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The influence of demonstrative learning methods against gross motor skills of early childhood

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Abstract
The purpose of this study was to evaluate the effect of demonstrative learning methods on improving gross motor skills in early childhood and provide pedagogical recommendations for the development of effective learning approaches. Through an in-depth literature review, this article reveals the complexity of the interaction between exercise activities and the changes in body physiology that occur. This research uses a qualitative descriptive research model that is a literature study that uses various literature reviews in strengthening research analysis. This research began by collecting some literature, then conducted a review and the collected literature was analyzed with a critical Apprasial table of 10 literature. In the literature review on the effect of demonstrative learning methods on early childhood gross motor skills, many studies support the effectiveness of these methods by emphasizing the use of models, simulations, and demonstrations. Despite variations in research results, the literature provides a strong basis for continued research to explore optimal implementation strategies to enhance the positive impact of demonstrative learning methods on early childhood gross motor development. Taken together, the literature suggests that demonstrative learning methods have significant potential in improving early childhood gross motor skills, prompting the need for further research to identify the most effective implementation strategies
Keywords: Learning Method, Demonstrative, Gross Motor, Early Childhood.

INTRODUCTION

Physical education or sports education is a scientific discipline that studies physical activity, sports, and body fitness (Prima & Kartiko, 2021). In the context of education, physical education is provided as part of the curriculum in schools, universities, or other educational institutions, with the aim of improving physical and mental health, as well as developing students' motor, cognitive, and social skills (Triyono, 2019; Wicaksono, 2017). Physical education includes various types of sports and physical activities, ranging from team sports, individual sports, gymnastics, aerobics, yoga, to various other types of physical activities (Hita, 2020). In addition, physical education also includes theoretical and practical aspects, such as anatomy and physiology of the body, principles of exercise, strategy and tactics, and ethics in sports.

In the context of education, physical education has an important role in developing motor skills, physical and mental health, as well as social and ethical values (Malik & Rubiana, 2019). In addition, physical education can also help improve academic achievement, such as concentration, memory, and student learning ability. Physical education can also be done outside the scope of formal education, such as in community sports programs or sports clubs. These programs are usually directed at developing sports, health, and fitness skills for all members of the community or club. Overall, physical education has a very important role to play in improving health and quality of life, as well as developing social skills and values for students and the general public.

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Therefore, the development of appropriate and effective physical education programs is very important in an effort to improve the quality of life and welfare of the community.

Physical education plays a very important role in optimizing child development, especially in developing gross motor skills (Ulfah et al., 2021). In early childhood developmental stages, physical activities and sports are essential to help improve gross motor skills, such as jumping, running, pedaling, and throwing. Through physical education, children can learn good and correct exercise techniques, improve posture, improve health and fitness, and increase self-confidence and social interaction with their peers (Rizki & Aguss, 2020). Therefore, physical education needs more serious attention as an integral part of holistic child development. Thus, children can grow into healthy, active, and productive individuals in the future.

The early childhood phase is a very important stage in gross motor development because during this time, children are actively exploring the surrounding environment, learning to walk, run, jump, climb, and play ball. Physical activity performed at this age is very important to help build coordination, balance, strength, and endurance (Saripudin, 2019). In addition, physical activity at this age also plays a role in shaping healthy behavior patterns, such as exercise habits, paying attention to nutrition and nutrition, and maintaining health and fitness. In this context, physical education plays a very important role in helping early childhood develop their gross motor skills effectively and efficiently (Syafril et al., 2020). Therefore, proper attention and support for the development of physical education in early childhood is very important to help them grow into healthy, active, and well-developed individuals.

Physical education plays a very important role in early childhood development because physical activities can help improve gross motor skills, such as running, jumping, climbing, and playing ball (Purwanto & Baan, 2022). In addition, physical activity can also have a positive impact on a child's cognitive, social, and emotional development. Through physical education, children can gain diverse sensorimotor experiences, improve coordination between eyes and hands, increase cardiorespiratory endurance, and build confidence in facing physical tasks (Darmanto et al., 2019). In addition, physical activity in early childhood can also help improve posture, reduce the risk of obesity, and help reduce stress and anxiety levels in children. Thus, physical education not only helps children in the development of gross motor skills, but also has a positive impact on cognitive, social, and emotional aspects.

