ACUTE EFFECT BETWEEN VERBAL INSTRUCTIONS AND VIDEO MODELLING ON UNDERHAND VOLLEYBALL SERVE AMONG NOVICE VOLLEYBALL PLAYERS

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Abstract

The purpose of this study was to examine the acute effect between verbal instructions and video modelling on underhand volleyball serve among novice volleyball players. Sample size for this study was 30 subjects (N=30) of age between 16-17 years old, were randomly assigned to two groups which is known as verbal instructions and video modelling. The results from the acute effects between verbal instructions and video modelling on underhand volleyball serve among novice volleyball players was found significant in pre-test, post-test1 and post-test2 for verbal instructions and video modelling. This shows that the improvements from both groups were significantly increase with different types of learning aids in the post-test. The results also showed there was no significant difference between both groups of verbal instructions and video modelling. Through this finding, it was proved that by applying learning aids for both different groups are more effective to be used to see the effects of verbal instructions and video modelling feedback towards the underhand volleyball serve among novice volleyball players.

Key words: Verbal instructions, Video modelling, Volleyball, Novice, Underhand serve.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Volleyball is a team game between two teams of six players, based on holdin g the ball in the air and trying to bring the ball over the net of the opposing teams o it hits the ground on the side of the court of the opponent, or to irritate the oppo sing side to strike the ball out of the court's boundaries. A player is only allowed a maximum of three touches of the ball before returning to the opposite (Reeser, Fleisig, Bolt, & Ruan, 2010).

There are some different types of volleyball performance skills that are overhand, underhand, topspin and floater. It is understandable that serve in volleyball is vital to create and start the game (Wagner, Pfusterschmied, Tilp, Landlinger, Von Duvillard, & Müller, 2014). Silva, Marcelino, Lacerda, and João (2016) reviewed the serve theory and serve-reception theory referred to as "reception" from this point on the recital were identified as predictors of team victory in volleyball.

Coaches regularly seek ever more effective systems for improving instruction and facilitating learning. Many coaches are mainly concerned about the response format that was provided. According to Kirazci (2013) evaluated the effectiveness of learning complicated motor actions using different types of verbal information. Research in motor learning and sport training examined the effects of verbal signals in addressing critical task stimuli and data, recalling series of motor activities and initiating sequences of movement. Sadeghi, Shariat, Asadmanesh,

and Mosavat (2013) found that it was proven to be more effective in learning with the help of verbal instruction. Various activities can be made with the coach's verbal guide as a straightforward guideline from the expert model for the beginner, increasing the consideration of the skill definition to be learned. This helps the cognitive conception in easier interpretation of the movements (Sadeghi et al., 2013).

According to Chiviacowsky, and Wulf (2007), video modelling is an instructional mode which uses video recording and display equipment to provide a visual model of targeted behaviour or expertise. According to Innocenzo (2016), frequently learned human behaviors through expert person or model reflection. Furthermore, Chiviacowsky and Wulf (2007) have highlighted the importance of the similarities between the model and the learner as regards performance and psychological responses. The instructor provided the video-modelling from expert volleyball player to the participant for the feedback. The participants were observing the video modelling for three days and post-test for the next days.

The present investigation contributed to literature on feedback by associating verbal and video feedback in volleyball serve. In motor learning and regulation, both visual and verbal feedbacks play a very important role (Kirazci, 2013). Participants took part in an experimental design where they learned through one type of instruction and then switched to learning with another type of instruction. In one type of instruction, participants received traditional coaching via verbal feedback. In the other instructional model, participants received video-modelling feedback. The results of different types of feedback will be observe after the post-test.

The effect of verbal instructions and video modelling to perform the technique or skill found that the learning aids can advance the athlete performance (Travlos, 2011). Ram and McCullagh (2003) stated that due to the contribution of verbal and modelling feedback, different athlete levels also showed an improvement for the performance product.

Kirazci (2013) also mentioned that volleyball serve towards verbal instructions and video modelling assist the athlete to improve performance. The effect from both verbal instructions and video modelling can increase the performance because of the athlete can understand well how to perform the technique by watching the video modelling and memorize the verbal instructions of the cues and sequence help to produce better outcome (Parsons & Alexander, 2012).

1.2 Problem Statement

Demonstrations are one of the most excellent well-known instructional plans used to transfer information to the learner in the sense of motor skills acquisition (Innocenzo, 2016). Results from earlier study show that early learning is inadequate in directing learners to solve a problem with pure verbal instruction (Millar, Oldham, & Donovan, 2011). Furthermore, Maleki, Nia, Zarghami, and Neisi (2010) stated that a model without verbal description is also considered unproductive, but if it includes verbal instruction, learning skills will progress.

According to Rhoads (2012), benefiting from an opponent team can come in a variety of ways through advanced preparation, better drilling, improved communication with players and progressive techniques training. Research into the use of verbal signals to direct learning prodigiously demonstrates this is an effective method of instruction (Kountouris & Laios, 2007). In other studies, video modelling was more effective when investigating completely new motor skills associated with verbal instruction (Janelle, Champenoy, Coombes, & Mousseau, 2003). Bouazizi, Azaiez, and Boudhiba (2014) found that effectiveness of video modelling in the improvement of skill performance, rather than characteristic practice.

According to Reo and Mercer (2004) demonstrated that video modelling is more effective than a handout alone to achieve a basic exercise program's performance correctness. But other study showed that using of video modelling had not impact on tennis service with compared to verbal feedback. It is a well-founded fact that visual and verbal feedback play a very important role in motor learning and controlling (Kountouris & Laios, 2007).

Besides, few studies investigated the learner's thoughts at the same time as learning about volleyball players with visual feedback (Rhoads, 2012). This research was designed to determine statistically visual feedback when training volleyball players to pass forearm and reaction. Thus, there is a need to examine on the acute effect of verbal instructions and video modelling on volleyball serve among novice volleyball players.

1.3 Research Questions

1. Is there any acute effect of verbal instruction and video modelling on underhand volleyball serve among novice volleyball players?
2. Is there a significance difference between verbal instruction and video modelling on underhand volleyball serve among novice volleyball players?

1.4 Research Objectives

1. To measure the acute effect of verbal instruction and video modelling on underhand volleyball serve among novice volleyball players.
2. To compare the differences of verbal instruction and video modelling on underhand volleyball serve among novice volleyball players.

1.5 Hypotheses

H^{o1}: There is no acute effect of verbal instructions and video modelling on underhand volleyball serve among novice volleyball players.

H^{o2}: There is no significance difference between verbal instruction and video modelling on underhand volleyball serve among novice volleyball players.

H^{a1}: There is an acute effect of verbal instructions and video modelling on underhand volleyball serve among novice volleyball players.

H^{a2}: There is a significance difference between verbal instruction and video modelling on underhand volleyball serve among novice volleyball players.

1.6 Significance of study

Some significance of study which give benefits for the coach, athletes and future study. The present study helps the coaches and sport persons to guide and monitor their athlete by giving verbal instructions and video modelling to improve their performance

It also highlights role of sport coaching, pedagogy and coaches to improve the performance by using learning methods which is verbal instructions and video modelling. The present study finding was an instrumental in improving and maintaining the sport performance and to ensure the athlete can improve in learning.

The study of feedback also helps in the development of performance of volleyball players. General and specific identification and distribution of feedback in volleyball game, suggested measures to improve the athlete performance. Verbal instructions and video modelling were learning aids for the athlete to produce better outcome.

1.7 Limitation

There were several limitations of this study. One of the major limitations was the weather. Outdoor place used for this experimental. The weather cannot be predicting, and this was more difficult to continue this activity. It also can lead to risk of injury for the coach and the participant as well.

Another limitation of the researcher study was drop out of participants and the researcher cannot push or force the participants. This included if the participants were drop out from this experimental.

The last limitation of this study was the participants schedule. The schedule of the participants may be changed such as have a meeting, extra class and doing another task.

Thus, the researcher was trying to handle and control the situation as well as possible to ensure the flow of the process running smoothly.

1.8 Delimitation

There were some delimitation of this study. The study delimited to female novice volleyball players from the SMK Che Tom at Sungai Petani Kedah. Besides, the study delimited to volleyball players who have no experience in volleyball tournament. The study delimited to novice volleyball players for a minimum at 30 participants. The participants also in well condition without injury. The type of skill that been used was only underhand serve.

