

**PHYSICAL LEARNING REVIEWED FROM THE ASPECTS OF MOTOR SKILLS, PARTICIPATION AND SOCIAL INTERACTION: A CASE STUDY REVIEW IN ELITE AND NON-ELITE KINDERGARTEN SCHOOLS**

**Riduan, Anggri Dwi Nata, Rahmat Sanusi**  
**Penjaskesreki Fakultas Keguruan dan Ilmu Pendidikan Universitas Karimun**  
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**Abstract**

*The problem in this study is the indication of differences in the implementation of physical education learning between schools with complete facilities and schools with limited facilities. The aim is to describe the quality of physical education learning at the kindergarten (TK) level from three main aspects: motor skills, participation, and social interaction, by comparing two types of schools: elite and non-elite kindergartens. This study uses a descriptive qualitative approach with a case study method. The research subjects included teachers and students from TK Cendekia (an elite school) and TK Negeri Pembina (a non-elite school) in Karimun Regency, Riau Islands. Data collection techniques were conducted through observation, interviews, and documentation. Data were analyzed using data reduction, data presentation, and conclusion drawing techniques, and their validity was tested through source and technique triangulation. The research results show that students in elite kindergartens have more developed motor skills, higher levels of participation, and better social interactions than students in non-elite kindergartens.*

**Keywords:** Motor Skills, Participation, Social Interaction, Elite and Non-Elite Kindergartens.

**Abstrak**

Masalah dalam Penelitian ini adalah adanya indikasi perbedaan dalam pelaksanaan pembelajaran jasmani antara sekolah dengan fasilitas lengkap dan sekolah yang masih terbatas bertujuan untuk mendeskripsikan kualitas pembelajaran jasmani pada jenjang Taman Kanak-Kanak (TK) ditinjau dari tiga aspek utama, yaitu keterampilan motorik, partisipasi, dan interaksi sosial, dengan membandingkan dua tipe sekolah: TK elite dan TK non-elite. Penelitian ini menggunakan pendekatan kualitatif deskriptif dengan metode studi kasus. Subjek penelitian meliputi guru dan siswa dari TK Cendekia (sekolah elite) dan TK Negeri Pembina (sekolah non-elite) di Kabupaten Karimun, Kepulauan Riau. Teknik pengumpulan data dilakukan melalui observasi, wawancara, dan dokumentasi. Data dianalisis dengan teknik reduksi data, penyajian data, dan penarikan kesimpulan serta diuji keabsahannya melalui triangulasi sumber dan teknik. Hasil penelitian menunjukkan bahwa siswa di TK elite memiliki keterampilan motorik yang lebih berkembang, tingkat partisipasi yang lebih tinggi, serta interaksi sosial yang lebih baik dibandingkan siswa di TK non-elite.

**Kata Kunci:** Keterampilan Motorik, Partisipasi, Interaksi Sosial, TK Elite dan Non-Elite

**I. INTRODUCTION**

Physical education, health, and recreation is a discipline that studies physical activity, sports, and physical fitness. Physical education encompasses a wide variety of sports and



physical activities, from team sports and individual sports to gymnastics, aerobics, yoga, and various other forms of physical activity. In an educational context, physical education plays a crucial role in developing motor skills, physical and mental health, and social and ethical values. Physical education plays a crucial role in optimizing children's development, particularly in developing gross motor skills. Mahendra (2017:15) stated that physical education, health, and recreation are essentially integral parts of the overall education system. This means that physical education, health, and recreation are not merely decorations or ornaments attached to school programs as a means of keeping children busy. According to Samsul Arifin (2017), physical education, health, and recreation play a crucial role in intensifying the implementation of education as a lifelong process of human development. Physical education, sport, and health provide students with the opportunity to engage directly in a variety of learning experiences through physical activity, play, and exercise, which are carried out systematically, directed, and planned. The problem in this research is that physical education has a very important role in encouraging the development of gross, fine, and kinesthetic motor skills in early childhood. A planned and structured learning process with a fun approach has proven effective in encouraging children's physical, mental, and emotional development. The problem-solving plan in this research is motor skills, participation, and social interaction in physical education learning, health, and recreation in elite and non-elite kindergarten schools. To determine the description of motor skills in elite and non-elite kindergarten schools. To determine the description of participation in elite and non-elite kindergarten schools. To determine the description of social interaction in elite and non-elite kindergarten schools.

