



## **A Colorful Question Game to Improve Children Motor Skills in 4<sup>th</sup> Class Elementary School**

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### **Info Artikel**

#### Article History

Received : September  
2023

Revised : September 2023

Accepted : September  
2023

#### Keywords:

Game, Learning,  
Locomotor,

### **Abstrak**

This research aims to develop a basic motor skills learning model through game activities tailored to the developmental stages of students' ages. The game model used in this research is called "Colorful Question." This game is designed to enhance locomotor skills, particularly the basic movements of jumping and hopping, which are highly beneficial for training leg muscle strength, coordination, attention focus, and cognitive abilities of students. The research follows the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). The subjects of this study are fourth-grade students in both boys' and girls' elementary schools, consisting of 27 participants in a small-scale pilot test and 65 participants in a large-scale pilot test. Validation results from experts show a CVI (Content Validation Index) value of 3.57 and a CVR (Content Validity Ratio) of 0.01, indicating that the developed "Colorful Question" game has high validity and is suitable for fourth-grade elementary school students, making it suitable for field testing (empirical validation).

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## INTRODUCTION

The whole national education system includes elements of mobility, and physical education is a crucial component of that system (Sari et al., 2018). Children's motor development heavily relies on movement (Martinus & Kesumawati, 2020). Children must play in order to become familiar with their environment. Adults frequently engage in play to pass the time and decompress. Any activity that is done purely for the enjoyment it provides without thinking about the outcome is called playing (Widodo & Lumintuarso, 2017). Playing entails giving children The Chance To Engage In Enjoyable Learning Activities (Suharjana, 2011).

Identification of children with motor impairments (pedagogical diagnosis) or the description of motor proficiency levels are the primary goals of educational testing in physical education (Scheuer et al., 2019). For motor skill therapies, schools seem to be a good setting (Eddy et al., 2019). For primary school students, the development of motor abilities is intimately tied to the development of reading (Lê et al., 2023). A child's physical health, brain development, and cognition are all indirectly impacted by playing while reading (Pesce & Ben-Soussan, 2016). Movement and motor skills are essential for everyone's meetings to function (Siaperas, 2012). Through play, kids can design their own worlds where they can practice telling their own stories and resolving disputes (Park & Lit, 2005). When learning using a play approach, students are encouraged to be able to play while learning to achieve learning achievements, namely increasing basic movement abilities to the maximum. The play approach, with all forms, methods, rules, and physical activities in it, can increase students' basic movement

abilities to the maximum (Sofyan et al., 2022). Children's motor skills can be developed via seeing, reading, and remembering. A child's physical health, brain development, and cognition are all indirectly impacted by playing while reading (Peng et al., 2018).

There are many different game genres that might help elementary school students' motor skills often using traditional game approaches (Mahfud & Fahrizqi, 2020) (Riyanto et al., 2016) (Hidayatullah & Hasbi, 2021) (Firmansyah, 2019) (Utsman et al., 2018). The Sintren Plate Breaking Game was created to help primary school students' gross motor abilities (Kamaludin et al., 2020), gobak sodor game (Raditya & Irawati, 2015), engklek game (Munawaroh, 2017). Utilizing a little ball enhances motor abilities as well (Hadi et al., 2021), kids athletic (Anisah et al., 2020), circuit training (James, Aini, 2018) aritmatika step (Arif Purnomo & Endah Sudarmillah, 2020). Additionally, some incorporate traditional, social, and motor games (Anjarini, 2017). Using the teaching games for understanding (TGfU) method to teach pupils motor understanding (Samodra, 2021). The study I conducted was to develop a colorful game model with questions to boost elementary school pupils' motor skills.