1.9 Definition of Terms

1. **Underhand Serve:** In volleyball, the act of starting a rally by hitting the ball with the hand's heel and sending it to the side of the court of the opponents.

(Zetou *et al,*. 2002)

2. **Verbal feedback**: A procedure that a coach uses to provide verbal feedback about the skill that has just been carried out.

(Kountouris & Laios, 2007)

3. **Video-Modelling:** Teaching mode that uses equipment for recording and display to provide a visual model of targeted behaviors or skill.

(Rhoads, 2012)

4. **Novice**: A person or creature new to a particular field or activity.

(Kirazci, 2013)

CHAPTER 2:

LITERATURE REVIEW

This literature review is organized into three sections. The first section introduces research on verbal feedback. The second section presents the history of video modelling and visual feedback. For the third section presents summary of the studies.

2.1 Verbal Instructions

Although instruction may be highly functional in teaching motor skills, verbal feedback is the main mode of intervention in teaching motor skills (Kountouris & Laios, 2007). Movement reaction serves three main functions: informing, reinforcing, and motivating the learner. Feedback information gives the artist consent to correct movement errors. Feedback is also emphasizing. It can either enhance positive behaviour or reduce the punishment for behaviour. Also, feedback can be motivating if the instructor provides positive feedback and inspires you (Parsons & Alexander, 2012).

Verbal feedback often comes in the form of verbal indications that are short and summarizing phrases that direct the learner's attention to critical task mechanisms or prompt key measurement patterns (Rhoads, 2012). Research shows that verbal indications can be effective when they come from the instructor or when they are prompted by the learner (Reo & Mercer, 2004). The theoretical clarification for the efficacy of verbal indications is that they help the athlete focus attention. It has been

described that attentiveness is one of the most important responsibilities in sports learning and execution (Rhoads, 2012).

Based on research showing the importance of verbal signals while teaching athletes, researchers indicated that self-catering might be helpful for athletes to control their concentration when acting. The positive effect of the attention shift drill, in which an athlete learns how to focus his or her attention on sport performance (Rhoads, 2012). Studies of the understanding of cognitive changes among athletes are critical in developing better quality instructional practices and increased performance in athletics.

One major investigation was designed to test the effects of verbal feedback on learning skills (Magill & Schoenfelder-Zohdi, 2006). In addition, this ability is illustrated by the analysis needed to compare the relative efficacy of verbal input compared to the prototypical. Participants learned a regular gymnastics skill by watching a model prove it or receiving verbal feedback. Although the study found verbal feedback to support learning the gymnastics skills, it was shown that detecting a model was considerably better for learning it (Magill & Schoenfelder-Zohdi, 2006). Several studies provide experimental observational learning with the finding that skill rally can be more effective in the learning process.

2.2 Video Modelling

Video modelling is the ability to learn an act by looking at another person. Observational knowledge was first found in the studies of the classic "bobo doll" (Ram & McCullagh, 2003). These studies showed that after observing an adult model of these behaviours, children learned to be fierce and aggressive. While these experiments highlight negative behavioural forms that can be caused by observational learning, modelling has many beneficial applications. Numerous soundings have demonstrated observer learning as an effective method for teaching motor skills (Magill & Schoenfelder-Zohdi, 2006).

One of the earliest studies on video modelling of motor skills was directed by (Millar, Oldham, & Donovan, 2011). Those researchers wanted to show the modelling effect of motor learning. They conducted experiments that investigated the motivation to observe a correct model, observed a learning arrangement model and observed an incorrect model of the success of participants on two motor tasks. The engine responsibilities included rolling a ball up an inclined board to a "roll up" target area and operating two inclined rods to roll a steel ball up a "shoot the moon" gradient. The results showed the modelling effect for motor learning and showed no difference in performance between a live model and a recorded model that properly demonstrated the tasks (Parsons & Alexander, 2012).

A later study measured the benefits of results information to success knowledge when learning the tennis forehand (Maleki, Nia, Zarghami, & Neisi, 2010). The contributors were divided into two training groups, knowledge of the results and performance knowledge. The participants observed a model which shows the tennis

forehand. Upon perceiving the pattern, participants tried their skills when obtaining either information about their performance results or information about their procedure and technique. The researchers measured the outcome and form of learning trials of the participants, allowing them to evaluate performance changes. After analysing the data with a discriminating examination, the researchers found that the scores on the form of the learning of the participants were more pretentious than the results. Maleki et al. (2010) found that the knowledge of the performance group suggestively outstripped the knowledge of the results group in scores on its form. Many researches further supported the modelling impact of acquiring motor skills while showing the key role of cognitive figurative growth in observational learning (Milner, Fairbrother, Srivatsan, & Zhang, 2012).

Since studies have shown modelling to facilitate performance in the motor skills acquisition reasoning phase, it was important to identify the issues involved. Through video modelling, for example, the effects of age and number of presentations were measured (Luk, Cruz, & Fu Po Lin, 2009). Groups of college women with a group of elementary school-age girls to examine age differences. The number of modelling dissents was investigated by four modelling circumstances including demonstrations no, 4, 8 and 12. Participants ' form and performance were curtailed. The modelling impact has been observed in the process but not in the performance assessments. It was hypothesized that older participants would require fewer model observations, however, the data did not support this outcome. The exhibiting effect was also found only with 12 proofs. Luk et al. (2009) found that the number of observations generating a modelling effect was unique to the task and depended on the duration of the time of practice.

2.3 Verbal Instructions and Video Modelling

In addition to important research variables involving visual feedback, other scholars have tried to understand how motor learning takes place. While there is little disagreement among researchers about what motor skills learning requires, deciding exactly what knowledge is used in the learning process is a major challenge for researchers. Magill and Schoenfelder-Zohdi (2006) stated that engineering is an exploit problem-solving situation where the limbs must be synchronized and controlled to act according to time and space constraints in order to achieve the goal of a skill. How this question is unravelled has been studied in the skills of slalom skiers. The learning process was explored through pictorial presentation and verbal input. Every day before practicing a ski simulation, participants observed a skilled model performing the simulation of skiing slalom. It has been shown that observing an expert model will allow the acquisition of motor skills. This effect would mean the visual system plays an important role in motor learning. By observing the limbs and body actions of another person, the observer can transform visual indications into movement of his or her own body (Magill & Schoenfelder-Zohdi, 2006).

Magill and Schoenfelder-Zohdi (2006) reviewed an ability to learn rhythmic rope skills used in oppositions was correlated with a subsequent research gymnast. The researchers sought to examine the differences between a professional's visual modelling compared to KP's performance knowledge, such as how the skill was performed. A declaration script was created for trainers to use to control the learning process in the knowledge of performance conditions. Another group observed a model and received KP, another group observed a model stripped of KP, one group did not

observe a model but received KP and the final group did not see a model and did not receive KP (Magill & Schoenfelder-Zohdi, 2006).

The results of this intervention recognized feedback that was more critical for beginners than for learners who already had some of the skills learned. It has been shown that beginners need rigid performance feedback knowledge while descriptive performance knowledge is suitable for intermediate learners. Prescriptive feedback informs the learner what to do to correct an error in results, while descriptive feedback tells the learner what the error was. Descriptive performance knowledge is acceptable to intermediate learners, as they have sufficient knowledge to understand how to correct performance without further amplification (Magill & Schoenfelder-Zohdi, 2006).

In conclusion, a lot of research has been conducted to improve coaching practices. Studies have indicated the efficacy of instruction, verbal feedback, and video modelling. Several soundings found observer learning more efficient than verbal feedback (Aiken, Fairbrother, & Post, 2012). Others reported beneficial additive effects of observer learning combined with verbal instruction (Emmen, Wesseling, Bootsma, Whiting, & Van Wieringen, 2005). Emmen et al. (2005) found that it is important to reflect the learner's level of development, because increased feedback must be appropriate for the learning skills, the person learning the skills and the learning situation.

