

Improving Bodily Kinesthetic Competence Through Simple Bowling Game to Kindergarten Children of Jungle School Semarang in the Academic Year 2023/2024

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Abstract: This research was conducted to explain the application of simple bowling game to improve bodily kinesthetic competence to the kindergarten children of Jungle School Semarang in academic year of 2023/2024 and to find out the result of conducting simple bowling game to improve children' bodily kinesthetic competence. This classroom action research applied 2 cycles. In each cycle consisted of planning, acting, observing, and reflecting. Subject of this research was the children of Jungle School kindergarten Semarang which consisted of 15 children. The researcher got data collection through observation and documentation. The result of this research found in before cycle that only three children or 20% who passed standard criteria of BSH (expected progress). On the other hand, there were 12 children or 80% in criteria of MB (starting on progress). In the first cycle, there was improvement in each meeting. Children with the criteria of BSH was 7 children (46,7%). Based on the result so can be inferred that in the cycle I has not passed the passing grade of research indicator, so the researcher moved on to the cycle II. The result on cycle II showed that one child (6.6%) passed the indicator standard of BSB (well progress). In addition, there were about 12 children (80%) passed the criteria of BSH (expected progress). Then only 2 children (13,4%) who did not pass the criteria or they were in the criteria of MB (starting on progress). Based on the result on the cycle II, it showed that 80 % of children have passed the passing grade criteria, so the research did not continue to the next cycle.

Keywords: Competence, Bodily Kinesthetic, Kindergarten Children, Bowling Game

Introduction

Early childhood education is preschool program that is hold to prepare the children competence to be ready when they entered formal education in elementary school. The program focused on the children in 0–6-year-old. The goal is to develop their basic competence and to build their basic knowledge in preparing next study.

In accordance with the Government Regulation Number 20 Year 2003 about national education system stated that early childhood education is one of efforts to develop the children competence since they born up to six-year-old. It conducted through giving stimulant to care them grow physically and psychology in order to prepare entering elementary school. Children will learn everything through imitating to what their parents do in the daily life activity (Chuong, 2023).

Bodily-kinesthetic is one of a learning styles often referred to as 'learning with the hands' or physical learning. Basically, people with bodily-kinesthetic intelligence could learn more easily by doing, exploring, and discovering. Bodily-kinesthetic intelligence is how we operate various parts of our body or even our whole body to do something, find a solution to a problem or to convey meaning. For a child, who has strong in bodily-kinesthetic intelligence, here are some ways in which you can provide interesting learning opportunities (Johnstone, 2022).

For children with bodily-kinesthetic intelligence, physical interaction, physical stimulus and robust body activities are the best ways to train them learn. Teacher can make them act out their learning as much as possible. Try to help them remember what they have done by associating it with hand gestures, body parts, mimes etc. Teacher or coach also can ask them do as many experiments and projects as possible to learn science, mathematics using media. Support them a stimulative environment where things are within their sight and reach. Teacher should give them access to a diverse set of materials that they use to create and experiment. Teacher also should give them breaks to walk around when they are learning in order to stimulate their sense of bodily kinesthetic ability in their surroundings (Masoumi, 2024).

Bodily kinesthetic is one of children development aspect. According to Gardon in Kamtini and Wardi Tanjung (Depdiknas, 2005) "Development of bodily kinesthetic included all body activity or part of body that use group of coordination muscle variety, so children can learn how to crawl, throw or jump." The other side of bodily kinesthetic is like balance coordination, agile, flexibility, and strength. Based on the fact, there are found some children who cannot be able to do the bodily kinesthetic development in their period. They even could not enjoy their playing time, and prefer to be calm and silent.

Bodily kinesthetic learners are action-oriented people who love to move and are very engaged with their bodies. They are supposed to have excellent hand-eye coordination and balance, and ideally learn by physically *doing* something. It means that hands-on learning activities make a significant impact on their ability to learn and retain new information of skills. Other qualities of this intelligence are agility, grace, a sense of timing, strong fine motor control and a gift for using whole-body motions. Based on the explanation above, I try to do an action research with the topic "Improving Bodily Kinesthetic Competence through simple bowling game to kindergarten children of Jungle School Semarang in the academic year 2023/2024.

Statement of the Problem

Based on the fact above, I concern two problems in improving bodily kinesthetic through simple bowling game. These two problems are:

- 1) How to improve bodily kinesthetic through simple bowling game to kindergarten children of Jungle School Semarang in the academic year 2023/2024?
- 2) To what extent the teaching of the simple bowling game contributes to the children's improvement in bodily kinesthetic competence?

Objectives of the Study

The objectives of this research are as follows:

- 1) To describe to what extent the use of simple bowling game can improve children's bodily kinesthetic competence.
- 2) To know the use of the simple bowling game contributes to the children's improvement in bodily kinesthetic competence.

