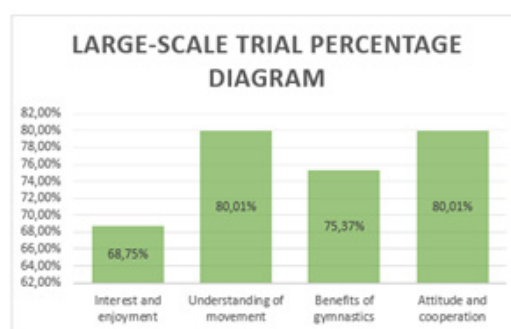
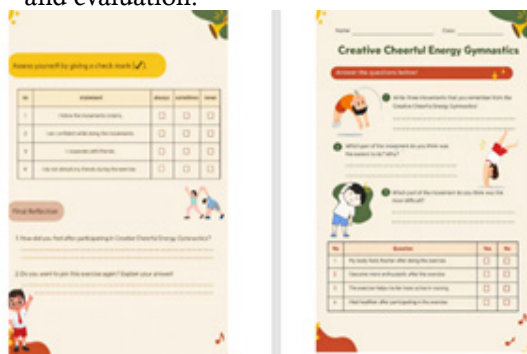


Diagram2. Large-scale trial results

Based on the data obtained, the percentages for the four important aspects are as follows: interest and enjoyment, understanding of movements, benefits of gymnastics, and attitude and cooperation. For the aspect of interest and enjoyment, the percentage is 68.75%. This figure reflects the students' good ability, showing that this activity has succeeded in developing their interest and enjoyment. Meanwhile, the aspect of understanding movement received the highest percentage of 80.01%, which is the same as the percentage for the aspect of attitude and cooperation, which also received 80.01%. This identical score shows that Creative Energy Cheerful Gymnastics has succeeded in improving the students' positive attitude. For the aspect of the benefits of gymnastics, the percentage was 75.37%, indicating that students understood the benefits of gymnastics for their bodies. From these four aspects, it can be concluded that Creative Energy Cheer Gymnastics had a positive impact.

As part of the development research, the final results obtained in this study are not only ideas or concepts, but also real and usable learning tools, namely:

1. The Creative Energy Cheerful Gymnastics learning module covers the objectives to be achieved, the steps to be taken, and how to measure participants' learning outcomes.
2. Video tutorials of the movements to help teachers and students understand the steps. (<https://youtu.be/ZQQdViyTptI?si=PfjWB PjLINGVbyIE>)
3. Guidelines for teachers explaining how to implement the program, variations of activities, and strategies for managing the class.
4. Student worksheets used for simple reflection and evaluation.



The development of the Creative Energy Gymnastics learning model was carried out using the Research and Development (R&D) approach. The development process refers to the stages of product development that include identifying potential and problems, collecting data, design-

ing the product, validating the design, revising the product, conducting trials, and producing the final product. Through these systematic stages, the resulting learning model can be tested for its feasibility and effectiveness before being widely implemented in the learning process.

Based on the results of the needs analysis conducted through preliminary observations and interviews with physical education teachers, it was found that rhythmic activity learning in elementary schools is still carried out conventionally with limited movement variations and minimal use of creative learning media. This condition causes students to experience difficulties in understanding rhythmic movements and reduces their enthusiasm for participating in physical education learning activities. Similar findings were also reported by , who stated that rhythmic gymnastics learning in elementary schools often lacks innovation and creativity in its implementation. Therefore, the development of a more creative and engaging learning model is needed to improve students' participation and understanding in rhythmic activities.

The implementation of the Creative Energy Gymnastics learning model was tested through two stages of trials, namely small-scale trials and large-scale trials. The results of the small-scale trial showed that students gave very positive responses to the learning activities. The aspect of interest and enjoyment reached 86.00%, indicating that the gymnastics activities were able to attract students' attention and increase their enthusiasm for participating in physical education learning. The movement comprehension aspect obtained a percentage of 71.75%, which shows that most students were able to understand and perform the gymnastics movements properly. Meanwhile, the benefits of gymnastics aspect reached 87.75%, and the attitude and cooperation aspect reached 83.50%, both of which were categorized as very good. These results indicate that Creative Energy Gymnastics activities can contribute positively to students' physical fitness while also fostering cooperation and positive attitudes during learning.