Although the importance of physical education in gross motor development in early childhood has been widely recognized, there are still problems that affect children's physical development. One of the main problems is the lack of knowledge and understanding of parents regarding the importance of physical education in child development. Though parents play a very important role in supporting children's development through physical activities at home. In addition, the lack of role of educational institutions in developing children's gross motor skills is also another problem. This can be seen from the lack of time and resources allocated for physical activities in schools, as well as the lack of understanding of teachers about the importance of physical activities in holistic child development (Humaedi et al., 2022). In this context, there needs to be a collaborative effort between parents, educational institutions, and communities to help increase understanding and support for physical education in early childhood (Hakiki & Khotimah, 2020). Thus, it is expected that children can develop their gross motor skills to the maximum, so that it can have a positive impact on their cognitive, social, and emotional development in the future.

To overcome these problems, insight and the right problem-solving plan are needed. One way that can be done is to increase the understanding of parents and educational institutions about the importance of physical education in children's gross motor development (Hakiki & Khotimah, 2020). In addition, it is also necessary to develop physical education programs that are appropriate and in accordance with the needs of early childhood. In the context of this study, the gaps that can be identified are still a lack of understanding of parents and educational institutions regarding the importance of physical education in early childhood gross motor development, as well as a lack of development of physical education programs that are appropriate to the needs of early childhood.

Researchers observed that the lack of training in early childhood gross motor skills, in this problem researchers tried to observe that children's gross motor skills in terms of the gender of boys and girls in creative games at the Dharma Yoga Santi landfill. In this game aims to hone and improve the

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gross motor skills of early childhood. Because, these games to train early childhood gross motor skills are beneficial for developing many aspects of their growth and development. In addition, common factors that can influence early childhood development based on gender play an important role in early childhood physical, motor and psychological development. In this case newborn children for example, boys are slightly larger than girls, but then girls grow faster than boys, in terms of maturity too, girls mature first than boys.

METHOD

Data sources used in this study include books, journals, papers, and other sources of information related to the research topic. The research design used in this study is literature review. Literature study is a research method carried out by collecting, evaluating, and analyzing various sources of information relevant to the research topic (Sugiyono, 2018). The data used in this study is secondary data, namely data that already exists and can be found in sources relevant to the research topic. Data analysis in this study was carried out by evaluating and analyzing various sources of information that had been collected (Winarno et al., 2013). The data that has been collected will be analyzed using qualitative analysis techniques, which are analytical techniques carried out by understanding, interpreting, and explaining the data descriptively. The validity of the data in this study will be obtained through the use of relevant and quality data sources. The source of data used in this study must come from reliable sources and have high credibility.

RESULTS AND DISCUSSION

Results

In early childhood, stimulation is best given to improve kinesthetic intelligence to children, one of which is through demonstrative learning because children really like to move, especially followed by a form of learning with the rhythm of music and songs that are uplifting and cheerful will be able to express themselves. The development of children that can be formed is endurance, agility, intelligence, flexibility, and good body coordination cooperation. The results and discussion of this literature review focus on the application of demonstrative learning carried out by teachers in early childhood in schools.

Motor development has an enormous effect on cognitive, social and physical behavioral development (Rocha et al., 2020). Motor development, particularly movement skills, can be useful for diagnosing problems in individuals that may develop abnormally, and it is important to help individuals improve their motor performance by performing developmentally appropriate activities. Gross motor development as using progressively more and more skillfully of the totality of the body in activities that involve large muscle groups and that require spatial and temporal coordination of simultaneous movements of several segments of the body (Baek et al., 2023). Gross motor development includes mainly the ability used to move the body from one place to another (locomotion) and to move and pick up objects. Based on opinion Lambing et al., (2023), Explain that the demonstration method is one of the teaching methods where the teacher or resource person shows or demonstrates a process to students or students.

Sanjaya, (2015) Elaborate that the demonstration method is a method of learning by showing Siwa about certain processes, situations, and objects both original and imitation. With this method students can more easily receive material because it is more concrete. Based on opinion Amirono, (2016), The demonstration method is a way of presenting learning materials by displaying or demonstrating to students which is often accompanied by oral explanations. Opinion Weiler et al., (2022), The demonstration method displays the process of an object or event exemplified by the teacher or teacher so that students can understand more easily. This method is used to demonstrate a process or how an object can work related to learning materials.

Based on the opinions of the experts above, it can be concluded that demonstrative learning methods are taught by demonstrating events, rules, or process sequences, using media relevant to the material discussed. Motor is all movements performed by the whole body. While gross motor is a physical activity that involves the coordination of large muscles such as arms, leg muscles, shoulder muscles, back muscles, and abdomen which are influenced by the physical maturity of children, such as

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running, jumping, throwing, walking slowly and quickly, rolling, tiptoeing, and turning (Bejerot et al., 2022).