## **II. THEORETICAL STUDIES**

Motor development refers to changes in body shape in early childhood that affect the ability to move and perform movements throughout the body. According to Wiyani (2014:35), and Maujud (2017), kindergarten student participation is a dynamic interaction process between children, teachers, and the learning environment, where children are actively involved in activities designed to develop their potential. Social interaction is the primary foundation for developing children's social skills at an early age. Through social interaction, children learn to communicate, share, cooperate, and understand the feelings of others. (Wijaya Erik & Nuraini Farah, 2023).

Kindergarten students are children aged 4-6 years who are currently attending preschool. This is a crucial period in child development, where they experience rapid growth and development in various aspects, including physical, cognitive, social, and emotional. According to (Puspita Sari et al., 2024), in his theory of cognitive development, it is stated that kindergarten-aged children are at a developmental stage, where they begin to develop symbolic thinking and language skills.

### III. RESEARCH METHODS

The type of research used in this study is qualitative, with a descriptive qualitative design used to analyze data by describing or depicting the collected data as it is without the intention of drawing general conclusions or generalizations.

The research objects are: Cendekia Kindergarten on Jl. Harjosari, Tebing District, Karimun Regency, Riau Islands, an elite school, and Pembina State Kindergarten on Jl. Lubuk Semut, Kampung Tengah, Karimun Regency, Riau Islands, a non-elite school.

Data collection techniques are the most strategic step in research, because the primary goal of research is to obtain data. Without understanding data collection techniques, researchers will not obtain data that meets established data standards. In qualitative research, data collection techniques can be conducted through various sources and methods. The data collection techniques used in this study include interviews, observation, and documentation.

### IV. RESEARCH RESULTS

This research was conducted in two types of kindergartens: TK Cendekia, representing elite schools, and TK Negeri Pembina, representing non-elite schools, located in Karimun Regency, Riau Islands. The selection of these two locations was based on the assumption of significant differences in the availability of learning facilities and infrastructure, which are assumed to impact the quality of physical education. Elite kindergartens are generally established by foundations with adequate facilities and adhere to standard educational curricula, while non-elite kindergartens are often established with limited community resources, making the availability of facilities a constraint.

The researchers involved 14 students (7 each from TK Cendekia and TK Negeri Pembina) and teachers from each school as research informants.

#### 4.1 Data on Cendikia Kindergarten Students

No	Nama	Jenis kelamin	Umur
1	Chayra nadhifa arrasyad	perempuan	5 tahun

2	M .rafisay ramamadhan	Laki laki	5 tahun
3	Zeeshan	Laki laki	6 tahun
4	Aji faras hidayatullah	Laki laki	4 tahun
5	Faris ikram dizuza	Laki laki	5 tahun
6	Shanum	Perempuan	5 tahun
7	Fatimah	Perempuan	5 tahun

#### 4.2 Data on Pembina Kindergarten school children

No	Nama	Jenis kelamin	Umur
1	Aydan alwarizdi	Laki laki	5 tahun
2	Elmera naura zaune	Perempuan	5 tahun
3	Kalamira syamikha	Perempuan	5 tahun
4	Afif alfian zikri	Laki laki	5 tahun
5	Zidan riga muhamad	Laki laki	5 tahun
6	Tisha aulia izzatunisa	Perempuan	5 tahun
7	Aisah	Perempuan	5 tahun

#### 4.3 Cendikia Kindergarten teacher data

No	Nama	Jenis kelamin	Umur
1	Widyawati,SPd	perempuan	52 tahun
2	Febi trimutri,SPd	Perempuan	38 tahun
3	Liyana sari,SPd	Perempuan	46 tahun
4	Suparti,SPd,AUD	Perempuan	51 tahun
5	Sabrina aisaputri,SPd	Perempuan	25 tahun
6	Elma safraini,SPd	Perempuan	56 tahun
7	Siti heti zufeida,SPd	Perempuan	44 tahun

