

The Use of “Target Games” Method to Improve the Object Manipulation Skills of Overhand Throw for Year One Pupils in Malaysia

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Abstract- This research is to improve object manipulation skills of overhand throw for Year One pupils. It is used to identify the problem faced by the pupils in object manipulation skills especially the overhand throw. This research also to ensure the effectiveness of Target Games method to improve object manipulation skill of overhand throw. This action research is carried out for seven weeks and five types of Target Games are used to solve the problem. Based on the pre-test result, the Year One pupils were having a problem to use the proper technique of overhand throw. Therefore, this treatment is carried out to overcome this type of problem. The research results also showed that the usage of Target Games method was suitable to improve Year One pupils object manipulation skills of overhand throw. Overall, the interventions that have been carried out using the Target Games method was successful to improve Year One pupils object manipulation skill of overhand throw.

Index Terms- skill, object manipulation, overhand throw.

I. INTRODUCTION

Object manipulation skills are the basic movement component in physical education. Basic movement and basic motor skill one of the knowledge about the movement. Based on Howton (2010), children' learning process is smoother and effective if they were trained using basic movement training systematically. Therefore, to help them to master the skills in the sport, they should be equipped with a strong foundation in basic movement skills. Gallahue & Cleland (2003) defined general movements are divided into several types of movements, which are locomotor movement, non-locomotor movement and object manipulation. Usually, the objects used are such as bean bag, small ball, big ball, rope and other suitable objects. This movement involves the control usage of hand and leg in manipulation movements. According to Thomas, Lee and Thomas (1988), object manipulation movement can be categorized into three types: imposing energy on objects (throwing, kicking, feeding and beating), mastering the object (catching and holding) and controlling the object (dribbling and bouncing the ball). Manipulation skill is one of the important skills in children motor movement. These skills also always involve hand and leg movement. The usage of the rough motor also can be identified when the children involved in activities with the ball as an object to improve the manipulation skills. Variety of skills can be mastered by the children such as jumping, throwing, bouncing, controlling, kicking and catching the ball.

II. LITERATURE REVIEW

Manipulation skill is a part of basic movement. Basic movement is started since birth. It concludes some skills such as running, object manipulation and controlling the body balance. Based on Cools, De Martlelaer, Samaey and Andries (2011), the weak basic movement in children level can affect physical activities at a more mature age. Normally children with poor basic movements are having difficulties in doing some physical activities especially related to the sport. There are three main aspects of the basic movements which are locomotive, balance and manipulative. Manipulative involves rough and smooth motor movements based on Gallahue & Ozmun (2002). Manipulation skills involve rough motor usage that involves giving and receiving the power of movement from the object, such as throwing, kicking and other movements. Research by Kalaja, Jaakkola, Olav,&Digelidis (2011) found that manipulation skills involve smooth skills based on controlling small object activities that need motor control, the accuracy of movements.

Researches also stated that manipulation moves need coordination space and object around them or activities performed by the body with the help of objects. According to Sujiono (2007:12.4), manipulation move is the activities done with objects, shape and composition objects. This skill learning involved objects such as bean bag, small ball, big ball, rope and other objects.

According to Gallahue (1993), we cannot deny that object manipulation skills have a very high interest for children or school pupils. Developmental assessment of manipulation skills is important to identify the children have the problem in the development process or as intended.

There are some problems that we cannot avoid to master the object manipulation skills in throwing. According to Ulrich (2015), one of the way to measure children's motor is through manipulation skill (controlling object). Based on Ahmad and Masri (2014), children manipulation skills development is affecting the children's locomotor development because the need of knowledge and experience in manipulation skill is higher compare to knowledge and experience that needed for locomotor skill. Besides, the factors that lead to the development of the children's controlling object skill have a lower rate of development than their locomotor development because object control skills need specific training than locomotor skills according to Westendrop (2011).

Based on the previous research by Masri, Ahmad & Mahaliza (2014) shows that manipulation skill development for level one primary school in Malaysia is not based on their age chronology.

