



The Increased of Children Rough Motor Ability on Skipping at the Kindergarten

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Abstract

The purpose of this study was to increased of children rough motoric ability on skipping in kendari group B dharma wanita kindergarten. The subjects in this study were teachers and children in kendari group B kindergarten dharma wanita, which numbered 14 children consist of 7 boys and 7 girls with age range 5-6 years. In the results of pre-action observation, it was obtained that 14.28% or 2 of the 14 children were in good criteria for strength and balance, then first cycle increased to 71% or 10 of 14 children in good criteria and second cycle was 93% or 13 children from 14 the child is on the criteria for both strength and balance. In second cycle, the increase in the percentage of gross motor skills exceeds the success indicators set, namely 80% (12 children) of 14 children are in good criteria. Therefore, the learning in kendari group B kindergarten dharma wanita was said to be successful and the research was stopped. The children learning outcomes by rough motoric ability in the first cycle were achieved with a percentage of 64.29%, in the study there were 4 students obtain growth by excellent with a percentage of 28.58%, 5 students received a growth by expectation value with a percentage of 35.71%, 4 people students getting beginning to growth values with a percentage of 28.58%, and 1 students who getting just growth values with a percentage of 7.13%. In second cycle the teachers teaching activities obtained a percentage of 92.31% or as many as 12 aspects achieved from the 13 aspects observed, while those that unachieved were to 7.69% or 1 aspect that unachieved from the 13 aspects observed. Children's learning activities getting a percentage to 92.31% or as many as 12 aspects achieved from the 13 aspects observed while those that unachieved were to 7.69% or 1 aspect that unachieved from the 13 aspects observed. The children learning outcomes in increased of children rough motoric ability in the second cycle were achieved with a percentage of 92.9%, in the study there were 9 students who obtained growth by excellent value with a percentage to 64.3%, 4 students obtained growth by expectation value with a percentage to 28.6%, 1 students who get beginning to growth values with a percentage to 7.1% and no one who getting star developing values.

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INTRODUCTION

According to the Directorate of Early Childhood Education, that early childhood is children aged of 0-6 years, both served and unserved in early childhood education institutions. NAEYC (National Association Education for Young Children) (in Pravista Indah Sari 2015:7), said that early childhood is a group of individuals who are in the age range between 0-8 years.

Sujiono (2008:7), said that rough motoric is all movements that may be carried out by the whole body. Early childhood developmental growth with the child's motor development and related to the child's ability to move. The child's motor ability can be seen from a variety of movements and games performed every day. The period of early childhood motor ability is closely related to the activities carried out by the children. Children who done a lot of physical activity, gross motor ability will develop properly, the child's growth will also be optimal. Gross motor ability involve large muscles of a working child, such as a child walking, tiptoeing, jumping and running.

Hurlock (2012: 3), said that in early childhood bones and muscles get stronger and allow the child to run and jump faster. Children aged 4 years done a lot of simple movements such as prancing, jumping back and forth. At the age of 5, children are even bolder than when they were 4 years old. Early childhood are more confident in doing terrible dexterity such as climbing an object, running fast and like to compete with their peers and even their parents.

Definition of rough motor ability

The development of physical aspects of the child is closely related to the activities carried out by the children movements everyday. Mansyur (2005:23), said that in early childhood physical vertical growth of children in general grows more prominent than horizontal growth. Ability that using of hand and leg muscles have begun to function. Physical growth in early childhood is the growth of the brain and nervous system. Early childhood physical development includes gross motor ability and fine motor ability.

Sumantri (2005:7), said that gross motor ability are abilities that require coordination of most parts of a child's body. Gross motor involve of large muscles such as the muscles of the hands, leg muscles and the hole body of the child. Santrock (2009:7), states that all gross motor ability that involve large muscle activities such as same one's hands to move and walk. This child's body movement requires energy because it is carried

out by certain muscles of the child which can make them jump, climb, run, ride a tricycle, and that stand on one or two legs. Samsudin (2008:6), states that gross motor are the ability of kindergartners to move by using large muscles. This ability is done to improve the quality of life of children kindergarten.