Furthermore, the results of the large-scale trial also showed positive outcomes. Student responses in the aspects of interest and enjoyment reached 68.75%, understanding of movements reached 80.01%, benefits of gymnastics reached 75.37%, and attitude and cooperation reached 80.01%, all of which were categorized as good. These findings indicate that the Creative Energy Gymnastics learning model is effective in increasing student participation, improving under-

standing of rhythmic movements, and developing positive attitudes during learning activities. Rhythmic gymnastics itself is known to support the development of coordination, flexibility, and creativity in children while promoting healthy lifestyle habits from an early age (Sembiring et al., 2025).

The results of this study are in line with several previous studies that emphasize the importance of creative learning approaches in physical education. According to , aerobic gymnastics learning that combines structured movements, music rhythm, and enjoyable activities can increase students' motivation and participation in learning. In addition, (Anjanika et al., 2025), stated that creative rhythmic gymnastics activities can improve students' self-confidence, communication skills, and cooperation during physical activities. These findings strengthen the argument that creative and interactive gymnastics learning models can provide meaningful learning experiences for students.

The Creative Energy Gymnastics learning model developed in this study also integrates several important elements that support effective gymnastics activities, including structured movement sequences, energetic music, and creative choreography adjusted to students' abilities. The duration of the activity ranges from 8–10 minutes and consists of three stages, namely warm-up, core activity, and cool-down. This structure allows students to perform movements safely while maintaining body coordination and stamina during exercise . In addition, rhythmic activities involving large muscle groups repeatedly can improve cardiovascular endurance and muscle strength while supporting children's overall motor development.

Another advantage of the Creative Energy Gymnastics learning model is the availability of supporting learning tools, such as learning modules, movement video tutorials, teacher guidelines, and student worksheets. These components help teachers implement the learning model more effectively and provide structured guidance for students during the learning process. The presence of video tutorials also facilitates students in understanding movement sequences more clearly and increases their motivation to practice independently.

Based on the results of expert validation, the Creative Energy Gymnastics learning media obtained an average score of 78.5%, which is categorized as good. This indicates that the developed learning model is considered feasible to be used as a rhythmic gymnastics learning mo-

del in elementary school physical education. The positive responses from students and the results of expert validation show that this model has the potential to support the improvement of learning quality in physical education, especially in rhythmic activity materials.

Overall, the development of the Creative Energy Gymnastics learning model provides an innovative contribution to physical education learning in elementary schools. The model not only improves students' physical fitness and movement skills but also encourages creativity, cooperation, and active participation during learning activities. In addition, the implementation of this model supports the principles of the Merdeka Curriculum, which emphasizes student-centered learning and meaningful learning experiences (Badriyah et al., 2024).

CONCLUSION

Based on the results of research and development that has been carried out, it can be concluded that the Creative Energy Gymnastics learning model is a learning innovation that is quite effective in improving the quality of Physical Education, Sports, and Health (PE) learning in rhythmic activities in primary schools. This model was developed due to the need for more creative and diverse gymnastics learning that is in line with the characteristics of students in phase B. The purpose of this study was to create and evaluate the effectiveness of the learning product. This was done through a regular research and development (R&D) process, starting from understanding user needs, designing the product, seeking expert opinions, to conducting small-scale and large-scale testin

Trials showed that Creative Energetic Gymnastics produced good results, namely increasing students' interest and enjoyment, understanding of body movements, physical fitness benefits, and attitudes of cooperation and togetherness among students. The percentage of results from small and large-scale trials were in the good to very good category, indicating that the model can increase motivation, active involvement, and students' motor coordination skills in rhythmic learning. By combining regular movements, freedom to explore, and interesting music, the learning process will be more meaningful and enjoyable for students.

In addition, the application of this model strengthens the role of teachers as creative and innovative learning designers and organisers. Teachers not only deliver lesson material but

also manage the learning process using modules, learning videos, implementation guides, and worksheets prepared for students. This approach helps create a learning process that is structured yet adaptable, thereby improving progress in thinking, feeling, and acting comprehensively.

The findings also show that Creative Energy Gymnastics is in line with the principles of the Merdeka Curriculum, which focuses on student-centred learning, character development, and learning experiences that are relevant to the context and enjoyable. Therefore, this model can be used effectively as a PE learning strategy, especially for rhythmic activities in primary schools.

Thus, it is clear that the development of Creative Energy Cheerful Gymnastics plays an important role in improving the effectiveness of PE learning, stimulating student enthusiasm and engagement, and helping to achieve more comprehensive learning outcomes. Therefore, it is recommended that PE teachers implement and use this learning model as part of creative, inclusive, and sustainable learning innovation in primary schools.

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