Referring to Malaysia's Permata Programme (2008), the motor skill development should be done among the children at their early age because the learning potential starting form since early childhood even though during in the womb. Nowadays teaching and learning should be started early childhood to help them to achieve comprehensive development in terms of the spiritual and the physical.

Lopes (2013) stated that primary school pupils less exposure to use manipulation skills during physical activities in primary school. According to Baharom (2014), this happened because the teachers is not exposed to the norm or instrumentation usage to measure children manipulation skills. Meanwhile, Pramono, Ddk (2010:9) stated that manipulation moves are movements of the object or certain tools for example ball, stick, bat and racquet. Specialists in Physical Education Gallahue (1996), stated that basic movements are divided into locomotor movement, non- locomotor movement and object manipulation. Manipulation skills are sport basic skills. These skills are very important for the school pupils because it enables them to do, to control and to handle the different size of objects such as ball, rope, bean bag or other objects.

III. METHODOLOGY

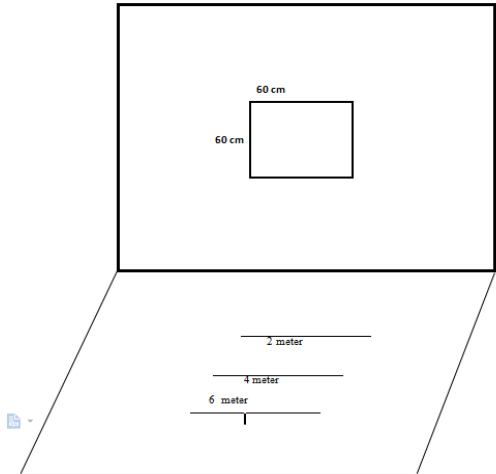
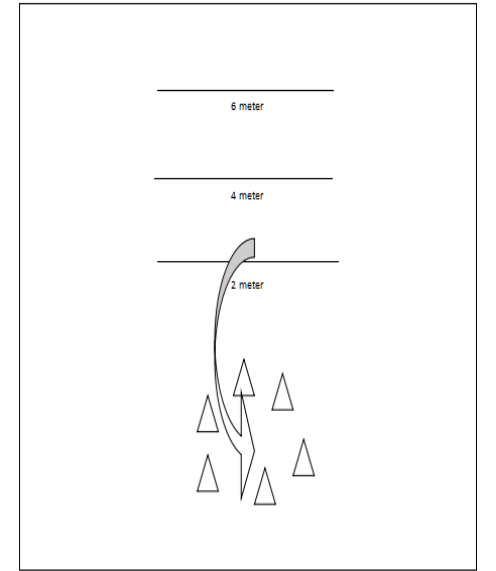
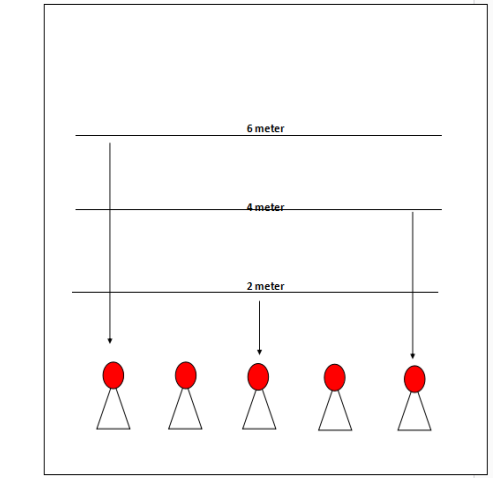
Participants

