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The Effect of Dongklak Dance on the Gross Motor Skills of Children Aged 5–6 Years

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ABSTRACT

Gross motor development is a crucial aspect of early childhood growth. One method that can be used to improve gross motor skills is through dance activities, particularly the Dongklak Dance. This study aims to determine the effect of Dongklak Dance on the gross motor development of children aged 5–6 years. This research employed a quantitative method using a pre-experimental one-group pretest–posttest design. The research subjects consisted of 14 children aged 5–6 years, selected through purposive sampling. Data were collected through observation and gross motor skills tests, analyzed using the Wilcoxon test. The Wilcoxon test produced a p-value < 0.05, showing improvements in balance, coordination, and agility after the Dongklak Dance treatment. In conclusion, the Dongklak Dance can be used as an effective method to enhance gross motor skills in early childhood.

Introduction

Early childhood, namely children aged 0–6 years, is in a very crucial developmental phase often referred to as the golden age (Bongyuvi & Widayanti, 2023). At this stage, various aspects of a child's

development—including physical motor, cognitive, language, socio-emotional, art, as well as moral and religious aspects—develop very rapidly. Early childhood education (PAUD) is designed to provide stimulation that supports the optimization of these potentials (Adhe et al., 2025), particularly the gross motor aspect, which serves as the foundation for physical skills and children's readiness in activities.

One of these aspects is the physical motor aspect. According to Djuanda & Agustiani (2022), the motor development of early childhood is a process in which an individual grows through responses that produce coordinated and integrated movements, thus motor skills can be seen as the foundation of one's success in performing motor tasks. According to Hurlock's theory, motor development in children is the process of controlling physical movements that occurs through coordinated activity between nerves and muscles.

Motor skills are divided into two: gross motor and fine motor. Gross motor skills are movements that use large muscles and generate a lot of energy, such as running, walking, and jumping. Meanwhile, fine motor skills are movements that use small muscles requiring eye-hand coordination, such as stringing beads, folding, and cutting (Kurniasih, 2020; Ulfa et al., 2023).

Gross motor development is the ability related to the coordination of large body muscles, such as walking, jumping, and running. The main components of gross motor skills include strength, balance, coordination, speed, agility, and accuracy (Izzati et al., 2024). The

development of this aspect is not only important for children's physical health, but also supports social skills, self-confidence, and children's readiness to participate in various activities in their surroundings (Aisyah et al., 2024; Mahfudza et al., 2024).

However, the phenomenon of delays in gross motor development is still widely found, one of which is based on observations conducted at Tessaban 2 Bansadao School, Thailand. Several children experienced motor difficulties, either due to health conditions (such as autism or leg impairments) or due to parenting styles that tend to limit children's physical exploration. In addition, increasingly passive lifestyles and dependence on technology also contribute to inhibiting children's physical development in today's modern era.

In this context, innovative, enjoyable, and developmentally appropriate methods are needed to stimulate gross motor aspects (Hidayanti et al., 2022). One potential approach is through art activities, such as dance. The Dongklak Dance, a traditional Indonesian dance, offers dynamic and comprehensive movements that involve the entire body in physical activity. The movements in the Dongklak Dance include coordination of the head, hands, feet, as well as body balance and agility. Moreover, this dance also contains cultural and social values that can be introduced to children from an early age (Qudwatullathifah et al., 2024).

The use of Dongklak Dance as a medium for developing gross motor skills has gained attention in several previous studies. For

example, Wigaringtyas & Katoningsih (2023) highlighted the potential of Dongklak Dance in fostering physical activity and love for local culture. However, few studies have specifically examined the effectiveness of implementing Dongklak Dance outside Indonesia, particularly in the context of early childhood education (PAUD) schools in Thailand, which face challenges in gross motor development.

Based on this background, this study aims to explore the effect of using Dongklak Dance as a medium for developing gross motor skills in early childhood in Thailand. The objective of this research is to determine the extent to which Dongklak Dance can improve key gross motor components such as agility, balance, and coordination in children, as well as to introduce Indonesian cultural values through enjoyable educational activities.

In terms of urgency, the importance of gross motor development cannot be postponed, given its significant impact on holistic child development. The novelty of this research lies in its approach of combining elements of Indonesian traditional culture with the context of early childhood education abroad, namely in Thailand. This research also expands the scope of cross-cultural and educational studies while supporting cultural diplomacy through the introduction of traditional arts to the international arena.

