



Application of Creative Dance Arts to Improve Flexibility of Movement of Children Aged 4-5 Years



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ABSTRACT

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Flexibility of movement is an important aspect in the gross motor development of early childhood, especially in the age range of 4-5 years. The results of initial observations at KB Golden Kids Bululawang showed that only 5 out of 14 children achieved completeness in flexibility of movement. This study aims to determine the application of creative dance art in improving children's flexibility of movement. The method used is Classroom Action Research (CAR) with two learning cycles, each consisting of the planning, implementation, observation, and reflection stages. Data collection techniques were carried out through observation and documentation. The results of the study showed an increase in children's flexibility of movement, which was marked by an increase in the average value of 58.03% in the first cycle with the category of Starting to Develop (MB), and increased to 77.08% in the second cycle with the category of Developing Very Well (BSB), this increase indicates that creative dance art can stimulate children's flexibility of movement. This study concludes that creative dance art can improve flexibility of movement in early childhood, and can be a fun and useful learning alternative for PAUD teachers.

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1. Introduction

Optimal gross motor development in early childhood provides a strong foundation for various other abilities. Based on the results of observations, the child's gross motor development has not developed optimally, as seen from the child's ability to perform basic movements such as running, jumping, maintaining balance, and coordinating body movements which are still not in accordance with the developmental stage of their age. During the implementation of observations on children aged 4-5 years in group A, especially class Jasmine 1 at KB Golden Kids Bululawang, which consists of 14 children (8 girls and 6 boys), the researcher conducted direct observations of the activities and observations carried out for several days by following the learning activities from beginning to end. Other research also shows that children aged 4-5 years generally still demonstrate low levels of fundamental movement skills (Martins et al., 2020).

Several factors contributing to this situation include limited space or play space for children. Another study found that lack of play space and an unsupportive environment can be barriers to children's motor development (Kompasiana, 2024). A limited environment means children do not have enough opportunities to move freely and engage in optimal physical activity. Furthermore, exercise activities offered to children tend to be monotonous



and lack variety. Repeated exercise movements without innovation can easily lead to boredom and a lack of enthusiasm for participating.

On the other hand, digital media use also significantly impacts children's gross motor development. Children spend more time watching videos, especially those with less educational content. Two studies confirm this: a 2020 study found that excessive screen use increased the risk of children having low gross motor quotient (low GMQ) by up to 72% (Felix et al., 2020). Meanwhile, another study in 2025 found that an additional hour of screen viewing duration can reduce children's gross motor skill scores (Viegas et al., 2025). This habit reduces children's time for physical activity, leading them to be passive and lacking the necessary motor stimulation. Lack of parental supervision and restrictions on digital media use also negatively impacts children's gross motor development. Conversely, research shows that regular physical activity can be a positive predictor of gross motor skills in preschoolers (Viegas et al., 2023).

The application of creative dance art is seen as an effective means to train the flexibility of gross motor movements in early childhood, because through dancing activities children can move freely, following the rhythm, while at the same time having fun and meaningfully according to their developmental stage. Other research also concludes that creative dance has a significant influence on the development of children's gross motor skills (Utari & Yeni, 2020). The application of creative dance art in learning for children aged 4-5 years at KB Golden Kids Bululawang can be done in a fun way and according to the child's developmental stage. The learning process involves planning, implementation, observation, and reflection. The teacher acts as a facilitator and companion, providing positive stimulation to the child.

Early childhood development emphasizes the importance of enjoyable and meaningful learning experiences through activities that are close to everyday life. One aspect of development that requires attention is physical motor skills, particularly the flexibility of children's body movements. Through the application of creative dance, children can move freely to the rhythm, practicing flexibility, balance, and body coordination in a fun way. Furthermore, dancing activities also help children express themselves, increase self-confidence, and learn to work together with friends. A 2020 literature study confirms that creative dance movement designs are very attractive to children so that they can optimally develop gross motor skills (Delia & Yeni, 2020). Creative dance is an appropriate medium to support motor development and the socio-emotional aspects of early childhood in harmony with the spirit (Nasution et al., 2024).