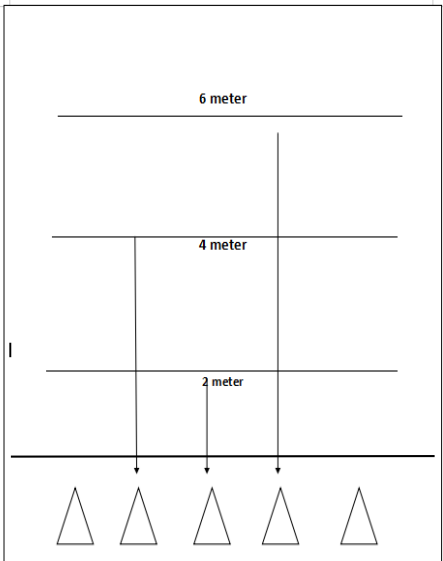
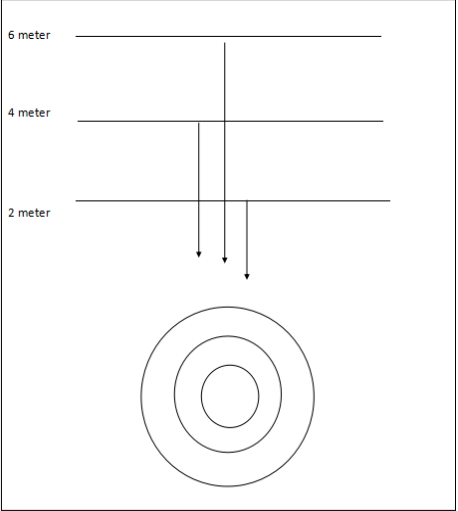
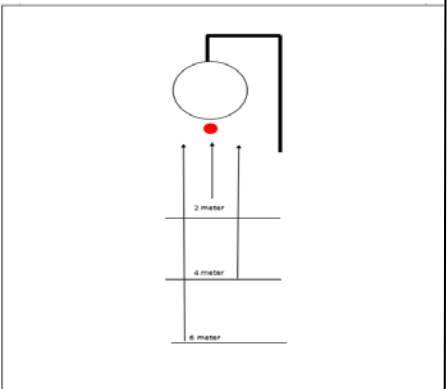
This research has been done in a rural national primary school in Serian, which is a town in Sarawak, East Malaysia. This is a boarding school with 84 pupils including preschool pupils. The samples selected for this research were four pupils from Year One which are three boys and a girl. All of them are selected because they had a problem of object manipulation skills in the overhand throw. They are selected based on observation by the teacher during the Physical Education class and also when they are doing other physical activities in the evening. Besides that, to determine the participants fulfill the need criteria, a special test or a pre-test has been done. The participants are selected based on the pre-test result.

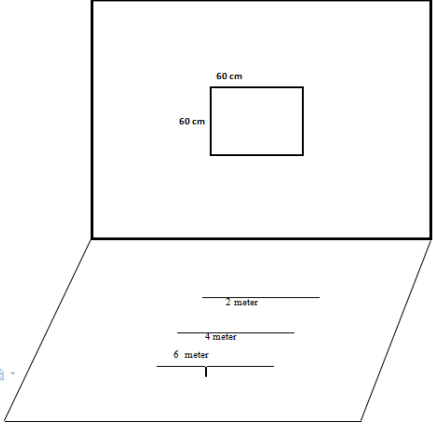
Procedures

Quantitative and qualitative data has been collected over seven weeks for the research study. The data were collected and analysed to answer the research questions. A descriptive statistic is used to analyse the data. The operation can be in the form of a table, illustration in diagram or graph of data or information. The mean is used to assess the overall score of the study subject. The percentage that will be used in comparing the subject's performance to each weak of treatment. The research started with a pre-test to determine the ability of each subject in overhand throw activities. After early data collected, so the intervention will be done for five weeks. Every week the intervention training is conducted using five different training methods. This training method is game-based such as Skittle Wheel, Target Five, Knock Down, Bull Eye and Ball Away. These game are known as Target Games. Target Games are activities in which players send an object toward a target while avoiding any obstacles. By playing these games the subject indirect learn the correct technique to throw the object using the overhand throw skills. A competition will be carried out after each training session during the intervention. These competitions to ensure the participants will be motivated to compete among themselves and tried hard in every training session. The game result will be recorded to compare the result after each intervention training session. On the seventh week, a post-test will be done and the result will be compared with the pre-test result to ensure the effectiveness of the interventions.