Many researchers began to examine forms of increased feedback on the indication from observational learning, along with the idea that viewing oneself could be a useful feedback expedient (Boyer, Miltenberger, Batsche, Fogel, & LeBlanc,

2009). Many researchers have started to examine forms of increased feedback on the indication from observational learning, along with the idea that viewing yourself could be an expedient feedback (Chiviacowsky & Wulf, 2007). Visual feedback received considerable attention (Kirazci, 2013). Visual feedback is the use of visual supports such as coach videos to provide feedback on a sportsman's motor skills (Zetou, Tzetzis, Vernadakis, & Kioumourtzoglou, 2002)

Maleki et al. (2010) argued that visual presentation is preferred to verbal instruction because language is not as skilled as vision to specify exact aspects of human movement. Zetou et al. (2002) have highlighted visual feedback as a valuable way to provide feedback. Other interferences showed it had negligible or even disadvantageous effects (Ciuffarella, Russo, Masedu, Valenti, Izzo, & Angelis, 2013). Ciuffarella et al. (2013) highlighted including immediacy of input, participants ' level of skill and the type of skill being trained.

Several studies were also performed into visual feedback for instructional volleyball. The earliest study of visual feedback in volleyball measured the setting act (Kirazci, 2013). Participants were taught using the two-hand overhand volley setting to strike the volleyball to a target. The instructor verbally assessed the performance of each individual and demonstrated the skill if necessary. The experimental group received the same instructional method and a visual criticism immediately after the presentation by the participant. While the study found the effectiveness of visual feedback to be insignificant, the writer felt that visual feedback might still be worthwhile for the occupation of physical education. While the study found the

efficacy of visual feedback to be insignificant, the writer felt that visual feedback might still be valuable for physical education (Kirazci, 2013).

Pollock and Lee (2002) conducted the first known study to evaluate the visual reaction in teaching the forearm pass in volleyball. The forearm pass is where the sportsman puts together two arms and joins the ball to his forearm. In this intervention, the control group received a conventional method of teaching including verbal instruction, demonstration and correction of teachers. The traditional experimental group used this teaching method, together with visual feedback. Participants were seventh and eighth graders from two schools who did not know the forearm pass beforehand. Total sessions were nine and participants were tested for their ability to pass a ball to a target. Visual feedback was shown to be cooperative for men but not for women in learning the volleyball forearm pass. In comparing the pre-test and post-test performance notches for passing, both the control and experimental groups enhanced. There was, moreover, no difference between treatment groups. Visual feedback therefore showed no additional benefits beyond old-style teaching methods (Pollock & Lee, 2002).

Boyer et al. (2009) also measured the volleyball forearm pass. This study verified the ability of novice high school girls to learn the pass with many types of visual feedback. The control group received verbal feedback on the proper technical competences. Experimental group One was taught through an expert video modelling the skill with verbal instructions logged by a teacher in physical education. Experimental group Two received the same instruction and watched a self-modelled video of the correct performance of the participant. In the next rehearsal session, the

self-modelled video was shown. The study results showed that verbal instruction appeared to be the critical component that enabled skill acquisition and retention, as all collections did the same in learning the volleyball forearm (Boyer et al., 2009).

The efficacy of visual feedback was also examined in an investigation focusing on the passing and setting skills in volleyball (Zetou et al., 2002). Passing is where an athlete personalizes his forearms to send the ball to the setter. Setup is where an athlete comes into contact with the ball with two hands over his or her head to send the ball in motion. This study was conducted with 32 beach-volleyball novices with an average age of 12. The efficacy of self-modelling in which athletes see themselves after learning a skill has been tested on the willingness of athletes to learn the volleyball skills. The self-modelling group was compared to a control group whose members established traditional feedback from a coach without receiving visual feedback. In addition to determining skill acquisition, this study examined the stage of self-efficacy of participants to see if visual feedback improved their level of self-assurance in their capacity to perform volleyball skills.

To measure progress in volleyball skills, a performance scale was developed based on the accuracy of passes or sets to a board of athletes. The trial's accuracy was scored from 1 to 4 with 4 being the highest grade. After 10 trials every participant could earn a maximum of 40 points. In addition to the assessment of skills, the passing and setting were also evaluated through comments. Passing was evaluated using the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD; 1984) Indoor Volleyball Transitory Test. Setting was evaluated through North Carolina State University Volleyball Skills Test (Zetou et al., 2002). The test

reliability for each test was high: r = .97 for passing and r = .94 for setting (Zetou et al., 2002). The results of this study showed that the self-modelling group reported greater changes in passing and setting than the control group did. The self-modelling group has also shown a superior improvement in self-efficacy compared to the control group (Zetou et al., 2002).

In another investigation, the use of visual feedback on setting and serving skills in volleyball has been investigated for education (Zetou et al., 2002). Setting is where an athlete touches the ball with two hands overhead to direct the ball through the air for a teammate to spike. Serving is the place where an athlete starts a rally by hitting the ball above his head. An experiment was conceived to investigate two different modelling types and presentation knowledge about the acquisition and retention of these skills. The participants included 116 boys and girls in elementary school with a mean age of 11.7 years. The participants were assigned randomly to one of two classes. One group observed a videotape of an expert model acting as a group of skill experts while the second group watched a videotape reiterating its own performance self-modelling group. During a 40-minute practice session, each group watched a videotape of a model or their own output for two minutes on two separate occasions.

The experiment measured the effects of the performance of each participant, along with the skill method. The setting skills of hitting the ball overhead with one's hands and sending the ball to a hitter and transitory contact with one's forearm and sending the ball to the setter were assessed on the basis of the participant's ability to direct the ball to a goal. A participant could notch up to five points per trial for the setting. A participant may score no more than four points per trial for passing. Two

observers tested performance systems, which evaluated the correct execution of seven elements of each skill. It was concluded on the basis of a post-test and preservation test that the expert modelling group performed better on the post-test and retention test comparable to the self-modelling group. The authors ideally based future studies on different settings of experience with both genders. Additionally, athletes with varying levels of expertise need to be examined while seeing a greater skill complexity (Zetou et al., 2002).

Another comprehensive research on the ability to serve in volleyball when evaluating the efficiency and self-efficacy of self-modelling (Ram & McCullagh, 2003). Self-modelling was operationalized as separate from visual feedback, since only the best clips of the performance of the participants were shown. Intentionally, the investigators picked optimal moves to improve the participants self-efficacy. Videotape replays were not shown after every trial but were amassed with highlights shown to the participant before the next session. This study applied a multiple basic, single-subject design, in which everybody was associated with their own scores (Ram & McCullagh, 2003).

Upon analysing the data, Ram and McCullagh (2003) found no implications in the participants performance scores or self-efficacy scores. One interesting finding was that participants were often amazed at the camera. The authors noted that learners might take a while to acquaint themselves with experiences of self-modelling. However, by the end of the study it became clear for the researchers that some coaching from a coach was necessary to direct the participants in their learning (Ram & McCullagh, 2003).

2.4 Summary of The Studies

Research on the effectiveness of visual feedback was carried out with a view to improving motor skills, sporting skills in general and volleyball skills while studies have been conducted to measure the ability of participants to learn how to spike in volleyball, no known studies have examined the use of visual feedback to teach volleyball spikes. Spiking involves jumping and touching the ball with one's hand with the purpose of pushing the ball to the side of the court of the opponent (Parsons & Alexander, 2012). Based on the mixed findings of the utility of visual feedback, it is still undetermined if visual feedback is successful as a means of increasing sports instruction. Moreover, several variables influence the efficacy of visual feedback as an instructive tool. Zetou et al. (2002) stated that several variables influence the efficacy of visual feedback as an instructive tool. This was accompanied by verbal feedback (Ram & McCullagh, 2003). Only verbal guidance and video modelling were analysed for both learning effectiveness. Both verbal and video showed the athlete a better result after the helps were received (Rhoads, 2012).

CHAPTER 3:

METHODOLOGY

3.1 Introduction

The study of this research was to differentiate the acute effect of verbal instruction and video modelling on volleyball serve among novice volleyball players. The description of the research design, population, sampling, instrumentation and data collection was discussed in this chapter.

