



## **The Role of Forward Rolls in the Development of Gross Motor Skills of Elementary School Students**

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### **Abstract**

Gross motor development is one of the crucial elements in the growth and development of elementary school children. One type of physical activity that can support this progress is the forward roll movement in floor gymnastics. This study aims to understand the role of forward roll training in improving students' gross motor skills in elementary schools. The method used is qualitative research with a case study approach, involving two physical education teachers at an elementary school in Sumedang Regency. Data were collected through interviews, observations, and documentation. The research findings indicate that forward roll movements are very effective in improving large muscle strength (core, arms, legs), body coordination, and balance. Teachers apply gradual and flexible strategies according to students' physical abilities, and combine character and cross-disciplinary values in the learning process. Indicators of successful gross motor development include improving movement techniques, courage to try, and enthusiasm in practicing. The main obstacles in forward roll training are students' fear and limited equipment, which are overcome by playing methods and using existing tools. These findings confirm the significance of optimizing forward roll training as a component in physical education teaching strategies in elementary schools.

**Keywords:** *Elementary School Student, Forward Roll, Floor Gymnastics, Gross Motor Skills And Physical Education*

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## **INTRODUCTION**

Physical education is an essential component of the educational system that cannot be separated, as it serves as a means to achieve educational objectives through structured physical activities. Beyond merely engaging in movement, physical education involves active participation and interaction among students in shaping well-rounded individuals (Bagas et al., 2025). As a part of the broader curriculum, Physical Education, Sports, and Health (PJOK) aims to foster physical fitness, motor skills, critical thinking, social interaction, reasoning, emotional stability, moral behavior, healthy lifestyle habits, and environmental awareness.

These goals are realized through carefully selected and systematically planned physical, sports, and health activities that support the achievement of national education goals (Siane Maria Tampi & Nonamina Kobak, 2025). Formal education in schools also encompasses direct interaction between teachers and students, a dynamic known as the learning process (Irene Herana, 2025). Through various physical and sports activities, students are not only nurtured to become healthy individuals but are also instilled with values that contribute to the development of their character and personality (Fadlillah et al., 2025). Furthermore, physical education plays a significant role in promoting personal safety, environmental health, and a deeper understanding of physical activity and sports concepts, with the learning process encompassing a wide range of sports and games as instructional tools (Siane Maria Tampi & Marsuki, 2025).

Gross motor development in elementary school children is one of the important aspects. Where gross motor skills involve movements that use the main body muscles such as the hands, feet and back, and are closely related to a child's ability to do physical activities, maintain balance and coordinate movement. During elementary school, children are in a physically active phase, so proper stimulation is needed to support optimal motor development.

Elementary school-aged children are at a very dynamic stage of physical development, so they need targeted and systematic motor stimulation to support optimal growth and development. Involvement in adequate physical activity is essential for gross motor development. Without such activity, children are at risk of experiencing obstacles in developing their motor skills. (Yugan et al., 2023) stated that physical activity has a direct influence on children's Body Mass Index (BMI); the more active they are, the better their physical condition. This emphasizes the importance of physical education in schools as a forum that can meet the needs of children's motor development. In this case, physical education plays a crucial role in providing physical activity programs designed to develop children's motor skills as a whole. (Rahman et al., 2020) emphasizes that all educational efforts should be directed to encourage gross motor development, because this aspect will contribute to the overall development of the child. Properly designed programs, such as traditional games and exploratory activities, not only provide opportunities for children to practice physical movement, but also support the growth of self-confidence and social skills. (Buahana & Suparno, 2022).