Table 1: Intervention Target Games training timetables for five weeks:

Week	Target Games	Descriptions
		<p>Pre-Test</p> <p>Tools needed: 4 small balls, measuring tape and cello-tape</p> <ul style="list-style-type: none"> ■ One target on the wall size 60 cm x 60 cm. ■ The distance set: 2m,4m and 6m. ■ The teacher does the demonstration. ■ The throwing technique: <ul style="list-style-type: none"> - holding the ball over the shoulder level - the ball position is behind the head. - the arm position is slightly inclined to the side and the elbow that holding the ball is bend. - the body is in straight position meanwhile the head slightly look up and the eyes focus on the target. - before throwing, the subject will move one step forward. - The dominant leg should be opposite with the hand that they use to throw. ■ The subject will throw the ball to the target.
1	<p>Target Games: Pinwheel</p> 	<p>Tools needed: 6 skittles and 4 bean bags</p> <ul style="list-style-type: none"> ■ Individual training. ■ The distance set: 2m,4m and 6m. ■ The skittles will be arranged in round shape around 1-meter diameter. ■ The subject needs to throw the bean bags into the round shape area of the skittles. ■ The throwing technique: <ul style="list-style-type: none"> - holding the ball over the shoulder level - the ball position is behind the head. - the arm position is slightly inclined to the side and the elbow that holding the ball is bend. - the body is in straight position meanwhile the head slightly look up and the eyes focus on the target. - before throwing, the subject will move one step forward. - The dominant leg should be opposite with the hand that they use to throw. ■ The subject will throw the ball to the target.
2	<p>Target Game: Target Five</p> 	<p>Tools needed: 5 skittles, 5 bean bags/tennis balls and 4 small balls.</p> <ul style="list-style-type: none"> ■ Individual training. ■ The distance set: 2m,4m and 6m. ■ 5 skittles will be arranged in one straight line. ■ The subject needs to hit the objects from the skittles. ■ The throwing technique: <ul style="list-style-type: none"> - holding the ball over the shoulder level. - the ball position is behind the head. - the arm position is slightly inclined to the side and the elbow that holding the ball is bend. - the body is in straight position meanwhile the head slightly look up and the eyes focus on the target. - before throwing, the subject will move one step forward. - The dominant leg should be opposite with the hand that they use to throw. ■ The subject will throw the ball to the target.

<p>3</p>	<p>Target Game: Knock Down</p> 	<p>Tools needed: 5 skittles, 4 bean bags/tennis balls and 4 small balls.</p> <ul style="list-style-type: none"> ■ Individual training. ■ The distance set: 2m,4m and 6m. ■ 5 skittles will be arranged in one straight line. ■ The subject needs to hit the skittles. ■ The throwing technique: <ul style="list-style-type: none"> - holding the ball over the shoulder level. - the ball position is behind the head. - the arm position is slightly inclined to the side and the elbow that holding the ball is bend. - the body is in straight position meanwhile the head slightly look up and the eyes focus on the target. - before throwing, the subject will move one step forward. - The dominant leg should be opposite with the hand that they use to throw. ■ The subject will throw the ball to the target.
<p>4</p>	<p>Target Game: Bull Eye</p> 	<p>Tools needed: 5 bean bags and 3 skipping ropes.</p> <ul style="list-style-type: none"> ■ Individual training. ■ The distance set: 2m,4m and 6m. ■ Setting the circles outside of each other, starting with the middle circle (bull eye). ■ Scores: 5 points for the middle, second circle 3 points and the last circle one point. ■ The throwing technique: <ul style="list-style-type: none"> - holding the ball over the shoulder level. - the ball position is behind the head. - the arm position is slightly inclined to the side and the elbow that holding the ball is bend. - the body is in straight position meanwhile the head slightly look up and the eyes focus on the target. - before throwing, the subject will move one step forward. - The dominant leg should be opposite with the hand that they use to throw. ■ The subject will throw the ball to the target.
<p>5</p>	<p>Target Game: Ball Away</p> 	<p>Tools needed: 10 tennis balls and 1 hula hoop</p> <ul style="list-style-type: none"> ■ Individual training. ■ The distance set: 2m, 4m and 6m. ■ The hula hoop will be hung 3m high. ■ The subject will throw the ball through the hanging hula hoop. ■ Only the throw through the hula hoop will be given a mark. ■ The throwing technique: <ul style="list-style-type: none"> - holding the ball over the shoulder level. - the ball position is behind the head. - the arm position is slightly inclined to the side and the elbow that holding the ball is bend. - the body is in straight position meanwhile the head slightly look up and the eyes focus on the target. - before throwing, the subject will move one step forward.

