

The Integration of Music and Dance Arts in the Gross Motor Skills (Locomotor) of Children Aged 5-6 Years

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Abstract

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Gross motor development is one of the important aspects in early childhood development. Gross motor skills, especially locomotor movements such as walking, running, jumping, and moving places, need to be stimulated through fun and meaningful activities. One form of stimulation that can be done is through the integration of traditional music and dance arts. This study aims to determine the influence of the integration of music and dance arts of Kidabela on the gross motor skills (locomotor) of children aged 5–6 years in Ambon. This study uses a quantitative method with a quasi-experimental design. The subject of the study is children aged 5–6 years at an early childhood education institution in Ambon. The data collection technique uses observation and assessment sheets of gross motor development. The results of the study show that the integration of music and dance arts of Kidabela has a positive influence on the improvement of children's gross motor skills, especially in locomotor movements such as walking, jumping, and moving to the rhythm of music. Thus, learning based on local cultural arts can be an alternative learning strategy to improve early childhood motor development.

Keywords: musical arts, Kidavela dance, gross motor, locomotive, early childhood

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INTRODUCTION

Early childhood education is a very important stage of education in building the foundation of children's development as a whole. Early childhood is often referred to as the golden age because in this period children's development takes place very rapidly in various aspects, such as cognitive, social-emotional, language, moral, and physical motor development. Optimal development during this period will have a great influence on the success of children in the next stage of education. Therefore, the learning process in early childhood education needs to be designed appropriately in order to stimulate all aspects of child development in a balanced manner. One of the aspects of development that is very important to be developed in early childhood is physical motor development, especially gross motor skills.

Gross motor is a child's ability to perform various body movements that involve large muscles, such as walking, running, jumping, and maintaining balance. This ability is very important because it relates to the child's ability to

perform daily physical activities and supports the development of children's health and fitness. According to (Arifudin et al., n.d.) In his book *Basic Concepts of Early Childhood Education* (2018), gross motor development in early childhood is related to the ability of children to control body movements involving large muscles so that children are able to perform activities such as walking, running, jumping, and maintaining body balance. These abilities do not appear automatically, but need to be developed through various activities that provide opportunities for children to move actively.

Gross motor development in early childhood is greatly influenced by environmental stimulation and movement experience given to children. Children who are often involved in varied physical activities will have better motor skills than children who do not get the opportunity to move. (No et al., n.d.) Santrock in the book *Child Development* (2020) explains that motor development in children is influenced by biological maturity factors and learning experiences that involve physical activity directly. Therefore, learning activities in early childhood education need to provide ample opportunities for children to carry out various fun and meaningful movement activities.

One of the skills included in gross motor development is locomotor movements. Locomotor movements are basic movements that cause the body to move from one position to another. Locomotor movements include walking, running, jumping, jumping, and tiptoeing. According to Gallahue and Ozmun in the book *Understanding Motor Development* (2019), locomotor movement skills are basic skills that must be developed in childhood because these skills become the foundation for the development of more complex movement abilities at the next stage of development. If a child's locomotor movement ability is not developed well at an early age, then the child will have difficulty performing more complex physical activities later in life.

In the context of learning in early childhood education, the development of gross motor skills can be carried out through various activities that involve active body movements, such as games, sports, and art activities. Art activities have great potential in developing children's motor skills because these activities involve elements of movement, rhythm, creativity, and self-expression. Mulyasa in the book *Early Childhood Management* (2019) explained that art activities in early childhood education can help develop various aspects of children's development in an integrated manner, including children's physical, motor development, creativity, and social skills.

One form of art activity that can be used in early childhood learning is music and dance. Dancing activities accompanied by music can help children develop coordination of body movements, balance, and rhythmic abilities. Campbell in the book *Music in Childhood* (2018) explained that music has a positive influence on children's motor development because music can help

children in coordinating body movements according to the rhythm heard. Through movement activities and songs, children can learn to control their bodies in a more coordinated manner.

In addition to providing benefits for children's motor development, art activities can also be a means to introduce local culture to children from an early age. Local culture-based education has an important role in instilling cultural values and strengthening cultural identity in children. One form of local culture that can be used in early childhood learning in Maluku is the Kidabela dance. The Kidabela dance is one of the traditional dances that has dynamic and rhythmic movements. The movements in this dance involve various bodily activities such as stepping, spinning, jumping, and moving the hands and feet in a coordinated manner.

