

Result of Mental Imagery and Demonstration Intervention on Primary Four Pupil's Acquisition of Soccer Dribbling Skills

Oluwaseyi Olubunmi Sodiya¹, Syed Kamaruzaman Bin Syed Ali²

Department of mathematics and Science Education, Faculty of Education, University of Malaya, Kuala-Lumpur -Malaysia

Abstract: ***Aim:** This study investigates the soccer dribbling performance time and dribbling technique of primary four pupils using mental imagery combined with the physical demonstration during soccer practice in physical education classes. **Material and Methods:** The study was conducted using a true experimental research design. Randomized pre-and post-test control group design for the intervention program, students were randomly assigned into three different groups of MIDG, MIG and CG using fishbowl method of selection for a pre-test, post-test data collection procedures on children's soccer dribbling performance time to answer the hypothesis that mental imagery and demonstration approach is an effective method of teaching and enhancing primary school children's soccer dribbling skills. **Results:** ANCOVA was calculated to examine the effect of soccer dribbling performance time of the primary four pupils controlling for the effect of Pre-test. There is significant difference between the groups after intervention program for the Post-test score $F(2, 55) = 18.315, p = .047$. **Conclusion:** The findings indicate that the Mental Imagery and Demonstration group (MIDG) shows significant improvement over the mental Imagery group (MIG) and Control group (CG). In addition, it shows the potential benefits of mental imagery and demonstration as a retention strategy intended for novice learning soccer dribbling skills. The combination of mental imagery and demonstration teaching methods are promising practices for motor skills acquisition in primary school children.*

Keywords: Auditory, kinetic, Learning, Motor-Skills, Visualization

1. Introduction

In the past few years, young children of both male and female have developed a high interest in the game of soccer, either participating in school physical education programs or soccer academies within their community. To cater to this demand, Soccer Academies have been established for youth development to provide children with the opportunity to learn soccer skills. Numerous research on soccer or other sports games reports individual stage by stage progress of learning motor skills relating to the important roles of the coach and availability of facilities to facilitate a progressive learning process.

Some researchers provide examples and gave details in their findings on instruction, demonstration and visualisation. A. M. Williams and N. J. Hodges (A. M. Williams & Hodges, 2005) stated that current skills practice with instruction and skill acquisition in a game of soccer were based on tradition method, intuition, and observing coaches' demonstration for reproduction. This study provides details for sports practitioners on the role of skill acquisition and practice to enhance quality performance at all levels of the game.

1.2 Purpose of the Study

The purpose of this study is to investigate the effectiveness of Mental Imagery and Demonstration on the acquisition of Primary Four Pupils Soccer Dribbling skills, mental imagery combined with physical demonstration and practise for children to observe/watch and mimic the output during the performance. This study examines the effect of three categories in acquiring complex skills: kinetic, visual, and auditory.

1.3 Statement of the Problem

The teaching methods on soccer skills has been one of the major factors affecting children's acquisition of basic soccer skills because lot of time is spent daily in the attempt to acquire the skills and there are still lack of improvement in the game which is often attributed to the inability of coaches/teachers to implement suitable demonstration and imagery methods during practice. (A. M. Williams & Hodges, 2005) identifies important factors underpinning elite sports performance and questions some of the popular and traditional approaches that currently seem to direct soccer training: style, method, and approach.

1.4 Objectives of Study

According to Bandura's widely accepted Social theory of learning (1977) which recount learning as the cognitive process that occur in a social context and take place through observation or verbal instruction, even in the absence of motor reproduction or direct reinforcement, the theory of demonstration and its effects on the behaviour of the students during learning.

The general objective of this study is to investigate the effectiveness of Mental Imagery and Demonstration on the acquisition of soccer dribbling skills among primary four pupils.

The Specific objectives:

- To identify if there is any statistical significant difference between the groups after intervention of Mental Imagery and Demonstration on Primary Four Pupil's Soccer Dribbling Performance time.
- To Identify and report if there is any statistical Significant difference between the Pre-test and Post-test score of

Mental Imagery and Demonstration Group (MIDG) on Primary Four Pupil's Soccer Dribbling Performance time.

- To Identify and report if there is any statistical Significant difference between the Pre-test and Post-test score of Mental Imagery (MIG) on Primary Four Pupil's Soccer Dribbling Performance time.

1.5 Research question

The study on the Impact of Mental Imagery and Demonstration on Primary Four Pupils Soccer Dribbling Performance was guided by these three research questions.

- Is there any statistical significant difference after intervention between Mental Imagery and Demonstration group (MIDG), Mental Imagery group (MIG) and Control group (CG) on the primary four pupils acquisition of soccer dribbling in performance time?
- Is there any statistical Significant difference after intervention between the Pre-test and Post-test score mean score of Mental Imagery and Demonstration Group (MIDG)?
- Is there any statistical Significant difference after intervention between the Pre-test and Post-test mean score of Mental Imagery (MIG)?

2. Review of Literature

Many theories have been proposed to explain the acquisition of motor skills in the field of sport. Though the literature of this study covered a wide variety of studies ranging from scholarly articles, books and other sources relevant to this study, the review concentrates on four major themes that affect the acquisition of motor skills in sports performance, especially the acquisition of soccer dribbling skill among young learners or a novice to be exact.

Foremost, this study focuses on four major variables, namely the effect of mental imagery and demonstration on the acquisition of soccer dribbling skill, and the practical application (actually doing it). A demonstration is the most common method used by coaches/teachers to convey information to learners. It is said to be more effective than pure verbal information. If coaches/teachers are not comfortable with this approach, it is recommended that they select one of the more capable players, take him/her through the skill, action, and then have him/her perform for the group, according to (Jayanthi, Pinkham, Dugas, Patrick, & LaBella, 2013) children participation of sports activity involves children free play and enjoyment and highly structured, deliberate practice devoted to sports-specific skill development. In other words, a guidance is needed or children learning motor skills to ensure effective learning.

Imagery, visualisation, mental practice and mental rehearsal have been used interchangeably. Researchers, sports coaches, and athletes describe it as a powerful training technique this was stated by (Taylor, Wilson, & Kinetics, 2006). Mental imagery is referred to as visualising, hearing the sound, and experiencing the so-called 'feel' of the respective action through imagination. Recently, there has been a success story about the use of 'game sense theory' as an effective way of acquiring and improving sports skills.