		<ul style="list-style-type: none"> - The dominant leg should be opposite with the hand that they use to throw. ■ The subject will throw the ball to the target.
		<p>Post-Test</p> <p>Tools needed: 4 small balls, measuring tape and cello-tape.</p> <ul style="list-style-type: none"> ■ One target on the wall size 60 cm x 60 cm. ■ The distance set: 2m, 4m and 6m. ■ The teacher does the demonstration. ■ The throwing technique: <ul style="list-style-type: none"> - holding the ball over the shoulder level. - the ball position is behind the head. - the arm position is slightly inclined to the side and the elbow that holding the ball is bend. - the body is in straight position meanwhile the head slightly look up and the eyes focus on the target. - before throwing, the subject will move one step forward. - The dominant leg should be opposite with the hand that they use to throw. ■ The subject will throw the ball to the target.

Ethical Consideration

This research conducted after obtaining written permission from the school management and parents of the participant that involves. All the information and the participant personal details are confidential.

Data Collection

This action research was conducted over approximately seven weeks in April and May 2018 with four Year One participants. The data collection methods used in this study are pre-test and post-test, interview and observation. The informal interview is done during the intervention sessions. The sample of questions:

Do you enjoy the games?

Can you feel the difference when you make a throw after the training session?

The observations are done for the whole research study. Observation data show the behaviour of the participant such as their self-confidence and disciplines during the intervention. The observation method can help to monitor the participant are using the correct techniques during their training session. A pre-test is conducted to collect the early score before the intervention using the Target Games method. Based on pre-test result that has been done all the subjects achieved very low scores which were under 49 based on the scale score.

Table 2: Score scale in percentage (%) and interpretation.

Score	Interpretation Score
1-49	Low
50-70	Moderate
71-80	Good
81-100	Excellent

Every subject will be assessed and the data will be recorded every intervention for five weeks. Pre-test data will be compared to the post-test data to identify the progress after using this method. The post-test will be conducted after five weeks of treatment using Target Games method. All of the activities are carried out based on the planned timetable for seven weeks. The data will be presented in graph form so that it easy to compare the data after the seven weeks of the research study.

Throughout the study, both qualitative and quantitative data are collected to answer the research questions:

1. How the Target Games can overcome the object manipulation skills in overhand throw among Year One pupils?
2. How to help the pupils to master the object manipulation skills in overhand throw technique?

IV. RESULTS

The observation shows the positive progress of pupils' behaviour during the intervention sessions. By the end of the research, the subjects have shown positive behaviour when they were more confident to ask questions and willing to try something new. They were actively participating in every activity. This shows a good achievement because before this they are very passive. This research data result was collected from the pre-test and post-test results before and after the interventions.