Gross motor development is crucial to stimulate early on, as it impacts a child's creativity. A 2023 study also reinforces that creative dance can be an effective means for gross motor development in young children (Haida et al., 2023). Furthermore, research has shown that children who receive adequate gross motor stimulation from their parents also have better emotional management skills. Furthermore, children with strong gross motor skills are also more adept at interacting with their peers, which in turn boosts their self-confidence when socializing with their friends. Early childhood gross motor skills can develop through dance movements because children are able to express themselves through dance movements and musical rhythms. Movement activities can be applied in games, sports, and physical activities carried out in daily activities, one of which is dancing. Dance is a type of art that is directly related to human body movements, including movements of the head, body, hands, and feet (Novitasari Reni et al., 2019). In line with this, an experimental study in 2020 also proved that creative dance learning is effective in improving gross motor skills in children (Abadi, 2020).

According to Hurlock, gross motor development is body movement that uses large muscles such as the hand muscles, arm muscles, abdominal muscles, and leg muscles,

which are influenced by the maturity of a child's physical development. Each child's motor development varies according to their age. Some basic movements (gross motor skills) and their variations are increasingly mastered or can begin to be done, including: walking, running, climbing, jumping, kicking, throwing, catching, and dancing. Dancing is a creative and fun activity that can improve gross motor development in children. According to Sujiono, gross motor skills are formed when children begin to have coordination and balance almost like adults. These gross motor skills require coordinated movements of most parts of the child's body (Aldiyan Rizky, 2022). This finding is supported by research showing that playing *dengklek* (traditional hopscotch) has a significant effect on the gross motor development of children aged 4-5 years (Suarti et al., 2020).

According to Sekarningsih (2006), dance is a medium for communicating feelings based on expressive movement, with its basic substance being movement and rhythm. Movements in dance must be expressed rhythmically, thus evoking certain characteristics according to the quality of the rhythm produced. Dance is an expression of the human soul expressed through beautiful rhythmic movement in space (Pratiwi et al., 2020). A study on music, body movement, and dance intervention also supports the role of dance in improving motor coordination in children with developmental coordination disorder (Valero-García & Lavega-Burgués, 2020).

According to Kamtini & Tanjung (2005), the types of dance that are very popular with PAUD-aged children are dances that are cheerful, with a happy and enjoyable atmosphere in performing the dance, movements that are agile and simple, and accompaniment that is easy to understand. The choreography or movements in the "ant dance" use everyday life themes, which are easier for children to understand and apply because children are more accustomed to everyday life and find them easier to imitate or perform (Ngadirejo et al., 2019). Flexibility in children's bodies is very necessary when doing movement and song activities. Flexibility development can be done through dynamic, static, or a combination of both exercises (Kasmianti et al., 2023). This is reinforced by research showing that the application of *engklek* (hopscotch) games has a positive effect on gross motor abilities, especially in the aspects of balance, agility, and movement coordination (Purnamasari, 2020). Additionally, a study on competition-based obstacle play demonstrated effectiveness in enhancing gross motor skills in young children (Tamala et al., 2025). Finally, a creative dance intervention specifically for expressing emotions in preschoolers was found to significantly improve both motor skills and emotional expression (Çetin & Çevikbaş, 2020).

2. Method

This research uses the Classroom Action Research (CAR) approach, which is a systematic method for improving learning practices by educators through a series of actions that are reflected critically and continuously (Nurhayati & Savitri, 2024). This classroom action research was conducted based on the PTK model proposed by Kemmis and MC Taggart, so that the implementation stages consist of planning, implementation, observation, and reflection. The design of the Kemmis and Mc Taggart model can be seen in the following diagram:



Figure 1. Kemmis and Mc Taggart Cycle Model

This research was conducted in December 2025, at KB Golden Kids Bululawang, Malang Regency, during the odd semester of the current academic year. The subjects of this research were class A students at KB Golden Kids Bululawang, with a total of 14 students consisting of 8 female students and 6 male students. The subject selection technique used total sampling because the number of children in one study group was still small and allowed all of them to be involved in the research process. The target of this study was the flexibility of early childhood movements, which includes the ability to twist and swing the arms, twist and bend the body, run while jumping without falling, jump using both feet, perform many hand-eye coordination movements, and walk in various directions in various ways.