#### 4.4 Data on teachers of Pembina Kindergarten

No	Nama	Jenis kelamin	Umur
1	Julia gultom,SPd	Perempuan	39 tahun
2	Nur hasanah,SPd	Perempuan	47 tahun
3	Wulan utami,SPd	Perempuan	35 tahun
4	Endriyani,SPd	Perempuan	46 tahun
5	Eva Nabila andriani,SPd	Perempuan	31 tahun
6	Rumijati,SPd	Perempuan	55 tahun
7	Iin indrawati,SPd	Perempuan	52 tahun

### Data Collection Process

The data collection process in this study was conducted through triangulation techniques, namely observation, in-depth interviews, and documentation, conducted

chronologically to obtain comprehensive and valid data. Data collection began in early 2025, after obtaining permission from the schools.

**Observation:** Participatory observation was conducted periodically in both kindergartens during physical education lessons. Researchers directly observed children's behavior related to gross and fine motor skills, their level of participation in physical activities, and social interactions between students and between students and teachers. Observations were conducted over several weeks to capture consistent behavioral patterns and possible variations. Observations were recorded using structured observation sheets and field notes to capture qualitative details.

**In-Depth Interviews:** In-depth interviews were conducted with physical education teachers and principals from both kindergartens. These interviews aimed to elicit information regarding the physical education curriculum, teaching strategies, challenges faced, and their perspectives on students' motor development, participation, and social interactions. The interviews were semi-structured, allowing flexibility to explore new topics that emerged during the conversations. Each interview was recorded with the informant's permission and then transcribed for analysis.

**Documentation:** Documentation data was collected from various sources, such as photographs of learning activities, as well as school and student profile data. This documentation served as supporting and complementary data to enrich the findings from observations and interviews, as well as to verify the information obtained.

**Data Validation:** Data validation was conducted through source and technique triangulation. Source triangulation involved comparing data from teachers, students, and documents to ensure consistency of information. For example, observations of children's motor skills were confirmed by interviews with teachers regarding their views on student abilities. Technique triangulation was conducted by comparing data obtained through observations, interviews, and documentation to ensure that the same findings emerged from various data collection methods, thereby increasing the credibility of the research results.

**Research Ethics Approach:** Throughout the data collection process, researchers consistently upheld research ethics. Informants were fully explained the purpose of the research and their rights (e.g., the right to refuse participation or withdraw). Verbal and written consent (if necessary) were obtained prior to interviews or observations. Informants' identities were kept confidential by using initials or pseudonyms in the research report to

protect their privacy. Observations of the gross motor skills of Cendekia Kindergarten students show excellent development and optimal mastery. Observations indicate that all children have fully mastered walking and running skills. This provides a solid foundation for further motor development. Solid walking skills indicate children have good balance and postural control, while mastery of running demonstrates increased muscle strength and more dynamic motor coordination.

Observations of fine motor skills showed variable development, with some areas well-developed and others requiring guidance. Children's hand-eye coordination demonstrated excellent results, particularly in throwing, hitting, and catching a ball. This is an important indicator that children are able to integrate visual information with motor responses. On the other hand, kicking a ball showed variation, indicating that eye-foot coordination and motor responses are still developing for some children. This may be due to the complexity of the kicking motion, which requires greater accuracy and specific muscle control. Furthermore, grasping and squeezing skills were also very well mastered by all children, indicating adequate development of finger and hand muscles. Skills requiring precision and accuracy, such as folding, cutting, and tracing, showed variable results. The majority of children were able to fold and cut, but one child had not yet mastered folding, and another was still in the early stages of cutting. This highlights the need for individual intervention for these children. Tracing skills also showed significant variation, with some children having achieved success, but many still developing. This skill is crucial for writing preparation and therefore requires regular and gradual practice.