3.2 Research Design

This study was an experimental research by using the True-Experimental Design. In this type of experiment design, the subjects were divided into two groups which consists of eight subjects per group. Two-group of female school students which were measure the acute effect of verbal instruction and video modelling on volleyball serve. Repeated design of measurements was a research technique involving multiple measurements of the same variable taken on the same subjects under different conditions or over two or more periods of time (Wagner, Pfusterschmied, Tilp, Landlinger, Von Duvillard, & Müller, 2014).

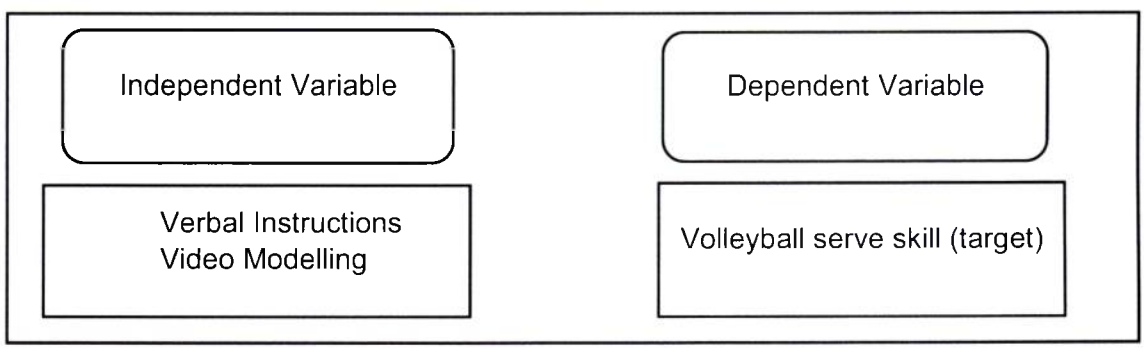

Figure 1: Research Framework Independent and Dependent Variable of The Study.

3.3 Population

The researcher had been deciding the population for this study based on the respondent that had been choose. The population for this study was at SMK Che Tom Sungai Petani Kedah that involved female students from 16 years old until 17 years old.

3.4 Sampling

This study involved N=30 female novice volleyball players and were in two-group, n=15 that were perform verbal instructions and video modelling. The age was ranged 16 to 17 years old. The subjects recruited were currently no experience in volleyball competition and open tournament. They were free from injuries and did not involve in any other volleyball skills training other than intervention during the study.

3.4.1 Sampling Technique

The researcher aims to measure the acute effect of verbal instructions and video modelling on volleyball serve among novice volleyball players. Convenience sampling technique was employed which it is a type of non-probability where members of the target population that meet the certain practical criteria, such as accessibility, graphical proximity, availability at a given time or the willingness to participate were include for the purpose of the study.

3.4.2 Sampling Size

A total of N=30 female novice volleyball players were recruited for this study. They were novice female volleyball players from SMK Che Tom Sungai Petani Kedah.

3.5 Instrumentations

In this instrumentation, the researcher was describing more details on specific about the standard protocol which was also known as testing during the experimental. Two group design were use in this experimental. There were two measurement periods which is pre-test and post-test. In the first measurement period, a pre-test for the volleyball serves was carried out and the AAHPERD's volleyball test for the serve (2002). The reliability of the tests was in acceptable ranges which is (r=0.80). After the intervention, were having post-test.

(Zetou *et al.*, 2002)

3.5.1 Verbal Instructions

Verbal instructions on how to perform underhand serve in volleyball. The subjects were practice by their own after receiving the verbal instructions feedback. Verbal instructions were given to the participants at the beginning in 2 minutes and in the middle of the 40 minutes of practice sessions. Verbal cues about some important factors of the skill which is:

1. Position of feet.
    - Stand in front with non-dominant feet and toes facing forward. Dominant foot should be in the back, with slightly pointing toes.
2. Position of body.
    - The direction of the body was facing the goal straight. Move the hips backwards and keep the upper back straight as you bring your shoulders to the ball. This takes the ball a little more, so that they have more power.

3. Position of hands.
    - Participants must bring back hitting paws. The ball should be at your mid-thigh elevation.
4. Ready the ball.
    - Slightly cup non-dominant hand and place the ball in it.
5. Point which to touch the ball.
    - Strike the ball with the heel of a hand as the open hand comes forward.

(Zetou *et al.*, 2002)

3.5.2 Video Modelling

Video modelling was show to the subject. The subjects were watching two times for 2 minutes each for 40 minutes practice session.

1. The subjects were stand in front of a laptop (ASUS) at distance of 2 meters.
2. Subject watched a demonstration by an expert model for 2 minutes at the beginning.
3. Another 2 minutes in the middle of a 40-minutes practice period.
4. The models were an elite male and a female gold medallist volleyball player in the Olympic games.

(Zetou *et al.*, 2002)

3.5.3 Testing

The purpose was to measure the participant's skill in serving. Equipment included volleyball net and poles and a marked court. The server stood opposite the marked court in the proper serving position. Underhand serve in hitting the ball over the net into the opposite court. The server was given 10 trials. When the ball hit the net and did or did not go over, it counted as a trial, but no points were given. The total number of points made was determined by where the ball landed in the opposite court. For all balls that struck on a line, the higher score of the areas concerned was awarded the maximum of 40 points.

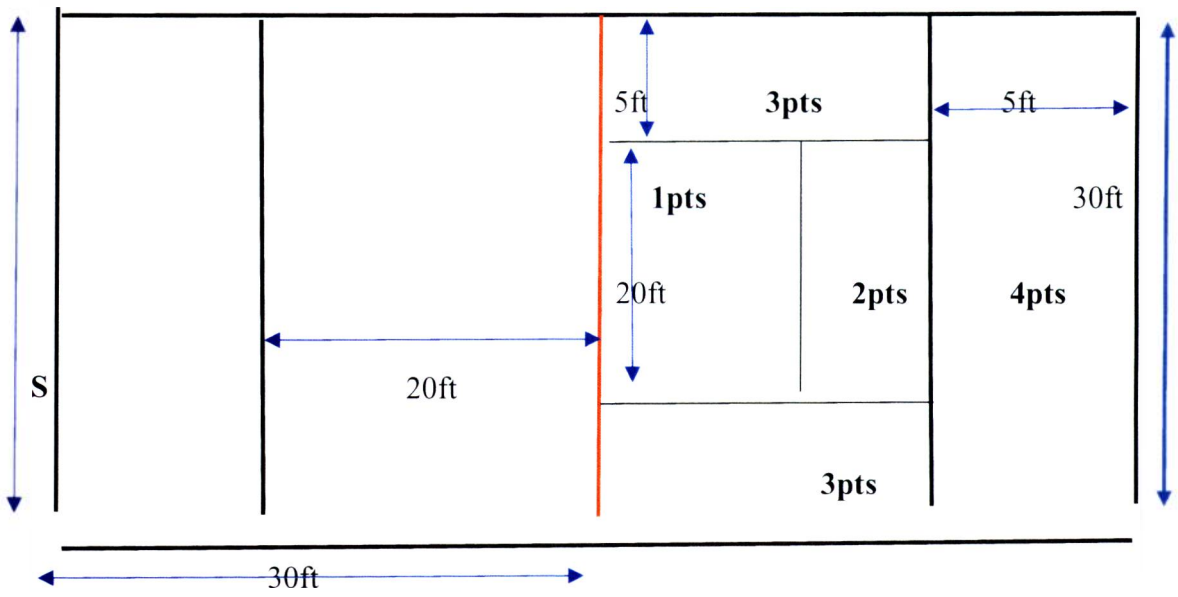

Figure 2: The test of serve skill.

3.5.4 Training Program

The training program for the participants is 6 session for intervention, 1 session for the pre-test, 1 session for post-test1 and 1 session for the post-test2. There were 9 session overall for this study. The participants N=30 were divided into two groups which is n=15. The first group started with verbal instructions and for the second group started with video modelling. Both groups were taking the pre-test on the same time, then for the first intervention group 1 started with verbal while group 2 started with video. After both group finish with their 3 intervention, there was post-test1 where the researcher was taking down the participants serve score. After the recovery period for 2 days, both groups were counter switch the types of learning which is group 1 was taking video modelling while group 2 was taking verbal instructions. After finish 3 session for intervention, both groups were having post-test2. During the post-test2, the researcher was taking down the participants serve score after finish for 3 session of intervention same method and procedure with post-test1.