Significance of the Study

This study is expected to give the advantages as follows:

- 1) Theoretically, this study could give the experience to the teacher in improving children's bodily kinesthetic competence through the simple bowling game
- 2) Practically, this study would serve as an alternative method in improving bodily kinesthetic competence, as follows:

- a. For Children

- 1) It can improve the children's bodily kinesthetic competence.
- 2) It can motivate the children to enjoy their learning process.

- b. For Teacher

It can improve the teacher's quality on teaching process. Hopefully, it can be a reference on how to treat and teach their student in order to improve the bodily kinesthetic competence.

Review Of The Related Literature

1. Bodily Kinesthetic Development

Based on quotation of Suyadi (2009:3.66-3.68) stated that "In this era, intelligence concept has changed the paradigm of education in early childhood education. The early childhood education has been manipulated by intelligence concept that focused only on intellectual competence than bodily kinesthetic. Some Teachers and parents tend to force their children to be able on mathematics, speaking, and writing than do physical activity fluently. That condition is supported with the digital application which makes them be lazy in doing physical activity. Children mostly spent their time for watching TV, playing video game, and use computer. (Sumantri, 2005) declared that bodily kinesthetic development can be defined as the changing of baby growth to adult period that included some motorist competence and attitude aspect. The human skill and attitude give influence to the bodily kinesthetic development and it will decide the attitude itself. According to (Endang Rini Sukamti, 2007) stated that bodily kinesthetic development is a maturity process or movement included muscles and nerve which make regulation of the body. According to (Agus Sujanto, 1996) stated that characteristic of motoric development generally divided into four steps as follows:

- a. Unconscious movement, unprogrammed basically, and without goal;
- b. Unspecific children movement, means that the movement appears is caused by inappropriate stimulant.
- c. The children movement is done massively; it means that all parts of body move regularly.

- d. The children movement is not followed by another movement which basically needed.

Bodily kinesthetic Competence

According to (Yudha M. Saputra, 2005) declared that bodily kinesthetic development is the children competence to do activity used big muscles. The basic movement ability is the competence to coordinate all big muscles in their daily. The active children needed more power and it can maximize the muscles' function in their body. Children get more health if they spend their time for playing and doing many activities.

Bodily kinesthetic movement involved the muscle activity of hands, foot, and all the children body to produce a complex movement. B. E. F. Montolalu, (Dian Arrahmi & Sri Setiana, 2009) divided three basic movement categories, as follows:

- a. Locomotor Ability

Locomotor Ability is a body movement like walking, running, jumping, skating, bolting, galloping, and cycling. Locomotor ability help the children conscious between their body and the room, for instance; conscious of the body, time, room, direction concept, visual and audio. This conscious condition helps the children to imitate the teachers' gesture in the classroom.

- b. Non locomotor Competence

Non locomotor competence is a body movement with the body position stay calm as like; swing, lift, shake, range, bow, push, and circle. This competence is usually related to balancing or bodily balance. It means that the balancing movement needs balance in that period like cycling and swing both hands.

- c. Manipulative Movement Ability

Manipulative movement ability covered the use and control limited small muscles movement especially hand and foot muscles. The examples of manipulative movement ability are hold, squeeze, handle, write, scissors, scribble, and throw ball regularly.

Children with Kinesthetic intelligence learn through movement and experimentation. They like sports and activities that require physical exertion and mastery. Some kinesthetic children enjoy the artistic side of movement such as dance or any kind of creative movement. These artistic types enjoy acting and performing in front of the others. Children with Kinesthetic intelligence enjoy building things and figuring out how things work. They enjoy using their hands and are very active. They have good motor skills and coordination. They are very physical and are keenly aware of their bodies and surrounding.

2. Stages on Bodily Kinesthetic Development

Suyadi (2009;3,83-3,92) mentioned that there are some stages on developing bodily kinesthetic competence, as follows:

- a. Sensorimotor Stage

In this sensorimotor stage Piaget explain about "thought of body movement".

On the other word, the ability to land and improve intellectual ability as a result

of movement and the consequences. Major characteristics and developmental changes in sensorimotor stage are:

- 1) The infant knows the world through their movements and sensations
- 2) Children learn about the world through basic actions such as sucking, grasping, looking, and listening
- 3) Infants learn that things continue to exist even though they cannot be seen (object permanence)
- 4) They are separate beings from the people and objects around them
- 5) They realize that their actions can cause things to happen in the world around them

During this stage of development, infants and toddlers acquire knowledge through sensory experiences and manipulating objects. Most children's entire experience at the earliest period of this stage occurs through basic reflexes, senses, and motor responses. It happens during the sensorimotor stage that children go through a period of dramatic growth and learning. By interacting with their environment, children are continually making new discoveries about how the world works.