Children's gross motor development generally shows excellent results, especially in basic skills involving mobility and balance. The majority of children have mastered walking indicators smoothly and without difficulty, including walking 10 steps backward and forward, and are able to ascend and descend stairs alternating feet. These achievements indicate the development of large muscles in the lower body and mature static and dynamic balance skills. However, some gross motor indicators remain challenging for some children. The ability to run without difficulty is generally mastered, but more specific indicators, such as running on tiptoes, have not been fully mastered by all children, indicating the need for additional training to improve ankle strength and stability. A similar developmental pattern is also seen in jumping. Children are generally able to jump forward 10 times in a row, hop on one leg, hop on two legs, and jump from an object. This reflects adequate leg muscle strength

and coordination. However, jumping skills that require multiple coordination, such as the combination of squatting and jumping, remain difficult for some children. The greatest challenge was seen in the indicator of jumping 2 meters on one leg, which almost all children were unable to achieve. This indicates that explosive muscle power and balance when supporting body weight on one leg are still beyond their current developmental range.

**Fine Motor Observation Results:** Observations of fine motor skills showed greater variation among children. Skills involving eye-hand coordination in the context of play (throwing, kicking, hitting, and catching a ball) showed a good level of mastery in most children. This indicates effective sensory-motor integration in a familiar environment. In the grasp indicator, children were able to hold a pencil and cup well, and build a tall tower of blocks. This reflects optimal development of finger muscle strength and object manipulation skills. However, areas requiring more precise motor control presented significant challenges. The ability to cut, both following patterns and without patterns, and to trace circles and hand shapes, remained difficult for most children. These results confirm that visual-motor coordination and control of the small muscles of the hand to accurately follow lines or shapes still need to be improved. These skills, which are prerequisites for writing and drawing, are a key focus area for stimulation. The greatest challenges are seen in the drawing and writing indicators. Almost all children are unable to draw the human body in sufficient detail, write the complete alphabet, or hold a writing utensil like an adult. Practical skills such as tying their own shoelaces are also not yet fully mastered. This indicates that children are in the early stages of developing complex visual representations, pre-writing skills, and self-help abilities that require intensive guidance.

Observations of student participation at Cendekia Kindergarten revealed a high and positive level of engagement in physical education activities. Most students attended regularly and on time, actively participating in class activities. Children at Cendekia Kindergarten also appeared to be able to choose their own activities without prompting, indicating a sense of initiative. Students were also able to focus on an activity for at least five minutes, demonstrating a good attention span for their age.

Students at Cendekia Kindergarten were seen completing assignments without teacher assistance on many occasions and were able to work collaboratively in groups. They also demonstrated the ability to follow teacher instructions without protest, indicating compliance and understanding of direction. Students' enthusiasm was evident during activities, and they

demonstrated responsibility for the equipment they used, indicating a sense of ownership and care. The ability to adapt to changes in activities was also evident among Cendekia Kindergarten students.

At Pembina Kindergarten, student participation in physical education varied. While some children attended regularly and on time, others still needed encouragement in terms of attendance and punctuality. Children are generally very active in class activities and are able to choose their own activities without prompting, demonstrating a good level of initiative. They can also focus on an activity for at least 5 minutes. However, when it comes to completing assignments, they sometimes struggle to complete them without teacher assistance. On the positive side, children at Pembina Kindergarten demonstrate a willingness to work together in groups, are able to follow teacher instructions without protest, and are very enthusiastic about participating in activities. They are also able to take responsibility for the tools they use and are able to adapt to changes in activities.

The social interactions of students at Cendekia Kindergarten also show positive patterns. Children at Cendekia Kindergarten demonstrate respect for their peers and refrain from teasing, creating a supportive learning environment. They are also showing a willingness to share toys and play together, which are important indicators of social development. The children's ability to respect differences or the opinions of their peers is also evident.