Gross motor skills play an important role in supporting the physical and social development of elementary school students. These skills include fundamental movements such as walking, running, jumping, and other activities that require body coordination, balance, and muscle strength.(Prodyanatasari et al., 2023). Gross motor development not only has a positive impact on children's physical health, but also helps increase their self-confidence and ability to interact socially.(Purwanto & Baan, 2022). So schools and teachers are very important to provide learning experiences that involve structured physical activity, for example in floor gymnastics learning. One form of effective exercise for gross motor development is the forward roll movement in floor gymnastics learning, because this forward roll is a movement that involves muscle strength, body coordination and overall balance. Forward rolls are one of the techniques in floor gymnastics that play an important role in supporting the development of gross motor skills in elementary school students. Forward rolls provide various benefits for the development of students' gross motor skills. However, not a few elementary school students have difficulty in carrying out this movement. These obstacles can be caused by various factors, such as lack of correct technical direction, minimal frequency of practice, and limited supporting facilities such as mats that are suitable for use in practice (Mabrur et al., 2021; Mahmudah & Darmawan, 2022). Mastering this skill not only improves physical abilities, but also has a positive impact on children's social and psychological development.(SYAM et al., 2024). Well-trained gross motor skills enable students to carry out daily physical activities more optimally, improve their physical condition, and also support their mental health and happiness.(Prodyanatasari et al., 2023). However, basically not all schools maximize the potential of this forward roll exercise in the physical education learning process.

Given the importance of gross motor skills and the great potential of forward roll movements in supporting this development, a more in-depth study is needed regarding the contribution of forward roll exercises to improving elementary school students' motor skills. A comprehensive understanding of this will enable teachers and schools to design learning strategies that are more effective, focused, and in accordance with children's developmental needs. Thus, forward roll movements can be optimally utilized as a means to support physical growth, coordination, and gross motor skills of elementary school children. So this is an important reason to further study the role of forward rolls in supporting the development of students' gross motor skills in elementary schools.

## **METHOD**

In this study, the researcher used a qualitative method that focuses on in-depth observation. Qualitative research methods are approaches used to explore and understand social phenomena in depth and comprehensively. Unlike quantitative methods that emphasize numerical measurements and statistical analysis, qualitative approaches focus more on interpreting meaning, understanding context, and the experiences of individuals or groups being studied.(Alamsyah et al., 2021). In its implementation, the researcher acts as the main instrument that is directly involved in collecting data through various techniques, such as in-depth interviews, field observations, and document studies.(Susanto, 2021). Qualitative research methods are widely applied in the fields of education and character development because they are able to provide a deep understanding of social phenomena and the behavior of individuals or groups in certain contexts. This approach focuses on the collection and analysis of non-numerical data, such as interviews, observations, and documentation studies, in order to describe the experiences, views, and perceptions of participants in the research.(Firmadani, 2022).

The case study approach is one of the methods in qualitative research that focuses on in-depth analysis of one or more cases in a particular context. The purpose of this approach is to explore and understand a phenomenon in a real situation, while identifying various factors that influence the condition. This method is very effective for studying complex problems that cannot be fully explained through a quantitative approach.(Yusanto, 2020). This study uses a case study approach design to help analyze and to determine the role of forward rolls in the development of gross motor skills of elementary school students in one of the schools in Sumedang Regency, West Java. The qualitative approach was chosen by the researcher because it was to understand in depth how the role of learning floor gymnastics forward roll movements can help develop gross motor skills in students. Data collection in this study was carried out through direct observation at school when physical education learning was taking place, interviews with two physical education subject teachers, as well as analysis and drawing conclusions to describe the relationship between floor gymnastics and gross motor skills of elementary school students.

This study involved two physical education teachers who acted as participants. The teachers were selected based on their experience and active involvement in learning.

Participants are expected to provide insight and perspective on the role of forward roll floor gymnastics learning taught by them on gross motor development in students.

The procedure carried out in this study began with preparation which included collecting information about the background in one of the elementary schools in Sumedang Regency, as well as permission from the school. After the data was collected through interviews with two physical education subject teachers, field observations and documentation of physical education learning activities, especially when providing floor gymnastics material for forward rolls to monitor the role of forward rolls on the gross motor skills of elementary school students. After the data was collected, data analysis was carried out qualitatively with descriptive techniques to identify patterns that indicate the role of forward rolls in the development of gross motor skills of elementary school students.