Group	Sessions	Duration	Days	Total hour
Verbal Instructions	1 sessions/per day ➢ 4.30 pm – 5.30 pm	40 minutes per session	3 days	2 hours
Video Modelling	1 sessions/per day ➢ 4.30 pm – 5.30 pm	40 minutes per session	3 days	2 hours

Group 1 = Verbal instructions (n=15)

Group 2 = Video modelling (n=15)

No	Activity	Types	Volume
1.	Warm-up ➢ (Static stretching) ➢ (Dynamic stretching)	- Slow jogging - Arm swing (forward + backward) - Arm crossover - Lunges twist	- 1 set - 12 seconds each stretching - 10 minutes
2.	Pre-test ➢ Sunday	- Underhand serve	- 10 trials each subject
3.	Intervention phase (Verbal Instructions) ➢ Monday ➢ Wednesday ➢ Friday	- Position of feet - Position of body - Position of hands - Ready the ball - Point which to touch the ball	- 2 minutes at the beginning of the session - 2 minutes in the middle of 40 minutes session

4.	Intervention phase (Video Modelling) ➢ Monday ➢ Wednesday ➢ Friday	- The subject will stand in front of a laptop (ASUS) at distance of 2 meters. - Subject watched a demonstration by an expert model for 2 minutes at the beginning. - Another 2 minutes in the middle of a 40-minutes practice period. - The model was elite female gold medallist Olympic games.	- 2 minutes at the beginning of the session - 2 minutes in the middle of 40 minutes session
5.	Post-test1 ➢ Sunday	- The researcher will observe the subject perform the underhand volleyball serve	- 10 trials each subject - Scoring of 1-4 points
6.	Cooling down ➢ Static stretching	- From lower body to upper body	- 12 seconds each stretching - 10 minutes

Table 1: Training program 1

2 days recovery period			
Counter switch: Group 1 = Video modelling (n=15) Group 2 = Verbal instructions (n=15)			
No	**Activity**	**Types**	**Volume**
1.	Warm-up ➢ (Static stretching) ➢ (Dynamic stretching)	- Slow jogging - Arm swing (forward + backward) - Arm crossover - Lunges twist	- 1 set - 12 seconds each stretching - 10 minutes
2.	Intervention phase (Verbal Instructions) ➢ Monday ➢ Wednesday ➢ Friday	- Position of feet - Position of body - Position of hands - Ready the ball - Point which to touch the ball	- 2 minutes at the beginning of the session - 2 minutes in the middle of 40 minutes session - 10 trials for each subject
3.	Intervention phase (Video Modelling) ➢ Monday ➢ Wednesday ➢ Friday	- The subject will stand in front of a laptop (ASUS) at distance of 2 meters. - Subject watched a demonstration by an	- 2 minutes at the beginning of the session

		expert model for 2 minutes at the beginning. - Another 2 minutes in the middle of a 40-minutes practice period. - The model was elite female gold medallist Olympic games.	- 2 minutes in the middle of 40 minutes session
4.	Post-test2 ➢ Sunday	- The researcher will observe the subject perform the underhand volleyball serve	- 10 trials each subject - Scoring of 1-4 points
5.	Cooling down ➢ Static stretching	- From lower body to upper body	- 12 seconds each stretching - 10 minutes

Table 2: Training program 2

3.6 Data Collection

In this chapter was describe more specific and details about the data collection in this experimental. The same practice method for 3 practice sessions in 1 weeks which is for the serve skills but in different types of feedback. The one group of 15 subjects were given verbal instructions during the session and the other group of 15 subjects were observe a videotape of an expert model performing the serve skills during the session. One group was having 1 types of intervention. The subjects followed the training sessions in 1 weeks with 3 session in each week for 40 minutes per session.

There was pre-test, post-test1 and post-test2 for verbal instructions and video modelling during 9 session. Every skill was taught for 6 (6 x 40 min) practice sessions. 1 session for 40 minutes of practice. For the pre-test session, both groups were doing together before moving to next session. During the pre-test, the subjects were giving 10 trials each subject to serve while the researcher was taking down the subjects score.

After pre-test was done, for the next days both group that were divided for 15 subjects each group start with the intervention. The first intervention was held for 3 days for both groups. Group 1 which is verbal instructions were start with verbal feedback first while group 2 which is video modelling were start with video modelling first. As the subjects already finished during the 3 days, there was post-test1 for the first intervention.

Recovery period for 2 days were given to the subjects. Counter switch for both groups as group 1 were taking video modelling while group 2 were taking verbal instructions. The subjects continue with second intervention which is counter switch for the first intervention where is group 1 used verbal instructions and group 2 used video modelling. As the subjects finished for the second intervention for the next session, there was post-test2 for the second intervention.

When the tests were done, the data was collected and analysed by using SPSS for hypothesis testing.

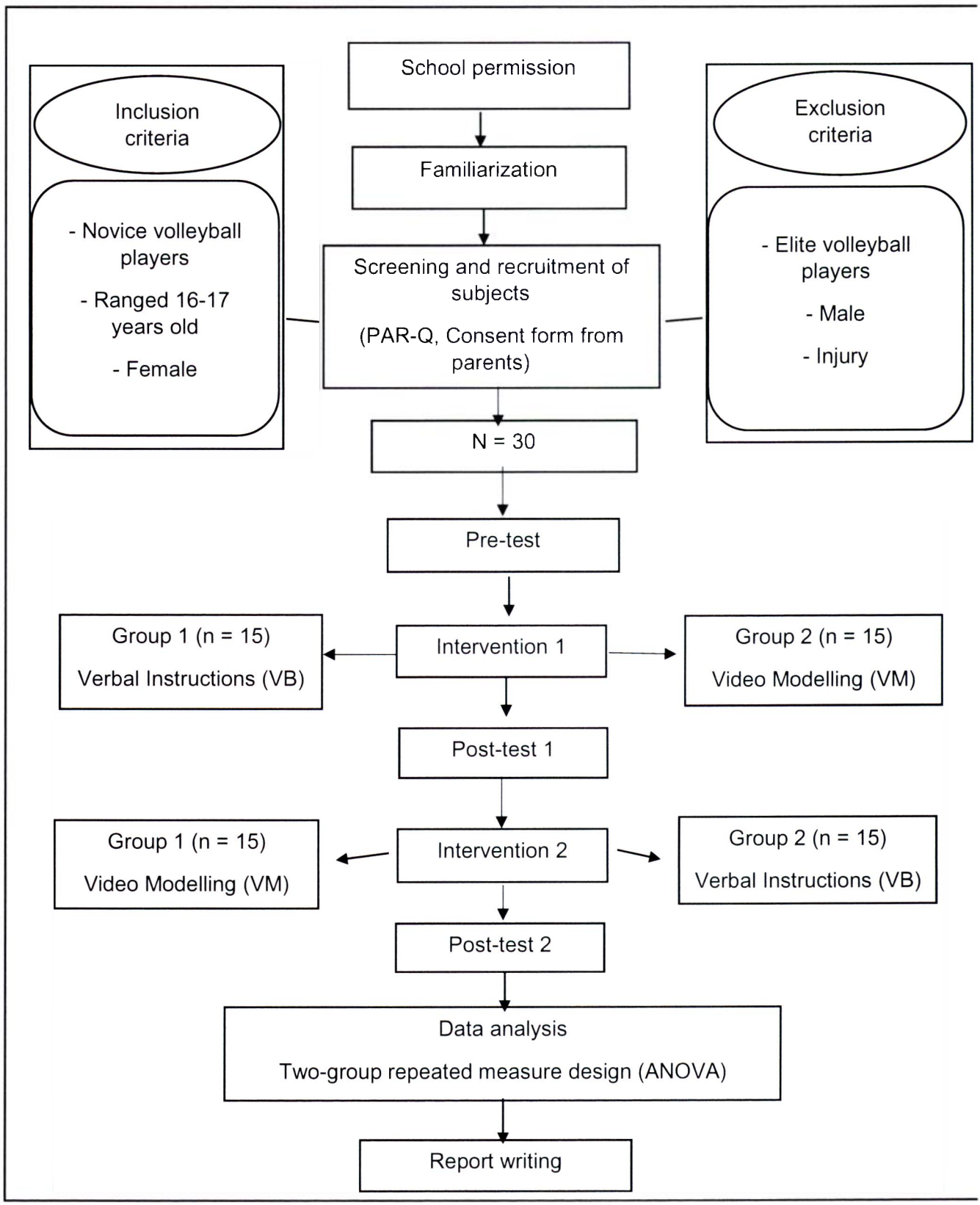

Figure 3: Flow Chart of study

3.7 Data Analysis

The data collected was analysed by using Statistical Package of Social Science (SPSS) version 22.0 Descriptive data was presented in mean and standard deviation. Two-way repeated measure design analysis of variance (ANOVA) was to be employed to measure the acute effect of verbal instructions and video modelling in volleyball underhand serve among novice volleyball players. The statistically significant was be set at 0.05 ($p<0.005$).