Phase of motor rough early childhood ability

Understanding of phase motor rough early childhood ability, parents need to know the phase of the child's ability in accordance with their age and motor activities. Gallahue (2012: 49-53), state that phase of children motor rough ability are:

Phase of reflective movement

Reflex motion is a motor movement that occurs accidentally, which is controlled to form the basic motion at the motor development phase. Through reflexes, babies will getting information about their environment, such as touching reactions, light, music, and changes in pressure that trigger inadvertent activities. The movements that occur unconsciously, will increase cortical at the early of month to the child's life. A child who plays a role will help the child learn about himself or his body and the outside world. This reflex phase occurs in children aged 4 months - 1 year.

Rudimentary movement phase

The initial movement phase is the basic of movement to the baby which represents the basic form of birth that depends on the basic of movement. This basic of movement is needed for the child's survival. The involvement of the balance movement is almost the same as the acquisition of control the head, neck and trunk muscles. The assignment of manipulative motion is to touch, grasp, and release, while locomotor motion is crawling, creep, and walking. The initial early motion phase is divided into two to illustrate motorized control, namely the reflexes inhibition phase and the precontrol phase.

Fundamental movement phase

The basic movement of early childhood ability is a result of the growth of motor movements at a certain time which illustrates where the activities of children carry over as children explore and experiment through their body movements. This thing that the time when the child discovers how diversity of motion from stability, locomotor, and manipulative motion.

Benefits of early childhood motor ability

Early childhood is a child who experiences rapid growth and development in terms of physical, cognitive, social-emotional, and language. Gross motor ability will provide good benefits for the physical development of children, especially regarding their size of the big muscles. The benefits of early childhood gross motor ability according to Hurlock (2012:18), state that by the children motor ability can entertain themselves to obtain feelings of pleasure.

Factors that influence of early childhood motor rough ability

Early childhood having good health will be healthy along with the growth and development of children. The child's body will develop optimally that need for nutritious food, excellent health, a clean environment and sport. Children's physical abilities are influenced by several factors such as: a) body weight, children's body weight at a certain age are recorded and included on the Card of Health; b) the child's height; and c) their motor ability. Growth and motor development will run well if it fulfills the important factors for this.

Definition of jump rope activity

Early childhood is a child aged between 0-6 years. At this age the child's potential will develop according to the phase of their development. Children's potential will develop when children done many activities, namely through play. By playing all aspects of child development will develop to the maximum. Playing with games will make children explore and move according to their wishes and imagination. Bruner (Mayke S Tedjasaputra, 2001:11), state that play allows children to explore the possibilities, because of the situation of play will protect children from the consequences that will be suffered if it is done for along days. Games that are suitable for early childhood are games that have the characteristics in accordance with the child for growth and development. Games for early childhood should be safe and do not harm the child physically or motorically and the game can be done alone or in groups. According to Hurlock (1978: 320), state that play is every activity carried out for the pleasure generated without considering the final result. Playing is done voluntarily and there is no compulsion or pressure from outside.

Techniques of jump rope

Jump rope activity is done in groups. Children done this activity by take turn, name-

ly two children holding both the top of rope and the other child take turn doing the rope jumping motion. The jump rope can be started with three steps, leg right, leg left and leg right again. Jumping motion is the leg right to make a footstool, both of arms swing forward up and down to upper body by the rubber, and landing with to both of leg and the position of legs bent.

RESEARCH METHODS

2.1 Types of the research

This type of the research is classroom action research. This classroom action research was conducted by using skipping playing as a solution to action in increasing the children gross motor ability in kendari group B dharma wanita kindergarten. Carr & Kemmis, (Suyadi, 2012:4), explained that classroom action research is an examination carried out by teachers in their own classes through self-reflection in order to improve their profession as a teacher so that the students learning outcomes continue to increase. Ekawarna (2013:5), explained that classroom action research is action research conducted by teachers in their own classrooms.

2.2 Subjects and participants that involved in the research

2.2.1 Research Subjects

The subjects in this study were students in kendari group B dharma wanita kindergarten, with a total of 14 students, consist of 7 boys and 7 girls. The object that observed was the children gross motor ability on rope playing activities.

2.2.2 Participants that involved

The participants that involved in this research activity were the teachers in kendari group B dharma wanita kindergarten.

2.3 Research procedure

This classroom action research procedure is divided into two cycles, in accordance with plans have been designed and the factors being investigated. To find out how effective the learning process is while playing through jumping playing outdoor before being given an action, then the interest is the basis for knowing the child's development before being given an action. Whether there is an increased the learning process while playing by using jump rope, which can be seen from the child's learning achievement.

