

The Monitoring and Evaluation of the Application of Learning Management Activities: A Case Study of the Play and Learn for the Young Learners' Brain Development Workshop Project

Tanawan N.^{1*}, Kanphisha J.², Kridsana J.³, Suppawan W.⁴

^{1,2,3} Ph.d Student in Physical Education, Faculty of Education and Development Sciences, Kasetsart University Kamphaengsan, Nakhon Pathom 73140 Thailand

⁴ Asst. Prof., Faculty of Education and Development Sciences, Kasetsart University Kamphaengsan, Nakhon Pathom 73140 Thailand

*Corresponding author, email: Tanawan.nu@ku.th

Abstract

This research is aimed at studying, monitoring and evaluating the transfer of knowledge gained from participating of the Play and Learn for the Young Learners' Brain Development Workshop Project, applications in the management of learning in schools, and comparing transfer of learning gained through participation in schools by variables, as well as compiling additional issues and suggestions on applying the knowledge obtained in learning management in schools and in order to recognize the value and usefulness of this training project.

The target group is 15 schoolteachers attending the training from a specific selection. The tools used to gather data are queries. Statistics used to analyze basic statistics and content analysis to analyze problems and suggest maximum frequencies.

This study evaluates the impact of a training program on teachers' ability to manage learning effectively in educational institutions. The findings reveal that teachers who participated in the training successfully applied their knowledge at an optimal level. Despite having similar in education level, teachers exhibited differences in application based on sex, age, education, school location, and teaching experience. Notably, teachers from 1st to 6th grades demonstrated the most practical application of knowledge. The problem of applying knowledge was found to be that the maximum frequency was the difficulty teachers faced in designing courses for students with deficiencies in inclusive classrooms. Teachers expressed a need for additional guidance in this area. Overall, the training program was deemed valuable, providing teachers with modern, up-to-date knowledge, which they could apply and transfer effectively in their teaching practices.

ACPES 2025

Keywords: Monitoring and Evaluation of project, Activity Application, Learning Management in Classroom

Background

Human resource development is a crucial mechanism in integrating the country into the global society of the 21st century and is a key issue outlined in the national strategy and Thailand 4.0 strategy. Preparing the workforce with the necessary knowledge, skills, and competencies to adapt and keep pace with global changes is an urgent priority for the nation. This is essential for enhancing the country's competitive capacity [16].

In the 12th National Economic and Social Development Plan (2017-2021), the development approach is centered around people, aiming to improve the quality of life and well-being of Thai citizens. The plan focuses on developing well-rounded individuals who are disciplined, eager to learn, skilled, creative, have a positive attitude, social responsibility, and uphold moral and ethical standards. It also promotes the development of people across all age groups [17].

Therefore, childhood is a critical period. The natural way for children to learn is through movement and various activities. Preparing and developing children's physical capabilities to grow strong and ensuring that their bodies are fully equipped for life is essential. Physical movement also stimulates brain development, which is crucial for learning. The brain controls the body's perception of the environment during movement, influencing cognitive development through activities and enhancing sensory-motor integration, as well as the perception of various sensations [5].

Basic movement skills are essential activities that stimulate and develop cognitive perception and learning in the most tangible and effective way. The brain's cognitive functions also play a key role in expressing movement abilities. Studies on the development of motor skills and sports performance have shown that maximizing movement and sports performance is related to brain function or cognitive abilities [8].

Moreover, developing motor skills from childhood leads to greater physical expression of basic movements and the ability to refine these skills, ultimately influencing physical activity behavior. This allows individuals to move confidently and control their movements in various physical activities, responding appropriately to different situations [15].

Through the "Play and Learn for the Young Learners' Brain Development " practical workshop, the goal is to provide education personnel, sports personnel, parents, and individuals involved with children with the opportunity to gain knowledge and understand the importance and benefits of fundamental movement through play. It also encourages systematic and efficient application in learning management. Therefore, to evaluate the outcomes of the workshop, the researcher aims to follow up on the integration and application of activities in various educational institutions, assessing whether participants have gained knowledge and understanding of the program and evaluating their ability to apply this knowledge in their work. Additionally, this study will evaluate the value and benefits of the project to improve the effectiveness of future workshops,

ACPES 2025

contributing to the further development of education personnel, sports personnel, and those involved with children to enhance their effectiveness.

