



Teachers' Understanding of Gross Motor Skills in Early Childhood: A Theoretical Review

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Abstrak:

Penelitian ini bertujuan untuk mengeksplorasi tingkat pemahaman guru terhadap aspek motorik kasar (gerakan dasar) pada anak usia dini serta faktor-faktor yang mempengaruhinya. Pendekatan kualitatif dengan metode studi kepustakaan digunakan untuk menganalisis data dari berbagai sumber, seperti buku, jurnal, dan literatur terkait. Hasil penelitian menunjukkan bahwa pemahaman guru sangat penting dalam mendukung perkembangan motorik kasar anak, yang meliputi kemampuan lokomotor, non-lokomotor, dan manipulatif. Namun, ditemukan bahwa pemahaman guru masih bervariasi dan dipengaruhi oleh beberapa faktor, seperti kurangnya pelatihan, minimnya modul/buku ajar praktis, keterbatasan fasilitas, serta persepsi yang menganggap motorik kasar sebagai aktivitas sekunder. Dampak dari rendahnya pemahaman guru dapat menyebabkan kurang optimalnya stimulasi motorik kasar pada anak, sehingga berpotensi menghambat kesiapan sekolah dan meningkatkan risiko keterlambatan perkembangan. Oleh karena itu, diperlukan upaya peningkatan pemahaman guru melalui pelatihan, penyediaan modul, dan dukungan fasilitas yang memadai agar perkembangan motorik kasar anak usia dini dapat berjalan optimal.

Kata Kunci: Pemahaman Guru, Motorik Kasar, Anak usia dini

Abstract:

This study aims to explore the level of teachers' understanding of gross motor skills (basic movements) in early childhood and the factors that influence it. A qualitative approach with literature study methods is used to analyze data from various sources, such as books, journals, and related literature. The results of the study indicate that teachers' understanding is crucial in supporting the development of children's gross motor skills, which include locomotor, non-locomotor, and manipulative abilities. However, it was found that teachers' understanding varies and is influenced by several factors, such as a lack of training, minimal practical teaching modules/books, limited facilities, and perceptions that regard gross motor skills as a secondary activity. The impact of teachers' low understanding can lead to suboptimal stimulation of children's gross motor skills, potentially hindering school readiness and increasing the risk of developmental delays. Therefore, efforts to enhance teachers' understanding through training, provision of modules, and adequate facility support are necessary for the optimal development of gross motor skills in early childhood.

Keywords: Teacher Understanding, Gross Motor Skills, Early Childhood



Introduction

Early Childhood Education (ECE) is the main foundation in the process of child development, ideally starting from the family environment as the first and foremost educational institution. However, ECE is also implemented through formal and informal education units, such as playgroups, Kindergartens, and other forms of services. In the formal education pathway, the implementation of ECE must refer to the ECE Curriculum as regulated in the Ministry of Education and Culture Regulation No. 146 of 2014 Article 5 Paragraph 1, which includes six aspects of child development, namely, religious and moral values, physical-motor skills, cognitive, language, social-emotional, and arts (Muslihin, 2020).

With a play-based approach at the core of the learning process, Early Childhood Education (ECE) becomes a strategic platform for developing all aspects of a child's development in a holistic and integrated manner. Educationally designed play activities not only provide enjoyable experiences for children but also serve as an effective medium for learning that stimulates their basic potential. Through directed play activities, children can develop motor skills, broaden cognitive horizons, foster self-confidence, and train social and emotional skills (Bubikova-Moan et al., 2019; Hamzah et al., 2023; Lähdesmäki et al., 2024). Therefore, it is important for ECE educators to understand the principles of child development and be able to manage play-based learning to create an optimal learning experience. Early childhood development is a crucial phase in the formation of their physical, cognitive, and social abilities. One important aspect of this development is gross motor skills, which include large movements involving the major muscle groups, such as walking, running, jumping, and throwing. Gross motor skills not only affect a child's physical health but also contribute to their social and emotional development (Hidayat, 2025; Ramesh, 2022; Samsinar et al., 2023).