The use of traditional dance in early childhood learning not only functions as a medium for cultural preservation, but can also be used as a means to develop children's motor skills. The movements in traditional dance can help children in practicing body balance, movement coordination, and body agility. Trianto in the book *Integrated Learning Model* (2021) explains that learning that integrates elements of local culture can make the learning process more contextual and meaningful for students.

However, the results of initial observations conducted at one of the early childhood education institutions in Ambon City show that the gross motor skills of children aged 5-6 years are still not optimally developed. Some children still have difficulty in performing locomotor movements such as running, jumping, and maintaining body balance when moving places. In addition, learning activities carried out by teachers still tend to use less varied learning methods and have not utilized art activities optimally as a learning medium.

This condition shows that learning innovations are needed that can help improve children's gross motor skills more effectively and enjoyably. One alternative that can be done is to integrate Kidabela's music and dance arts activities in the learning process. The integration of music and dance is expected to provide an active and enjoyable learning experience for children so that children are more motivated to be involved in learning activities.

Several previous studies have shown that art and dance activities can have a positive influence on early childhood motor development. Research conducted by Rahmawati (2021) shows that creative dance activities can significantly improve early childhood gross motor skills. Other research conducted by Putri and Wulandari (2022) also shows that movement and song activities can improve the coordination of children's body movements. However, most of the research still focuses on the use of creative dance or movement and song activities in general. Research that specifically examines the integration of musical art with local traditional dance as a learning medium to improve early childhood gross motor

skills is still relatively limited. In addition, research examining the use of Kidabela dance as a learning medium in early childhood education is also still very rare.

Based on the literature review, it can be identified that there is a research gap, namely that there have not been many studies that specifically examine the integration of musical arts and traditional Kidabela dance in improving the gross motor skills of early childhood, especially the ability of locomotor movements in children aged 5–6 years. Therefore, this research has a novelty value because it integrates elements of musical art with local traditional dance as a learning medium in developing gross motor skills in early childhood.

The novelty of this research lies in the use of Kidabela dance as a learning medium combined with musical accompaniment in early childhood motor learning activities. This approach not only aims to improve children's gross motor skills, but also to introduce and preserve local culture to children from an early age.

Based on the description of the background, the purpose of this study is to determine the influence of the integration of music and dance arts of Kidabela on the gross motor skills (locomotor) of children aged 5-6 years in Ambon.

RESEARCH METHODS

This study uses a quantitative approach with the type of experimental research. The quantitative approach is used because this study aims to determine the influence of the integration of music and dance arts of Kidabela on the gross motor ability of early childhood through the analysis of numerical data obtained from the measurement results. According to John W. Creswell in his book *Educational Research* (2018), quantitative research is used to test the relationship between variables through data collection in the form of numbers analyzed using statistical techniques.

The research design used in this study is a quasi experimental design with a Pretest-Posttest Control Group Design. This design was chosen because the researcher could not randomize the subjects completely, but still gave treatment to the experimental group and compared it with the control group.

The research design can be described as follows:

Groups	Pretest	Treatment	Posttest
Eksperimen	01	X	02
Controls	03	—	04

Description:

O1 = Pretest of the experimental group

O2 = Posttest of the experimental group

O3 = Pretest control group

O4 = Posttest control group

X = Treatment in the form of integration of music and dance arts Kidabela

This research was carried out at one of the Early Childhood Education (PAUD) institutions in Ambon City, Maluku Province. The selection of the research location was carried out purposively because the institution has students with an age range of 5-6 years in accordance with the needs of the research. The research was carried out for approximately 4 weeks which included the preparation stage, the implementation of treatment, and the collection of research data.

Population and Research Sample

The population in this study is all children aged 5-6 years who are registered at the PAUD institution where the research is located. The research sample amounted to 30 children which were divided into two groups, namely the experimental group and the control group.

The distribution of research samples is as follows:

Group Number of Children

Experimental group of 15 children

Control group of 15 children

Total 30 children

The sampling technique uses the purposive sampling technique, which is a sample selection technique based on certain considerations that are in accordance with the research objectives.

This research consists of two variables, namely the independent variable and the bound variable.

The independent variable in this study is the integration of Kidabela music and dance arts in learning activities. The bound variable in this study is the gross motor (locomotor ability) of children aged 5–6 years.

The data collection technique in this study uses the observation method. Observation is carried out to determine the development of children's gross motor skills during the learning process. According to Sugiyono in the book *Educational Research Methods* (2019), observation is a data collection technique that is carried out by directly observing the activities or behavior of the research subject.

The instrument used in this study is in the form of an observation sheet of children's gross motor ability which is compiled based on locomotor movement indicators.