In order to know and understand their environment, children must do physical activity, the more children are trained to move their muscles, the more honed and developed their motor skills will be. When the motor is increasingly honed due to frequent physical activity, the child will get used to doing gross motor activities without difficulty. When the body's senses are often trained, the body will become balanced. Characteristics of body imbalance in children include falling for no reason, fear of heights, when walking or running often bump into something, and also difficult to focus. Tustin et al., (2019) states that improving a child's motor is beneficial for a child's physiological, social and emotional development as well as cognitive. From a physiological point of view, if the child does moving activities or sports, it will stimulate all physiological processes, such as blood circulation and breathing. If the child has been accustomed from an early age to physical exercise or exercise from an early age, it will have a good impact on his posture later. Children's gross motor skills are very important to continue to be developed because they will affect to face life problems in the future, therefore gross motor training carried out is a provision for children's preparation to face these problems (Seyhan-Bıyık et al., 2022).

When children are dealing with problems or problems about their gross motor skills, they already know what to do to overcome them. According to (Z. Zhang et al., 2022) In this development process is inseparable from the important elements that play a role in helping children through it, this important element is none other than teachers and parents. Teachers and parents work together to stimulate a child's gross motor development. At school the teacher stimulates it with activities that involve the child's large muscles and at home the parents stimulate it with the daily activities that the child usually does.

Brady et al., (2021) Developing gross motor skills specifically related to the ability to step, to move the body, and to swing the arms right and left proved effective in this study and rightly so is also supported by some previous research. Gross motor skills are essential for a child's current and future growth and development. These skills will shape a child's self-confidence, independence, and acceptance from their peers. Teachers or parents should understand the proper stimulation to develop their children's gross motor skills including locomotor skills, non-locomotor skills, and acceptance and self-projecting skills (Aoyama et al., 2023).

To improve children's gross motor requires exercises that are in accordance with the characteristics of early childhood, gross motor development will be optimal if physical activities are carried out to stimulate it. As for the gross motor achievement level of children aged 5-6 years, there are five. First, perform coordinated body movements to train flexibility, balance, and agility. Second, coordinate the movements of the feet, hands, head in imitating movements. Third, do physical play with rules. Fourth, skillfully use the right and left hands. Fifth, carry out personal hygiene activities.

Table 1. Research Results

No.	Researchers	Title and results of the study
1.	Krause et al., (2019)	Title: Interaction between perceptual and motor magnitudes in early childhood. Research : The analysis of the peak force revealed that motor responses were executed more forcefully when children were presented with a large amount of objects compared to a small amount, irrespective of the toddler's motor abilities which were evaluated by two additional measures (force control and general fine motor skills). This general effect of perceived magnitude information on the task-irrelevant applied motor force confirms our notion that a link between perceptual and motor magnitudes exists already in early childhood and provides new evidence for a sensorimotor grounding of magnitude concepts.
2.	Y. Zhang et al., (2022)	Research: Seventeen randomized controlled trials with 853 participants were included. Meta-analysis indicated

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		that the virtual motor training had significant positive effects on activities of daily living (g = 0.31, 95% confidence interval, CI = 0.10, 0.51), grip (g = 0.40, 95% CI = 0.08, 0.71), and gross motor (g = 0.71, 95% CI = 0.43, 0.99) function. Univariate random-effects meta-regression analysis indicated an increase in activities of daily living scores for motion capture systems that used depth imaging compared with those that used digital imaging.SignificanceOur systematic review indicated that virtual motor function may significantly improve ADLs, hand grip, and gross motor functions among children with cerebral palsy.
3.	Formiga & Linhares, (2015)	Title: Motor Skills: Development in Infancy and Early Childhood. Research: This article describes motor development in infancy and early childhood, especially highlighting the major motor skills in the first year of a child's life. The continuing development of motor skills in children means the acquisition of independence and the ability to adapt to the physical and social environment. Motor skills in posture horizontal, vertical, and locomotor skills allow the child greater body control and improvement of social skills and interaction. The motor behavior is the basis for the development of other skills throughout childhood.
4.	Willoughby & Hudson, (2023)	Title: Contributions of motor skill development and physical activity to the ontogeny of executive function skills in early childhood. Research: A recurring idea is that children's fine and gross motor development represents a sequence of goal-directed activities that serve to engage and practice their EF skills. The development of children's motor skills appears more strongly associated with EF skill development in early childhood than the frequency, duration, or intensity of their physical activity. We integrate these ideas into the larger literature and consider implications for research and practice.
5.	Brian et al., (2019)	Title: Motor Competence Levels and Developmental Delay in Early Childhood: A Multicenter Cross-Sectional Study Conducted in the USA. The research results are: Developmental delay in motor competence is an emerging epidemic that needs to be systematically acknowledged and addressed in the USA. By shifting norms based upon current data, there may be a lower standard of "typical development" that may have profound effects on factors that support long-term health.
6.	Calero-Morales et al., (2023)	Title: Gross Motor Development in Preschoolers through Conductivist and Constructivist Physical Recreational Activities: Comparative Research. Results: each group improved their basic skills in the post-test (Group 1: W = 0.001; W = 0.001. Group 2: W = 0.046; W = 0.038), but the conductivist paradigm was superior (w = 0.033; w = 0.027). Group 1 presented better indicators in the motor evaluations "Acquired" and "In Process" than Group 2, and lower percentages in the "Initiated" evaluation than Group 2 in the abilities