This research was conducted in two cycles, each consisting of four stages: planning, action implementation, observation, and reflection. In the planning stage, the researcher prepared a lesson plan (RPPH) with the class teacher, followed by preparing supporting tools and materials, such as a portable sound system and a smart TV. In addition, the researcher also prepared observation sheets and documentation. The action implementation stage consisted of performing simple body warm-ups by imitating the teacher, followed by practicing body movements and basic movements of the Ceriane Lare creative dance by imitating the teacher. The observation stage was carried out by the researcher using a prepared observation sheet. The reflection stage was carried out after each cycle to evaluate the results, identify deficiencies, and plan improvements for the next cycle.

Data was collected using two techniques, namely observation and documentation. Observations were conducted directly by the researcher during the learning process to assess the children's spatial perception abilities. Documentation was used to record learning activities through photos or videos, as well as to archive notes on the process and results of the actions. The main instrument in this study was the observation sheet for children's movement flexibility, which included six indicators, including the ability to twist and swing the arms, twist and bend the body, run while jumping without falling, jump using both feet, perform many hand-eye coordination movements, and walk in various directions in various ways. Assessments were carried out using the categories "appear" and "not appear." The observation sheet to be used can be seen in Table 1.

KKTP	Assessment Rubric			
	1	2	3	4
Children can rotate and circle both hands well	Children cannot rotate and circle their hands	Children can rotate and circle both hands with and teacher's direction	Children can rotate and reach one hand slowly	Children can rotate and circle both hands well
Children can do twisting and bending movements with their backs parallel.	Children cannot yet do twisting and bending movements.	Children can start to do twisting and bending movements with stiff movements.	Children can do twisting and bending movements with their backs not yet parallel.	Children can do twisting and bending movements with their backs parallel.
Children can run while jumping and landing on both feet equally	Children cannot run while jumping	Children can run and jump unbalanced	Children can run while jumping and landing on both feet but not yet balanced	Children can run while jumping and landing on both feet equally
Children can jump with both feet with 4 jumps	Children cannot jump using both feet at the same time	Children can jump using both feet with the help and direction of the teacher	Children can jump using both feet with 2 jumps	Children can jump with both feet with 4 jumps
Children can move their hands, feet, and head simultaneously	Children cannot yet coordinate eye and hand movements	Children are beginning to be able to coordinate their eyes and hands, but the coordination of movements is not yet precise	Children can move only their hands and feet simultaneously.	Children can move their hands, feet, and head simultaneously
Children can walk in various directions by jumping and their jumps land on the right foot	Children cannot yet walk in the right direction	Children can start to walk in various directions but cannot yet jump	Children can walk in various directions by jumping and their jumps land only on tiptoes	Children can walk in various directions by jumping and their jumps land on the right foot

Source: (Researcher, 2026).

Data analysis in this study was used to obtain data resulting from the improvement of children's movement flexibility abilities through creative dance activities. Students are considered to have completed the learning individually if they obtain a score of >70%, as stated by [Arikunto \(2016\)](#), who stated that a score of >70% of students is included in the good category. If the child's completion is >75%, the development can be said to be successful. If the child's learning completion is.

3. Result and Discussion

This study aims to determine how the application of creative dance art can improve the flexibility of children aged 4-5 years at the Golden Kids Bululawang Kindergarten. Children's flexibility is observed through indicators such as the ability to rotate and swing their arms, twist and bend their bodies, run while jumping without falling, jump using both feet, perform many hand-eye coordination movements, and walk in various directions in

various ways. The research process was carried out in two cycles. The following is a recap of the percentages of cycles I and II can be seen in table 2.

