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# Improving Gross Motor Skills of Children Aged 5–6 Years Through Gambang Suling Dance Learning Based on YouTube Media

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**ABSTRACT**
This study aims to improve the gross motor skills of children aged 5–6 years through Gambang Suling dance learning based on YouTube media. The background of this research is the low level of gross motor skills among Group B children at Tunas Ananda Kindergarten, as indicated by limited balance, coordination, and ability to follow rhythmic movements. This study employed Classroom Action Research (CAR) using the Kemmis and McTaggart model, conducted in two cycles, each consisting of planning, implementation, observation, and reflection stages. The research subjects were 15 children. Data collection techniques included observation, interviews, and documentation, with data analyzed descriptively using quantitative percentages of learning mastery. The results showed a significant improvement in children's gross motor skills in each cycle. The mastery percentage increased from 42% in the pre-action stage to 68% in Cycle I, and reached 87% in Cycle II. This improvement occurred because the learning process integrated dance activities involving large muscle movements, utilized YouTube as an audiovisual medium, applied playback speed features to facilitate understanding of movements, and implemented a challenge-based learning approach that enhanced children's motivation and engagement. Thus, it can be concluded that Gambang Suling dance learning based on YouTube media is effective in improving the gross motor skills of children aged 5–6 years.

**Keywords:** Gross Motor Skills, Early Childhood Education, Gambang Suling Dance, Youtube-Based Learning.

## I. Introduction

Early Childhood Education (ECE) is a fundamental phase in child development, often referred to as the golden age. During this period, children experience rapid growth and development across physical, cognitive, social-emotional, and language domains. The age range of 5–6 years is particularly critical, as it represents an optimal stage for providing appropriate stimulation to develop children's full potential holistically. Therefore, delivering stimuli that aligns with the developmental characteristics of early childhood is essential, including in the domain of physical and motor development. Physical motor development, particularly gross motor skills, plays a crucial role in supporting children's readiness to enter the next level of education. Gross motor skills involve the use of large muscle groups, such as walking, running, jumping, and maintaining balance. These abilities influence not only physical development but are also closely related to children's social, emotional, and cognitive growth. Children with well-developed gross motor skills tend to be

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more confident, actively engage with their environment, and demonstrate better learning readiness. Conversely, delays in gross motor development may result in lower independence and difficulties in participating in school learning activities.

Based on preliminary observations conducted at Tunas Ananda Kindergarten, several issues related to the gross motor skills of Group B children were identified. Some children still struggle to maintain body balance, have difficulty following rhythmic and coordinated movements, and exhibit stiffness during physical activities. In addition, the lack of structured physical activity stimulation has contributed to this condition. This situation has been exacerbated by post-pandemic lifestyle changes, where children tend to adopt more sedentary behaviors and increase use of digital devices, reducing their opportunities for active movement. These problems highlight the need for learning interventions that are engaging, effective, and aligned with the characteristics of early childhood. Fundamentally, children learn through play and enjoyable activities. Therefore, learning strategies that incorporate movement, play, and a challenge-based learning approach are considered effective in enhancing children's motivation and engagement in the learning process. One form of activity that can be utilized is movement-based art, such as dance, which has been proven effective in stimulating children's gross motor development.

The Gambang Suling dance, as one of the traditional Javanese dances, holds significant potential as a learning medium for developing children's gross motor skills. This dance includes various movements involving large muscle groups, such as mendak movements that train leg strength and balance, as well as hand movements like ngrayung and ukel that enhance coordination and flexibility. Furthermore, the use of traditional dance provides added value by introducing and preserving local culture from an early age. With the advancement of digital technology, the use of audiovisual-based learning media has become increasingly relevant in the context of early childhood education. One widely used platform is YouTube, which offers several advantages, including engaging visual displays, ease of access, and the ability to replay content multiple times. The playback speed feature on YouTube also allows children to learn movements gradually according to their abilities, thereby improving focus and comprehension when imitating dance movements.