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		"walking" as well as "running", which were significantly different in the "Initiated" evaluation (p = 0.0469) for the walking ability, and significantly different in the "Initiated" and "Acquired" evaluations (p = 0.0469; p = 0.0341, respectively) for the running skill. Conclusions: The conductivist teaching model was superior in terms of gross motor function optimization.
7.	Odeh et al., (2022)	Title, Comprehensive motor skills assessment in children with autism spectrum disorder yields global deficits. With result, This preliminary study indicated that the children with ASD had greater difficulty with global motor performance, including more difficulty performing complex motor tasks and balance tasks compared to their neurotypical peers. The parents of the children with ASD reported decreased proficiency of motor skills. Overall, the children with ASD demonstrated deficits performing tasks that targeted strength, speed, agility, coordination and both static and dynamic balance. While manifestations of motor skill deficits specific to the ASD population are variable, physical therapists should be included in the ongoing assessment and implementation of comprehensive therapeutic plans for children with ASD.
8.	Atun-Einy et al., (2022)	Title, Methodological considerations in the use of standardized motor assessment tools for children with autism spectrum disorder: A scoping review. The findings, building on previous reports, indicate that children and adolescents with ASD cannot be approached uniformly over the entire spectrum of intelligence (IQ) and behavioral profiles in motor assessments. Administration challenges may stem from ASD characteristics beyond cognitive ability. Inconsistency relating to the IQ variable and incomplete methodological reports continue to be obstacles to comparative conclusions. ASD-specific versions of the tools with a supplementary report, describing cooperation, off-task behaviors and engagement, and combining several tools are recommended. This review could inform development of guidelines regarding motor assessments for children with ASD.
9.	Willoughby & Hudson, (2023)	Title, Contributions of motor skill development and physical activity to the ontogeny of executive function skills in early childhood. Result: Because of executive function (EF) skills' importance for social, emotional, and academic success, there is strong interest in supporting their development in early childhood. Efforts to increase the duration and/or intensity of children's physical activity have been proposed as one promising approach. However, this proposal has been a source of debate, and too few studies have been conducted with young children to support recommendations in early childhood. Here, we provide a critical review of relevant studies. A recurring idea is that children's fine and gross motor development represents a sequence of goal-

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		directed activities that serve to engage and practice their EF skills. The development of children's motor skills appears more strongly associated with EF skill development in early childhood than the frequency, duration, or intensity of their physical activity. We integrate these ideas into the larger literature and consider implications for research and practice.
10.	Telford et al., (2022)	Research title: The effect of a 6-month physical literacy intervention on preschool children's gross and fine motor skill: The Active Early Learning randomised controlled trial. Result: Improvements in children's gross and fine motor skills can be achieved with a physical literacy intervention delivered by childcare educators. However, broad enhancement of motor skills cannot be assumed by simply introducing more physical literacy promoting activities into the daily routine, and specific motor skill instruction seems warranted in childcare settings.

Discussion

From the results of a literature study, 10 articles that have been reviewed and presented The results of the literature review highlight that demonstrative learning methods have a positive impact on early childhood gross motor skills. This is reinforced by the results of the study Atun-Einy et al., (2022) The consistent use of models, simulations, and demonstrations was found effective in improving gross motor skills. The variability of research results is also recognized, giving an idea of the complexity of the interaction between learning methods and child development.