However, limited literature exists to date on the effects of this application in the acquisition of soccer skills. On the other hand, the use of mental imagery for skill acquisition is a new trend, but more investigation is needed on combining physical demonstration and mental imagery for primary school pupils on the acquisition of motor skills. This study aims to investigate the effectiveness of mental imagery and demonstration on the acquisition of primary school pupils. This chapter provides an overview of the literature and related theories regarding mental imagery and demonstration on motor skill acquisition. Conceptual Framework below in (

2.1 Conceptual Framework)

2.1 Conceptual Framework

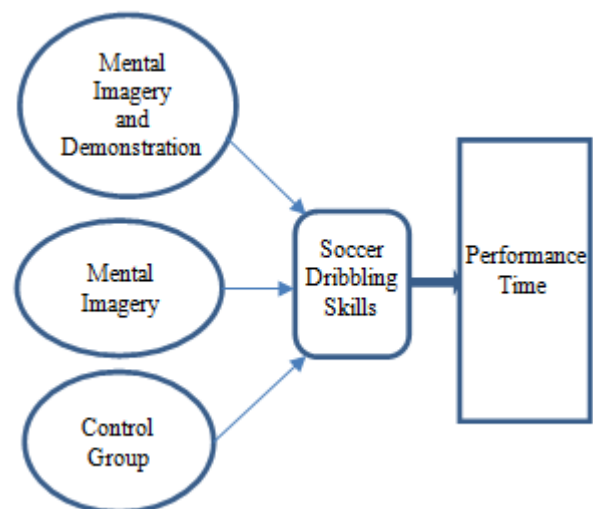


Figure 1: Conceptual Framework. Impact of Mental Imagery and Demonstration on Primary Four Pupils Soccer Dribbling Performance

The diagram above in

2.1 Conceptual Framework, describes the conceptual framework of the intervention, the independent variables are the demonstration and mental Imagery, the physical demonstration combined with the video visual imagery for mental practice during the acquisition and practice of soccer dribbling skills. The researchers are keen on the effects of using both approaches together to check the impact it will have on the students dribbling speed after the intervention.

It will also be interesting to see the amount of effects the control group can produce in the absence of zero intervention program compare to the MIDG and MIG groups. Other factors that can also affect the outcome of acquisition are the extraneous variables such as "Age, Gender, Experience, Environment, Coaches/ Physical education teachers, Equipment, and Students" the findings of this study will only focus on the effects on Demonstration and Mental Imagery. The investigation application stages during learning process consists of the practice, training approach and method used during the acquisition process by the coaches or physical education teachers, whilst, a soccer dribbling skill test will be used at this stage to measure the outcome of the application process.

In Addition, the students will attempt the post-test after the 9 weeks intervention, this enable the researcher to measure and check for the significant outcome of the learning process if any. The researchers want to find out the Impact of Mental Imagery and Demonstration on Primary Four Pupils Soccer Dribbling Performance, to know if there is any significant difference between the post-test score of the Control (CG) the (MIG)and the (MIDG).

2.2 Demonstration

A demonstration can be understood as the act of showing or demonstrating a given motor skill. The technique is used for various types of learners because they can now observe the specific actions and movement shown by the coach/teacher rather than receiving only verbal instruction before performing and mirroring the demonstrated technique. Some participants learn quicker, which provides the opportunity for peer learning. This creates the so-called 'teachable moment' by using teammates as demonstrators and observing others performing the correct technique, which develops motivation for others to strive to perform equally as well. On the other hand, any demonstration can easily fail if skills are not presented correctly. In this case, it is more difficult to comprehend the involved skill technicalities. If learners attain these incorrectly, especially at the early stage, their interest diminishes because improvement is minimal. It is, therefore, essential that coaches/teachers have the required expertise and qualifications.

There is possibility that some coaches/physical education teachers are not able to demonstrate the task to the children, because not all physical education teachers can play all sports game; Instead, its recommended that teacher should and rehearse the skill or movement several times, before demonstrating the skill to the entire group. Coaching/teaching performance and effectiveness are important considerations in athletic performance and participation in sports according to (Lambourne, Audiffren, & Tomporowski, 2010)&(Lynch, Ferguson, & Lynch, 2017)propose that coaches/teachers have to possess the 'know how' of demonstration, and at the same time the ability to decide on the appropriate timing to implement the demonstration.

According (de Paor, 2015), stated in their research study the professional development in education to support curriculum implementation that, "Practising demonstration inside the school-based coaching context can provide the instructors with a new educational module for action, thereby reinforcing the main messages learned in their initial in-service training at the same time, the demonstration needs to be sufficiently invitational thereabouts that instructors feel positive about the module and given opportunity to implement new methodologies constantly also supported by (Bennie & Langan, 2015) that the school physical education plays a vital role in adolescents' physical activity lives, What's more, educators are vital to children experiences in physical activities. Further stating that the role of coaches/physical education teachers is crucial to students during the early stages of motor skill acquisition because they look toward following the initial actions by the demonstrator. It is therefore very important for

coaches/teachers to be able to perform complex skills and demonstrate correctly.

The importance of demonstration in learning have been proven and highlighted by various researchers (Lander, Barnett, Brown, & Telford, 2015) stated that providing demonstrations and teaching Instruction is therefore seen as critical to learning gross motor skills and suggested fundamental movement skills instruction and assessment practices for in-service physical education teachers. This is crucial because children learn not only particular actions or movements; they also learn the underlying principles, and systems to perform under different circumstances.

2.3 Mental Imagery

Imagery has been described as "the use of all of the senses to re-create or create an experience within the mind "Imagery has both a cognitive and motivational characteristic. The cognitive feature of images is the use of mental imagery to experience sports activities competencies and to devise techniques earlier for competitions (Parnabas, Parnabas, & Parnabas, 2015),Furthermore,(Obrusnikova & Rattigan, 2016)describes the benefits of VM and VP and presents eight basic steps to implementing them into physical education classes to promote the acquisition of fundamental motor skills in children(Munzert & Lorey, 2013)) mental imagery and mental practice play a key role in many sport games, mental imagery in not only for the motor skills acquisition, it can also help the athletes during preparation for competitions or recovery from injuries. Though, this study focused on the use of mental imagery on primary school pupils, but we can't overlook the impact of mental imagery on adult (Burnett Heyes et al., 2017)stated that mental imagery has a powerful impact on emotion and cognitive processing in adults.

Furthermore, mental assignments and its viability will be great recorded to sports writing, (Andrade, May, Deeprose, Baugh, & Ganis, 2014) mental imagery may additionally arise in any sensory modality, despite the fact that visual imagery has been most studied. A sensitive measure of the vividness of images across a variety of modalities is needed, visual symbolism need aid focused on the supposition that visual symbolism is a special-purpose part from cognitive architecture, which holds representations.