WORKSHOP PROJECT "PLAY AND LEARN FOR THE DEVELOPMENT OF CHILDREN'S BRAINS" FOR PHYSICAL EDUCATION TEACHERS.

The play and learning project

The development of young learners' brains is a crucial period for both physical and mental growth. Play is one of the powerful methods of learning that fosters brain skills and children's learning, especially creative play in physical education classes that involve body movement, which can promote children's development in various dimensions. Physical education teachers play an important role in designing learning activities that can stimulate brain development and the skills necessary for future learning.

The project of play and learning to develop the brains of young learners aims to provide participants with knowledge and understanding of the importance and benefits of basic movement to maximize the potential of youth. Additionally, it seeks for participants to apply the knowledge gained from this workshop in their work to achieve the highest efficiency. The hope is that it will play a crucial role in establishing a foundation for physical and mental development for young children. Furthermore, it aspires for physical education teachers to be able to adapt these principles in designing activities that not only promote physical health but also support young children. [7].



Figure 1 Training muscle control by using basic movement skills to design teaching activities.

The fundamental concept of play for brain development.

Play is one of the most important ways to develop a child's brain during this critical period. [11] proposed that play is an activity that promotes learning through direct experience, allowing children to develop systematic thinking. Meanwhile, [14] highlighted the importance of creative play that fosters social thinking and problem-solving skills. These research findings serve as a crucial knowledge base for developing physical education learning activities for teachers.

Play and brain development in the context of physical education.

Research focused on brain development through play in physical education classes has found that activities that combine movement positively impact the development of various cognitive skills,

ACPES 2025

such as self-regulation and analytical thinking [3]. Exercise also stimulates brain areas related to memory and coordination between the nervous system and muscles, which benefits learning in a variety of subjects.

Creative play and movement skills.

Physical education teachers can incorporate creative play in the classroom to promote children's motor skills and brain development. According to research by Tomporowski et al. [13], activities focusing on diverse physical movements, such as running, jumping, or playing group games, positively impact children's brain development in terms of problem-solving and flexible thinking. Additionally, research indicates that aerobic exercise enhances the brain's efficiency in areas related to planning and decision-making. [6].



Figure 2 Using basic movement skills to design play activities for learning with equipment.

Research focusing on the use of play to develop the brain in physical education classes indicates that physical movement plays a crucial role in enhancing learning abilities, such as planning skills, self-control, and creativity [2]. Therefore, physical education teachers should incorporate play activities that not only develop physical skills but also stimulate brain function into their teaching to support classroom learning. Thus, applying learning management activities by integrating creative play with physical activities that emphasize brain skill development, as well as diverse and structured movement play, will better enhance brain development in young children. Teachers should prioritize creating an environment that supports learning through play and designing activities that promote problem-solving and flexible thinking [10]. This is because play and learning play a significant role in the brain development of young learners, especially in the context of physical education teaching. This training program aims to inspire physical education teachers to realize that they can incorporate creative play and movement into the design of learning to promote brain development and essential learning skills.

Objectives

1. To gather follow-up feedback from teachers who participated in the "Play and Learn for Brain Development in Children" workshop through structured questionnaires.
2. To analyze the completeness and reliability of the returned questionnaires for ensuring valid data collection.

ACPES 2025

3. To conduct content analysis on teachers' reported problems and suggestions related to the application of workshop knowledge in their teaching practices.

4. To summarize the quantitative data using basic statistical methods to understand overall responses from participants.

Methods

Research method

In this research, the researcher collected data by following these steps:

1. The researcher distributed follow-up evaluation questionnaires to 15 teachers who participated in the "Play and Learn for Brain Development in Children" workshop, using purposive sampling.

2. The researcher checked the completeness of all returned questionnaires, ensuring that every section was fully completed for analysis.

3. The researcher extracted the responses from Section 3, which focused on problems and additional suggestions regarding the application of knowledge in their work, for content analysis.