A Physical Education, Sports, and Health teacher plays a crucial role in facilitating the development of children's motor skills. Play too are demands and needs essential for early childhood, through Children's play will be satisfying demands and developmental needs dimensions of motor, cognitive, creativity, language, emotions, social, values, and attitudes life (Moeslichatoen, 2006). Here are some key actions that PESH teachers should take to facilitate the development of children's motor skills:

- (1) Understanding Children's Needs, PESH teachers should recognize that every child has a different level of development. They need to comprehend individual needs and the physical abilities of the children in their classes.
- (2) Structured Lesson Plans, Creating structured and continuous lesson plans is essential in helping children develop their motor skills. These plans should encompass a variety of physical activities that support both gross and fine motor skill development.
- (3) Varied Approaches, Utilize various methods and aids to teach motor skills. This includes games, physical exercises, sports, gymnastics, dance, and more. Varied approaches keep children engaged and enthusiastic.
- (4) Supporting All Children's Participation, PESH teachers must create an inclusive environment so that children with varying physical abilities can participate. This includes adapting activities to meet the needs of children with physical limitations.
- (5) Providing Positive Feedback, Offering positive and constructive feedback is crucial. It helps children understand how to improve their motor skills without feeling discouraged.
- (6) Encouraging Collaboration and Teamwork, Team sports or group activities can teach children about cooperation, communication, and social skills. Teachers should promote collaboration in the learning process.
- (7) Emphasizing Safety, Providing clear guidelines and rules for safety during physical activities is essential. Teachers must ensure that children understand the importance of safety while practicing motor skills.
- (8) Evaluating Development, Measuring children's progress in terms of motor skills and providing measurable feedback is important. This helps children and parents understand the progress achieved.
- (9) Allocating Time for Play, Allowing children ample time for unstructured play and self-exploration is vital. Play is a natural way for children to develop motor skills.
- (10) Communication with Parents and Guardians, Regular communication with parents or guardians is essential. They can provide insights into the child's development outside the school environment.

Understanding individual needs, supporting motor skill development, and creating a safe and inclusive environment are key aspects of what PESH teachers should do to help children develop their motor skills effectively. Increasing students' motivation in physical education requires a creative, inclusive, innovative approach that focuses on developing physical and movement skills. Very intrinsic motivation closely related to one's own feelings without being influenced by external factors. These feelings can be comfort, satisfaction, pleasure, joy, etc also interest (Nur, 2019). Hence, the researcher has developed the "Colorful Question" game model as a learning tool for students, with the hope that it will motivate them to achieve physical education learning objectives.

#### The Colors Question Game Model

This game model is called the "Colorful Question Game," and it can be played individually or in teams. The purpose of this game is to enhance fundamental movement skills like jumping, hopping, and leaping, which are typically part of athletic learning. Some educators say that playing is learning to

adapt to circumstances and is a form of activity that children like (Yudha M Saputra, 2001). Additionally, it aims to boost children's cognitive knowledge through a set of questions within the game (each surprise ball contains questions related to the lessons for fourth-grade elementary students). The advantages of this game include stimulating these fundamental movement skills and motivating students to become physically literate.



**Figure 1.** The Colors Question Game

Equipment Used:

1. Circular Pattern Banner (1x3 meters in size).
2. Surprise Ball (question container).
3. Whistle.

How to Play:

1. This game is played with teams (consisting of 3 or more people) starting by selecting participants to take a surprise ball and perform a one-legged jump with the supporting leg considered the strongest on the circular pattern matching the color of the surprise ball.
2. Upon reaching the final circle (end point of the game), the player opens, reads, and answers the question inside the surprise ball.
3. If the answer is correct and accurate, the player earns 10 points, but if it's wrong, no points are earned.

4. Once the first player is done, the game continues with the next player until the last player finishes.

## METHOD

In this study, a Research and Development (R&D) model was employed. The R&D methodology serves the purpose of creating specific products and evaluating their efficacy. To craft these particular products, a needs analysis research approach is employed. Furthermore, to assess the functionality of these products within the broader community, research is conducted to gauge their effectiveness.