2.4 Data and data sources

2.5.1 Data

The data obtained from this study are qua-

litative data. Qualitative data is used to collect data about the implementation of the learning process carried out by the teacher. Qualitative data obtained through observation sheets.

2.5.2 Sources of data

Sources of data conducted in this study are: (1) students, to get data from students learning outcomes, (2) teachers, to see the level of teacher success during the student learning process.

2.6 Data collection techniques

Data conducted in this study were collected through interviews, observations and documentation. Interview is a planned direct meeting between the interviewer and the interviewee to exchange ideas, in order to provide or receive certain information needed in the research, Sukardi, (2013:49). State that observations were carried out by using observation sheets, namely, data collection techniques by direct observation of the object under study within a certain period of time, and recording some aspects that were observed including the activeness and enthusiasm in moving, agility and flexibility of children. While the documentation intended for getting the results of the data by indirect shown the conditions on the field when playing jump rope is done.

2.7 Data analysis techniques

The data analysis technique used in this study was by a descriptive analysis which was intended to provide a description the children gross motor ability through playing jump rope. In analyzing data and giving an assessment on each performance indicator, researchers refer to the guidelines for giving assessments in education units of kindergarten, namely by assessing qualitatively or by giving values in the form of star symbols such as: * = Under Developing, ** = Just to Developing, *** = Developing According to Expectation, and **** = Developing by Excellent (Ministry of National Education, 2004: 26).

RESULTS AND DISCUSSION

3.1 The results observation of teaching activities at the first cycle

At the first cycle showed improvement in the children's abilities both as planned. The observation activity carried out was to improve gross motor skills, especially the physical components of the child's motor strength and balance through skipping and recording the results on the observation sheet. The recording is adjusted according to the instrument, namely, strength and balance. The following is a table of observations

made before and after the action:

Table 1. Recapitulation of Cumulative Data Observations from the First Cycle

No	Criteria	Total of Children	Percentage %
1	Developing by Excellent	1	7,14%
2	Developing by Expectation	9	64,28%
3	Just to Developing	4	28,57%
4	Under Developing	0	0%

Explanation of the Symbols:

- **** = Developing by Excellent.
- *** = Developing according to Expectations.
- ** = Starting to Developing.
- * = Under Developing.

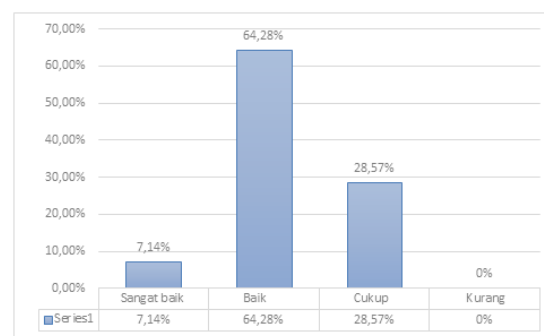


Figure 1. Histogram of Cumulative Data Observations From the First Cycle

Based on the percentage depicted on the histogram above, children who are in very good criteria are 1 child out of 14 children or 7.14%. This is because in the strength criteria, the child has been able to jump the rope well without touching the rope because the child does high repulsion and when landing after jumping the child's body remains in the position the child does not fall, just squat. In good criteria, there are 10 out of 14 children or 71.42%. This is because the child is able to jump but still touches the rope and when landing the child's balance is good, the child stays on the box and shakes his body. Meanwhile, children who are in sufficient criteria are 3 out of 14 children or 21.42%. Children with this criterion are said to be sufficient because the child's strength when jumping is not strong enough to do repulsion so that when approaching the rope the child makes slow movements so that he touches the rope and the child is assisted by the teacher in making jumps. The balance aspect of the child after jumping is that the child just runs away, until a child is stumbled while running.

Table 2. Comparison of the results of the pre-action observation with First Cycle

No	Kriteria	Pra Tindakan		Siklus I	
		Jumlah Anak	Presentase %	Jumlah Anak	Presentase %
1	Developing by Excellent	0	0%	1	7,14%
2	Developing according to Expectations	2	14,28%	9	64,28%
3	Just to Developing	6	42,86%	4	28,57%
4	Under Developing	6	42,86%	0	0%

Explanation of the symbols:

- **** = Developing by Excellent.
- *** = Developing according to Expectations.
- ** = Starting to Developing.
- * = Under Developing.