No	Indicator	Result			
		Cycle I Score	Percentage (%)	Cycle II Score	Percentage (%)
1.	Twisting and swinging the arms	33	58,92%	46	82,14%
2.	Twisting and bending the body	32	57,14%	44	78,57%
3.	Run while jumping without falling	36	64,28%	45	80,35%
4.	Jump using both feet	36	64,28%	45	80,35%
5.	Performs many hand-eye coordination movements	16	28,57%	39	69,64%
6.	Walk in different directions in different ways	34	60,71%	43	76,78%

Pre Cycle

The results of initial observations showed that the activity of watching dance videos on smart TV and the introduction of costumes delivered by the teacher. Many children were not focused on watching the dance video, most of the children were still playing alone and the number of children who were declared to have completed only 5 of the 14 children who had direct enthusiasm and were active in imitating the movements. Many children were not focused on watching the dance video and most of the children were still playing alone. The cause of the existing problems was also due to the introduction of dance through the video being monotonous, the activities were also less interesting, so that the children's interest and motivation to watch the video and listen to the teacher were less than optimal.

Cycle I & Cycle II

In cycle I was carried out on Thursday, December 11, 2025. With the percentage results obtained after the actions in cycle I were 58.03%, and were in the category of Not Yet Developing (BB). However, these results indicate an increase in the flexibility of children's movements after the implementation of creative dance activities. Children began to show interest in creative dance, turning and swinging both hands, doing twisting and bending movements, running while jumping and landing with both feet in balance, jumping with both feet, doing simultaneous movements between the feet and head, walking in various directions by jumping and landing on the feet. However, this is possible because there are still many children who are less interested in imitating the movements of the teacher. Children also need to be accompanied to be able to follow the movements of the ceriane lare creative dance.

In the second cycle was carried out on Wednesday, December 17, 2025. The learning outcomes increased significantly to 77.08%, which is classified as Very Good Development (BSB). Children seemed more focused, more enthusiastic when the teacher used smart TV media and were happy when listening to dance music. This happened because the teacher had made improvements to the learning strategy based on reflections on the previous cycle, this improvement showed that the flexibility of children's movements had also increased when compared to cycle I. Improvements were made to the implementation strategy, the teacher not only gave examples, the teacher also prepared a smart TV as a medium for

dancing activities. In addition, the role of the teacher is also very important to condition and direct children to imitate the creative dance movements of ceriane lare by watching on the smart TV. The role of teachers is crucial in the learning process. Teachers with high competence tend to be better able to create a conducive learning environment and encourage maximum improvement in student learning outcomes.

Discussion

The results of this study indicate that children's movement flexibility can be improved in a fun and integrated way through singing and dancing activities. The researcher found a significant percentage increase from 58.03% in cycle I to 77.08% in cycle II. This finding confirms that creative dance art is a gross motor activity that can improve children's movement flexibility when relevant and effective learning is implemented in early childhood education institutions. This improvement can be observed in figure 1.

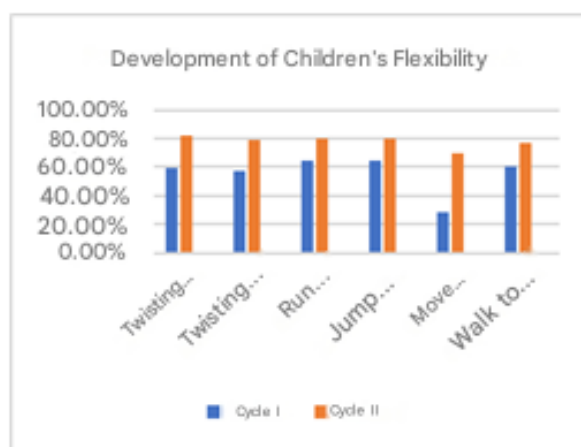


Figure 2. Development of Children's Flexibility

This study also corroborates previous findings by [Rejeki & Baits \(2025\)](#), which showed that the application of creative dance as a fun learning strategy effectively improves gross motor skills in children aged 5-6 years. This is in line with research conducted by [Suriana et al. \(2024\)](#), who found that traditional Malay Zapin creative dance activities can stimulate gross motor development in children through coordinated body movements as well as coordination of the eyes, head, hands, and feet. Thus, creative dance has proven to be an appropriate medium for holistically developing children's motor abilities.