The cognitive development that happens during this period takes place over a relatively short period of time and gets involve a great deal of growth. Children do not only learn how to perform physical actions such as crawling and walking; they also can learn a great deal about language from the people with whom they interact. Piaget also broke this stage down into a number of different substages. It happens during the final part of the sensorimotor stage that early representational thought emerges.

b. Preoperational Stage

In this stage Piaget give limitation standard that the children did not have the ability to think logically and do simple action. Major characteristics and developmental changes of preoperational stages:

- 1) Children begin to think symbolically and learn to use words and pictures to represent objects.
- 2) Children at this stage tend to be egocentric and struggle to see things from the perspective of others.
- 3) While they are getting better with language and thinking, they still tend to think about things in very concrete terms.

Children are much more skilled at pretend play during this stage of development, yet continue to think very concretely about the environment around them. At this stage, children learn through pretend play but still struggle with logical mind and taking the point of view of other people.

c. Concrete Operational Stage

Major characteristics and developmental changes of concrete operational stage included as follows:

- 1) During this stage, children begin to thinking logically about concrete events

- 2) They begin to understand the concept of conservation; that the amount of liquid in a short, wide cup is equal to that in a tall, skinny glass, for example
- 3) Their thinking becomes more logical and organized, but still very concrete
- 4) Children begin using inductive logic, or reasoning from specific information to a general principle

While children are still very concrete and literal in their thinking at this period in development, they also become much more adept at using logic. The egocentrism of the previous stage signs to disappear as children become better at thinking about how other people might view a situation. The children's thought becomes much more logical during the concrete operational stage, it can also be very rigid. Children at this stage in development tend to struggle with abstract and hypothetical concepts.

During this period, children also become less egocentric and begin to think about the other sense and feeling. Children in the concrete operational stage also begin to understand about their thoughts which are unique to them and that not everyone else necessarily shares their thoughts, feelings, and opinions.

d. Formal Operational Stage

Major characteristics and developmental changes of formal operational stage as follows:

- 1) At this stage, the adolescent or young adult begins to think abstractly and reason about hypothetical problems
- 2) Abstract thought emerges
- 3) Teens begin to think more about moral, philosophical, ethical, social, and political issues that require theoretical and abstract reasoning
- 4) Begin to use deductive logic, or reasoning from a general principle to specific information

The final stage of Piaget's theory involves an increase in logic, the ability to use deductive reasoning, and an understanding of abstract ideas. At this period, people get capable of seeing multiple potential solutions to problems and think more scientifically about the world around them. The ability to thinking about general ideas and situations is the key hallmark of the formal operational stage of cognitive development. The ability is systematically planned for the future and reason about hypothetical situations are also critical abilities that emerge during this stage. It is crucial to note that Piaget did not view children's intellectual development as a quantitative process; that is, children do not just add more information and knowledge to their existing knowledge as they get older. Instead, Piaget declared that there is a *qualitative* change in how children think as they gradually process through these four stages.

Children Bodily Kinesthetic Development Factors

According to Suherman in (Eko Budi Hartanto, 2011) stated that there are basic characteristics of model bodily kinesthetic children development. They are:

- a. Anatomy development.

- b. Physiology development.
- c. Motorist attitude development, and
- d. Skill motorist development goal

Bodily-kinesthetic intelligence included a high sense of self-awareness of one's body movements and the ability to use the movements of the body for expression. Children with this intelligence are said to possess balance, grace, and speed, and use the same for understanding and expressing varied ideas and feelings. Bodily-kinesthetic intelligence also consisted of the skill to use hands to create and transform things

There are several characteristics that are specialized to this bodily kinesthetic intelligence. There are varied bodily-kinesthetic intelligence activities that can be taken up to develop and enhance this form of intelligence, such as; play and catch ball, take up physical performing arts, play physical games, take up storytelling, an obstacle course, and build something. So it can be concluded by introducing any of these activities, or even a combination of these activities in children day-to-day routine will definitely help build and enhance bodily-kinesthetic intelligence.

Characteristics of Early Childhood Development

According to (Mansur, 2005) stated that Early children is a unique group of children who is developing and growing process. They have developing and growing pattern which is appropriate with their development. Early childhood is the most crucial and critical time for positive intervention. Children's development in this stage is affected by their environment, and the effect continues to produce a strong influence on the rest of their lives.

The informal education system of Indonesia consisted of playgroups and kindergartens. Playgroup (Kelompok Bermain) is for children of between two and three years old. Kindergarten (Taman Kanak-Kanak; TK) Class A is for children of four years old; TK Class B is for children who are five years old. Preschool education has goal to stimulate the physical and mental growth of pupils outside the family environment before entering primary school or out-of-school educational programs. Pre-school education is divided into kindergartens, playgroups and child care centers. Kindergartens are the part of school-based education system and, as such, are under the Ministry of Education and Cultural Development (Government Regulation No. 27 of 1990). In other side, play groups and childcare centers are part of the out-of-school system and the responsibility of the Ministry of Social Affairs. Each part of Pre School has its own segment based on the children ages. Preschool is aimed for children from four to six years of age, while play groups and child care centers are attended by children under three years of age.