Based on the table above, it can be explained that the gross motor skills of the children in group B Dharma Wanita kendari kindergarten when the first cycle are as follows: The gross motor skills of the children during first cycle were held there were three meetings, children who were in sufficient criteria, namely 4 children out of 14 children or 28.57% in good criteria there were 9 children out of 14 children or 64.28%, and on very good criteria there were 1 child out of 14 children or 7.14%. The following is a histogram of the percentage of observation results in the first cycle. Based on the comparison table of gross motor skills before pre-action and first cycle to gross motor skills of group B Dharma Wanita kendari kindergarten are as follows:

Gross motor skills of children in the pre-action implementation, namely, children who are in good criteria are 2 children from 14 children or 14, 28%, the children who are in the sufficient criteria are 6 children from 14 children or 42.68% and on the bad criteria are 6 children from 14 children or 42.68%. While the children's gross motor skills at the implementation stage of first cycle were carried out for three meetings, children who were in very good criteria were 1 child out of 14 children or 7.14%, children who were in good criteria were 9 children out of 14 children or 64,28%, and children who are in sufficient criteria there are 4 out of 14 children or 28.57%. In the pre-action implementation the results of children's gross motor skills have not reached the specified success indicators. In the first cycle, which was carried out to improve children's gross motor skills, it increased gradually in each child,

but this had not yet reached the indicators of success determined by the researcher, namely 80% (12 children) of 14 children who were in good criteria. Based on the comparison between gross motor skills in pre-action activities and first cycle, it can be described on the histogram as follows:

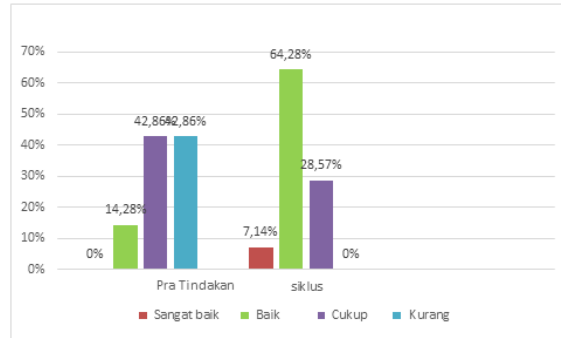


Figure 2. Histogram Comparison of Results at Pre-Action Observations at the First Cycle

Based on the histogram image above, it can be seen that there was an increase in children's gross motor skills from pre-action and first cycle. From the results of this study, it can be described about the increase in pre-action to first cycle, namely as follows: In the histogram image above, there is an increase, gross motor skills, especially the physical motor components, strength and balance of children have increased. The increase that occurs in children is because when the child is doing jumping rope activities, the child slowly wants to be arranged or conditioned, so that when the teacher gives examples repeatedly the child can see well. Child improvement cannot be separated from the child's own abilities. Because the child has done repeated jumps and the ability of the child's leg muscles is already strong.

There was an increase from pre-action to first cycle, namely 64.28% from 14.28% or 2 children from 14 children to 71% or 10 children from 14 children were in good criteria but this had not yet reached the indicators determined by the researcher, namely 80% Children of 14 children are in good criteria, so there is a need for further improvement efforts to improve the elements that support children's gross motor skills through jumping rope, namely by making two rows with the same number. At the second cycle was held on November 12, 14, and 15, 2014, showing an increase in the child's strength and balance abilities very well as planned. The observation activity carried out was 87 to improve gross motor skills through jumping rope and recording the results on the observation sheet. The recording was adjusted to the instrument, namely the components

of physical fitness, strength and balance. The following is a table of observations made before and after the action:

Table 3. Recapitulation Data Observation of Children Physical-Motor Components Strength and Balance at the Second Cycle

No	Kriteria	Jumlah Anak	Presentase %
1	Developing by Excellent	7	50%
2	Developing according to Expectations	6	42,85%
3	Just to Developing	1	7,14%
4	Under Developing	0	0%

Explanation of the symbols:

- **** = Developing by Excellent.
- *** = Developing according to Expectations.
- ** = Just to Developing.
- * = Under Developing.