This miss the point of constantly on properties that might make display done a real visual scene. One clarification on the matter of why results change might be the individual contrasts two different ways of learning and the execution of motor and mental skills (Vealey & Greenleaf, 2001). Researchers can't control for imagery capacity, controllability, and past encounters. Imagery capacity has two compelling variables: firstly, how plainly students can see a picture and how nitty gritty the picture appears to them and secondly the student's capacity to control parts of the pictures they wish to change. Imagery requires composed, constant practice for to have the coveted impact on execution. Consider demonstrated orderly practice adequately expanded imagery capacity.

According to (Gould, Voelker, Damarjian, & Greenleaf, 2014) the study provide sport psychologists and coaches with a comprehensive and practical overview of imagery theory, research, and intervention. Specifically, the following 6 areas are addressed: (a) the nature of imagery and how it can enhance sport performance; (b) theories and models explaining the relationship between imagery and performance; (c) evidence of the importance and utility of imagery training programs; (d) general guidelines for using imagery; (e) recommendations on how to implement an imagery training program; and (f) problems and pitfalls often made in imagery training programs, as well as ways in which they can be avoided. Whilst, (S. E. Williams, Burns, & Cumming, 2013) stated that studies support the need to use imagery ability measures that most closely match the type of imagery.

On the other hand, it is proposed that an internal visual imagery point of view might be most gainful for open/receptive skills that depend vigorously on recognition (White & Hardy, 1995). Be that as it may, all imagery research is not reliably in concurrence with these proposals, and more broad research is expected to check the commonness of imagery sorts as it identifies with the attributes of development, and to pick up a more top to bottom comprehension or the irregularities in the exploration. However, it is impractical to set up a rule for an imagery sort related to the frame and procedure of a motor ability (Callow, Hardy, & Hall, 2001) & (Abdin & Bell, 2010) because imagery facilitates feelings of competence and successful skill performance. To completely benefit from mental imagery practice, students must have the capacity to take part in mental imagery adequately. While a vast amount of literature has analysed and explained the impacts of imagery intervention on skills performance (Weinberg, In, & 2011, n.d.) and building mental toughness is one of the key to motor skills performance.

However, the imagery session must comprise the sensations of 'feel, taste, smell, and hear, coaches/physical education teachers need to provide the necessary information. As stated by (Debarnot, Sperduti, Di Rienzo, & Guillot, 2015a), that learning the ability for improvement in perceptual, cognitive, or motor skill execution taking after demonstrated in figure 2 below, those act modes from claiming physical practice motor imagery on motor skill learning to secure of the master level of execution. The diagram below is a practice mode that shows how coaches / physical education teachers and implementation of both mental imagery and demonstration during acquisition of basic motor skill

2.4 Performance

When students have accomplished the movement or acquired motor skills, it will become part of their lifestyle is at home. H. G. Williams et al., (2008) Stated that children with poorer motor skill performance were less active than those with better-developed skills. This can be because of the acquisition of the skills.

The acquisition of the skills can be the factor to better skill performance or poorer skills performance and looking at the relationship between motor skill performance and physical

activity (PA) important to the health of children, particularly obesity prevention. Robert L Woolfolk, Parrish, and Murphy, (1985) Claimed that the effect of imagery instruction on a basic motor skill accuracy task (putting a golf ball). Which showed a significant effect on performance improvement in the experimental manipulation. It shows that mental imagery instruction was effective in the acquisition of motor skill. In addition to the effectiveness of imagery on the acquisition of motor skills for better performance, (White & Hardy, 1995) stated that external visual imagery was found to be more effective.

2.5 Theoretical Framework

This study Impact of Mental Imagery and Demonstration on Primary Four Pupils Soccer Dribbling Performance is supported by the Memory model theory of (Atkinson and Shiffrin 1968), 'Learning model shows how learning take place during the acquisition of motor skills. Using mental imagery and physical demonstration to acquire a new skill during soccer practice.' The researcher relates the stages of memory learning process. The external stimuli in this study is the mental imagery and physical demonstration, the children input through observation of physical education teacher/coach demonstration and video imagery for the student's observation and main focus display, the connection between the theories of Atkinson and Shiffrin (1968) and explain the role of video imagery and physical demonstration during acquisition of the soccer dribbling skill of children during soccer practice.

The two-major important part of memory model is the input and the out-put, the input approach must be original, well organise, accessible and valid for the children's age category. if the input is wrong, it will affect the out-put which is the performance of the children. Therefore, during the input process the demonstrator have to demonstrate the skills correctly and the video image of the expert have to be clear and simple. Complex motor skills should be breakdown using part method approach. see below in (Figure2.) Memory model of Atkinson and Shiffrin (1968) for Impact of Mental Imagery and Demonstration on Primary Four Pupils Soccer Dribbling Performance.

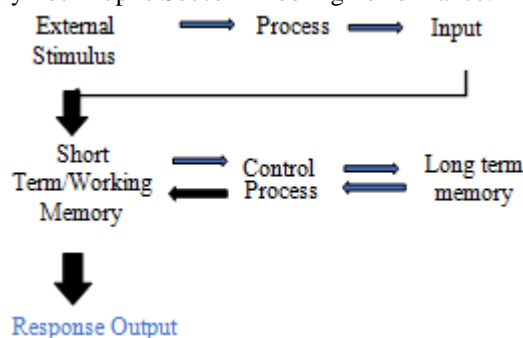


Figure 2: Memory model of Atkinson and Shiffrin (1968) for Impact of Mental Imagery and Demonstration on Primary Four Pupils Soccer Dribbling Performance

2.6 Summary

The literature review of this study focuses foremost on the current trends on the effects of the mental imagery and demonstration on the acquisition of motor skills and

performance on children's learning and practising of sports skills within the past few years. In addition, the literature review intent is to show the changes of researchers, data collection, and potential newer findings on the acquisition of motor skills by adopting the use of mental imagery and demonstration in the teaching of motor skills for students in our various schools. It is clear from all the literature reviewed that mental imagery and demonstration are widely used across academic fields in the learning and acquisition of skills as various researchers and most investigations yield positive results in the past and till date.

Motor imagery and modelling versus physical practice are still being debated, although most recent investigations show that motor imagery and modelling groups obtained significantly higher mean scores than the physical practice group, which suggests the strong application potential of motor imagery as a training tool. However, as seen in Douglas L. Weeks and Kordus, (1998) which insisted that the effectiveness of demonstrations needs to be judged relative to the task context.

This suggests that the demonstration model might work effectively based on the task presented. Nevertheless, more research and testing are required for a better understanding of the effects of the mental imagery and physical demonstration for the acquisition of motor skills of children and as a teaching and learning tools for physical education teachers and coaches.