Movement learning plays a crucial role in supporting gross motor development in early childhood. Gross motor skills include physical abilities that involve the coordination of large muscle groups, enabling children to engage in activities such as running, jumping, and climbing. At an early age, these skills develop optimally as they are closely related to a child's ability to interact with their surrounding environment and actively participate in play and learning activities. These activities not only support physical growth but also make a significant contribution to the overall cognitive development of children. Motor development is a gradual process of improving a child's movement abilities that takes place along with the maturation of nerves and muscles. Every movement of a child is the output of a complex interaction between various systems and body structures that are controlled by the brain. It is important to emphasize that this developmental pace is individual; each child exhibits a unique maturation pattern and cannot be compared to one another (Maula & Khasanah, 2024; Risyanto, 2018; Rizqina, 2019).

The development of basic movement skills in early childhood is classified into three main categories, namely locomotor skills, non-locomotor skills, and manipulative skills (Mirawati & Rahmawati, 2017). Locomotor movement skills include the ability to move



from one place to another, such as running, jumping, walking, and other (Saputri et al., 2023). Meanwhile, manipulative movement skills encompass activities that involve external objects, such as lifting, throwing, and kicking. All forms of movement are the foundation of more complex and integrated motor skills. An individual's ability to master higher-level motor skills is greatly influenced by the extent of experience and mastery of the basic motor skills they have previously acquired (Widiarti et al., 2021).

The lack of understanding and skills of teachers regarding fundamental movements in early childhood can have a significant impact on the quality of education and learning. This unpreparedness can indirectly hinder the optimization of the growth and development process of students, particularly around gross motor skills. The low level of knowledge among teachers in this field is generally caused by the limited availability of relevant and easily accessible references. In fact, most of the available literature is presented in foreign languages or dialects that are difficult to understand, making it challenging for teachers to explore information and apply it in learning practices (Zulaida & Saridewi, 2022).

Teachers play a strategic role in supporting and developing the gross motor skills of early childhood children. They are responsible for designing learning activities appropriate to the child's development stage, while also providing the right guidance for children to explore and hone their motor skills optimally. However, the level of teachers' understanding of gross motor aspects often varies, which in turn can affect the quality of teaching and children's learning experiences. This gap is a significant concern given that gross motor skills are a fundamental part of children's physical, cognitive, and social development. Therefore, this research aims to explore the extent of teachers' understanding of gross motor aspects in early childhood, as well as identify various factors that influence that understanding, as an effort to enhance the overall quality of early childhood education.

Method

This research uses a qualitative approach with a library research method where the author conducts an in-depth review of various data and information relevant to the researched topic. The analyzed sources include academic books, scientific journal articles, and other references discussing teachers' understanding of gross motor skills (basic movements) in early childhood. Through this approach, the researchers aim to identify, analyze, and synthesize findings from various literatures to gain a comprehensive understanding of the extent to which teachers understand gross motor aspects in early childhood. This approach is deemed relevant as it allows researchers to explore various theoretical perspectives and previous research results as a foundation for constructing arguments and concluding conceptual findings. Data analysis in this study is conducted using content analysis techniques, which aim to deeply examine the content of various literature sources that have been collected. The researchers identify key themes related to teachers' understanding of gross motor aspects, and then categorize the information based on conceptual similarities, discussion focus, and its contribution to theory development.



The analysis process begins by selecting credible and relevant sources, such as scientific journals, reference books, and education policy documents related to early childhood education and gross motor skills.

Results and Discussion

In the context of early childhood education, teachers play a central role in supporting and developing various aspects of children's development holistically. Teachers are required to provide learning that is appropriate to the age stages and developmental characteristics of children, as set out in the Regulation of the Minister of Education and Culture No. 137 of 2014 Appendix I. This regulation emphasizes that the scope of early childhood development includes six main aspects, namely religious and moral values, physical-motor skills, cognitive, language, social-emotional, and arts. All these aspects are interconnected and must be developed simultaneously. One important aspect that has advanced rapidly during this period is physical-motor development, which reflects a child's readiness to explore their environment through directed movement activities (Aghnaita, 2017; Alkasih, 2024).