4. All questionnaires were used to calculate basic statistical data using a statistical software program.

Research sample

Population and Sample Group

The population used in this research includes all 32 participants in the "Play and Learn for Brain Development in Children" practical workshop. The sample group consists of 15 teachers who participated in the workshop, selected through purposive sampling.

Research Instruments

The researcher developed and validated the data collection tools following these steps:

Steps in Creating the Instruments

1. Review relevant literature on follow-up evaluations of training programs.

2. Study guidelines for developing data collection tools.

3. Create a questionnaire for data collection, divided into three sections.

Questionnaire design

Create a questionnaire for data collection, divided into three sections:

Section 1: General information about the respondents, such as gender, age, education level, teaching grade, the region of the school they work in, and their experience teaching children in educational institutions.

Section 2: Questions about the application of knowledge in their work. This section uses a 5-point Likert scale, with the following rating criteria:

5 = Applied the knowledge to their work to the greatest extent

4 = Applied the knowledge to their work to a large extent

3 = Applied the knowledge to their work to a moderate extent

2 = Applied the knowledge to their work to a small extent

1 = Applied the knowledge to their work to the least extent

Section 3: Questions about problems and additional suggestions regarding the application of knowledge from the "Play and Learn for Brain Development in Children" practical workshop in their teaching and work. Respondents can provide suggestions and feedback on applying the knowledge gained to their teaching in educational institutions.



ACPES 2025

Results

Section 1: Analysis of general information about the teachers who participated in the workshop, using frequency and percentage, with the results processed by statistical software and presented in Figure 3 with explanations.

Figure 3 Shows the frequency and percentage of general information about the respondents, including gender, age, education level, teaching level, region of the school, and teaching experience in educational institutions.

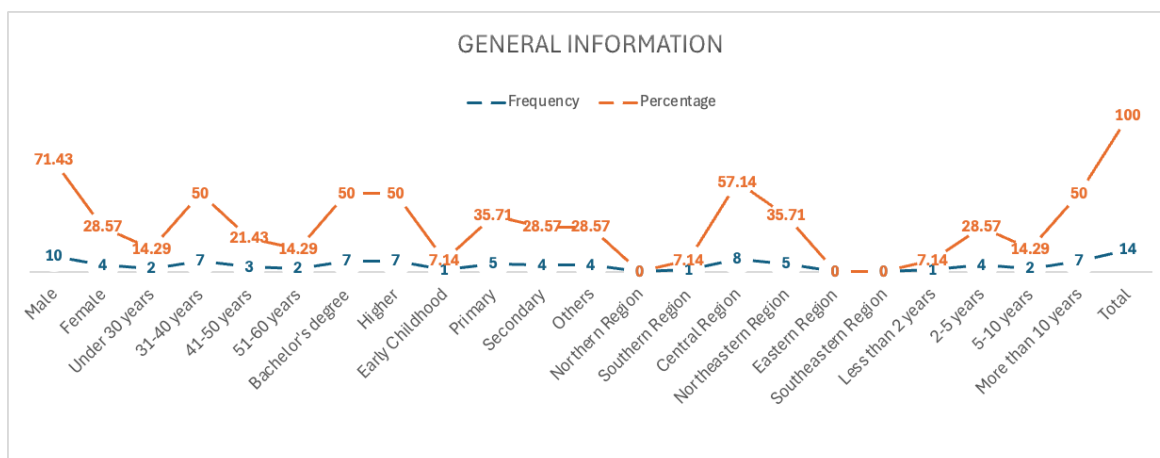


Figure 3 shows that most respondents are male, accounting for 71.43%, while females represent 28.57%. Most respondents are between 31-40 years old, and 50% have more than 10 years of teaching experience. Additionally, most respondents have a bachelor's degree or higher, and the majority work in the Central region of Thailand.