Preschool children are also learning time preferences, when they understand and estimate that there are times when it is better to wait for something rather than to do it now. Children in three years age are exposed to the social values of discussing and sharing, not just with gifts or tangible materials, but also with interaction with others. Other crucial life skills that are embedded include taking turns, making decisions, and setting goals.

As a toddler, kid will try to understand simple concepts as he is better able to understand similarities and differences. He will begin to differentiate objects by color or shape. He will recognize position words such as over, under, around and beside. When he is three years old, he will be able to mention the colors and have an understanding of the concept of counting, according to Healthy Children.

Based on the Government Regulation Number 1 Year 2003 about national education system stated that Early childhood education is one of efforts to love and care the children since they born up to six-year-old. The regulation is implemented through Early Children Education Program. This program is hold through formal education, non-formal education and in informal education. And next, it will be implemented through kindergarten, play group or Islamic kindergarten program.

Early childhood is an important period of life in terms of child's physical, intellectual, emotional and social development. In this stage, Growth of mental and physical abilities progress at a surprising rate and a very high proportion of learning takes place from birth to age six. It is a period when children essentially require high quality personal care and learning experiences.

In this stage, playing is very important in the learning and emotional development of all children. Playing is a fun experience for the children, often many skills can be reached through playing. Playing activity will help children learn relationship and social skills, and developing values. The goal of playing is to develop children motor and practice skills.

Constructive playing is characterized by building or creating something. In constructive playing encouraged the children through toy such as simple puzzles, building blocks, easy craft activities, and puppets. Normally 4- or 5-year-old children enjoy this type of game, but it continues to be enjoyable into the first and second grades of elementary school.

From that explanation, it can be concluded that early childhood education or preschool is for children with the age of 0-6 year. They are in process of developing and growing rapidly to reach maturity. So, they need appropriate stimulant in order to grow and develop perfectly. The stimulant can be given through preschool education which consist of family environment, nonformal division, day care program, or formal division such as kindergarten or Islamic kindergarten.

Characteristics of early childhood by Kartini Kartono in Marsudi Strain (2006: 6) stated as follows:

- a. Characteristically geriatric naive
Children saw the outside world from his view of his own, in accordance with their knowledge and their own understanding, limited by the feelings and their thoughts are still narrow. Then the children are not yet able to recognize the true meaning of an event and haven't been able to put himself into the lives of others.
- b. Primitive social relations

Social Relationships are the result of a primitive nature naive egocentric. This characteristic is symbol of children who have not been able to separate between the social environments of the situation himself. Children at this period only have interest in the objects or events in accordance with his power fantasy. Children try to start building his world with fantasy and desires of its own.

c. Spiritual unity which is almost inseparable

Children could not differentiate between the fact and the feeling. Children imagination is still contradictive through something issued or given for free, spontaneous and honest both in facial, behavior or pretending, children express it openly because it does not teach or familiarize the child not to be honest

d. Living diseconomy is attitude

Children acted physiognomy is through their world, it means that children give attribute directly or based on fact which is concrete. This condition is caused by children understanding the accident happened is real. Children are not able to difference between something life and die. All that happened in their environment is a life and has soul which has complete structure part of body.

The Concept of Bowling

Bowling is a sport activity in which players attempt to score points by rolling a ball to hit target objects. Bowling has been popular for hundreds of years, with different variations taking hold in Europe and North America. The game is popular with the goal of competitive, yet socially friendly, atmosphere and relative simplicity.

There are many different types of the game in various parts of the world. The most familiar form in North America, and globally, is Ten-Pin Bowling, the type of bowling related with the World Tenpin Bowling Association, an internationally recognized professional sports federation. Other forms, such as ninepin, candlepin, and lawn bowling, are still popular games around the world. According to (Hasan Alwi, 2005) the definition of throwing ball is giving away to its target aimed. In addition, Seefel (Widarmi, 2008) throwing is a complicated manipulative competence that used one or two hands to roll away an object far away from us to the target.