DISCUSSION

From the gross motoric observation data of children after the action in second cycle, the children’s motor skills showed good improvement. Based on the table above, it can be explained that the gross motor skills of group B Dharma Wanita kendari kindergarten in second cycle are as follows: Gross motor skills of children during second cycle, there are children who are in very good criteria, there are 7 children out of 14 children or 50%, children who are in good criteria, namely 6 children out of 14 children or 42.85%. There are 1 child out of 14 children who are in sufficient criteria or 7.14%. Based on the percentage shown in the histogram image above, there are 7 out of 14 children or 50% who are in very good criteria. This is because before doing the jumping rope activity the teacher invites the child to warm up in the form of small movements which aim to make the child’s leg muscles stronger and make the child’s body not stiff when jumping. In the indicator of children’s strength, it is very good, because in second cycle, the lines of children are changed into two lines and each row is accompanied by a teacher. With the division of the ranks, the child can have the opportunity to jump more than before, the leg strength when doing the support is strong so that when he refuses the child does not hesitate and does not touch

the rope.

The balance of the child is balanced because the child is able to maintain body position after jumping, landing without getting out of the box and landing squatting. In good criteria, there are 6 out of 14 children or 42.85%. This is because in the criteria of jumping to the knee height of the child’s feet, the child has done a maximum of starting to refuse, but when he wants to jump he is not strong enough to support him so that he touches the rope. The balance of the child after jumping rope is the child’s body swaying and there are several children falling. While children with sufficient criteria are 1 child out of 14 or 7.14%. This is because the child is still difficult to be invited to this activity, the teacher has to persuade him many times, until in the end the child wants to jump rope with the help of the teacher. The child is held by the teacher from the start, until landing after jumping. The following are the results of observations from pre-action, first cycle and second cycle:

Table 4. Comparison Results of Pre-action Observation at the First Cycle and Second Cycle

No	Kriteria	Pra Tindakan		Siklus I		Siklus II	
		Jumlah Anak	Presentase %	Jumlah Anak	Presentase %	Jumlah Anak	Presentase %
1	Sangat Baik	0	0%	1	7,14%	7	50%
2	Baik	2	14,28%	9	64,28%	6	42,85%
3	Cukup	6	42,86%	4	28,57%	1	7,14%
4	Kurang	6	42,86%	0	0%	0	0%

Explanation of the symbols:

- **** = Developing by Excellent.
- *** = Developing according to Expectations.
- ** = Starting to Developing.
- * = Under Developing.

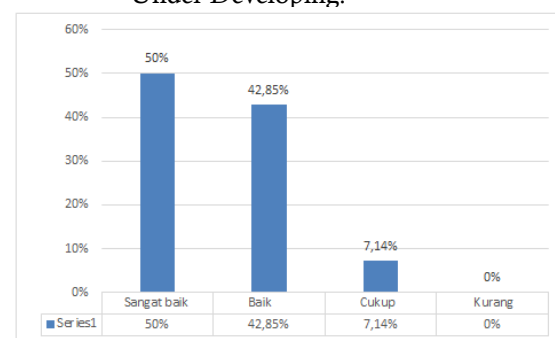


Figure 3. Histogram of Cumulative Data Observations from Second Cycle

Based on the observation table above the gross motor skills of children in group B Dharma Wanita Kendari kindergarten during pre-action, first cycle and second cycle are as follows:

Gross motor skills of children during pre-action activities, children who are in good criteria are 2 children out of 14 children or 14.28%, there were 6 children out of 14 children or 42.86% in adequate criteria, and 6 children out of 14 or 42.86% in poor criteria. The children's gross motor skills in second cycle were carried out three times, namely the results of the children who were in the very good criteria, only 1 child out of 14 children or 7.14%. Children who are in good criteria are 9 out of 14 children or 64.86%, and children who are in sufficient criteria are 4 out of 14 children or 28.57%. The children's motor skills were carried out again in second cycle with the results of the children who were in very good criteria, there were 7 children out of 14 children or 50%. There were 6 children out of 14 children or 42.86% in good criteria and 1 child out of 14 or 7.14% had enough criteria. Based on the description of the comparison of the results of pre-action observation, first cycle and second cycle in the table above, it can be described in the following histogram:

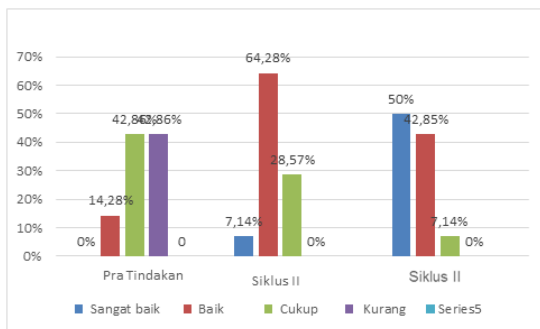


Figure 4. Histogram Comparison of Pre-Action Observation Results, First Cycle and Second Cycle