Thus, the integration of Dongklak Dance into early childhood education programs in Thailand is not only an innovative solution in developing children's gross motor skills but also a meaningful means of

cultural preservation enriched with educational values.

Methods

This study employed a quantitative research method. Quantitative research is research in which the results are obtained from data analysis that has been calculated according to the sample (Machali, 2022). This study used a quantitative type of research with a pre-experimental one-group pretest–posttest design. In this design, there is only one group of subjects given treatment, and measurements are taken before and after the treatment to observe the changes. This design was chosen to measure the effect of the modified traditional Dongklak Dance on the gross motor development of children aged 5–6 years.

Table 1. Research Instrument Grid

Pre-Test	Treatment	Post-Test
01	X	02

Notes:

01: Pre-test score before treatment

X: Treatment (intervention)

02: Post-test score after treatment

The research design used allows the researcher to observe significant changes in children's gross motor skills before and after the Dongklak Dance intervention, and to ensure that the differences are due to participation in the dance rather than other factors. In this case, measurements of gross motor development included aspects such as agility, balance, and coordination.

The study was conducted at Tessaban 2 Bansadao Kindergarten, located in Sadao District, Songkhla, Thailand. This kindergarten was chosen because it has supportive physical and artistic activities, making it easier for the researcher to introduce Indonesian traditional dances such as the Dongklak Dance to the students.

The population of this study consisted of all children aged 5–6 years enrolled in Anoban 3, totaling 21 children. From this population, a sample was taken using purposive sampling with the following inclusion criteria: aged 5–6 years, having no physical or health impairments that could hinder gross motor movements, and having parental consent to participate in the study. The final sample consisted of 14 children who met the criteria, while 7 children were excluded.

The data collection technique used was direct observation (Daruhadi & Sopiati, 2024), in which the researcher observed children's activities while they participated in the Dongklak Dance. The observation involved recording the development of children's gross motor skills based on specific aspects such as strength, balance, coordination, and dexterity. Observations were conducted systematically using observation sheets specifically designed for this research, so that the data obtained were well-structured and measurable.

The observation process began with a pretest, namely the initial observation of children's gross motor abilities before the treatment was given. The researcher recorded each child's ability based on predetermined indicators. The modified traditional Dongklak Dance

training sessions were conducted for 1 week with a frequency of 4 practice sessions. During the sessions, the researcher also observed the children's engagement in the activities and recorded the development of their gross motor skills. The data were collected through pretest and posttest using instruments as measurement tools (Aulia et al., 2022).

Table 2. Research Instrument Grid

Variable	Indicator	Item	Assessment
Gross Motor Ability	Balance	1. Able to walk on one foot for six steps	
	Coordination	2. Able to jump to the right and left accurately	
	Agility	3. Able to tiptoe with zig-zag movements among small poles	

Table 3. Assessment Grid

No	Assessment	Score	Description
1	BB	1	Not Yet Developed
2	MB	2	Beginning to Develop
3	BSH	3	Developing as Expected
4	BSB	4	Developing Very Well

Subsequently, data analysis was carried out after all data were collected. A normality test was conducted as a prerequisite before using parametric or non-parametric statistical tests (Santoso, 2019).

Results and Discussions

This study was conducted over six meetings from August 12, 2024, to August 22, 2024. The research findings carried out at Tessaban 2 Bansadao School, Thailand, showed that the traditional Dongklak Dance had an effect on the gross motor skills of children aged 5–6 years. Based on the pretest data, the total score was 111 with an average of 8, while the posttest data showed a total score of 154 with an average of 11, indicating an increase in the gross motor skill scores of children aged 5–6 years.

Table 4. Total Scores of Pretest and Posttest Items

No	Name	Pre-test (x1)	Post-test (x2)	Difference (x2–x1)
1	CH	8	11	3
2	PK	7	10	3
3	PP	7	10	3
4	KB	9	12	3
5	TS	8	11	3
6	NP	9	12	3
7	PO	7	10	3
8	FA	8	11	3
9	CP	8	11	3
10	FC	8	11	3
11	AS	9	12	3
12	TK	8	11	3

13	PP	9	12	3
14	WM	6	11	5
Total		**111**	**154**	
Average		**8**	**11**	

The table above shows that there was an increase in children's gross motor skill scores before and after the treatment.