3. Research Methodology

The study investigates the Impact of Mental Imagery and Demonstration on Primary Four Pupils Soccer Dribbling Performance. Specifically, this study examined the effect of three categories in acquiring complex motor skills: kinetic, visual, and auditory. The field of this study is learning and teaching /coaching of sports skills in physical education classes and the significance of this study is to propose to physical education teachers, coaches and the educators in the field of coaching and teaching of sports skills to children the use of mental Imagery combine with physical demonstration during soccer practice and physical education classes.

3.1 Research Procedure

As indicated in the below in figure 3, true experimental research design was used to investigate Impact of Mental Imagery and Demonstration on Primary Four Pupils Soccer Dribbling Performance. A randomized pretest-posttest control group design, it may be referred among all researchers as a strong research design which allows research subjects to be randomly selected and assigned to either a control group or an experimental group for the research study. The three groups of participants were tested on the dependent variable for pre-test and post-test after the research intervention condition was done, which takes a duration of nine (9) weeks. (Grimshaw, 2000) Stated that the randomization process ensures that, all else being equal, both known and unknown biases are distributed evenly between the trial groups. A pre-test soccer dribbling skill test was used to diagnose the students after the selection was made. After the pre-test, the nine (9) weeks intervention

program took place, the students that were randomly assigned to experimental group (1) MIDG, they undergo one training session per week for nine (9) weeks using mental imagery and demonstration intervention.

The students that were randomly assigned to experimental group (2) MIG undergo one training session per week for nine (9) weeks using mental imagery intervention, while the students in the control group only practiced one training session per week for nine (9) weeks without any intervention but with the presence of a teacher monitoring and control the kids in terms of behaviour and for safety reasons regarding injuries such as legs or head collision. After the nine (9) weeks of the intervention post-test was conducted for all the groups. The two experimental groups and the control group, the data collected was computed into SPSS for analysis and the result was reported in chapter four of this study.

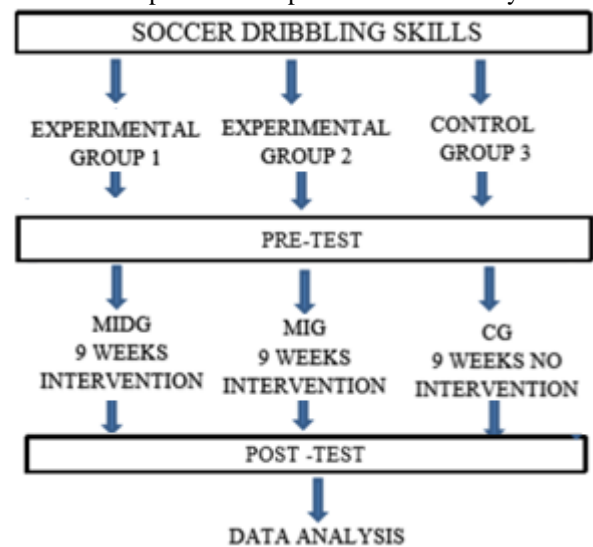


Figure 3: Research Procedure Impact of Mental Imagery and Demonstration on Primary Four Pupils Soccer Dribbling Performance

3.2. Study design and Participant

The study used true experimental research design to investigate the Impact of Mental Imagery and Demonstration on Primary Four Pupils Soccer Dribbling Performance. A randomized pretest-posttest control group design, it may be referred among all researchers as the best research design, it allows research subjects to be randomly selected and assigned to either a control group or an experimental group for the research study.

The participants were tested on the dependent variable for pre-test and post-test after the treatment which runs for a duration of nine (9) weeks. Grimshaw, (2000) Stated that the randomization process ensures that, all else being equal, both known and unknown biases are distributed evenly between the trial groups. A pre-test soccer dribbling skill test was used to diagnose the students for the pre-test, followed by nine (9) weeks intervention program, the students in the experimental group (1) MIDG, undergo one training session per week for nine (9) weeks using mental imagery and demonstration intervention.

The students that were randomly assigned to group (2) MIG undergo one training session per week for nine (9) weeks using mental imagery intervention, while the students in the control group only practiced one training session per week for nine (9) weeks without any intervention but with the presence of a teacher monitoring and control the students in terms of behaviour and for safety reasons, such as legs or head collision. After the nine (9) weeks of the intervention post-test was conducted for all the groups. The two experimental groups and the control group, the data were collected and computed into SPSS for analysis, the result was reported in chapter four of the study.

3.3 Population

The target population for this study were primary four pupils at the Alice Smith International School Jalan Bellamy located in Kuala Lumpur. The reason why the researcher choose the Alice smith international school was due to the availability of the sports facilities in the school, the school has an indoor gym with big TV screen which was used for mental imagery video session and a standard football pitch for the weekly ECA practice used to conduct the intervention program.

The indoor gym was a standby should in case of raining or any unexpected weather condition. In addition, the students of this school were chosen due to the availability of appropriate time and parents and school physical education department consent to the research intervention.

The researcher used the international school over local school due to language barrier and facilities which might affect the intervention program and the unavailability of an indoor gym in most of the local schools. So, the researchers put into consideration in the case of unexpected weather condition such as rain and lightning.

3.4 Research Sample

It would have been great if the researchers can study the entire population but according to (Lunsford, And, & 1995). The cost of studying an entire population to participate in the experimental study is usually prohibitive in terms of time, money and resources.

Therefore, a subset of subject's representative of a given population were randomly selected for the study on the effects of mental imagery and demonstration on the acquisition of soccer dribbling skill of primary 4 school students, the study was conducted by drawing out a sample from the subset of the target population of the grade/year 4 boys studying at Alice Smith International school.

This study used fishbowl sampling, which means every individual in the subset population has an equal chance of being selected as a subject for the research. The fishbowl method used guarantees that the selection process is completely randomised. The sample size of 61 students from grade/year four pupils at Alice Smith international school which were randomly assigned to the experimental group (one) 20 students MIDG, experimental group (two) 20 MIG and control group has 21 students CG.

The students were divided into a group using fishbowl technique to divide the 61 students after "Pre-test" each group comprised of 20 students except for control group with 21 students.

3.5 Data Collection

The subjects of the study were primary 4 school students and the accessible population are primary school students studying at Alice Smith international school Jalan Bellamy located in Kuala Lumpur.

The informed consent cover letter was given to the school. The researcher explained the design and procedures of the study to the head of physical education department. As it was mentioned in the delimitation of this study that the researchers are not allowed to video the session. A pre-test was administered prior to the start of the intervention program and 9 weeks later a post-test was administered to allow for data comparison. Each group has a data time sheet with pre-test timed scores, as well as a data time sheet with post-test, timed scores.