Teacher understanding refers to the ability of an educator to comprehend, interpret, and apply learning materials and processes effectively to achieve educational goals optimally. This ability encompasses the teacher's skills in translating learning concepts, designing appropriate strategies, and predicting the dynamics of the teaching and learning process to meet the needs and characteristics of students. With a good understanding, teachers can manage the classroom effectively and create relevant and contextual learning experiences (Asmani, 2016; Madjid, 2016). In the framework of Bloom's Taxonomy as revised by Anderson and Krathwohl (teachers' understanding can be assessed through six levels of cognitive domains that are hierarchical, ranging from the simplest to the most complex. These six levels include: 1) Remembering: The ability to recall information that has been learned; 2) Understanding: The ability to interpret and explain information clearly; 3) Applying: Using knowledge in new contexts or situations; 4) Analyzing: Breaking down information into components and understanding the relationships between parts; 5) Evaluating: Making judgments or decisions based on specific criteria and standards; 6) Creating: Combining various elements of knowledge to produce something new and original. Through this framework, teachers' understanding is not only assessed by their ability to master the material, but also by the extent to which they can think critically, creatively, and reflectively in developing and delivering comprehensive learning (Gunawan & Paluti, 2017).

Several factors contributing to the low understanding of teachers regarding gross motor development aspects include a lack of adequate specialized training, limited availability of practical modules or teaching books that can be used by early childhood education (ECE) teachers related to basic movements, and a scarcity of play facilities and learning media that support gross motor stimulation (Dewi et al., 2024; Masyitah et al.,



2024; Muchlisin, 2020). In addition, there is also a perception among teachers that views motor activities as a secondary aspect in the learning process. If this condition is left unaddressed, the teachers' understanding of basic movements will not significantly improve. As a result, children are at risk of experiencing a lack of gross motor stimulation, which affects their readiness to enter the next level of education. This also has the potential to increase the risk of developmental delays, resulting in early childhood education services becoming less balanced and unable to accommodate the holistic growth and development needs of children (Sofia et al., 2020; Suratman & Rahnang, 2021).

Motor development is a crucial aspect of a child's growth and development. To support the development of these motor skills, parents need to provide adequate support by offering opportunities for their children to explore actively in their home environment. Providing adequate facilities and means is very important so that children can move freely and optimally hone their motor skills. However, currently, many parents allow their children to play without clear time limits, which often results in children spending more time sitting still at home watching videos. This habit has the potential to hinder a child's motor development, thereby increasing the risk of delays in mastering gross motor skills (Hazizah et al., 2024; Sapendi & Suratman, 2024; Suryadi et al., 2025).

The aspect of motor physical development is one of the main factors that influence the overall development of children. The process of physical growth and development occurs continuously from infancy to adulthood. At around two years of age, children generally show sufficient physical ability to perform various daily activities. At this stage, the coordination between the child's nervous system and muscles begins to develop well, allowing for more organized and directed body movement control. This development is rooted in reflexes and activities that have existed since birth. The ability to coordinate can be observed through the variations in development and different play patterns that children engage in every day (Zulaida & Saridewi, 2022).

The development of gross motor skills in children plays an important role because it significantly affects the development of other aspects. Achievements in gross motor skill levels are very useful to support daily activities as well as to support the overall physical growth of children. Although various gross motor skills taught have benefits, the skills most commonly used in daily life include walking, running, jumping, and hopping, considering that children's daily activities often involve those movements (Fitria & Rohita, 2019). Gross motor refers to physical abilities that involve the use of large muscle groups in carrying out various activities, such as running, jumping, and climbing. In childhood, these gross motor skills develop very well as they are directly related to a child's ability to interact with their surrounding environment. Furthermore, these skills also allow children to actively participate in various play and learning activities that support overall physical and cognitive development (Tristya, 2024).