Figure 2.
Pretest Activities

Figure 1.
Posttest Activities

The data were also presented in graphical form to make it easier to understand the distribution of data before and after the treatment. sebelum dan sesudah pemberian *treartment*

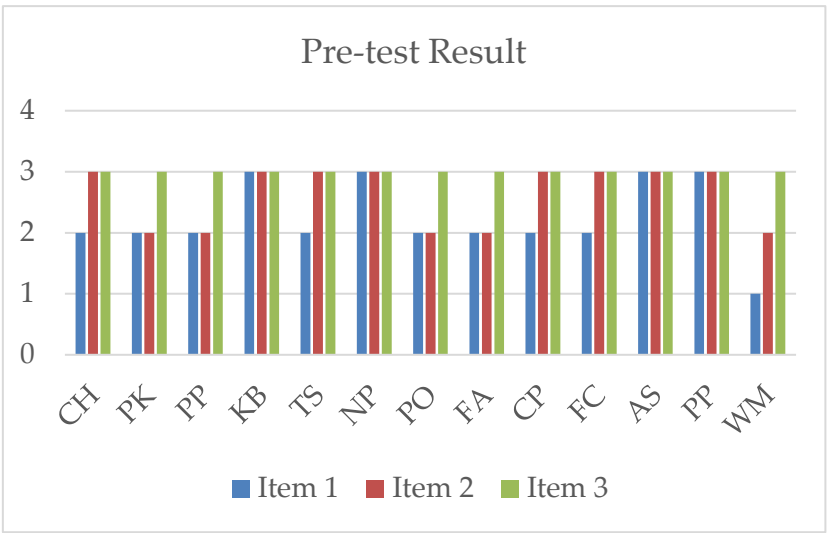

Figure 3. Comparison Chart of All Items in the Pretest

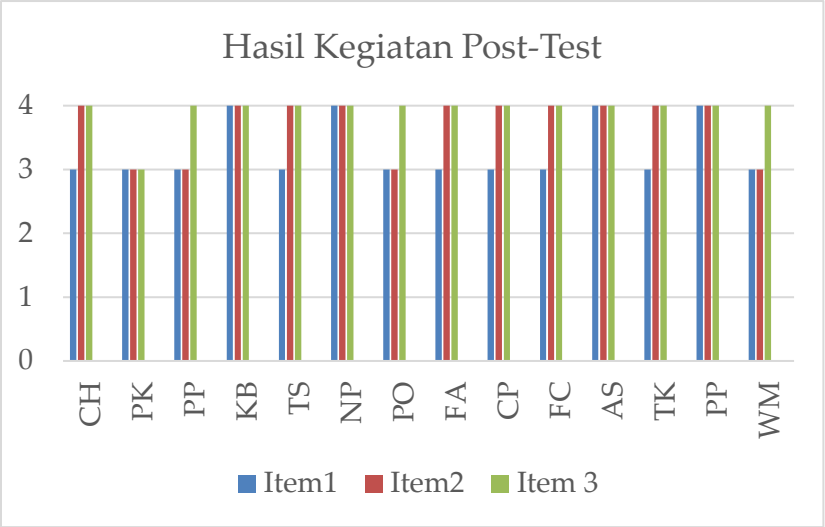

Figure 4. Comparison Chart of All Items in the Posttest

After the data were collected, prerequisite tests were conducted to determine the next stage of data analysis. The normality test was carried out using the Kolmogorov-Smirnov test with the help of SPSS version 20 software. The distribution of data from the normality test is presented in Table 5.

Table 5. Results of the Normality Test

Class		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Result	Pre test	.245	14	.022	.874	14	.048
	Post Test	.214	14	.081	.823	14	.010

The pretest results in the Kolmogorov-Smirnov test showed 0.022 where $p > 0.05$, thus the data were not normally distributed. The posttest

results showed 0.081 where p > 0.05, thus the data were also not normally distributed. Therefore, the hypothesis test was conducted using a non-parametric statistical test, namely the Wilcoxon Signed Ranks Test.

Table 6. Wilcoxon Signed Ranks Test

Posttest – Pretest	Z	Asymp. Sig. (2-tailed)
	-3.638b	.000

Based on the data in the table above, the significance value obtained was 0.000. Since p < 0.05, it can be stated that Ha is accepted and Ho is rejected, meaning there is a significant difference between the pretest and posttest results because the Asymp. Sig. value is smaller than 0.05. Thus, it can be concluded that the traditional Dongklak Dance has an effect on the gross motor skills of children aged 5–6 years.