Social interactions at Pembina Kindergarten demonstrate that children are taught not to tease or belittle their peers, and are willing to share and play together. They are also taught to respect differences and the opinions of their peers. Children are able to communicate using simple, easy-to-understand words and show empathy for sad friends. They are willing to lend toys or tools to friends and are taught to resolve conflicts peacefully. In discussions, children are invited to participate and answer questions. They are also taught to listen when their friends speak and to lead small groups. These findings indicate that aspects of positive social interaction are actively instilled and taught by teachers at Pembina Kindergarten.

## **V. CONCLUSION**

Findings regarding the quality of motor skills of children in elite and non-elite kindergartens indicate significant disparities. In general, students in Cendekia Kindergarten (elite) demonstrated more consistent and higher mastery of gross and fine motor skills compared to students in Pembina Kindergarten (non-elite). This aligns with previous research



showing that a stimulating learning environment and the availability of adequate facilities are positively correlated with early childhood motor development (Zulia Syiva Salsabila & Rivan Saghita Pratama, 2024), who found that access to adequate sports facilities significantly improved coordination and motor strength in preschool children. The more comprehensive facilities and infrastructure in elite kindergartens, such as spacious play areas and a variety of educational play equipment, provide more opportunities for children to explore and practice their motor skills.

The striking differences, particularly in jumping skills and some aspects of fine motor skills in non-elite kindergartens, can be interpreted as a reflection of limited teacher resources and a possibly less varied learning approach. This is consistent with a study by Nurdiyan Haris et al., 2025, which highlighted the importance of teacher competence in designing developmentally appropriate physical activities to optimize motor development. The study confirmed that teachers with a deep understanding of children's motor developmental stages tend to be more effective in facilitating learning.

Regarding student participation, observations at Cendekia Kindergarten showed excellent levels of participation, characterized by initiative, responsibility, and high enthusiasm. These findings support the theory that a positive learning environment that supports children's autonomy will increase their engagement (Hashipah et al., 2024), who found that a child-centered learning approach increases active participation in physical education. The conditions at Cendekia Kindergarten, with adequate supervision and stimulation, appear to successfully create a participatory climate.

Social interaction at Cendekia Kindergarten also demonstrated strong development, with children demonstrating skills in sharing, empathy, peaceful conflict resolution, and small group leadership initiatives. This is consistent with the view (Lukmanul Hakim & Sarah Nurazizah, 2024) that peer interaction and opportunities to collaborate in physical activities are crucial for the development of children's social and emotional skills. Although there was one area that needed more encouragement (discussion/answering questions), overall, Cendekia Kindergarten students demonstrated a solid social foundation.

There were clear differences in participation. Students at Cendekia Kindergarten were highly engaged and positive. Children arrived on time and regularly, and they were strongly encouraged to choose and initiate their own learning. Good facilities and a learning

environment provided opportunities to explore and engage in a variety of activities, which may be associated with increased participation.

In contrast, student participation at Pembina State Kindergarten was more varied. Some students required teacher encouragement to arrive on time, even though many were active. Furthermore, they often required assistance or guidance from teachers to support their efforts to complete tasks. Researchers found that not only individual characteristics but also structural barriers, such as limited facilities, contributed to these differences. This inadequate environment directly reduced the variety of stimuli. This can impact students' desire and independence to participate.

In terms of social interactions, the results showed that students in both types of kindergartens could demonstrate basic skills, such as speaking in simple words and empathizing. Children might be willing to lend a toy or help a sad friend. However, the researchers emphasized that there are significant differences in how these social behaviors develop.

Positive social behaviors appear to be internalized as part of the school culture at Cendekia Kindergarten. Students demonstrate empathy and help one another. This aligns with social cognitive theory, which emphasizes the importance of emulating positive behavior from those around us. Effective examples include a supportive atmosphere and healthy interactions between teachers and students.

In contrast, teachers play a crucial role at Pembina State Kindergarten. Data shows that educators actively "teach" social standards such as "not teasing," "being willing to share," and "resolving conflicts peacefully." According to researchers, educators act as "compensatory agents." They consciously incorporate social principles that students may lack outside of school. This is an interesting finding because it demonstrates how teachers function as facilitators and primary educators in the socialization process. This role may be lacking in the Cendekia Kindergarten environment.

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