Data were collected for Mental Imagery and demonstration group (MIDG) which was the intervention and practised for the group during the 9 weeks program. Data were collected for Mental Imagery group using the mental imagery practice during the 9 weeks intervention program.

Data were also collected for the control group (CG). Each participant was timed on an individual basis during the test. In the tests, participants were required to execute a soccer dribbling skill evaluation test. Time scores were recorded on the recording data sheet under each participant's name.

The scores were recorded under, the participants made 3 trials the best time score out of the three trials were recorded on the data sheet to indicate their test score. The data sheets consisted of player's numbers, test scores, and the three-baseline soccer skills checklist for a performance error.

The test was performed according to the protocol described by (Mujika, Santisteban, Impellizzeri, & Castagna, 2009). The test evaluations were based on performance time, according to (Collins & Hodges, 2001) Timed soccer dribbling tests are the best determination of soccer skills. The students dribbled through the cones arranged in NM shape with a Time-Gate, this test challenged soccer players' dribbling speed and cutting abilities.

3.6 Pretest-Posttest Control Group Design

The pretest-posttest control group design (Creswell, 2007) is one of the most popular research designs in use today. It provides tight scientific control over threats to internal validity, which is classified as a "true experimental design. The pre-test design is used to determine the level of knowledge of the students, it's like a doctor diagnosing a patient to know what has gone wrong with a certain individual and the result provides the doctor with the details of what happened to the patient and where to apply changes. The post-test is used to check the level of changes that

occurred after the treatment has been administered for a certain period.

3.6.1 Intervention

An intervention study is a key defining the characteristics of an experimental study (Cook, 1994). There have been success stories by teachers, researchers and educational psychologist on the use of mental imagery in teaching and learning of various subjects in schools most especially at the primary school level. Mental Imagery practice with motor imagery input follows by demonstration to support the image and movement created during mental practice. According to Ietswaart, Johnston, Dijkerman, Joice, Scott, Macwalter, et al., (2011) stated that due to the cognitively demanding nature of mental practice with motor imagery, ways of facilitating the motor imagery process. This was based on some empirical evidence that a wide range of sensory inputs can trigger action simulation in the brain. Think it, see it, feel it and do it" as I have stated earlier in the introduction in chapter one, children feel more relaxed and enjoyed learning with pictures or video. See (*Appendix B*)

At the primary school level, most students learning sports skills are considered a novice because they don't have any idea of how well to practice and perform the sports skills, this is the point where the teacher /coach has to play their role by using mental imagery and demonstration approach to help the students gain confidence practising and performing the skill and it all falls under teaching-learning of new behaviour. Aligning the use of mental imagery with Dr Benjamin (Bloom's Taxonomy 1956) which is used when designing educational, training, and learning processes.

There are three domains of learning activities according to (Bloom, B. S. 1956) Cognitive: mental skills (knowledge) Affective: growth in feelings or emotional areas (attitude or self) psychomotor: manual or physical skills (skills), a taxonomy for learning, teaching, and assessing. The new domain which is a revision of Bloom's taxonomy of educational objectives. The stages of learning activities, which can be applied when using mental imagery for students at the primary school level to acquire sports skills. Acquisition of motor skills can motivate and give the student's confidence during a performance of the given task with the opportunity to create new experiences. The table below is the learning objective of the effect of the mental imagery and demonstration on the acquisition of soccer dribbling skill intervention.

3.6.2 Lesson plan

The Impact of Mental Imagery and Demonstration on Primary Four Pupils Soccer Dribbling Performance. The intervention program is 60 minutes of practice session once a week which lasted for 9 weeks. Below is the training program for experimental group one, group two and the control group. The lesson plan is broken into for content which are the guidelines for what was taught during the teaching and learning activities. The contents four major purposes in the scheme of the physical education lesson are introductory activity; fitness development activity; lesson focus activities; and game activity.

These four-major purpose scheme of physical education lesson are constructed under instructional techniques, extensions, clarification and application in the lesson plan for the effects of mental imagery and demonstration on the acquisition of soccer dribbling skills of primary four pupils. see the three-lesson plan design for the three groups in Appendix A (MIDG experimental group 1 lesson plan); (MIG Experimental group 2) and the (CG) lesson plan. The three groups have different training program for the duration of 9 weeks, the intervention program is different intervention throughout the duration of 9 weeks program. See (*Appendix A*)

3.7 Data Analysis

The data analysis for the for the Impact of Mental Imagery and Demonstration on Primary Four Pupils Soccer Dribbling Performance, the data collected will be analyse by comparison of each experimental group to check for the success of the treatment. The mean time values for mental Imagery and demonstration group, mental imagery group and control group has no statistical significant effects thus resulting in no improvement of mental Imagery and demonstration.

After the collection and recording the pre-test and post-test score, the raw scores were calculated to determine whether the null hypothesis should be accepted or rejected. The test scores were computed into SPSS to prepare the data and perform descriptive statistical analysis of the data for the Mean, Normality of the data distribution using Skewness and Kurtosis analysis test, SD (standard deviation).

The ANCOVA test was used to analyse the difference in independent group means for pre-test and post-test. According (Allis, V White, P, 2017) to a common design in research studies is the two groups' pre-and post-test design institution. The preferred structure of this design is random allocation of participants to considered one of the two intervention group (Group A and B, usually "experimental" and "control group") with measures on participants pre-test (X) and Post-test after – intervention (Y)

4. Results

The current study investigates the effectiveness of Mental Imagery and Demonstration on primary four pupils acquisition of soccer dribblingskills. The study was carried out with 61 primary four pupils in one of the international school in Kuala-Lumpur, the 61 participants were drawn from the whole primary four classes. A pre-test and post-test true experimental design was used for this study. Children(n=61) were randomly selected and randomly assigned to different treatment using fish bowl simple random assignment allowing the researchersto carefully observe the occurring changes before and after the treatment.

The Mental Imagery and Demonstration Group (MIDG) 20 students, the Mental Imagery Group (MIG) 20 students and the Control Group (CG) 21 students. The Daniel Frankl (2001) Assessing dribbling evaluation skills test for the dribbling test performance. The was used to measure the

children soccer dribbling performance time using a stopwatch, it's important that electronic timing devices are used when attempting to objectively evaluate athletes speed performance (Brown et al.,2004) the stopwatch is used for the NM dribbling evaluation test in this study, which enables us to calculate the difference between the student's dribbling performance for both pre-test and post-test.

Prior to statistical analysis, it's important to check the normality distribution of the data. Skewness and kurtosis were also calculated, when the Skewness is greater than or equal to 2 or less than or equal to -2, then the variable is considered symmetrical about its mean.