Previous studies have shown that the use of traditional dance and audiovisual media can enhance children's gross motor skills. However, most studies have focused on traditional dance in general and have not specifically examined the Gambang Suling dance. In addition, research integrating a challenge-based learning approach with the use of YouTube media, particularly its playback speed feature, remains limited. Studies conducted in the context of Tunas Ananda Kindergarten are also still scarce, indicating the need for further investigation to fill this gap. Based on the above considerations, this study offers novelty through the use of Gambang Suling dance challenges based on YouTube media by utilizing the playback speed feature as a learning strategy. This research also integrates local cultural values with digital technology while applying a challenge-based learning approach to improve the gross motor skills of early childhood learners. The objective of this study is to improve the gross motor skills of children aged 5–6 years through YouTube-based Gambang Suling dance challenges in Group B at Tunas Ananda Kindergarten.

## II. Literature Review and Hypothesis Development

Early Childhood Education (ECE) is widely recognized as a critical period for optimizing children's developmental potential. According to UNESCO, early childhood is a foundational stage that significantly influences lifelong learning, behavior, and health. During this period, appropriate stimulation must be provided to support holistic development, including physical, cognitive, social-emotional, and language aspects. One essential domain in early childhood development is physical motor development, particularly gross motor skills. Gross motor skills refer to the ability to use large muscle groups to perform movements such as walking, running, jumping, and balancing. These skills are fundamental for children's independence and readiness for formal schooling. Research by Izzaty Rita Eka (2017) highlights that well-developed motor skills contribute to children's confidence, social interaction, and active participation in learning activities.

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Conversely, children with poor motor development may experience difficulties in coordination, low self-esteem, and limited engagement in physical and social environments.

One effective approach to enhancing gross motor skills in early childhood is through movement-based learning, including dance activities. Dance integrates rhythm, coordination, balance, and body control, making it a comprehensive medium for motor development. According to Howard Gardner's theory of multiple intelligence, bodily-kinesthetic intelligence plays a vital role in children's learning processes. Dance activities stimulate this intelligence by encouraging children to express themselves through movement while improving physical coordination and flexibility. Traditional dance offers additional benefits as it integrates cultural values with physical activity. The Gambang Suling dance, a traditional Javanese dance, contains structured and rhythmic movements that involve both upper and lower body coordination. Movements such as mendak, ngrayung, and ukel train balance, flexibility, and muscle strength. Studies indicate that culturally relevant learning materials can increase children's engagement and sense of identity, making the learning process more meaningful.

In addition to movement-based activities, the use of technology in early childhood education has become increasingly significant. Digital platforms such as YouTube provide audiovisual learning experiences that can enhance children's understanding and attention. According to recent studies, audiovisual media supports observational learning, where children learn by watching and imitating actions. This aligns with Albert Bandura's social learning theory, which emphasizes imitation and modeling as key mechanisms in learning. The playback speed feature available on YouTube further allows children to observe movements more carefully and practice them at their own pace, thus improving motor skill acquisition. Another relevant approach is challenge-based learning, which encourages active participation through problem-solving and task completion. This approach motivates children to engage more deeply in learning activities by presenting achievable challenges that match their developmental level. Research in the past decade shows that combining physical activities with interactive and technology-supported learning strategies can significantly improve children's motivation and developmental outcomes. Previous empirical studies (2016–2024) have demonstrated that dance-based interventions and audiovisual media positively impact children's gross motor development. However, there is still limited research that specifically integrates traditional dance, such as Gambang Suling, with digital media like YouTube using features such as playback speed within a challenge-based learning framework. Therefore, this study aims to address this gap by combining cultural, technological, and pedagogical elements to enhance gross motor skills in early childhood.