CONCLUSIONS

Based on the results of the research and discussion, it can be concluded that the gross motor skills of group B children TK Dharma Wanita Kendari can be improved through skipping. The increase that occurs can be seen from the research stage, namely observations made during pre-action, the implementation of actions in first cycle and second cycle. The steps taken in this skipping activity are the teacher preparing the place to be used, then preparing the tools to be used. Children are conditioned to line up into two lines. Then the teacher gives instructions to children how to do and gives examples of correct jumps. This rope jumping activity is carried out into two groups, each child jumping one by one from the one who lined up at the very front to the

last child.

Each child is given twice the opportunity to jump on the rope 20 cm high. The activity begins with singing and warming up movements so that the child's leg muscles are strong and the body is not stiff and enthusiastic. Rewards are also given to support children's enthusiasm and confidence, given to every child who wants to jump. The physical components of gross motor skills, strength and balance through skipping are able to improve properly. In the results of pre-action observation, it was obtained that 14.28% or 2 of the 14 children were in good criteria for strength and balance, then first cycle increased to 71% or 10 of 14 children in good criteria and second cycle was 93% or 13 children from 14 the child is on the criteria for both strength and balance. In second cycle, the increase in the percentage of gross motor skills exceeds the success indicators set, namely 80% (12 children) of 14 children are in good criteria. Therefore, the learning in group B at TK Dharma Wanita Kendari was said to be successful and the research was stopped.

REFERENCES

- Acep Yoni, Herry Purwanto & Sri Kunthi Ambarwati. (2010). *Compiling Classroom Action Research*. Yogyakarta: Familia.
- Acep Yoni. (2010). *Compiling Classroom Action Research*. Yogyakarta: Familia.
- Aip Syarifuddin. (1993). *Physical Education and Health Sciences*. Jakarta: Education Personnel Development Project, Director General of Higher Education in Departemen of National Education.
- Akbar Sa'dun. (2010). *Classroom Action Research Philosophy, Methodology, Implementation Revised Edition*. Yogyakarta: CV Cipta Media.
- Andang Ismail. (2006). *Education Games Be Smart and Cheerful with Educational Games*. Yogyakarta: Media Pillar.
- Bachtiar. (2007). *Big Game II Volleyball and Handball*. Jakarta: Open University.
- Bambang Sujiono. (2008). *Physical Development Methods*. Jakarta: Open University.
- Danar Santi. (2009). *Early childhood education programs*. Jakarta: PT. Macanan Jaya Cemerlang.
- Departemen of National Education. (2009). *Ministry of National Education Regulation No. 58*. Jakarta: Directorate of Early Childhood Education.
- Diana Mutiah. (2010). *Early Childhood Play Psychology*. Jakarta: Golden.
- Djumidar. (2005). *Athletics Basics*. Jakarta: Open University.
- Early Childhood Directorate. (2004). *What, Why and Who is Responsible for the Early Childhood Education Program?* Jakarta: Ministry of National Education.
- Einon, Dororthy (Translated Damaring Tyas). (2005).