Pre-test result

Table 3: Pre-Test Result

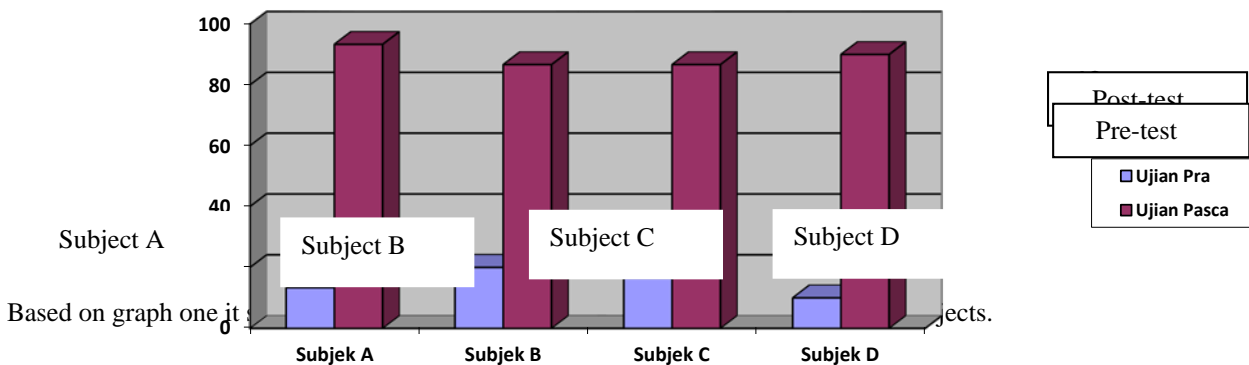
Subject	Score	Percentage	Achievement
Subject A	4/30	13.33%	Low
Subject B	6/30	20.00%	Low
Subject C	5/30	16.67%	Low
Subject D	3/30	10.00%	Low

Based on table 3, all the subjects achieved a very low score when they got less than 50% score. During the pre-test session, the teacher was able to identify the cause of this problem through observation or asked them orally. The pupils were using the wrong technique in the activity that involved the object manipulative skills, especially in the overhand throw. After the interventions carried out for five weeks, the subjects' achievement showed a significant improvement.

Post-test result
 Table 4: Post-test result

Subject	Score	Percentage	Achievement
Subject A	26/30	86.7%	Good
Subject B	28/30	93.33%	Excellent
Subject C	26/30	86.67%	Good
Subject D	27/30	90.00%	Excellent

Based on table 4 all the research subjects achieve a high score. All of them got more than 80% score. The comparison between Table 3 and Table 4 shows significant improvement in all the subjects. Proper continuous intervention training using proper overhand throw technique through various Target Games allows all the subjects to master it.



Graph 1 : The Score Differences Between Pre-Test and Post-Test

The findings were able to answer the research question based on the data form the post-test result. The result also shows positive progress among the subject to proof that the use of Target Games method for the treatment is very effective. After five weeks intervention shows the significant score improvement between the pre-test and post-test result. The various activities during the intervention suitable for the subject. The fun activities will attract their interest during the interventions. This also proved that the various activities of Target Games as planned for this treatment is appropriate and successful to overcome the problem of the subjects problems.

V. DISCUSSION

There are several notable findings from the data analysis. The study focuses on the related aspects with the Year pupils problems in order to master the object manipulation skills of overhand throw. The effectiveness of the usage Target Games method to improve object manipulation skills of overhand throw. The subjects also showed their improvement in terms of attitude, behaviour, motivation and their self confidence level throughout the seven week of research. This action research shows the weaknesses faced by the Year One pupils to master the technique of object manipulation skills of overhand throw .

Based on the action research carried out in seven weeks a significant mistake done by the subjects is the technique used when they do the overhand throw. However, after two weeks there were improvements in their score marks for each test by the end of each training session or treatment for two hours. This shows that the Target Games method that has been used were able to help the subject to master the object manipulation skill of overhand throw. After mastering the technique, the subject will be able to master the object manipulation skill of overhand throw more.

Within seven weeks of research, the usage of Target Game technique applied in the treatment session, the feedback from the subjects was very positive. They stated that the target games method in their training has improved their skill in doing overhand throw. Furthermore, this action research can improve the subject confident level of their owns abilities.

VI. CONCLUSION

There are several strengths and weaknesses learned throughout the research. Therefore, some suggestions to improve this research in the future, such as time for the research should be extended, try to add more fun activities and involve more participant. The research also can focus on other techniques such as kicking, catching and so on. The identified weaknesses from throughout the research process, were the subject is not punctual during the training session and they were easily distracted by other people. Therefore, the intervention should not take too long so that the subjects do not lose their focus.

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