In early childhood, motor development is characterized by an increase in the quality of movement patterns that have been mastered since infancy, as well as an increase in the variety of basic movement patterns that can be performed. Abilities such as walking and



grasping see significant progress and can be executed with various more complex movement variations. Basic movements or conscious motor skills include three main categories: locomotor movements, non-locomotor movements, and manipulative movements (Oktariyana & Oktariyani, 2019). Basic movement refers to the ability to perform daily activities such as walking, running, jumping, and throwing. The term movement or motor is used generally to describe various forms of human movement behavior, while psychomotor is more specifically referring to the development of movement within the human domain. Thus, the scope of movement (motor) is broader than psychomotor. Basic movement skills are divided into three main categories. First, locomotor ability, which is the ability to move the body from one place to another or to lift the body up, for example, like jumping and leaping. Other locomotor movements include walking, running, jumping, gliding, as well as movements like galloping or horse steps. Second, non-locomotor skills, which are performed in one position without moving, include movements like bending and stretching the body, pushing and pulling, lifting and lowering, folding, twisting, making circular movements, and tossing objects. Third, manipulative skills that develop when children begin to master the control of various objects. These skills generally involve the hands and feet, but other body parts can also play a similar role.

The development of fundamental movement in children is influenced by various interrelated factors. Genetic factors, for example, determine the child's basic physical potential such as muscle strength and nerve coordination. A conducive environment, such as the availability of safe and engaging play areas, provides opportunities for children to engage in physical activities freely. Good health and nutrition status are also very important because a healthy and well-nourished body will optimally support the child's motor abilities. In addition, social interactions with peers and teachers enable children to learn through examples and play together, thereby enhancing their motor skills. The active role of parents and caregivers is very influential, for example by encouraging children to engage in physical activities regularly and providing appropriate movement stimulation at home. Formal education at school, particularly in early childhood education (ECE) or kindergarten, contributes through learning programs designed to train fundamental motor skills. A child's cognitive development also plays a role in understanding instructions and applying movements correctly. Finally, a child's motivation and interest in physical activities will encourage their activity levels and the sustainability of movement practice; for instance, a child who enjoys playing soccer tends to practice kicking and catching the ball more diligently. With the combination of all these factors, children can achieve optimal fundamental motor skill development (Risyanto, 2018).

Factors that hinder the development of basic movement can be divided into two main categories, namely internal and external factors. Internal factors include physical conditions such as health disorders or physical abnormalities that hinder movement ability, for example, children with motor impairments due to nerve disorders or malnutrition. Psychological factors also play a role, such as children experiencing anxiety or lack of



confidence, making them reluctant to try new physical activities. Additionally, intellectual factors, such as limited understanding of instructions or reduced ability to remember movements, can also hinder motor development (Zain et al., 2024).

Meanwhile, external factors consist of non-social environments, such as a lack of adequate play space or facilities at home or school, which means that children do not have the opportunity to practice basic movements. Limited facilities and infrastructure, such as a lack of play equipment that supports motor training, also poses obstacles. Finally, the role of teachers or coaches is also very important; a lack of knowledge or skills among teachers in guiding children to develop gross motor skills can lead to an ineffective learning process. For example, teachers who do not provide a variety of activities or appropriate movement stimuli will make it difficult for children to achieve optimal motor development.

Conclusion

Based on the research results and data analysis presented, there are significant findings regarding teachers' understanding of the development of gross motor skills (basic movements) in early childhood. In early childhood education, teachers play an important role in developing or enhancing various aspects that emerge in children. Teacher understanding is the ability of teachers to comprehend, interpret, and effectively apply teaching materials and the learning process so that educational goals can be optimally achieved.

Factors contributing to the lack of teacher training related to gross motor development, the scarcity of practical modules or teaching books for early childhood education (PAUD) teachers regarding basic movement, limited play facilities or media for motor learning, and teachers' perceptions that motor movement is still considered a secondary activity. To develop motor skills, it is necessary for parents to provide support for honing their child's motor skills by giving them opportunities to explore their home environment. This situation leads children to remain inactive at home watching videos, resulting in delays in their motor skills. Supporting factors for basic movement include genetic factors, a conducive environment, good health and nutrition, social interaction, the role of parents and caregivers, education in schools, cognitive development, as well as the child's motivation and interest. All these factors interact to create optimal conditions for children to master basic motor skills.

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