The findings of this study showed a significant improvement in children's gross motor skills after receiving the Dongklak Dance treatment. The difference between the pretest and posttest results indicates that this intervention had a positive impact on children's coordination, balance, and agility. In the pretest stage, most children had not yet optimally completed movement items such as hopping on one foot, jumping to the right and left, and tiptoeing in a zig-zag pattern. These limitations occurred because the children were not accustomed to doing motor activities through direct approaches and without structured media support.

The researcher observed each child's movement. There was one

child who could not yet complete item 1, namely hopping on one foot for six jumps, because the child often fell more than three times. Thus, the child had not yet been able to coordinate body and leg movements. Then, in item 2, jumping to the right and left, four children were not yet optimal because during the pretest they appeared unbalanced when jumping and only placed one foot on the floor. In item 3, tiptoeing in a zig-zag movement among small poles, all children obtained the same scores in the pretest results. This was because the children were able to follow the activity with agility, even though they sometimes put their feet down while tiptoeing.

However, after the children participated in a series of Dongklak Dance treatments for four days, they showed significant improvement. The children began to coordinate their body movements better, as seen from improvements in the movement items that were previously difficult. This success was inseparable from the gradual approach taken during the treatment, starting from introducing the music, simple movements, to combining complex movements such as spinning and tiptoeing while clapping hands.

Improvements in the posttest results were seen in children with the initials KB, NP, AS, and PP, who previously could only do five hops with poorly coordinated body posture. After the treatment, they improved by being able to hop on one foot for six jumps and coordinate their body and legs correctly. In item 2, improvements were observed in children with the initials CH, KB, TS, NP, FA, CP, FC, AS, TK, and PP,

who previously could not balance while jumping right and left and only placed one foot on the floor. After the Dongklak Dance treatment, these children were able to jump right and left with balance, placing both feet on the floor simultaneously. Finally, in item 3, there was the same improvement among all children, who were able to tiptoe in zig-zag movements from start to finish.

This improvement in gross motor skills aligns with Maghfiroh (2020), who stated that varied and structured movement experiences can accelerate children's motor system maturity. The Dongklak Dance, which contains rhythmic, coordinative, and explorative elements, allows children to develop comprehensive motor control. Basic movements such as swinging arms, stomping feet, and hopping provide stimulation to large muscles (gross motor) and enhance children's kinesthetic awareness of their bodies (Yuliandra et al., 2023).

These findings also support previous research by Kholifah et al. (2019), which stated that dance activities can shape children's body coordination skills, especially in responding to changes in rhythm and movement patterns. In addition, Wigaringtyas & Katoningsih (2023) also reinforced the finding that dance activities not only improve balance and coordination but also contribute to forming connections between the right and left brain, which are crucial in children's overall motor development.

Thus, these findings are not only consistent with theories of gross motor development but also strengthen previous research emphasizing

the importance of art-based approaches in early childhood motor learning. Dongklak Dance activities have been proven to create an enjoyable learning environment and improve children's focus, self-confidence, and perseverance in engaging in movement activities.

It can be concluded that the improvement of children's gross motor skills through Dongklak Dance activities demonstrates that traditional cultural arts approaches can be an effective method in early childhood learning. Although there were technical limitations during implementation, such as language barriers and weather conditions, the results still showed the effectiveness of this method in significantly enhancing children's gross motor development.

Conclusion

The Dongklak Dance has a positive effect on the gross motor development of children, particularly in the aspects of coordination, balance, and agility. Based on the analysis, there was a significant effect of the traditional Dongklak Dance on the gross motor skills of children aged 5–6 years, with a significant difference between the pretest and posttest results, as indicated by the Asymp. Sig. value being smaller than 0.05. Thus, the alternative hypothesis was accepted, and the null hypothesis was rejected, showing that Dongklak Dance can improve children's gross motor skills. Therefore, teachers are expected to utilize Dongklak Dance as part of classroom physical activities to stimulate children's motor development. Furthermore, future researchers are advised to develop Dongklak Dance movements to be more refined, not

only focusing on gross motor improvement but also enhancing other skills.

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