## III. Research Method

This study employed a Classroom Action Research (CAR) method aimed at improving children's gross motor skills through direct refinement of the learning process in the classroom, as this approach emphasizes improvement rather than merely describing phenomena. The approach was action-based, implemented in gradual and cyclical stages following the model of Kemmis and McTaggart, which consists of four phases: planning, action, observation, and reflection, thereby enabling continuous improvement in each learning cycle. This research was conducted at Tunas Ananda Kindergarten, located in Wonoasri Village, Ngadirojo District, Pacitan Regency, over approximately two months, from February to March 2026. It consisted of two cycles, each comprising three meetings, for a total of six meetings. The research subjects were all 15 children in Group B aged 5–6 years, consisting of 8 boys and 7 girls, who were fully involved to ensure more representative results. The object of this study was the gross motor skills of children aged 5–6 years, with observed indicators including the ability to maintain body balance, movement coordination, agility, large muscle strength, and the ability to follow rhythmic movements.

Data collection techniques in this study included observation, interviews, and documentation. Observation was used to monitor the improvement of children's gross motor skills during the learning process, particularly when participating in the Gambang Suling dance activities based on YouTube media. Interviews were conducted with the classroom teacher to obtain information regarding children's gross motor

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development, learning constraints, and children's responses to the activities. Documentation was used to support the data in the form of photos, videos, and activity records. The research instrument used was an observation sheet in the form of a rating scale, with indicators including body balance, movement coordination, agility, large muscle strength, and accuracy in rhythmic movements, along with assessment criteria: BB (1), MB (2), BSH (3), and BSB (4).

The research procedure was carried out in two cycles consisting of the planning stage (preparing lesson plans/RPPH, preparing Gambang Suling dance video media from YouTube, developing instruments, and designing challenge-based learning activities); the action stage (providing movement challenges gradually using playback speed features); the observation stage (monitoring children's activities and development using observation sheets); and the reflection stage (evaluating results as a basis for improving the next cycle). The data obtained were analyzed using a descriptive quantitative technique by calculating the percentage of gross motor skill achievement using the formula (total score obtained / maximum score) × 100%, then categorized into BB (0–25%), MB (26–50%), BSH (51–75%), and BSB (76–100%). The success criteria of this study were achieved if at least 75% of the children reached the BSH or BSB category and there was a significant improvement from the pre-cycle to the subsequent cycles

## IV. Result and Discussion

This study was conducted in two cycles, each consisting of three meetings. The research subjects were 15 children in Group B aged 5–6 years.

### 4.1. Initial Condition (Pre-Action)

Based on the results of the initial observation, the children's gross motor skills were still low. Of the 15 children:

**Table 1. Initial Condition (Pre-Action)**

| Category | Number of Children | Percentage |
|---|---|---|
| Beginning to Develop | 6 | 40% |
| Not Yet Completed | 9 | 60% |
| Classical Completeness | - | 42% |

The children's gross motor skills in the initial condition were still relatively low, as indicated by most children who had not yet achieved mastery. The classical completeness percentage, which only reached 42%, indicates that the previous learning process had not been optimal in developing gross motor skills. Therefore, improvement efforts were needed using more engaging and effective learning methods and media.

### 4.2. Cycle I Results

In the first meeting, children were introduced to the basic movements of the Gambang Suling dance through a YouTube video with reduced playback speed. In the second meeting, children began to imitate the movements better, although some stiffness was still observed. In the third meeting, the children's abilities began to improve, especially in following rhythmic movements.

**Table 2. Cycle I Results**

| Meeting | Completed (Children) | Percentage | Not Completed (Children) | Percentage |
|---|---|---|---|---|
| Meeting 1 | 7 | 47% | 8 | 53% |
| Meeting 2 | 9 | 60% | 6 | 40% |
| Meeting 3 | 10 | 67% | 5 | 33% |
| Recapitulation | 10 | 68% | 5 | 32% |

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In Cycle I, there was a gradual improvement in the children's gross motor skills at each meeting, although the classical completeness target had not yet been achieved. The use of the Gambang Suling dance video began to show a positive impact, particularly in helping children imitate movements. However, there were still obstacles in terms of balance and coordination, so improvements were needed in the next cycle.

### 4.3. Cycle II Results

Cycle II was carried out as a follow-up improvement from Cycle I by emphasizing variations in movements and more intensive practice. The results in this cycle showed a significant improvement in the children's gross motor skills at each meeting.