- Smart Games for 2-6 year Olds. Imaginative Games, Science Games, Fun Games, Whatever the Weather.* Jakarta: Erlangga.
- Elizabeth B Hurlock. (1978). *Child Development. (Translation: Med Meitasari Tjandrasa and Muchicah Zarkasih).* Jakarta: Erlangga.
- Elizabeth B. Hurlock. (1978). *Children's Abilities Volume 1.* Jakarta: Erlangga.
- Gallahue, David L. Ozmun, John C & Goodway, Jackie D. (2012). *Understanding Motor Development: Infant, children, adolescents, adults. Seventh Edition.* New York: McGraw-Hill.
- Heri Rahyubi. (2012). *Learning Theories and Applications of Motor Learning.* Bandung: Referens.
- Husdarta and Nurlan Kusmaedi. (2010). *Growth and Ability of Students (Sports and Health).* Bandung: Alfabeta.
- Mansour. (2005). *Early Childhood Education in Islam.* Yogyakarta: Student Library.
- Martini Jamaris. (2006). *Kindergarten Child Development and Development.* Jakarta: Grasindo.
- Maykes S Tedjasaputra. (2001). *Play, Toys and Games.* Jakarta: PT Gramedia Widiasarana Indonesia.
- M. Ramli. (2005). *Early Childhood Development Assistance.* Jakarta: Depdiknas.
- Muhammad Fadillah and Lilif Mualifatu Khorida. (2013). *Early Childhood Character Education: Concepts and Applications in Early Childhood Educational.* Yogyakarta: Ar-Ruzz Media.
- Ministry of National Education Language Center. (2005). *Big Indonesian Dictionary, Third Edition.* Jakarta: Balai Pustaka.
- Nelva Rolina. (2012). *Early Childhood Educational Game Tools.* Yogyakarta: Ombak Publisher.
- Santrock John. W. (2002). *Life-Span Development. (Translation: Juda Damaniik and Achmad Chusairi).* Jakarta: Erlangga.
- Samsudin. (2008). *Motor Learning in Kindergarten.* Jakarta: Prenada Media Group.
- Soegeng Santoso & Anne Lies Ranti. (2002). *Health and Nutrition.* Jakarta: Departemen of National Education.
- Sofia Hartati. (2005). *Early Childhood Learning Development.* Jakarta: Departemen of National Education.
- Slamet Suyanto. (2005). *Basic Concepts of Early Childhood Education.* Jakarta: Departemen of National Education.
- Suharsimi Arikunto. (2010). *Research Management.* Jakarta: Rineka Cipta.
- Suharsimi Arikunto. (2010). *Action Research.* Yogyakarta: Aditya Media.
- Sumantri, MS. (2005). *Early Childhood Motor Skills Development Model.* Jakarta: Departemen of National Education.
- Suwarsih Madya. (2011). *Action Research.* Bandung: Alfabeta.
- Tadkirotun Musfiroh. (2005). *Play While Learning and Sharpen Intelligence.* Jakarta: Departemen of National Education.
- Wina Sanjaya. (2009). *Classroom Action Research.* Jakarta: Golden. Yudha M Saputra. (2005). *Cooperative Learning to Improve Motor Skills of Kindergarten Children.* Jakarta: Departemen of National Education.
- Rusli Lutan. (1997). *Learning Motor Skills, Introduction to Theory and Methods.* Jakarta: Departemen of National Education.
- Samsudin. (2008). *Motor Learning in Kindergarten.* Jakarta: Prenada Media Group.
- Santrock, John. W. (2009). *Child Development Period -Children-, Edition 11 Book 1.* Jakarta: Salemba Humanika.
- Slamet Suyanto. (2005). *Basics of Early Childhood Education.* Yogyakarta: Hikayat Publishing.
- Slamet Suyanto. (2005). *Basic Concepts of Early Childhood Education.* Jakarta: Ministry of National Education, Directorate General of Higher Education, Directorate of Education Development for Education Personnel and Higher Education Personnel.
- Sofia Hartati. (2005). *Learning Ability in Early Childhood.* Jakarta: Ministry of National Education, Directorate General of Higher Education, Directorate of Education Development for Education Personnel and Higher Education Personnel.
- Sugiyono. (2007). *Educational Research Methods Approach Quantitative, Qualitative, and R & D.* Bandung: Alfabeta. Suharsimi Arikunto. (2005). *Revised Edition Research Management.* Jakarta: Rineka Cipta
- Suharsimi Arikunto. (2006). *Research Procedure An Action Practice.* Jakarta: Rineka Cipta.
- Suharsimi Arikunto. (2008). *Classroom action research.* Jakarta: PT Bumi Aksara. Sumantri. M. S. (2005). *Early Childhood Motor Skills Development Model.* Jakarta. Directorate of Education for Education Personnel and Higher Education Personnel.
- Suryobroto. (1968). *Teaching Methods in Schools and New Approaches to the Teaching and Learning Process.* Yogyakarta: Amarta Buku.
- Tadkiroatun Musfiroh. (2005). *Playing while Learning and Honing Intelligence (Multi Intelligent Kindergarten Stimulation).* Jakarta:
- Vitta Naurina. (2012). *Improving Children's Gross Motor Skills through Galactic Jumping and Zigzag Running in Group A at PKK Sriharjo Kindergarten.* Yogyakarta: Yogyakarta State University.
- Wina Sanjaya. (2010). *Classroom Action Research.* Jakarta: Kencana Prenada Media Group.
- Yudha M. Saputra. (2005). *Motion Development. Ministry of National Education, Directorate General of Basic Education Management and Directorate of Special School Development.*