Simple Bowling Game

1) Game for Early Children

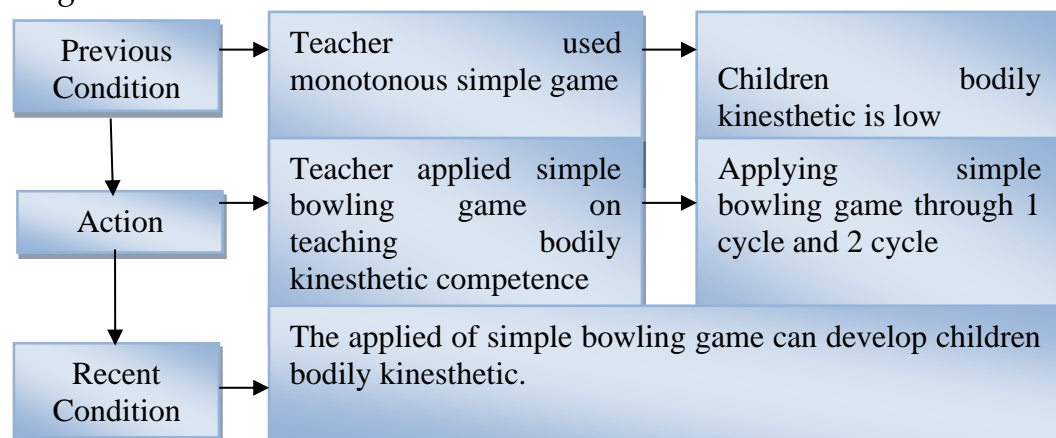
According to Umansky (in Harun Rasyid, Mansyur, & Suratno, 2009: 81), stated that playing or game is children expression to the environment through variety of movement and action which involving joyful physics and mental activities and it makes benefit to the health body. Through playing, children can overflow their feeling and expression not only on physics but also on cognitive term. In addition, Smith, Rubin, Fein, dan Vandenberg (in Mayke S. Tedjasaputra, 2007), mentioned that there are of playing, included:

- a. Flexibility which makes the children probably move from one activity to another activity.
- b. Recognizing to pretend,
- c. Playing is more focused on process happened than final result.
- d. Positive emotion will color the playing activity.
- e. Freedom of choice is basic element of playing concept on children.
- f. Playing can be done by its own will.

Based on those explanations, it can be concluded that playing is an activity that is done without any for cement or instruction. It is done by the choice of children to express happiness, imaginary occasion, and exploration. Children try to play simple bowling used plastic bowling game. It is appropriate to the children muscle and power than playing the real bowling as adult. Teacher gave explanation first about steps on playing bowling. Teacher had prepared all material needed on playing simple bowling. Ten-pin bowling, the most familiar form of bowling, is played indoors on a flat, wooden or synthetic surface, usually covered with oil to reduce friction. Here playing simple bowling for children used floor covered with the plastic mat. And the material is lighter than the heaviest one usually used for adults.

Frame of Work

There are many ways on developing children bodily kinesthetic through playing. One of this is playing simple bowling. Through that game is expected that children are motivated to train their bodily kinesthetic. By applying simple bowling game, children are more active on learning through playing game. Based on the explanation above, so can be formula through frame of mind as follows:



Based on the frame of work, so it can be inferred that applying simple bowling game can develop children bodily kinesthetic to in Jungle School Semarang.

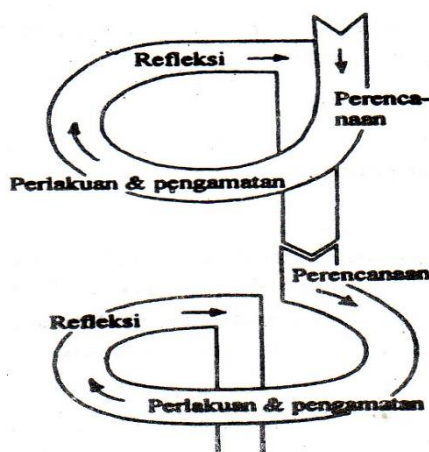
Methodology

Research Method

Classroom Action Research (CAR)

The design used in this research is a Classroom Action Research (CAR). The researcher applied a classroom action research to know and learn the phenomenon which

occurred in teaching learning process and purposely tried to offer the solving for the problem happened. Classroom Action Research is different from quantitative and qualitative research, but it has characteristics of both. An action research makes use and appropriates intervention to collect and analyze data and implementations of address educational issues. In this research, I tried to explain some theories related to definition of action research according to some experts. Burn, (2010: 2) stated that: Action research is part of a broad movement that has been going on in education generally for some time. It is connected to the ideas of „reflective practice“ and „the teacher as researcher“. Action research involves taking a self-reflective, critical, and systematic approach to describe your own teaching contexts. In action research, a teacher becomes an „investigator“ or „explorer“ of his or her personal teaching context, while at the same time being one of the participants in it. It meant that one of the main goals of action research is to identify problematic situation or issue that the participants who may include teachers, students, managers, administrators, or even parents consider worth looking into more deeply and systematically. Another expert accepts definition of classroom action research in addition, Kemmis, 1985 (in Hopkins, 2008: 48): declared that Action research is a form of self-reflective enquiry undertaken by participants in social (including educational) situations in order to increase the rationality and justice of (a) their own social or educational practices, (b) their understanding of these practices, and (c) the situations in which the practices are carried out. It is most rationally empowering when undertaken by participants collaboratively, though it is often done by individuals, and sometimes in cooperation with „outsiders“. Those statements above become the basic foundation for the researcher in answering how important the research design for doing a research is. It is because Classroom Action Research is called a unique research. In plan definition, classroom action research is an action research conducted by the teacher who seeks for solution in teaching learning process in order to increase the students“ achievement. Implementing the principle of an action research, this study included four steps: (1) plan, (2) act, (3) observe, (4) reflect. For more explanation will be describe through the frame below:



Procedure of action research
(Source: Kemmis & Taggart in Pardjono, 2007:22)

Characteristics of Classroom Action Research

Classroom action research is a classroom action in a research, which can be conducted by teacher, researcher, and teacher with his or her colleague with involves a group of students to increase teaching and learning process or to enhance the understanding of the students to the lesson. In this research, the researcher used Word Squares to improve students' understanding on English common nouns.

In order to make it clear, the researcher would like to present the Kurt Lewin's model of classroom action research as follows:

a) Planning

Planning as the first step of research procedure is conducted to give solution for the identified problems. It is a plan to conduct treatments. In order to develop children bodily kinesthetic competence.

b) Acting

After planning the concept, the researcher applied the treatment referring to the plan has been made. The researcher did a pre-test before applying the treatment.

c) Observing

Observation is the activity of observing the data collected in order to understand what extent the action activities has reached the objectives of the study. In this step, the researcher did identification and analyzed the data collected during the treatment

d) Reflecting

Reflection is the activity of assessing or evaluating critically the progress or change of the students. In this step, the researcher reflected on, evaluated and described the effects of the implementation of simple bowling game to develop children bodily kinesthetic competence.

Subject of the Research

In this study, I chose the sources of the data or the subjects of the research that is the kindergarten children of Jungle School Semarang in the academic year of 2023/2024. The data that I obtain are the children bodily kinesthetic ability.

Population and Sample

According to Gay (1987: 102) declared that the population is the group of interest to the researcher, the group to which he/she would like the results of the study to be generalizable. In addition, Best (1981: 8) mentioned that "a population is any group of individuals that have one or more characteristics in common that interest the researcher".

Based on the statement above, it is very helpful for obtaining the data if I choose the population carefully according to the problem in the study. In this study, a group of people taken as the population was kindergarten children of Jungle School Semarang in the academic year of 2023/2024.

Research Variable Design

1. Identification Variable

Arikunto (1998:99) mentioned that research variable is an object of research or the main point from the research. Variable is anything that used as a tool by researcher in order to get any information about the action, and it will be conclusion. Based on those explanation, it can be identified as some variable consisted of dependent variable and independent variable. The dependent variable of this study is the bodily kinesthetic competence and the independent variable is simple bowling game.

2. Assessment Indicator

The tool of data collection used in this study is a sheet of observation or evaluation indicator that used by the teachers and observer. The goal is to give assessment and as tool of observation as follows;

Tabel 1. Assesment Indicator

Development Aspect	STTPA	Indicator Standard	Indicator			
			BB	MB	BSH	BSB
Bodily Kinesthetic	3.3 (fm) Recognize part of body, the function and movement of fine motor and bodily kinesthetic	Children are able to hold the bowling ball				
	4.3 (fm) used the part of body to develop fine motor and bodily kinesthetic	Able to throw ball appropriately				
	3.5 (kog) Recognize and be able to solving problem, has creative attitude	Able to count the pin of bowling				
	4.5 Problem solving creatively	Children are able to hit the bowling pin				
	3.6 Knowing the things surrounding (color, shape, pattern, sound, texture, and the function)	Recognizing shapes and colors				
Score						
Note:						
BB : worse						
MB : starting on progress						
BSH : expected progress						
BSB : well progress						

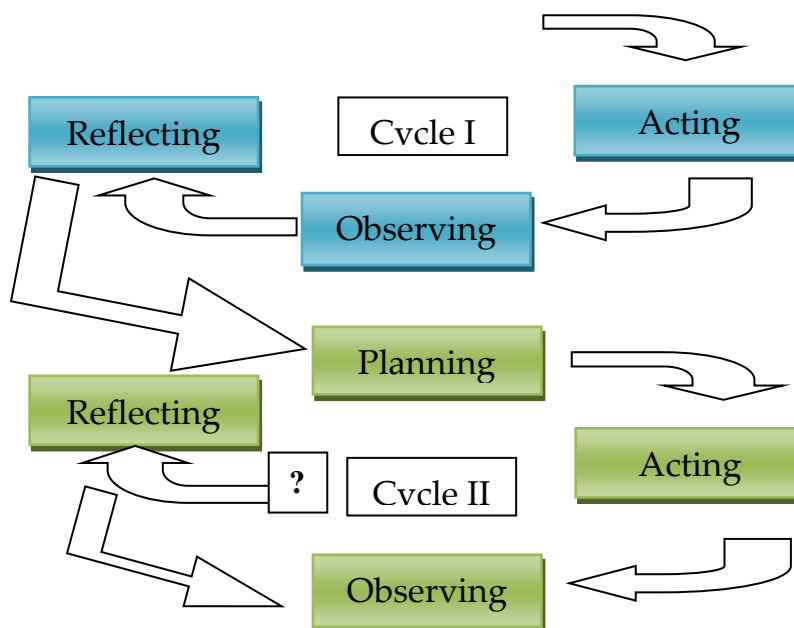
Research Procedure

The research procedure in this study focused on classroom activity with stages as follows:

1. Planning
2. Acting
3. Observing
4. Reflecting

Those stages of classroom action research can be reflected as follows:

Model of Cycle Diagram Research by Arikunto (2007:16)



1. Planning

The planning made in this stage is aimed to develop children bodily kinesthetic through simple bowling game as follows:

- Make lesson plan in the form of daily planning activity that implemented indicator standard.
- Prepare tools or media that used in the teaching-learning process. The media used is simple bowling made of plastic. It is an appropriate and friendly media for the kindergarten children. It is lighter than the real one so the children feel joyful in playing simple bowling plastic.
- Prepare the game which is discussed with the teacher and headmaster of Jungle School Semarang. Teacher give modeling in front of children how to play bowling. After giving modeling, teacher asked the children to imitate playing bowling.
- Preparing assessment sheet to evaluate the process of playing bowling. In this assessment focused on the ability basic component to develop children bodily kinesthetic.

2. Doing the Action

This research is conducted through two cycles, and each cycle consisted of three meetings in order to develop children bodily kinesthetic competence as follows:

- Cycle I
 - Planning
 - Arrange the lesson plan.
 - Prepare material and media for teaching.
 - Preparing observation sheet.
 - Preparing evaluation sheet.

2) Doing Action

a) Opening Class

- (i) Convey the goal of teaching-learning process.
- (ii) Do brainstorming through question and answer aimed to relate and connect the previous material before.

b) Core Activity

- (i) Teacher showed the material used, simple bowling plastic. Teacher then asked the children about playing bowling.
- (ii) Teacher asked the children to stand up in line and practice the simple bowling game.
- (iii) Teacher asked the children to imitate how to throw the ball to the pin while counting and mention the color.
- (iv) Teacher divided the children into small group and asked them to play the game alternate.
- (v) Teacher gave reinforcement and feedback and also praise to motivate them.

c) Closing Activity

- (i) Teacher gave assessment to the previous activity.
- (ii) Teacher did reflection to the result of evaluation and assessment.

3. Observing

Teacher observed the activity helped by the shadow teacher as team work. They gave note as the assessment during the observation. The assessment aspect included:

- a. Children' respect during the playing simple bowling.
- b. Children competence in throwing the ball to the pins.
- c. Team work competence
- d. Happiness
- e. Responsibility

4. Reflecting

Reflection is to evaluate all the activity done both by the teacher and also the children. The reflection file usually in the form of portfolio, observation sheet, anecdote, and teacher's noted, and so on. If the result of cycle I has not reach the standard passing grade, so it will be repaired in the second cycle based on the reflection's result on the first cycle.

Result and Discussion

In this study, I did data analysis based on the type of data applied through observation and interview. Teacher and researcher try to elaborate and innovate the teaching – learning process to improve the children bodily kinesthetic competence on the kindergarten children of Jungle School Semarang. The Study is conducted by applying simple bowling game to take interest of children in improving bodily kinesthetic competence.

The standard criteria in this study is the totally number of children passed the criteria in about 80% of them got good score, so the study can be said reliable and valid. This criteria is based on an appropriate percentage (Suharsimi Arikunto, 2010: 44), they are:

1. Score criteria on (%):0-20 : worse
2. Score criteria on (%):24-40 is : bad
3. Score criteria on (%):41-60 : good
4. Score criteria on (%):61-80 : very good
5. Score criteria on (%):81-100 : best

The score criteria can be taken from the following formula:

:

$$X = \frac{\sum N \times 100\%}{\sum n}$$

Note:

X:average (%)

$\sum N$: numbered of children passed the standard criteria.

Table 2.The Result of second cycle on bodily kinesthetic competence

No	Research Subject	Score					
		Cycle I			Cycle II		
		MB	BSH	BSH	MB	BSH	BSH
1	Ahmad Naufal	√				√	
2	Ahmad Farid	√				√	
3	Hawa Nida Charisma		√			√	
4	Ahmad Alfari	√				√	
5	Aisyah Putri		√				√
6	Alya Hanifah		√		√		
7	Annisa Alfiyanti		√			√	
8	Kayla Aulia Zahra		√			√	
9	Nadia Rijni	√				√	
10	Syaffiya Yunaila	√				√	
11	Adila Nisa		√			√	
12	Ahmad Fahri	√	√			√	
13	Ananda Naufal	√			√		
14	Faiq Faturohman		√			√	
15	Hana Fitri		√			√	
Total Number		7	8	0	2	12	1
Percentage		46.70%	53.30%	0.00%	13.40%	80.00%	6.60%

Note : BB (worse), MB (starting on progress), BSH (expected progress), BSB (well progress). Based on the data above, it can be seen in the cycle II that children who passed indicator is 80 %. There was only a child who got highest level and two children who are in the bottom level of totally twelve children were in good criteria indicator. It can be concluded that applying simple bowling game is effective to improve children bodily

kinesthetic competence to jungle school kindergarten children with total population 15 children.