This research was conducted in one of the elementary schools in Sumedang Regency, which is a public elementary school located in North Sumedang District. This school is a school that is highlighted in its sports achievements. In addition, this school has facilities that greatly support the learning process, especially in learning floor gymnastics forward roll movements and is filled by competent teachers, including physical education teachers. The selection of the location by this researcher aims to reveal more deeply about the role of forward rolls in the development of gross motor skills of elementary school students.

The collection of information for this study was carried out through several methods, including interview methods, observation, direct observation and documentation collection. The main data obtained in the collection of information was through in-depth interviews with the two physical education teachers who were teachers at the elementary school. With this interview, it aims to explore a deeper understanding. In addition, observation and direct observation in the field to see the learning process, this observation was also carried out to see the extent to which the role of floor gymnastics learning can develop gross motor skills of elementary school students.

The data collected in this study were analyzed using a qualitative approach with descriptive analysis techniques. The first step taken was to categorize the data that had been obtained from the results of interviews, observations and documentation. After that, identify patterns or sub-themes that are relevant to the role of forward rolls in the development of gross motor skills of elementary school students.

Interviews conducted with physical education teachers aim to find an answer or perception of the teacher regarding the methods or ways used in developing gross motor skills through learning floor gymnastics forward roll movements. This observation data will be used to assess the extent to which forward roll movements can help students' gross motor development.

In this research process, researchers utilize modern technology in the form of voice recording applications or audio recordings and smartphone cameras that play an important role in carrying out this research. Audio recording applications are used to record every chat or conversation with clear sound quality and ensure that all information can be recorded clearly and nothing is missed. The second is a smartphone camera, the smartphone camera here is very useful for researchers every time they capture a moment. The use of audio recordings and smartphone cameras is very helpful in increasing the accuracy and completeness of the data obtained, and provides an opportunity for researchers to fully concentrate while conducting interviews without having to take manual notes. Thus, the process of collecting data through interviews, observations and documentation becomes more in-depth and clear.

## **RESULTS AND DISCUSSION**

### **Result**

#### **The Effectiveness of Forward Roll Exercises in Developing Gross Motor Skills**

At this point, the researcher discusses how far forward roll exercises contribute to the development of gross motor skills in elementary school students. Through observations and interviews that have been conducted, the researcher obtained data on the effectiveness of forward roll exercises in developing gross motor aspects. Based on the responses obtained from the two physical education subject teachers, they said that this forward roll exercise was considered very effective in supporting the development of gross motor skills in elementary school students. Because in this forward roll movement, the teacher said that it involves almost all large muscles, for example, the core muscles, arms and legs. So that this allows students to train muscle strength and body coordination as a whole. In addition to training the physical, forward rolls can help children understand body orientation and improve motor control. This basic forward roll movement can also be considered an important foundation in preparing students to master other sports skills. This is also supported by (Kustari & Mahendra, 2020) which states that forward roll exercises are one form of physical activity that has been

proven effective in supporting the development of gross motor skills in elementary school students. This movement involves the work of a number of large muscles, such as the core, arms, and legs, which play a role in increasing strength and body coordination. In addition, according to (Candra et al., 2023), the execution of forward rolls requires accurate body orientation skills and good movement control, which are important foundations in learning more complex sports movements. Therefore, this forward roll exercise is not only useful for physical aspects, but also in supporting the psychological development and social skills of children.