4.1 Hypothesis 1

There is a statistical significant difference between the group on the effective of mental imagery and demonstration on primary four pupil's soccer dribbling performance time.

To answer the hypothesis ANCOVA was calculated to examine the effect of Mental Imagery and demonstration on the acquisition of soccer dribbling skills among primary four school students on performance time between the group controlling for the effect of Pre-test score. There was a significant difference between the groups after intervention program for the Post-test $F(2, 55) = 18.315, p = .047$, the result of the analysis can be seen below in (Table 4.1) ANCOVA Analysis tests of between-Subjects effects dependent variable: Pre-test Score indicating that there is a significant difference between the group.

Table 4.1 : ANCOVA Analysis Tests of Between-Subjects Effects Dependent Variable: Pre-test Score

Source	df	Mean Square	F	Sig.
Corrected Model	5	307.176	8.533	.000
Intercept	1	249.876	6.942	.011
GROUP	2	54.392	1.511	.230
Post Score	1	659.288	18.315	.000
GROUP * Postscore	2	116.677	3.241	.047
Error	55	35.997		
Total	61			
Corrected Total	60			

To further examine the differences between the groups. Pairwise comparisons were conducted for all significant effects and the results. Pairwise Comparisons Dependent Variable for the post-test effects across the groups, MIDG was significant over MIG $p = .042$ and CG $p = .026$, the result of the analysis can be seen below in Table 4.1.2

Table 4.1.2: Pairwise Comparisons Dependent Variable Pre-Test Score

(I) GROUP	(J) GROUP	Mean Difference (I-J)	Sig.
MIDG	MIG	-5.010*	.042
	CG	-5.554*	.026
MIG	MIDG	5.010*	.042
	CG	-.543	.785
Control Group	Mental Imagery Demonstration Group	5.554*	.026
	Mental Imagery Group	.543	.785

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

The diagram below presents the estimate margin for the impact of mental imagery combined with demonstration on primary four pupil's soccer dribbling performance time.

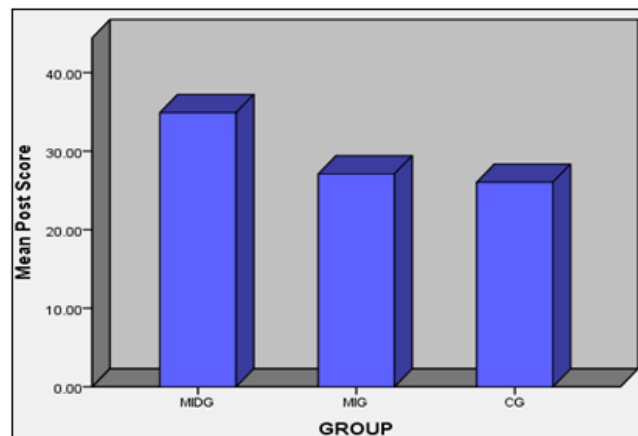


Figure 4: Estimated Marginal Means of Post-test score for performance time

4.1.3 Hypothesis 2

There is statistical Significant difference after intervention between the Pre-test and Post-test score mean score of Mental Imagery and Demonstration Group (MIDG).

To answer the hypothesis whether there was a statistical significant difference within the MIDG group after intervention, a one-way ANOVA analysis was conducted to compare the effect of MIDG Post Test Score on the MIDG Pre-Test Score in the NM Dribbling performance test. There was a significant effect of the MIDG post-test on MIDG pre-test score at the $p < .05$ level for $[F(6, 13) = 3.339, p = 0.32]$. These results suggested that Mental Imagery combined with physical demonstration do influence the primary school children acquisition of soccer dribbling skills, the result can be seen below in Table 4.1.3.

Table 4.1.3: ANOVA MIDG Posttest_Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	328.578	6	54.763	3.339	.032
Within Groups	213.222	13	16.402		
Total	541.800	19			

4.1.4 Hypothesis 3

There is a statistical Significant difference after intervention between the Pre-test and Post-test mean score of Mental Imagery (MIG).

To answer the hypothesis whether there was a statistical significant difference within the MIDG group after intervention, a one-way ANOVA analysis was conducted to compare the effect of MIG Post Test Score on the MIG Pre-Test Score in the NM Dribbling performance test. There was no significant effect of the MIG post-test on MIG pre-test score at the $p < .05$ level for $[F(9, 10) = 2.081, p = .135]$. These results suggested that Mental Imagery only is less effective within the group on the primary school children acquisition of soccer dribbling skills, the result can be seen below in Table 4.1.4.

Table 4.1.4: ANOVA MIG_Posttest_score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	865.633	9	96.181	2.081	.135
Within Groups	462.167	10	46.217		
Total	1327.800	19			

5. Discussions

The study focused on mental imagery and demonstration intervention on primary school pupils acquisition of soccer dribbling using NM soccer dribbling evaluation test for performance time to answer the specific objective of the study and research questions. To enable a wider and deeper understanding of the discussion in this chapter, the research hypothesis for this study is recapitulated below.

The study was guided by these three-research hypotheses.

- H1). There is a statistical significant difference between the group on the effective of mental imagery and demonstration on primary four pupil's soccer dribbling performance time.
- H2). There is statistical Significant difference after intervention between the Pre-test and Post-test score mean score of Mental Imagery and Demonstration Group (MIDG).
- H3). There is a statistical Significant difference after intervention between the Pre-test and Post-test mean score of Mental Imagery (MIG)

The test evaluations were based on time trials. Timed soccer dribbling tests are the best determination of soccer skills (Miller, 2012) The test challenged soccer players' dribbling speed and cutting abilities which requires the players using his inside and outside of his feet and the surface and the sole of their feet, head up and down while dribbling for the player's awareness for obstacles . Dribbling techniques are necessary skills soccer players must acquire to beat an opponent, (Zago et al., 2016) stated that, "dribbling speed is considered important for the outcome of the game.

The ANCOVA analysis for the effects of MIDG between the group Post-test mean score of Performance time (Daniel Frankl ,2001) Assessing dribbling evaluation skills test indicated that there is a statistical significant difference between the group on the effective of mental imagery and demonstration on primary four pupil's soccer dribbling performance time. See (Table 4.1) ANCOVA Analysis Tests of Between-Subjects Effects Dependent Variable: Pre-test Score and (Table 4.1.2) for Pairwise Comparisons Dependent Variable Pre-Test Score.

In Addition, the result for the second hypothesis that there is statistical Significant difference after intervention between the Pre-test and Post-test score mean score of Mental Imagery and Demonstration Group (MIDG) also indicated that there was a significant improvement after intervention within the (MIDG) group see (Table 4.1.3) ANOVA MIDG Post-test mean Score. According to Debarnot, Sperduti, Di Rienzo, & Guillot, (2015) stated that the combined physical and mental practice in the learning of a foot-sequence task after stroke the result indicated that mental practice, when combined with physical practice, is effective and can

improve the performance and acquisition of motor skill of people suffering from a stroke.