CHAPTER 4

FINDINGS AND ANALYSIS

4.1 Introduction

The purpose of the study was to analyse data about the acute effect of verbal instructions and video modelling on underhand volleyball serve among novice volleyball players. The video instructions and video modelling represented the independent variable, while the underhand volleyball serve represented dependent variable. The researcher used the SPSS software using Two-way repeated measure ANOVA for SPSS software version 22 to analyse the data.

4.2 Normality Test

Table 2 below illustrates the test of normality for pre-test and post-test for underhand volleyball serve score between two groups of verbal instructions and video modelling among novice volleyball players.

Table 3

Test of normality pre-test and post-test for underhand volleyball serve performance test (N=30)

Group	Skewness	Kurtosis
Pre-test	1.005	0.313
Post-test 1	0.706	0.936
Post-test 2	0.283	-0.931

Table 3 shows the normality for pre-test and post-test among novice volleyball player from Sekolah Menengah Kebangsaan Che Tom. Normality test was conducted to test the statistical assumption. The normality for pre and post for the serve score was tested by using Skewness and Kurtosis. The results showed the Skewness and Kurtosis values were ranged between -1 to +1 respectively. The data were normal as the values fell between the ranged. Thus, the data assumption of normality was met, and the parametric test could be used in the analysis of hypothesis testing.

4.3 Demographic Profile

Table 4

Descriptive data of the subjects

	N	Mean	±Std. Deviation
Age (years)	30	16.23	0.430
Height (cm)	30	156.43	5.606
Weight (kg)	30	54.38	9.406

Table 4 showed that the descriptive data of the subjects. There were 7 students from 17 years old while 23 students from 16 years old. It showed that the mean and standard deviation for age was 16.23 ± 0.430 years old. The height was 156.43 ± 5.606 cm and their weight were 54.38 ± 9.406 kg.

4.4 Descriptive Statistic for Means and Standard Deviation

Table 5

Descriptive statistic for means and standard deviation

Group	N	Mean	Std. Deviation
Pre-test	30	2.53	2.583
Post-test 1	30	8.00	3.705
Post-test 2	30	8.43	2.897

Table 5 represents the descriptive statistics for pre-test and post-test for the volleyball serve score. During the pre-test, the subjects' mean score was 2.53 and for the standard deviation is 2.583. At the end of the first intervention session, the means score of post-test1 increase to 8.00 while the standard deviation also increase to 3.705. At the end of the second intervention, the means score of post-test2 also increase which is 8.43 and for the standard deviation is 2.897.

4.5 Inferential Statistics

HA1: There is a significant acute effect of verbal instruction and video modelling on underhand volleyball serve among novice volleyball players.

HA2: There is a significance difference between verbal instruction and video modelling on underhand volleyball serve among novice volleyball players.

HO1: There is no significant acute effect of verbal instruction and video modelling on underhand volleyball serve among novice volleyball players.

HO2: There is no significance difference between verbal instruction and video modelling on underhand volleyball serve among novice volleyball players.

Table 6

Multivariate test of volleyball serve score

Effect	Wilks' Lambda	*F*	*Df*	*Sig*
Serve score	0.188	58.309	2.000	0.001

*significant level is at 0.05 ($p<0.05$)

A within-subject design test was conducted to test the hypotheses. The result shows that there were significant differences in within the subject's volleyball serve score in pre-test and post-test for both verbal instructions and video modelling group. The value of Wilks' Lambda for serve score is 0.188 with a significant value of 0.000 (which really means $p<0.05$). Because of p value is less than 0.05, it can conclude that there is a statistically significant effect for serve score. This suggest that there was a change in serve scores across three different periods. The main effect for serve score was significant. Thus, rejected null hypothesis 1.

Table 7

Test of between group effects (verbal instructions and video modelling)

Source	Type III sum of squares	*Df*	Mean square	*F*	Sig.
Intercept	3597.344	1	3597.344	177.612	0.000
Grouping	3.211	1	3.211	0.159	0.694
Error	567.111	28	20.254		

Table 7 support the null hypothesis 2 as the testing shows that there was no significant difference in volleyball serve scores for the two groups. Since the significant value is 0.694 which is not less than 0.05, so it can be concluded that the main effect for group is not significant. Thus, this supports the acceptance of null hypothesis 2.

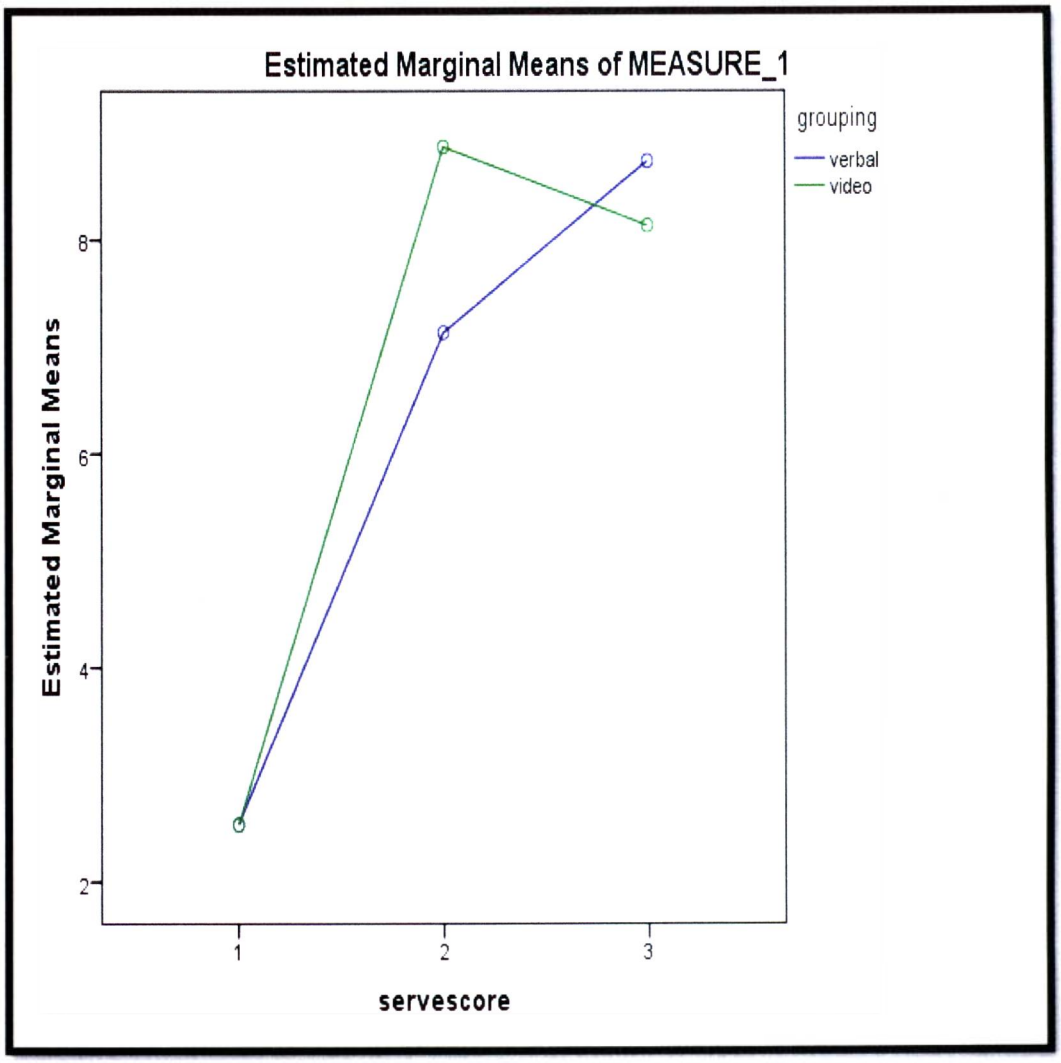

Figure 4: Plot of data of volleyball serve score

Figure 5 illustrates the differences in pre, and post-test of a volleyball serve score between verbal instructions and video modelling. It showed that there are differences between groups. Both verbal and video group showed improvement in post-test of the volleyball serve.