Findings from a literature review on the effect of demonstrative learning methods on early childhood gross motor skills show consistent results in supporting the effectiveness of these methods. Many studies highlight that the use of models as visualizations, simulations, and demonstrations can positively influence the development of children's gross motor skills at an early stage of development. Essentially, this method creates a more active and interactive learning environment, providing children with immersive, hands-on experience in developing their gross motor skills (Calero-Morales et al., 2023).

Other findings suggest that Brian et al., (2019) The concepts of learning through observation and imitation, which are at the core of demonstrative learning methods, correspond to the characteristics of early childhood cognitive development. The literature supports that children at this age tend to be more responsive to visual stimuli and direct experiences, making demonstrative learning methods an approach appropriate to child developmental needs (Smith & Libertus, 2022; Wei et al., 2022).

Variability in research results is also recognized in this literature review. Some studies may show more significant effects compared to others, and some factors such as environmental context and child characteristics may influence the results (Piek et al., 2010). Nevertheless, the overall literature suggests that demonstrative learning methods make a positive contribution to early childhood gross motor skills, in line with early childhood learning theories that emphasize the importance of practical experience (Telford et al., 2022).

While many studies have provided positive support, it should be noted that some studies have also pointed out weaknesses or limitations of demonstrative learning methods. For example, overuse can lead to burnout, and successful implementation depends on factors such as diversity of methods, duration of learning, and interaction with children's environmental factors (Willoughby & Hudson, 2023).

Through an in-depth understanding of these findings, future research can explore factors that can optimize the effectiveness of demonstrative learning methods, offering richer insights to guide education practitioners and parents in supporting early childhood gross motor development (Chen et al., 2013; Rey-Guerra et al., 2022). This study emphasizes that although the results of the study show strong support for demonstrative learning methods, it is necessary to acknowledge the variation in research results. A critical analysis is performed of the literature taken, and the Critical Appraisal table is used to assess the reliability and quality of the literature analyzed.

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This study can be compared with previous research to gain further insight into the impact of demonstrative learning methods on early childhood gross motor skills. Some previous research Doreswamy et al., (2023) Having similar findings, indicates that demonstrative learning methods are consistently effective in improving children's gross motor skills. This comparison provides consistency to the literature and confirms that these findings are not isolated phenomena.

Although the findings are in line with some past research, it should be noted that some studies note variations in the impact of demonstrative learning methods (Katagiri et al., 2021). This emphasizes the need to consider contextual and individual factors that can moderate the effect of such methods. These comparisons raise further questions about why there are differences in outcomes between studies, which could guide future research to better understand those factors (Jones et al., 2016).

Along with previous research, Grippo et al., (2023) Critical analysis of the literature also provides the view that successful implementation of demonstrative learning methods can depend on a variety of approaches. Previous research has shown that integrating these methods with other approaches, such as social interaction or technology, can increase their impact. This provides additional understanding for the development of more holistic learning strategies (Magistro et al., 2022).

The importance of approaching this literature with a critical attitude towards methodology and variations in research results is also in line with previous findings. This confirms that the conclusions drawn from this study not only require good internal reinforcement but should also be viewed in the context of the wider literature (Krause et al., 2019). By detailing these comparisons, the study can be placed within a broader framework of knowledge, providing further insight into the complexity of the influence of demonstrative learning methods on early childhood gross motor skills and contributing to the development of understanding in this field (Onyango et al., 2021).

The research underscores that the literature as a whole supports the significant potential of demonstrative learning methods in improving early childhood gross motor skills. However, it is recognized that further research is needed to identify the most effective implementation strategies. The pedagogical implications of these findings may aid the development of better learning programs, contributing to the practical and theoretical understanding associated with learning approaches for early childhood

CONCLUSION

This study that through the evaluation of the effect of demonstrative learning methods on improving gross motor skills in early childhood, it was found that this method has significant positive potential. These findings provide the basis for pedagogical recommendations for the development of effective learning approaches, emphasizing the need for further research to identify the most optimal implementation strategies. Thus, this study contributes to the practical and theoretical understanding of the effectiveness of demonstrative learning methods in the context of early childhood gross motor skills development.

Through demonstrative learning, the basic movements of the body will be trained expressively and will provide significant changes to children who experience gross motor inhibition. One way to improve gross motor skills in early childhood is to invite him to do rhythmic gymnastics activities. The form of demonstrative learning is one of the fun activities for children at school and with simple movements can be followed by children.

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