Section 2: Analysis of the Application of Knowledge in Teachers' Work After Attending the Workshop

This section analyzes the application of knowledge by the teachers who participated in the workshop. The analysis focuses on the outcomes achieved by participants, follow-up on the application of activities in learning management with children in schools, and the value and benefits of the "Play and Learn for Brain Development in Children" workshop. The results are presented using mean (X) and standard deviation (S.D.) in the following tables:

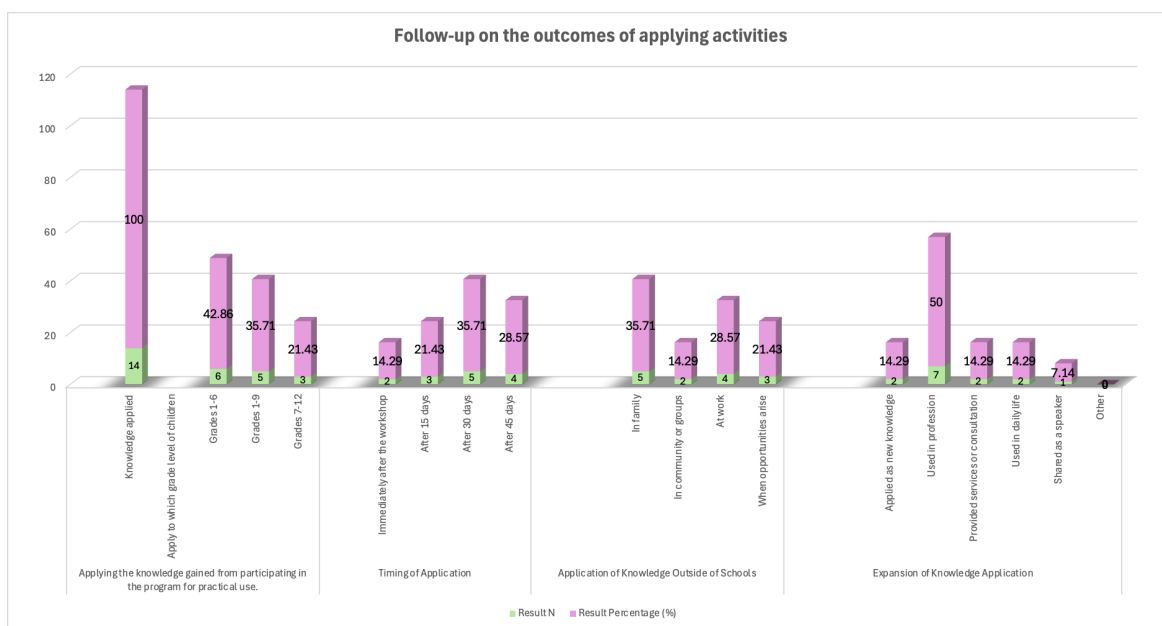
Table 1 Results of questionnaire reliability analysis of Outcomes of Participants After Attending the Workshop

Application of Knowledge Gained from the Workshop		Result			
		N	X	S.D.	Interpretation
1	Applied knowledge in practice	14	100	0	Highest
2	Did not apply knowledge	0	0	0	None
Total		14	100	0	Highest
Opinions on Knowledge and Its Benefits After the Workshop		Result			
		N	X	S.D.	Interpretation
1	Able to apply the knowledge in practice	14	4.93	5.72	Highest
2	Gained up-to-date and relevant knowledge	14	4.86	5.22	Highest
3	Able to transfer and expand the knowledge	14	4.93	5.72	Highest
Total		14	4.9	5.55	Highest

Application of Knowledge After the Workshop		Result			
		N	X	S.D.	Interpretation
1	Applied knowledge	14	100	0	Highest
2	Did not apply knowledge	0	0	0	None
Total		14	100	0	Highest

The table 1 shows that all teachers who attended the workshop applied the knowledge they gained in practice, with the application level rated as the highest and the teachers found the knowledge gained to be applicable in practice, with a mean score of 4.93. The knowledge was considered up-to-date and relevant, with a mean score of 4.86, and the ability to transfer and expand the knowledge received a mean score of 4.93. All aspects were rated at the highest level. And all teachers applied the knowledge gained from the workshop, with the level of application rated as the highest.

Figure 4 Results of questionnaire reliability analysis of Follow-up on the outcomes of applying activities in learning management with children in educational institutions.



The results from the figure 4 show that all teachers who participated in the workshop applied the knowledge gained after attending the program at the highest level. The teachers applied the knowledge most frequently with students in Grades 1-6 (N=6), followed by Grades 1-9 (N=5), and least frequently with students in Grades 7-12 (N=3).