The blue line which is group 1 that start with verbal instructions first showed a better improvement for the post-test2 after using video modelling while for the green line which is group 2 that start with video modelling first showed a slightly decrease of performance for the post-test2 after using the verbal instructions. This result shows that both learning aids improve the performance, but video modelling improves better than verbal instructions.

4.5 Summary

A two-way between groups analysis of variance was conducted to examine the effect of two different interventions which is verbal instructions and video modelling on volleyball serve score across three time periods in pre-test, post-test1 and post-test2. There were significant differences within the subject's volleyball serve score in pre-test and post-test for both verbal and video group as the Wilks' Lambda for serve score is 0.188 as the p value is 0.000 ($p<0.05$). Both groups showed a significant improved in volleyball serve score during pre-test, post-test1 and post-test2. However, in comparing the two types of intervention was not significant ($p>0.05$). Since the significant value is 0.694 which is not less than 0.05, the main effect for group is not significant.

CHAPTER FIVE

DISCUSSION, CONCLUSION, AND RECOMMENDATION

5.1 Introduction

The aim of this study was to investigate the acute effect of verbal instructions and video modelling on underhand volleyball serve among novice volleyball players. This chapter discussed the result that has been collected and analysed.

5.2 Discussion

The determination of this study was to investigate the acute effect of verbal instructions and video modelling on underhand volleyball serve. The outcome of volleyball serve score showed that there was a difference score on two different interferences which is verbal instructions and video modelling on underhand volleyball serve among novice volleyball players.

Thus, it was theorized that practice on three days and providing verbal instructions and video modelling was enhanced performance in volleyball serve score. These findings are nearly decided with the results of previous studies (Kirazci, 2013) who found that both verbal guidance and video modelling have been successful in improving engine learning and control efficiency. Other than that, from the result there were discovery that video modelling groups exhibited better improvement than verbal instructions group. Based on Parsons and Alexander (2012), video modelling was more successful when enquiring into completely new motor skills associated with verbal instructions.

Magill and Schoenfelder (2006) suggested that observing a model and acquiring knowledge of the results provided novices with valuable information to produce and modify experiments. In technical terms, the skills or technique with the correct sequence are very useful and effective to increase the performance by observing expert or any model. All groups planned to increase significantly during the post-test, but the visual modelling was better than verbal instructions.

Pollock and Lee (2002) explained that modelling is an effective teaching tool, since acts that are difficult to verbally explain can often be taught visually. This also was reinforced in a study by Bouazizi, Azaiez and Boudhiba (2014) it was detected modelling effectiveness in improving skill performance.

It was confirmed that through modelling one acquires the cognitive components of the task, but skilled execution requires practice and feedback (Zetou et al., 2002). During the training session, learning assist feedback allows the participant to gain a better understanding of how to execute the skills as the subjects learned the skill technique of underhand volleyball. The findings confirmed with previous study (Paulo, Zaal, Fonseca, & Araújo, 2016). Knowledge consciously remembered in procedural learning in declarative memory, memories are demonstrated by task success and feedback has been successful in improving performance (Travlos, 2010). Therefore, the subjects serve score increase and showed an improvement from pre-test to post-test1 and post-test2.

Research into the use of verbal signals to guide learning shows that this is an effective form of learning (Kountouris & Laios, 2007). Verbal instructions give more specific understanding to the athlete in terms of which area of the body part need to focus, what muscle involve and the angle of movement to perform specific skills (Reeser, Fleisig, Bolt, & Rua, 2010). This also support the result why using verbal instructions also can have enhancement on their performance. As the subject for both groups receive one of the learning aids, it helps the subject to comprehend well and obtain new information and knowledge on how to perform the skill. Nevertheless, Reo and Mercer (2004) showed the verbal instruction had a significant influence on learning and exercise presentation.

The researcher outcomes showed that both verbal instructions and video modelling lead to improving learning and perform in volleyball underhand serve but there is no difference between both types of learning aids. Different individual has different understanding and learning skills (Travlos, 2010). Rhoads (2012) reviewed that memory system in long term memory helps the athlete to observe the technique and describe as the procedural knowledge for the athlete which allows the athlete to perform a skill and know how to do a skill. Verbal instructions focus on ques sequence that describe as declarative knowledge which allows the athlete to understand how to do a skill (Rhoads, 2012). As the subjects were giving 3 days for intervention to training the serve skill, the outcome of the performance increase for both group during post-test1 session. Rhoads, Da Matta, Larson, and Pulos (2014) found that there was no difference either start with verbal instructions or video modelling because the subject translate the movement information into a symbolic memory code that forms

the basis of a stored memory representation and is used when the subjects wish to perform the skills.

Both of this learning aids can give long term memory, impact and influence for the learners to be proficient in it and learn the correct technique (Milner, Fairbrother, Srivatsan, & Zhang, 2012). Therefore, neither use verbal instructions nor video modelling both are no difference in terms of helping the understanding and improving athlete performance.

5.3 Conclusion

As a conclusion, this study method is useful and permits to analyse the performance of the athletes. Underhand volleyball serves after receiving verbal instructions and video modelling would increase the ability of the athletes to get the highest score and improve their performance. The underhand volleyball serves were the test that can be used to measure athletic performance. The researcher subject's which is 30 female novice volleyball players showed there is a significant difference in both verbal instructions and video modelling.

Therefore, the result shows that both verbal instructions and video modelling help the subject to understand and improve how to perform the underhand volleyball serve. This also proved that it gives effect towards their performance. The researcher accepted Alternate Hypothesis 1 which stated that there was an acute effect of verbal instructions and video modelling and also accepted Null Hypothesis 2 which stated that there was no difference between verbal instructions and video modelling towards volleyball serve. There was a significant acute effect on verbal instructions and video modelling on performing underhand volleyball serve among novice volleyball players and there was no significant difference between verbal instructions and video modelling on underhand volleyball serve among novice volleyball players.

The researcher found that using verbal instructions and video modelling was contributed effectiveness in improving performance. Based on the findings of this experiment, the underhand volleyball serve test is correlated with both types of learning while receiving the verbal instructions and video modelling. This study provides useful values for the athletes in increase their performance.

Other than that, the result between verbal instructions and video modelling were significant difference but from the mean result, video modelling showed increased more improvement than verbal instructions. This finding could be agreement with the study result of Ivan, Tomislav, Goran, & Dejan, (2015), stated that video modelling to be more effective compared to verbal instruction when enquiring completely new motor skills.

Finally, as concluded both verbal instructions and video modelling showed improvement and increase the performance but using video modelling is more effective compare to verbal instructions as the novice need to observe and understand well. Thus, performance of the volleyball serve score was the factor that critical need to be considered in identifying the effectiveness of different types of learning which is verbal instructions and video modelling.

5.4 Recommendation

The purpose of this study was to investigate the acute effect between verbal instructions and video modelling on underhand volleyball serve among novice volleyball players. The researcher wants to know which types of learning that effectively enhance the athlete's performance. These studies were help coaches, athletes and sports person to benefit more from the underhand volleyball serve performance. The researcher suggests a few recommendations such as longitudinal study should be conduct in order to improve the performance of the athletes. Furthermore, further transversal studies with a larger number of subjects should be conducted as well.