The research instrument used was a rubric for assessing children's gross motor ability which included several indicators of locomotor movement.

Table 1.1 Assessment Instrument Grid

Variabel	Indicator	Description
Motor skills kasar (locomotor)	Walk	Children are able to walk to the rhythm of music
	Running	Your child runs with good coordination
	Jump	The child is able to jump with both feet
	Meloncat	Children are able to jump with balance
	Body balance	Children are able to maintain balance when moving

Rating Scale

Shoes category

1 Not yet developed

2 Start growing

3 Growing as expected

4 Excellent camping

The research procedure is carried out through several stages, namely:

At this stage, the researcher conducts initial observations, compiles research instruments, and prepares learning activities that integrate the art of music and Kidabela.

At this stage, the researcher carries out learning activities in accordance with the research design.

The experimental group was given treatment in the form of learning activities that integrated the art of music and Kidavela dance.

The control group was given regular learning without using the integration of music and dance arts.

Treatment is carried out during several meetings with a duration of about 30–40 minutes per activity.

Data collection was carried out through pretest and posttest to determine changes in children's gross motor skills after being given treatment.

The data obtained in this study was analyzed using statistical techniques with the help of the SPSS program. Data analysis was carried out through several stages as follows:

The normality test is carried out to find out whether the research data is normally distributed or not. The normality test is carried out using the Kolmogorov-Smirnov test.

The homogeneity test was carried out to find out whether the variance of the two research groups was homogeneous or not.

Hypothesis testing was carried out using the t-test (Independent Sample t-test) to determine the difference in gross motor ability between the experimental group and the control group after being given treatment.

The criteria for hypothesis testing are as follows:

If the sig value < 0.05, then H0 is rejected and Ha is accepted.

If the sig value > 0.05, then H0 is accepted and Ha is rejected.

RESULTS AND DISCUSSION

This study aims to determine the influence of the integration of music and dance arts of Kidabela on the gross motor skills (locomotor) of children aged 5-6 years in Ambon. Research data were obtained through pretest and possttest activities carried out in the experimental group and control group. The experimental group received treatment in the form of music and dance integration activities, while the control group followed ordinary learning. The number of research samples was 30 children consisting of 15 children in the experimental group and 15 children in the control group.

The results of the pretest are carried out to determine the child's initial gross motor ability before being given treatment. Meanwhile, the posttest is carried out to determine the child's gross motor ability after being given treatment.

Table 2. Descriptive Statistics of Pretest and Posttest

Groups	N	Mean Pretest	Mean Posttest	Std. Deviation
Eksperimen	15	62.40	85.40	6.25
Controls	15	63.10	70.20	5.80

Based on the table above, it can be seen that the average pretest score of the experimental group was 62.40 and increased to 85.40 in the posttest. Meanwhile, the control group had an average pretest score of 63.10 and increased to 70.20 in the posttest. These results showed that the improvement in children's gross motor skills in the experimental group was higher than in the control group. The normality test was carried out to find out whether the research data was normally distributed or not. The normality test in this study used the Kolmogorov-Smirnov test with the help of the IBM SPSS Statistics program.

Table 2. Normality Test Results

Groups	Statistics	Say.
Pretest Experiment	0.154	0.200
Posttest Experiment	0.165	0.184
Pretest Control	0.148	0.200
Posttest Control	0.160	0.173

Based on the table above, it is known that the significance value of all data is greater than 0.05, so it can be concluded that the research data is normally distributed.

The homogeneity test was carried out to find out whether the data variance from the two research groups had the same or homogeneous variance.

Table 3. Homogeneity Test Results

Levene Statistic	df1	df2	Sig
1.213	1	28	0.278

Based on the table above, it is known that the significance value is $0.278 > 0.05$, so it can be concluded that the research data has a homogeneous variance.

4. Uji Hipotesis (Independent Sample t-test)

Hypothesis tests were performed to find out if there was a significant difference between the experimental group and the control group after being given the treatment.

Table 4. Hasil Independent Sample t-test

Variable	Mean Experiments	Mean Control	t	Sig (2-tailed)
Motor skills	85.40	70.20	6.872	0.000

Based on the table above, it is known that the significance value is $0.000 < 0.05$, so it can be concluded that there is a significant difference between the experimental group and the control group.

Thus, the research hypothesis is accepted, which means that the integration of music and dance arts of Kidabela has a significant effect on the gross motor (locomotor ability) of children aged 5–6 years.

5. Improvement of Children's Gross Motor Skills

To determine the improvement of children's gross motor skills, the difference between pretest and posttest scores was calculated.