However, the third hypothesis that there is a statistical Significant difference after intervention between the Pre-test and Post-test mean score of Mental Imagery (MIG) according to the result of the One-way ANOVA the result shows that there was no significant statistical difference within the group but was close to achieving a statistical significance. we rejected the hypothesis, see (Table 4.1.4) ANOVA MIG Post-test mean score. On the other hand, the MIG group shows a statistical significant difference over CG in the pairwise between group comparisons see (Table 4.1.2) Pairwise Comparisons Dependent Variable Pre-Test Score.

The author's suggested that mental practice could play a role in the retention of newly acquired abilities which means, using mental practice combined with physical practice for children acquisition of motor skills and performance can have a high value of retention in the newly acquired skill of the children with the opportunity of continuous practice it can turn a novice to an expert. No one turns into a remarkable expert without experience, however, this doesn't invariably lead individuals to turn into an expert. We accept the hypothesis, there is a statistical significant difference between Mental Imagery and Demonstration group (MIDG) over Mental Imagery group (MIG) and the control group (CG) on the mental imagery and demonstration intervention for primary school pupils acquisition of soccer dribbling skills and performance time.

6. Conclusion

The students in the MIDG experimental groups were assigned to treatment to watch a video of an expert and the physical education teacher demonstration dribbling the soccer ball, this study aimed to help the children and the teachers for an effective process of teaching and learning during the acquisition of soccer dribbling skills and to enhance the children's performance for personal growth and development of interest in the game of soccer.

The ANCOVA analysis significant differences were found using mental imagery and demonstration intervention program in the intervention group MIDG on the acquisition of soccer dribbling skills and performance time.

The mental imagery and demonstration program was impressive, and it was amazing to see the children improving on their dribbling skills week after week till the end of the program. The children in the MIDG group became faster while dribbling and the students in the MIG developed the skills gradually.

The literature review of this current study also found out that in learning the game of soccer, there are few external factors affecting the teaching and development of the game in various schools, which are also seen as stumbling blocks for the acquisition of the fundamental soccer skills among the children in primary schools.

Few of this external factor are mentioned in the literature review of this study; such as school environment, out of field teachers, lacks appropriate teaching material, teaching methods and facilities. The use of mental Imagery and demonstration method at school with a conducive teaching environment for the mental imagery program could be the best method to accelerate the acquisition of soccer dribbling skills and other basic motor skills in primary schools because children learn faster when imagery is displayed for input into short term memory and processed in the long-term memory for retention and reproduction of the task.

The teacher should be able to understand that importance of mental imagery and demonstration in learning motor skills and he/she should be able to apply the teaching method in his physical education classes.

However, inadequate facilities and teaching material in the school could be a major setback using mental imagery and demonstration approach to teach the students soccer dribbling skills and other motor skills because it requires the use of technology, smart board, projector, and coaches' eye's a new app that helps coaches/ teachers to facilitate and accelerate motor skills learning in physical education classes. If students continue to struggle every day trying to acquire basic soccer dribbling skills, it could hinder their interest in the game of soccer.

In conclusion, the result of this study indicated that mental imagery combined with the demonstration have significant effect on the acquisition of soccer dribbling skills performance time of the children, the procedure and the lesson plan of this study can be useful for physical education teachers and soccer coaches to apply mental imagery and demonstration in their physical education classes for an effective teaching and acceleration of learning processed during the acquisition of soccer dribbling and other basic motor skills.

References

- [1] Abdin, J. M., & Bell, A.-D. R. (2010). Imagery for Sport Performance: A Comprehensive Literature Review. Retrieved from <http://cardinalsolar.bsu.edu/handle/123456789/193355>
- [2] Andrade, J., May, J., Deeprose, C., Baugh, S. J., & Ganis, G. (2014). Assessing vividness of mental imagery: The plymouth sensory imagery questionnaire. *British Journal of Psychology*, 105(4), 547–563. <https://doi.org/10.1111/bjop.12050>
- [3] Bennie, A., & Langan, E. (2015). Physical activity during physical education lessons: a qualitative investigation of Australian PE teacher perceptions. *International Journal of Qualitative Studies in Education*, 28(8), 970–988. <https://doi.org/10.1080/09518398.2014.933914>
- [4] Burnett Heyes, S., Pictet, A., Mitchell, H., Raeder, S. M., Lau, J. Y. F., Holmes, E. A., & Blackwell, S. E. (2017). Mental Imagery-Based Training to Modify Mood and Cognitive Bias in Adolescents: Effects of Valence and Perspective. *Cognitive Therapy and Research*, 41(1), 73–88. <https://doi.org/10.1007/s10608-016-9795-8>
- [5] Callow, N., Hardy, L., & Hall, C. (2001). The Effects of a Motivational General-Mastery Imagery Intervention on the Sport Confidence of High-Level Badminton Players. *Research Quarterly for Exercise and Sport*, 72(4), 389–400. <https://doi.org/10.1080/02701367.2001.10608975>
- [6] Collins, D. R., & Hodges, P. B. (2001). *A comprehensive guide to sports skills tests and measurements*. 2nd ed. Retrieved from https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Collins%2C+D.+R.%2C+%26+Hodges%2C+P.+B.+%282001%29&btnG=
- [7] de Paor, C. (2015). The use of demonstration lessons to support curriculum implementation: invitation or intrusion? *Professional Development in Education*, 41(1), 96–108. <https://doi.org/10.1080/19415257.2014.886284>
- [8] Debarnot, U., Sperduti, M., Di Rienzo, F., & Guillot, A. (2015a). Corrigendum: Experts bodies, experts minds: how physical and mental training shape the brain. *Frontiers in Human Neuroscience*, 9. <https://doi.org/10.3389/fnhum.2015.00047>
- [9] Debarnot, U., Sperduti, M., Di Rienzo, F., & Guillot, A. (2015b). Corrigendum: Experts bodies, experts minds: how physical and mental training shape the brain. *Frontiers in Human Neuroscience*, 9, 280. <https://doi.org/10.3389/fnhum.2015.00047>
- [10] Gould, D., Voelker, D. K., Damarjian, N., & Greenleaf, C. (2014). Imagery Training for Peak Performance. In *Exploring Sport and Exercise Psychology, Third Edition* (pp. 55–82). <https://doi.org/10.1037/10465-004>
- [11] Grimshaw, J. (2000). Experimental and quasi-experimental designs for evaluating guideline implementation strategies. *Family Practice*, 17(90001), 11S–16. https://doi.org/10.1093/fampra/17.suppl_1.S11
- [12] Jayanthi, N., Pinkham, C., Dugas, L., Patrick, B., & LaBella, C. (2013). Sports Specialization in Young Athletes. *Sports Health: A Multidisciplinary Approach*, 5(3), 251–257. <https://doi.org/10.1177/1941738112464626>
- [13] Lambourne, K., Audiffren, M., & Tomporowski, P. D. (2010). Effects of acute exercise on sensory and executive processing tasks. *Medicine and Science in Sports and Exercise*, 42(7), 1396–1402. <https://doi.org/10.1249/MSS.0b013e3181cbee11>
- [14] Lander, N. J., Barnett, L. M., Brown, H., & Telford, A. (2015). Physical Education Teacher Training in Fundamental Movement Skills Makes a Difference to Instruction and Assessment Practices. *Journal of Teaching in Physical Education*, 34(3), 548–556. <https://doi.org/10.1123/jtpe.2014-0043>
- [15] Lunsford, T., And, B. L.-J. J. of P., & 1995, U. (n.d.). The Research Sample, Part I: Sampling. *Journals.lww.com*. Retrieved from http://journals.lww.com/jpojournal/Abstract/1995/00730/The_Research_Sample_Part_I_Sampling.8.aspx
- [16] Lynch, J., Ferguson, K., & Lynch, J. (2017). Reflections of Elementary School Literacy Coaches on Practice. *JSTOR*, 33(1), 199–227. Retrieved from http://www.jstor.org/stable/pdf/canajeducrevucan.33.1.199.pdf?casa_token=uc5Hv2Iq_SkAAAAA:CARJ9baxh