**Table 3. Cycle I Results**

| Meeting | Completed (Children) | Percentage | Not Completed (Children) | Percentage |
|---|---|---|---|---|
| Meeting 1 | 11 | 73% | 4 | 27% |
| Meeting 2 | 12 | 80% | 3 | 20% |
| Meeting 3 | 13 | 87% | 2 | 13% |
| Recapitulation | 13 | 87% | 2 | 13% |

The results of Cycle II showed a significant improvement compared to Cycle I, with the completeness percentage reaching 87%. Most children were able to follow the movements well, more flexibly, and with greater confidence in the activities. This indicates that the improvements in the learning strategy successfully enhanced the children's gross motor skills in accordance with the established indicators.

### 4.4. Interview Results

The interview results with the classroom teacher indicated that the use of YouTube video media in teaching the Gambang Suling dance had a positive impact on the development of children's gross motor skills. The teacher stated that the videos greatly helped children understand the movements because they could be seen directly and replayed repeatedly, allowing children more opportunities to observe and imitate movements correctly. In addition, the playback speed feature was considered very effective as it enabled the teacher to slow down the movements, allowing children to follow each stage gradually according to their abilities. The teacher also revealed that during the learning process, there was an observable increase in the children's confidence, as they became more courageous, active, and enthusiastic in participating in movement and dance activities. This shows that the use of engaging and interactive media not only impacts motor skill development but also the children's psychological aspects. One of the teacher's statements that supports this finding is, "The children become more enthusiastic because they can see the movements directly from the video, especially since it can be slowed down, making it easier for them to imitate." This statement confirms that the use of technology in learning can enhance motivation while also facilitating a more effective and enjoyable learning process.

### 4.5. Recapitulation of Improvement

The recapitulation of the improvement in children's gross motor skills shows consistent development in each learning cycle.

**Table 4. Recapitulation of Improvement**

| Cycle | Percentage of Mastery | Number of Children Mastered | Number of Children Not Yet Mastered |
|---|---|---|---|
| Pre-Action | 42% | 6 children | 9 children |
| Cycle I | 68% | 10 children | 5 children |

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| | | | |
|---|---|---|---|
| Cycle II | 87% | 13 children | 2 children |

The research results indicate a significant improvement in each cycle. The improvement occurred gradually in every meeting, showing that challenge-based learning through the Gambang Suling dance using YouTube media is effective in enhancing children's gross motor skills. This success is marked by the increasing number of children reaching the categories of "developing as expected" and "developing very well," as well as the achievement of the research success indicator, namely more than 75% of children achieving mastery.

### 4.6. Discussion

The improvement in children's gross motor skills in this study is primarily attributed to the use of Gambang Suling dance activities, which directly engage the large muscles of the body. Movements such as mendak require leg strength and body balance, while movements like ngrayung and ukel train coordination and hand flexibility. In addition, the repeated movements in each session provide children with opportunities to gradually practice body control. As a result of this consistent physical stimulation, children's gross motor skills improved significantly, as evidenced by the increase in mastery percentage from 42% in the pre-action stage to 68% in Cycle I, and further to 87% in Cycle II. This change is also reflected in the growing number of children who are able to maintain balance, move more flexibly, and follow movements accurately. In addition to the dance activity factor, the use of YouTube media is an important contributor to the improvement of children's gross motor skills. This is because audiovisual media provide concrete, engaging, and easily understandable examples of movements for early childhood learners. Children not only receive verbal instructions but can also directly observe the movements they need to imitate. This ease of accessing visual demonstrations enhances children's imitation skills. Consequently, their movement coordination improves, as indicated by the increasing number of children who can follow movements rhythmically and accurately in each session.

Furthermore, the utilization of the playback speed feature on YouTube becomes a key factor in distinguishing the results of this study. Initially, some children experienced difficulties due to the fast movement speed, making it hard to follow. However, after slowing down the video, children were able to understand each stage of the movements more clearly. This tempo adjustment provides children with more time to process and imitate the movements. As a result, the number of children achieving mastery increased from 10 in Cycle I to 13 in Cycle II, and their movements became more coordinated and less rigid. The implementation of a challenge-based learning approach also contributes to increased student engagement. This is because providing challenges in each activity encourages children to try and repeat movements until they succeed. Children feel motivated to achieve the given goals, fostering intrinsic motivation. As a result, children become more active, confident, and willing to perform the movements. This condition is evident in the shift from initially passive behavior to greater enthusiasm in participating in learning activities.