### **Teaching Approaches for Students with Diverse Physical Abilities**

In the process of learning floor gymnastics forward roll movements, physical education teachers face the fact that each student has different or varied physical abilities. Therefore, a flexible and adaptive approach during learning is very much needed to help the continuity of learning. From the results of the interview, it was found that the first teacher used a differentiation strategy, namely adjusting the method to the student's condition. The first teacher gave students who were still afraid the opportunity to practice on a sloping, soft surface and using a mat, while students who had mastered the movement would be directed to try independently but still under the supervision of the teacher. This approach also involves the peer teaching method, namely students who had mastered the movement were asked to help their friends who were still afraid or had not been able to master the movement. While the second teacher emphasized more on the initial warm-up that focused on flexibility and strengthening the core muscles before entering the practice of the forward roll movement. After that, the teacher taught the technique gradually and sequentially starting from the squat position to the knee push. And for students who had difficulty, the teacher would provide direct assistance. The second teacher's approach in teaching forward rolls showed an understanding of the individual needs of students. The first teacher implemented differentiation and peer teaching methods, where fearful students were given more support, while more ready students were encouraged to develop. Peer teaching has been shown to be effective in improving motor skills through peer evaluation and feedback. (Spittle et al., 2020). In contrast, the second teacher used a structured approach, such as functional warm-ups and systematic movement breakdowns. She also provided physical support to create a sense of safety while practicing. This approach is consistent with research that emphasizes the importance of a safe and supportive learning environment in physical education. (Ortíz et al., 2025).

## **Indicators of Success in Gross Motor Development**

The success of forward roll exercises in developing students' gross motor skills can be seen from several important indicators, such as increased body balance when performing movements, the ability to maintain coordination between limbs and increased core and leg muscle strength. To assess the development of gross motor skills through forward roll exercises, teachers use a number of success indicators, including aspects of movement technique, courage and body coordination. The first teacher made an assessment by observing the improvement of basic techniques, such as posture when rolling, and the students' courage to try even though they were not yet perfect. The first teacher considered that the courage to start and the desire to try were indicators of initial success. Meanwhile, the second teacher prepared a more structured assessment rubric with various indicators of student mastery of techniques. In addition to student mastery of techniques, teachers also paid attention to aspects of attitude such as enthusiasm, seriousness in practicing and willingness to improve movements. Both teachers assessed the success of forward roll learning based on aspects of movement technique, courage and body coordination. The first teacher focused on improving posture and courage as the main indicators of progress. This is in line with the findings (Kamaruddin et al., 2023) which states that physical education contributes to the formation of positive character, including students' self-confidence. On the other hand, the second teacher uses a systematic assessment rubric with criteria such as body control, balance, and independence in movement. This approach is in accordance with the assessment instrument developed by (Mustafa & Masgumelar, 2022), which includes aspects of attitude, knowledge, and skills as the basis for assessing physical education.

## **Discussion**

The research findings indicate that forward roll exercises play a crucial role in improving gross motor skills of elementary school students. This activity involves almost all large muscles, especially the core muscles, hands, and feet, thus supporting the improvement of muscle strength, body coordination, and balance. In addition, this activity also supports children in grasping body orientation and improving movement control, which are crucial elements in gross motor skills. In its implementation, teachers apply adaptive methods that are sensitive to students' needs. The first teacher applies differentiation and peer teaching strategies to support students who feel afraid, while the second teacher applies a more structured approach through gradual techniques and physical support. Both of these approaches show that success

in gross motor learning requires methods that are appropriate to the child's physical and psychological abilities. Signs of success are not only assessed in terms of technical aspects, but also from changes in students' attitudes such as enthusiasm and courage in conducting experiments. This shows that forward roll exercises not only provide physical benefits, but also mental and social ones. This learning can also be linked to other subjects such as Science and Mathematics, as well as character education. However, challenges such as limited equipment and students' fears still need to be managed in a creative and collaborative way.

## **CONCLUSION**

Based on the research, it can be concluded that forward roll movement plays an important role in the development of gross motor skills of students in elementary schools. This activity is effective in building large muscle strength, improving coordination, and training children's body balance. In addition to physical benefits, this exercise also plays a role in increasing students' self-confidence, courage, and social skills. Success in learning forward roll movements is greatly influenced by the teaching methods applied by the teacher. Gradual strategies, differentiation, peer teaching, and direct assistance have proven effective in accommodating variations in students' physical abilities. Indicators of successful learning include technical aspects of movement, courage to try, and a positive attitude towards the exercise. However, problems such as lack of facilities and student fear must be addressed with the right strategies, such as the use of alternative tools, increasing motivation, and creating a safe and enjoyable learning atmosphere. With proper management, forward roll movements can be an effective learning tool in supporting maximum gross motor development at the elementary school level.

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