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APPENDICES

APPENDIX A

Application for Research Ethical Approval

UNIVERSITI TEKNOLOGI MARA

FACULTY OF SPORTS SCIENCE AND RECREATION
UNIVERSITI TEKNOLOGI MARA SARAWAK

Application form for Ethics Approval

Ethics Committee of Research Project

Part A : Details of Research Project

Title of Research Project	:	**Comparison Between Verbal Instructions and Video Modelling On Volleyball Serve Among Novice Volleyball Players**
Name of Student	:	**Nabil Tahfiz Bin Md Saad**
Matric no.	:	**2017311699**
Programme	:	**Bachelor of Sports Science (Hons.)**

Supervisor Approval of Research Project:

✓	Agree to grant the Research Ethics Approval for the said study. Submission to the ethics committee is required.
	Agree to grant the Research Ethics Approval for the said study with minor amendments. Resubmission to the supervisor is required.
	Disagree to grant the Research Ethics approval for the said study. Resubmission to the ethic committee is required.

NORERIANI SABTURANI
PENSYARAH
FAKULTI SAINS SUKAN DAN REKREASI
UNIVERSITI TEKNOLOGI MARA SARAWAK

Name of Supervisor and stamp

Signature

1/7/19
Date

Ethics Committee Approval of Research Project:

✓	Agree to grant the Research Ethics Approval for the said study.
	Agree to grant the Research Ethics Approval for the said study with minor amendments and without resubmission.
	Disagree to grant the Research Ethics approval for the said study. Resubmission to the ethic committee is required.

PATRICKRAWA PITIL
PENSYARAH
Fakulti Sains Sukan & Rekreasi
Universiti Teknologi Mara Samarahan
Sarawak

Signature

Chairperson of the Ethics Committee

30/7/19
Date

APPENDIX B

Score Sheet

Name : _____ **Day** : _____

Age : _____ **Date** : _____

Height: _____ **Weight** : _____

Group : _____

No. of serve trials	Pre-test	Post-test (Verbal instruction)	Post-test (Video-modelling)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
Total			

APPENDIX C

Consent Form and Physical and Readiness Questionnaire

Participants Information Sheet

Comparison Between Verbal Instructions and Video Modelling on Volleyball Serve Among Novice Volleyball Players

Introduction of Study:

This study is about to measure the effect of learning style with different feedback in volleyball serve skill. The participants that involved will be given different types of feedback by the researcher. The participants will have new knowledge about volleyball sports.

Purpose of Study:

The purpose of this study is to compare and measure the effect of verbal instructions and video modelling feedback on underhand volleyball serve. This will help and support the participant and coach as well in learning and guide the players well.

Study Procedure:

In this study, the participants will be divided into two groups which have eight person each group. The two groups are (a) verbal instructions and (b) video modelling. Both groups will do the pre-test, then intervention phase for 8 session, and the last will have post-test after finishing the intervention phase. The duration is around 2 weeks.

Participation in Study

Your participation in this study is entirely voluntary. You may refuse to take part in the study or you may withdraw yourself from participation in the study at any time without penalty.

Benefit of Study

Information obtained from this study will benefit the researchers, Government of Malaysia, doctors and individuals for the advancement of knowledge and practice of medicine in future.

If you have any question about this study or your rights, please contact the investigator, Nabil Tahfiz Bin Md Saadat telephone number 013-4939045

Confidentiality

Your information will be kept confidential by the investigators and will not be made public unless disclosure is required by law. By signing this consent form, you will authorize the review of records, analysis and use of the data arising from this study.

Consent Form

To become a subject in the research, you or your legal guardian is advised to sign this Consent Form.

I herewith confirm that I have met the requirement of age and am capable of acting on behalf of myself /* as a legal guardian as follows:

1. I understand the nature and scope of the research being undertaken.
2. I have read and understood all the terms and conditions of my participation in theresearch.
3. All my questions relating to this research and my participation therein have been answered to my satisfaction.
4. I voluntarily agree to take part in this research, to follow the study procedures and to provide all necessary information to the investigators as requested.
5. I may at any time choose to withdraw from this research without giving reasons.
6. I have received a copy of the Participants Information Sheet and Consent Form.
7. Except for damages resulting from negligent or malicious conduct of the researcher(s), I hereby release and discharge UiTM and all participating researchers from all liability associated with, arising out of, or related to my participation and agree to hold them harmless from any harm or loss that may be incurred by me due to my participation in the research.

	Name & IC no	Signature	Date
Participant			
Guardian/Parent			
Researcher	NABIL TAHFIZ BIN MD SAAD 970603-02-5475		

SOAL-SELIDIK KESEDIAAN AKTIVITI FIZIKAL
PHYSICAL ACTIVITY READINESS QUESTIONNAIRE (PAR-Q)

Sila baca soalan di bawah dengan teliti dan jawab dengan jujur: YA atau TIDAK
Read the question below carefully and answer honestly: YES or NO

	Ya *Yes*	**Tidak** *No*
1. **Pernahkah doktor mengatakan bahawa anda mempunyai masalahjantung dan hanya boleh melakukan aktiviti atas saranan doktor?** *Have your doctor said that you have heart problems and can only do exercises recommended by your doctor?*		
2. **Adakah anda berasa sakit di bahagian dada apabila melakukan aktiviti fizikal?** *Do you feel pain in the chest area when doing any physical activity?*		
3. Dalam tempoh sebulan yang lalu, pernahkah anda mengalami sakit dada ketika tidak melakukan sebarang aktiviti fizikal? *Since last month, did you have any pain in the chest area even when not doing any physical activity?*		
4. Adakahandahilangkeseimbangandisebabkanpeningataupernahkahandapengsan? *Have you ever fainted before?*		
5. Adakah anda mempunyai masalah tulang atau sendi yang boleh menjadi lebih kritikal dengan perubahan aktiviti fizikal anda? *Do you have any bone or joint injuries which can become more severe when you change your exercise routine?*		
6. Adakah doctor anda sedang mempreskripsi sebarang jenis dadah (contohnya, pil air) untuk tekanan darah atau keadaan jantung anda? *Is your doctor advises you to take drugs for high blood pressure and heart failure?*		
7. Adakah anda mempunyai lain-lain sebab untuk tidak melakukan aktiviti fizikal? *Do you know any reason that causes you unable to play sports?*		

- **Sekiranya anda menjawab Ya untuk satu lebih soalan, dapatkan nasihat dari doktor sebelum menjalani kajian ini.**
  If you answer Yes on one or all the questions, seek advice from your doctor before proceeding into this study.
- **Sekiranya anda menjawab Tidak bagi semua soalan, anda boleh terus menjalani kajian ini.**
  If you answer No to all questions, you may proceed with the study.
- **Sekiranya anda berasa kurang sihat, sila tangguh sehingga anda sembuh sebelum meneruskan dengan kajian ini.**
  If you are feeling not well today, please hold until you recover before proceed with this study.

APPENDIX D

Approval Letter

Am
an Hal Ehwal Akademik & Antarabangsa

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Surat Kami : 100-UiTMKS (HEA&A. 30/7)
Tarikh : 16 Mei 2019

KEPADA SESIAPA YANG BERKENAAN

Tuan/Puan

Sila rujuk lampiran untuk senarai nama pelajar yang terlibat.

Sukacita sekiranya pihak tuan/puan dapat membantu dan memberi kerjasama kepada pelajar di atas dari Program **Sarjana Muda Sains Sukan (Kep)(SR243)** untuk membuat satu kertas projek bagi kursus **SRT606 (Research Methodology In Sport And Behavioural Sciences).**

Maklumat-maklumat daripada jabatan/agensi/syarikat tuan/puan amatlah diperlukan bagi melengkapkan kertas projek tersebut. Semua maklumat yang tuan/puan berikan adalah untuk tujuan akademik sahaja.

Sila hubungi Penyelia Projek, **Cik Patricia Pawa Pitil** ditalian **0135633605** sekiranya pihak tuan/puan ingin mendapatkan maklumat lanjut berkaitan perkara di atas.

Kerjasama daripada pihak tuan/puan kami dahului dengan ucapan ribuan terima kasih.

Sekian.

Yang benar

NOR HAYATI ABDULLAH
Pegawai Eksekutif
Bahagian Hal Ehwal Akademik & Antarabangsa
bp Rektor

lfm