For Timing of Knowledge Application After the Workshop shows show that 14.29% of teachers applied the knowledge immediately after the workshop, 21.43% after 15 days, 35.71% after 30 days, and 28.57% after 45 days.

Application of Knowledge Outside of Schools that 35.71% of teachers applied the knowledge in their families, 28.57% at work, 21.43% when opportunities arose, and 14.29% in their communities. And Expansion of Knowledge Application that 50% of teachers used the knowledge in their profession, 14.29% applied it as new knowledge, and 14.29% used it in daily life or provided services and consultation.

Table 2 Results of questionnaire reliability analysis of Value and Benefits of the Workshop

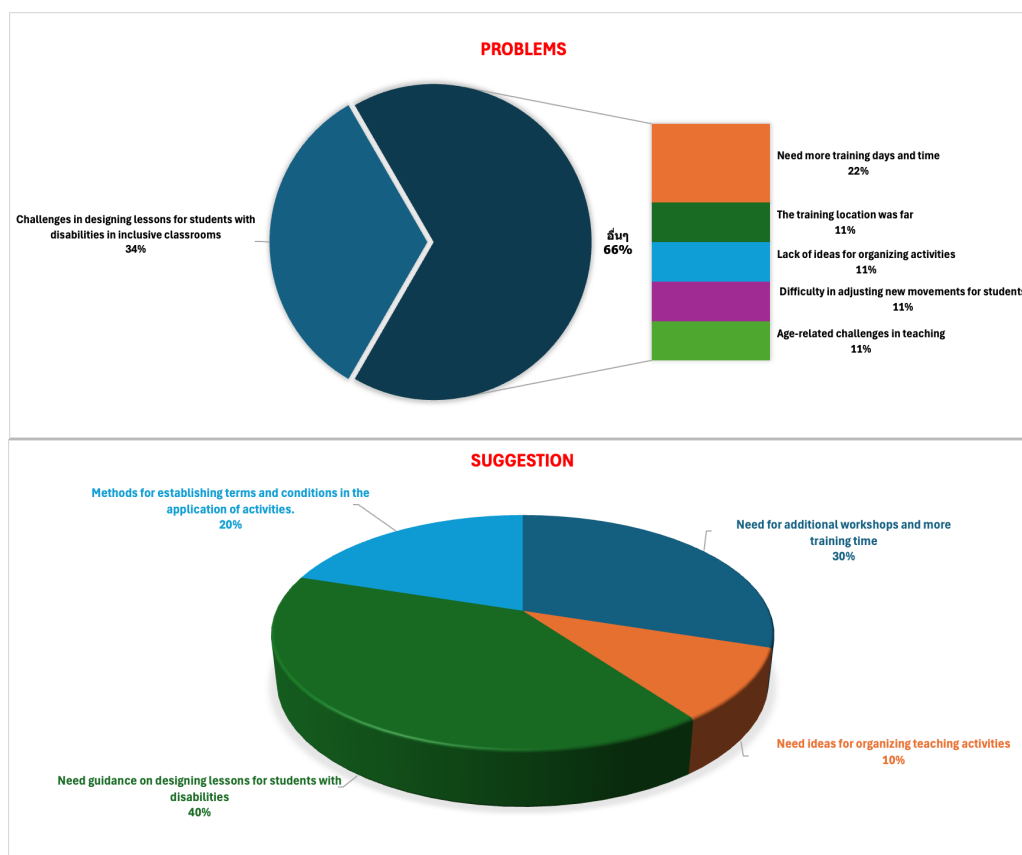
Value and Benefits of the Workshop	Result			
	N	X	S.D.	Interpretation
Able to apply knowledge effectively	14	4.93	5.72	Highest
Gained up-to-date and relevant knowledge	14	4.86	5.22	Highest
Able to transfer and expand knowledge	14	4.7	5.17	Highest
Total	14	4.86	5.37	Highest

The table 2 shows that teachers rated the workshop highly valuable, with a mean score of 4.93 for the applicability of knowledge, 4.86 for the relevance of the knowledge, and 4.70 for the ability to transfer and expand the knowledge.