This research aims to develop an athletic game model for 4<sup>th</sup> elementary school students. The research utilizes the Research and Development Model ADDIE (Analysis, Design, Development, Implementation, and Evaluation). The subjects in this study involve 27 4<sup>th</sup> grade elementary school students for a small-scale pilot test and 65 students for a large-scale pilot test. The research instrument in this study uses an expert assessment instrument with a Likert scale to evaluate the game model.

## RESULT

**Table.1** CVI and CVR Expert Validation

No	E1	E2	E3	ne	N	N/2	ne-(N/2)	CVR	Criteria
1	3	4	3	1	3	1.5	-0.5	0.33	Valid
2	4	4	3	2	3	1.5	0.5	0.33	Valid
3	4	3	3	1	3	1.5	0.5	0.33	Valid
4	4	3	3	1	3	1.5	-0.5	0.33	Valid
5	4	4	3	2	3	1.5	-0.5	0.33	Valid
6	4	4	3	2	3	1.5	0.5	0.33	Valid
7	4	4	4	3	3	1.5	0.5	1	

8	3	4	3	1	3	1.5	-0.5	0.3	Valid
9	4	3	3	1	3	1.5	-0.5	0.3	Valid
10	4	3	3	1	3	1.5	-0.5	0.3	Valid
Sum	38	38	31		Sum			0.01	
Mean	3.8	3.8	3.1		Mean			0.001	Valid
Average	3.57								

Table 1 presents the results of the validation conducted by three experts, including an expert in movement learning, an expert in adaptive physical education, and an expert in small games. The validation results from these experts indicate that the CVI (Content Validation Index) and CVR (Content Validity Ratio) values show a mean of 3.57 and 0.01, respectively. This means that the "Colorful Question Game" developed has a high level of validity and is suitable for fourth-grade elementary school students. The game is deemed appropriate for field testing (empirical validation). Based on the validation results by experts, this developed learning model aims to enhance basic locomotor skills, combined with various questions embedded in other subject materials to also promote age-appropriate knowledge acquisition (concept of learning through play). The hope is that the development of the Locomotor Basic Movement Learning Model not only alleviates boredom and monotony during learning but also enhances students' everyday motor skills.

Games in Physical Education have a significant role that encompasses several crucial aspects. In this context, physical education becomes a fundamental part as a tool for building national values and character (Sitepu, 2017). Firstly, games enhance student participation and motivation as they present learning in an engaging context. Second, games help develop fundamental motor skills and

replace them with more complex physical skills. Third, games also facilitate social learning and teamwork skills, as well as providing practical experiences in accepting victory and defeat with sportsmanship. Through games, Physical Education teachers can also convey concepts like coordination and balance in a more practical context, as well as promote a healthy lifestyle through enjoyable physical activities. Thus, games are a powerful tool in Physical Education that integrates various essential aspects for student development.

## DISCUSSION

Basic Motor Skills (FMS) are crucial as they enable active participation in lifelong activities, boost self-esteem, and support an active lifestyle. Children who do not master FMS may struggle to join games, experience a decline in self-esteem, and tend to avoid physical activities, impacting muscle and bone development as well as opportunities to develop social competence. Early identification of movement issues is essential to provide children with the opportunity to reach their movement skill potential. While most children can learn FMS, some may require additional support, which can be accommodated through learning adjustments.

Teachers can adopt the Colorful Question Game model as an alternative approach to teaching fundamental physical movements like jumping, hopping, and leaping. Moreover, this game model has the added benefit of enhancing cognitive aspects, literacy, and sports-related insights. Its versatility is a significant advantage, as it can be implemented in various settings, be it indoors or outdoors, and the materials used are easily portable. Additionally, the questions within the game are tailored to suit elementary school-aged children.

The model is recommended for elementary school age whether it is carried out during school hours, learning and leisure time in the neighborhood.

## CONCLUSION

Following a validation analysis conducted by experts, it has been determined that the Colorful Question Game can effectively enhance the learning of athletic movements, promote physical literacy, and provide enjoyment for 4th-grade elementary school children. As a result, it is highly recommended for use in both school and family settings as an engaging recreational activity for young children during their leisure time.

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