Although learning mastery has been achieved, some students still have not achieved individual mastery. This is possible because each child's movement flexibility is different. Research by [Yurita et al. \(2023\)](#) revealed that the development of Zapin-based creative dance learning media effectively improves kinesthetic intelligence in children aged 5-6 years, including aspects of whole-body coordination, balance, agility, and flexibility. Nevertheless, children's movement flexibility can still be trained to develop, as explained by [Tursina et al. \(2022\)](#).

Further research by [Nursihab \(2025\)](#) reinforces these findings by optimizing gross motor skills using the Manuk Dadali creative dance in children aged 5-6 years. In that study, the percentage increased from 34.4% in the pre-cycle to 55.3% in the first cycle, and then significantly increased to 86% in the second cycle. This improvement was observed in aspects of balance, flexibility, agility, and coordination. These results further strengthen the evidence that creative dance can optimally improve various components of gross motor skills in children simultaneously.

Movement and song activities have also proven effective in improving early childhood gross motor skills. [Fatwikiningsih & Ambarwati \(2025\)](#), in their classroom action research

at TK Setya Budhi Surabaya, found that the percentage of children in the "Developing as Expected" category increased from 8.3% in cycle I to 83.3% in cycle II. This finding proves that movement and song activities combined with interesting themes can be an effective active learning strategy in kindergarten. This approach not only improves gross motor skills but also supports children's language development, social-emotional development, and self-confidence.

Research by [Thomaidou et al. \(2021\)](#) adds an important perspective regarding an eight-week creative dance and movement program on motor creativity and motor competence in preschoolers. The results showed that the program significantly improved children's motor creativity ($p < 0.001$), although no significant differences were found in motor competence between the experimental and control groups. This indicates that creative dance programs play a greater role in developing movement creativity than merely improving basic motor skills, thus they need to be combined with other activities for more comprehensive results.

International research by [Padao et al. \(2025\)](#) through a 12-week randomized controlled trial on 80 preschool children showed that a structured dance program effectively improves children's motor competence. The intervention group with a frequency of twice per week showed significant improvements in fine motor precision ($p < 0.001$), fine motor integration ($p = 0.022$), and static balance ($p < 0.001$), while the group with a frequency of three times per week showed significant improvement in dynamic balance ($p < 0.001$). These findings support the integration of structured dance sessions into preschool curricula to effectively improve motor competence.

Furthermore, research by [Santos et al. \(2025\)](#) through a hip-hop-based "Grow+" program on 37 children aged 3-4 years in Portugal found that the program contributed meaningfully to improving children's motor competence and physical activity levels. Although the improvements were not always statistically significant, the positive trends during the intervention period indicate that rhythmic music-based dance programs can support the development of fundamental motor skills and expand children's movement repertoires. This confirms that creative dance in various forms, both traditional and modern, is a fun learning tool to develop children's movement skills to be more flexible, supple, and coordinated. Therefore, as explained by Yulianti in [Tahira et al. \(2022\)](#), creative dance is a new dance movement style composed of a combination of dance types. Through dance activities, especially children's dance, children can explore movements based on learning themes or their own life experiences.

4. Conclusion

Creative dance art has been proven to increase the flexibility of children aged 4-5 years in the Golden Kids KB. This is indicated by an increase in the average value of 58.03% in the first cycle with the category of Starting to Develop (MB), and increased to 77.08% in the second cycle of Very Well Developed (BSB). This increase reflects that creative dance is able to stimulate the flexibility of children's movements. Creative dance activities themselves can also be done in a fun way and according to the child's developmental stage. Children are given the opportunity to get to know and understand about the ceriane lare creative dance by watching videos or introducing costumes and dance attributes. Children are also given the opportunity to try to imitate the movements of the ceriane lare creative dance.

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