Section 3: Analysis of Problems and Suggestions

The analysis of problems and additional suggestions related to applying the knowledge gained from the workshop is presented as follows:

Figure 5 Results Problems and Suggestions from Content Analysis.



The results from the figure 5 the analysis reveals that the most common problem reported by teachers was the challenge of designing lessons for students with disabilities, while the most frequent suggestion was the need for guidance on this issue. Additionally, many teachers suggested holding more workshops and extending the training duration.

Discussion and conclusion

From the research titled "Monitoring and Evaluating the Application of Learning Management Activities: A Case Study of the Workshop Project 'Play and Learn for Children's Brain Development'," there is a high possibility of extending or applying the knowledge on a broader scale. This is because the concept of play for children's brain development is widely accepted in the fields of education and developmental psychology. As noted by Diamond & Ling, the focus is on studying the role of creative play that involves movement and its impact on brain development, particularly in self-regulation skills and problem-solving. The research found that activities designed for children to use their creativity while moving effectively stimulate their brain development [4], which aligns with the research conducted by Pesce et al. A study conducted in 2019 analyzed the role of diverse movement and its impact on children's learning. It found that complex exercise enhances learning abilities and analytical thinking. This research has gained popularity among scholars interested in the development of both physical and cognitive skills through movement in physical education classes [9]. All this research provides empirical evidence that play activities positively affect the development of thinking skills, memory, and emotional regulation, which can be applied to children at various ages, whether in early childhood education or elementary school.

Furthermore, the research findings can be applied in teacher and childcare training programs to enhance knowledge and skills in effectively incorporating play activities in the classroom. If a clear manual or guidelines for organizing activities are developed, these findings could be utilized in schools that lack educational resources, enabling teachers to adapt play-based learning activities to different contexts.

However, for effective widespread application, support from relevant agencies, such as the Ministry of Education or local authorities, is necessary to integrate play as part of the learning process in the formal curriculum. Additionally, there may need to be ongoing evaluation and monitoring in the long term to improve and develop the process to meet the needs of children in each area.

From the research results and follow-up after the workshop project on play and learning for children's brain development, the teachers who participated in the training responded to a questionnaire regarding problems and additional suggestions about applying the knowledge to learning management. It was found that the most frequent issue was that teachers had difficulties in designing teaching management for children with disabilities in inclusive classrooms. Therefore, another important aspect to focus on in organizing training programs to maximize the potential for applying the results is to provide training for teachers on how to teach physical education to special needs children in inclusive settings, especially for children with special needs such as those with developmental disabilities or attention deficit hyperactivity disorder (ADHD). This is because play activities help stimulate brain function and the application of this approach can create flexibility in organizing movement activities that are suitable for children with special needs by designing activities that do not emphasize competition or speed but rather focus on the development of personal skills, such as movements that promote concentration, muscle coordination, and teamwork. These activities can help develop the brain areas related to emotional regulation, positive thinking,

ACPES 2025

and adaptability in social situations, which are essential skills for children with special needs in the context of learning alongside their peers.

Furthermore, applying the outcomes from participating in the training program to physical education for children with special needs helps create a more diverse and inclusive learning environment. Both teachers and classmates can use play activities as a medium to connect understanding and promote the participation of all children in the classroom. This will foster a balance in learning and development for both children with special needs and their typically developing peers.

The value and benefits of the training program revealed that teachers in participating educational institutions were able to apply the knowledge they gained effectively. They received up-to-date and relevant information and could pass on the knowledge and skills acquired to others. In summary, play and learning in physical education classes play a crucial role in developing children's brains and skills. Physical education teachers can incorporate the concept of creative play and movement into designing activities that support learning. Creating an environment conducive to play and brain development will provide children with a solid foundation for future learning and growth.

Suggestions

1. Teacher and educational personnel training: Training should be provided for teachers and caregivers to understand how to use play activities to develop children's cognitive skills, as well as how to design age-appropriate activities and adapt them to various learning situations. This will enable teachers to effectively implement these approaches in the classroom.