Repeated practice plays a significant role in improving children's gross motor skills. Repetition allows children to correct mistakes and strengthen motor memory. This occurs because motor skills develop through continuous practice. As a result, children's movements become more automatic, flexible, and well-coordinated in Cycle II compared to the initial condition. The findings of this study are consistent with research conducted by Sari (2020), which states that traditional dance activities can improve children's gross motor skills due to the involvement of complex and structured body movements. In addition, research by Rahmawati (2021) shows that the use of audiovisual media in learning can enhance children's understanding of movements by providing concrete examples. These similarities occur because both studies provide active movement stimulation and use engaging media. As a result, there is a significant improvement in children's gross motor skills.

However, the results of this study differ from those of Wulandari (2019), who found that the use of video in learning did not yield optimal improvement due to the lack of appropriate speed adjustment and instructional approach. This difference arises because, in that study, the media was used only as a supporting

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tool without adequate strategies. In contrast, this study combines YouTube media with the playback speed feature and a challenge-based learning approach. As a result, the learning process becomes more effective and better suited to children's abilities, leading to more optimal outcomes. Critically, the improvement in children's gross motor skills in this study is influenced not only by teaching methods and media but also by children's internal and external factors. This is evident from the presence of 2 children who had not yet achieved mastery in Cycle II. This condition is caused by individual differences, such as levels of self-confidence, physical condition, and daily activity habits. Children who are more physically active at home tend to develop more quickly than those who spend more time using gadgets. As a result, the development of gross motor skills does not occur evenly, even when the same treatment is applied.

In addition, the teacher's role is a crucial factor in the success of this study. Based on interview results, the teacher actively provided guidance, demonstrated movements, and motivated children throughout the activities. This is important because early childhood learners require direct assistance in the learning process. As a result, positive interaction between the teacher and children enhances children's confidence and comfort in participating in learning activities. Although this study shows positive results, several limitations need to be considered. The study was conducted over a relatively short period and used only one type of dance, so the findings cannot yet be widely generalized. In addition, family environmental factors could not be fully controlled. As a result, children's development may also be influenced by factors outside the school learning context. Based on the overall discussion, it can be concluded that the improvement in children's gross motor skills in this study is influenced by a combination of dance activities, the use of YouTube media, the utilization of the playback speed feature, the implementation of a challenge-based learning approach, and repeated practice. As a result of these strategies, children's gross motor skills improved significantly in terms of balance, coordination, and flexibility. Therefore, learning that integrates art, technology, and appropriate strategies is proven to be effective in enhancing early childhood gross motor skills.

## V. Conclusion

Based on the results of the classroom action research that has been conducted, it can be concluded that the implementation of learning through Gambang Suling dance challenges based on YouTube media has proven effective in improving the gross motor skills of children aged 5–6 years in Group B of Tunas Ananda Kindergarten. This is indicated by the increase in the percentage of classical mastery from 42% (6 children achieving mastery) in the pre-action stage, rising to 68% (10 children achieving mastery) in Cycle I, and reaching 87% (13 children achieving mastery) in Cycle II. Thus, the research success indicator has been achieved, namely that more than 75% of the children are in the categories of developing as expected and developing very well. This improvement occurred because the learning process integrated dance activities involving large muscle movements, utilized YouTube media to provide concrete visualization of movements, made use of playback speed features to help children follow movements according to their abilities, and applied a challenge-based learning approach that increased children's motivation and engagement. As a result, children showed clear development in aspects of balance, coordination, agility, and accuracy in rhythmic movements. Therefore, the use of Gambang Suling dance challenges based on YouTube media can significantly and measurably improve the gross motor skills of children aged 5–6 years.

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