Table 5. Increased gross motor score

Mean Pretest	Mean Posttest	Improvement
62.40	85.40	23.00
63.10	70.20	7.10

Based on the table above, it can be seen that the experimental group experienced an increase in score of 23.00, while the control group only experienced an increase of 7.10. This shows that learning that integrates the art of

music and Kidabela dance is more effective in improving children's gross motor skills than ordinary learning.

The results showed that the integration of music and dance arts of Kidabela had a significant influence on the improvement of gross motor skills of children aged 5–6 years. This can be seen from the increase in the average posttest score in the experimental group which was higher than the control group. Children who participated in learning activities through the integration of music and dance arts Kidabela showed better locomotor movement skills, such as walking to rhythm, running with better coordination, and jumping and moving places with more stable balance. This improvement shows that learning activities involving elements of movement and musical rhythm are able to provide effective stimulation to children's motor development.

The findings of this study are in line with the theory of early childhood motor development which states that physical activities that actively involve body movements can help develop children's coordination and balance skills. According to Slamet Suyanto in the book *Basics of Early Childhood Education* (2018), children's gross motor development can develop optimally if children are given the opportunity to perform various movement activities that involve large muscles regularly and repeatedly. These activities can be in the form of games, sports, or art activities that actively involve body movements. In addition, musical art activities combined with dance movements can also improve the coordination of children's body movements. The rhythm of music used in learning activities can help children in regulating the tempo of movements so that the movements carried out become more regular and coordinated. According to William H. Anderson in the book *Integrating Music into the Elementary Classroom* (2019), activities that combine music and body movements can help children develop motor coordination, balance, and rhythmic abilities that are very important in children's physical development.

The use of the Kidabela dance in learning activities also provides a fun learning experience for children. The movements in the dynamic Kidabela dance make children more active in participating in learning activities. Children not only perform movements mechanically, but also express themselves through the movements made. According to E. Mulyasa in the book *Early Childhood Education Management* (2019), learning activities that are fun and involve physical activities can increase children's participation in the learning process so that children can more easily understand and master the skills taught.

The results of this study also show that the use of dance as a learning medium can help children develop various motor skills in an integrated manner. Movements in dance not only involve foot movements, but also coordination between hands, feet, and the body as a whole. According to David L. Gallahue in the book *Understanding Motor Development* (2019), activities that involve

integrated body movements can help children develop basic movement skills, including locomotor skills such as walking, running, and jumping.

In addition to playing a role in improving children's gross motor skills, the integration of music and dance arts Kidabela also has an important value in introducing local culture to children from an early age. Learning based on local culture can make children know and appreciate their regional culture better. According to Trianto in the book *Integrated Learning Model* (2021), learning that integrates elements of local culture can increase the relevance of learning to students' lives so that the learning process becomes more meaningful.

When compared to the control group, the improvement in gross motor skills in the experimental group showed more significant results. This shows that the use of innovative and creative learning methods has a great influence on the success of the learning process in early childhood education. Children in the experimental group appear to be more active, enthusiastic, and participate directly in the learning activities carried out. This condition shows that learning that involves movement and music activities can increase children's motivation to learn.

Overall, the results of this study show that the integration of music and dance arts of Kidabela is one of the effective learning strategies in improving the gross motor skills of early childhood. This activity not only helps children in developing locomotor movement skills, but also provides a fun learning experience and introduces local cultural values to children from an early age. Therefore, early childhood education teachers are expected to utilize music and dance arts activities as an alternative learning method to develop children's motor skills optimally.

CONCLUSION

Based on the results of the research and data analysis that has been conducted, it can be concluded that the integration of music and dance arts of Kidabela has a significant influence on the improvement of gross motor skills (locomotor) of children aged 5–6 years in Ambon. The results of the study showed that there was a significant difference between the gross motor skills of children in the experimental group and the control group after being given treatment. The experimental group that participated in learning activities through the integration of music and dance arts Kidabela experienced a higher increase in locomotor movement skills compared to the control group that participated in conventional learning.

The improvement of children's gross motor skills in the experimental group can be seen from the child's ability to perform various locomotor movements such as walking to the rhythm of music, running with better coordination, jumping, and maintaining body balance when moving. Learning

activities that combine elements of music and dance are able to provide more interesting and fun stimulation for children so that children are more active in doing various movement activities.

Thus, the integration of music and dance arts of Kidabela can be an alternative learning strategy that is effective in developing early childhood gross motor skills. In addition to improving children's movement skills, this activity also provides a fun learning experience and introduces local culture to children from an early age.

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