2. Support from relevant agencies: Educational agencies should encourage schools and educational institutions to implement the findings of this research by providing appropriate tools and resources for organizing learning activities through play, such as teaching materials that support brain development and designing learning spaces that promote movement and creative play.

3. Application in Diverse Contexts: This research should be applied in different contexts, such as schools in rural areas or areas with limited resources, by adapting to the specific environment and needs of the students. Furthermore, there should be follow-up studies to test the effectiveness in these contexts to ensure that such activities can broadly enhance children's learning.

The recommendations from this research focus on supporting the use of play-based learning activities in a comprehensive and systematic manner, which will help children maximize the benefits of brain development and long-term learning skills. Implementing the next project effectively will lead to the development of educational personnel in Thailand and those involved with children, enhancing their effectiveness further.

References

1. Bodrova, E., & Leong, D. J. (2007). *Tools of the mind: The Vygotskian approach to early childhood education*. Pearson.



ACPES 2025

2. Best, J. R. (2012). Effects of physical activity on children's executive function: Contributions of experimental research on aerobic exercise. *Developmental Review*, 30(4), 331–351.
3. Diamond, A., & Lee, K. (2011). Interventions shown to aid executive function development in children 4 to 12 years old. *Science*, 333(6045), 959–964.
4. Diamond, A., & Ling, D. S. (2020). Aerobic-exercise and resistance-training interventions have been shown to improve executive function, memory, and brain health: Cognitive outcomes, mechanisms, and moderators. *Neuroscience & Biobehavioral Reviews*, 108, 158–169.
5. Handayani, B., Duran-Corebima, A., Susilo, H., & Mahanal, S. (2020). Developing Brain Based Learning (BBL) model integrated with Whole Brain Teaching (WBT) model on science learning in junior high school in Malang. *Universal Journal of Educational Research*, 8, 59–69. <https://doi.org/10.13189/ujer.2020.081809>
6. Hillman, C. H., Pontifex, M. B., Raine, L. B., Castelli, D. M., Hall, E. E., & Kramer, A. F. (2019). The effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. *Neuroscience*, 199, 166–176.
7. Hirsh-Pasek, K., Golinkoff, R. M., Berk, L. E., & Singer, D. G. (2009). *A mandate for playful learning in preschool: Presenting the evidence*. Oxford University Press.
8. Krabuanrat, C. (2014). The application of basic training (FITT). *Health Education Journal Physical Education and Recreation*, 40(2), 5–12.
9. Pesce, C., Marchetti, R., Motta, A., & Tomporowski, P. D. (2019). Physical activity and children's cognition: An educational neuroscience perspective. *Journal of Sport and Health Science*, 4(1), 47–55.
10. Pellegrini, A. D. (2009). *The role of play in human development*. Oxford University Press.
11. Piaget, J. (1962). *Play, dreams and imitation in childhood*. Norton.
12. Sheng, X., & Maharkan, P. (2024). Development program of basic physical movement skills for early childhood in Guangzhou City, China. *International Journal of Sociologies and Anthropologies Science Reviews*, 4(2), 201–218. <https://doi.org/10.60027/ijssar.2024.3772>
13. Tomporowski, P. D., McCullick, B., Pendleton, D. M., & Pesce, C. (2015). Exercise and children's cognition: The role of exercise characteristics and a place for metacognition. *Journal of Sport and Health Science*, 4(1), 47–55.
14. Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
15. Whitehead, M. (2019). Definition of physical literacy: Developments and issues. In M. Whitehead (Ed.), *Physical literacy across the world* (1st ed., pp. 8–18). Routledge. <https://doi.org/10.4324/9780203702697-2>
16. Office of the Basic Education Commission. (2017). *Human resource development to support basic education*. Ministry of Education.
17. Office of the National Economic and Social Development Board. (2017). *The 12th National Economic and Social Development Plan (2017–2021)*. Office of the Prime Minister.
18. Office of the Basic Education Commission. (2020). *Guide for organizing physical activities to develop learning for children using the brain-based learning (BBL) playground model*. Ministry of Education.



ACPES 2025



MINDANAO STATE UNIVERSITY
ILIGAN INSTITUTE OF TECHNOLOGY



ACPES
ASEAN Council of Physical Education and Sports