Conclusion

Based on the explanation above, the conclusion of this study as follows; (1) children bodily kinesthetic competence can be improved through simple bowling game in kindergarten children of Jungle School Semarang in academic year 2023/2024. (2) The used of simple bowling game is effective to improve children bodily kinesthetic competence in in kindergarten children of Jungle School Semarang in academic year 2023/2024. It can be seen from the data in the first cycle got improve in the second cycle and around 80 % children passed the criteria standard of this research. In the cycle I, total children who passed standard criteria is 53.30 %. In the cycle II increased up to 80.00% or around 12 children have passed the criteria standard. So, it can be concluded the improvement of cycle I to cycle II is around 33,3%.

References

- Agus Sujanto. (1996). *Psikologi Perkembangan*. Jakarta: Aksara Baru.
- Arikunto, Suharsimi. 1998. *Prosuder Penelitian Suatu Pendekatan Praktek*. Jakarta: PT. Rineka Cipta.
- B.E.F Montolalu, Dian Arrahmi, & Sri Setiana. (2009). *Bermaindan Permainan Anak*. Jakarta: Universitas Terbuka.
- Budi Dyah Lestari,Ika Tyas Mustika Sari,Sahrul,Sri Marfu'ah.(2024). Assesme Perkembangan Kognitif Anak Usia Dini Di KB Mutiara Sari Soneyan. Jurnal Pendidikan Anak Usia Dini Vol: 1, No4, 2024, Page: 1-6
- Burns. Anne. 2010. *Doing Action Research in English Language Teaching*. New York: Routledge.
- Chuong, H. L. A. (2023). Assessing the Competence of Early Childhood Education Students at Teacher Education Universities in Vietnam in Terms of Implementing STEAM Education. *European Journal of Contemporary Education*, 12(2), 385–398. <https://doi.org/10.13187/ejced.2023.2.385>
- Eko Budi Haryanto.(2011). *Model pengembangan Keterampilan Motorik* . Jakarta: Erlangga.
- Endang Rini Sukamti.(2007).*Diklat Perkembangan Motorik*. Yogyakarta: Fakultas Ilmu Keolahragaan, Universitas Negeri Yogyakarta.
- Johnstone, A. (2022). Nature-Based Early Childhood Education and Children's Physical Activity, Sedentary Behavior, Motor Competence, and Other Physical Health Outcomes: A Mixed-Methods Systematic Review. *Journal of Physical Activity and Health*, 19(6), 456–472. <https://doi.org/10.1123/jpah.2021-0760>
- Kamtini, dan Husni Wardi Tanjung. (2005). *Bermain Melalui Gerak Dan Lagu Di Taman Kanak-Kanak*. Jakarta: Departemen Pendidikan Nasional.
- Kartono, Kartini. (2006). *Peran Keluarga Memandu Anak*. Jakarta: CV. Rajawali.
- Kemmis, S. 1985. *Action Research and the Politics of Reflection*. In D. Boud, R. Keogh and

- Walker, D. (Eds.) Reflection: Turning experience into learning. London: Kogan Page.
- Mansur. (2005). Pendidikan Anak Usia Dini Dalam Islam. Yogyakarta: Pustaka Pelajar)
- Masoumi, D. (2024). Framing adequate digital competence in early childhood education. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-024-12646-7>
- Rasyid, H., Mansyur, dan Suratno., (2009). *Asesmen Perkembangan Anak Usia Dini*. Yogyakarta: penerbit Multi Pressindo
- Sumantri.MS. (2005). Model Pengembangan Keterampilan Motorik Anak Usia Dini. Jakarta: Departemen Pendidikan Nasional Direktorat Jenderal Pendidikan Tinggi.
- Suyadi, (2009). Psikologi Belajar *PAUD*. Yogyakarta: Pedagogia.
- Tedjasaputra, M.S. (2007). Bermain Mainan dan Permainan. Jakarta: PT. Grasindo
- Widarmi. (2008). Kurikulum Pendidikan Anak Usia Dini. Jakarta: Universitas Terbuka.
- Yudha M Saputra dan Rudyanto. (2005). Pembelajaran Kooperatif untuk Meningkatkan Keterampilan Anak Taman Kanak-kanak. Jakarta: Depdiknas.