- r5WCVkcU3OTIqPMrhBZidMda1AnUs91omSzh67Cp8V_ZMkDVt9Cq0tR0k6xF9GSftd_bAIweEZYbuzy3mgFezUxYtOY9UCE8K8BSCUIInrLS
- [17] Miller, K. S. (2012). *The effects on soccer dribbling skills when training with two different sized soccer balls*. Retrieved from <https://kuscholarworks.ku.edu/handle/1808/10011>
- [18] Mujika, I., Santisteban, J., Impellizzeri, F. M., & Castagna, C. (2009). Fitness determinants of success in men's and women's football. *Journal of Sports Sciences*, 27(2), 107–114. <https://doi.org/10.1080/02640410802428071>
- [19] Munzert, J., & Lorey, B. (2013). Motor and visual imagery in sports. In *Multisensory Imagery* (Vol. 9781461458, pp. 319–341). New York, NY: Springer New York. https://doi.org/10.1007/978-1-4614-5879-1_17
- [20] Obrusnikova, I., & Rattigan, P. J. (2016). Using Video-based Modeling to Promote Acquisition of Fundamental Motor Skills. *Journal of Physical Education, Recreation & Dance*, 87(4), 24–29. <https://doi.org/10.1080/07303084.2016.1141728>
- [21] Parnabas, V., Parnabas, J., & Parnabas, A. M. (2015). The influence of mental imagery techniques on sport performance among Taekwondo athletes. *European Academic Research*, II(11), 14729–14734. Retrieved from www.euacademic.org
- [22] Taylor, J., Wilson, G., & Kinetics, H. (2006). Applying Sport Psychology: Four Perspectives. *The Sport Psychologist*, 20(1), 391–393. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=22032073&site=ehost-live>
- [23] Vealey, R. S., & Greenleaf, C. A. (2001). Seeing is believing: Understanding and using imagery in sport. In *Applied sport psychology: Personal growth to peak performance* (pp. 247–272). Retrieved from <http://psycnet.apa.org/record/1995-98291-000>
- [24] Weeks, D. L., & Kordus, R. N. (1998). Relative frequency of knowledge of performance and motor skill learning. *Research Quarterly for Exercise and Sport*, 69(3), 224–230. <https://doi.org/10.1080/02701367.1998.10607689>
- [25] Weinberg, R., In, J. B.-M. toughness in sport: D., & 2011, U. (n.d.). 11 Building mental toughness. *Books.google.com*. Retrieved from https://books.google.com/books?hl=en&lr=&id=ey4zSSndkJwC&oi=fnd&pg=PA212&dq=Weinberg+and+Gould,+2006+a+combination+of+outcome,+performance,+and+process+goals&ots=JWFZ0KiGAF&sig=2mpnFUgd0bSMrvlDaT4W_TvN_Sc
- [26] White, A., & Hardy, L. (1995, May). Use of different imagery perspectives on the learning and performance of different motor skills. *British Journal of Psychology (London, England : 1953)*. <https://doi.org/10.1111/j.2044-8295.1995.tb02554.x>
- [27] Williams, A. M., & Hodges, N. J. (2005). Practice, instruction and skill acquisition in soccer: Challenging tradition. *Journal of Sports Sciences*, 23(6), 637–650. <https://doi.org/10.1080/02640410400021328>
- [28] Williams, H. G., Pfeiffer, K. A., O'Neill, J. R., Dowda, M., McIver, K. L., Brown, W. H., & Pate, R. R. (2008). Motor skill performance and physical activity in preschool children. *Obesity*, 16(6), 1421–1426. <https://doi.org/10.1038/oby.2008.214>
- [29] Williams, S. E., Burns, V. E., & Cumming, J. (2013). Methodological Variations in Guided Imagery Interventions Using Movement Imagery Scripts in Sport: A Systematic Review. *Journal of Imagery Research in Sport and Physical Activity*, 8(1), 13–34. <https://doi.org/10.1515/jirspa-2012-0005>
- [30] Woolfolk, R. L., Parrisb, M. W., & Murphy, S. M. (1985). The Effects of Positive and Negative Imagery on Motor Skill Performance. *Springer*, 9(3), 335–341. Retrieved from <http://www.springerlink.com/index/R901J44M3T6N08L1.pdf>
- [31] Zago, M., Piovan, A. G., Annoni, I., Ciprandi, D., Iaia, F. M., & Sforza, C. (2016). Dribbling determinants in sub-elite youth soccer players. *Journal of Sports Sciences*, 34(5), 411–419. <https://doi.org/10.1080/02640414.2015.1057210>

Appendix A

Lesson Plan: Lesson plan for mental imagery and demonstration group (MIDG)

EFFECTS OF MENTAL IMAGERY AND DEMONSTRATION ON THE ACQUISITION OF SOCCER DRIBBLING SKILLS OF PRIMARY FOUR PUPILS

Physical Education Student's Research Program:

Master of Education, Department of Mathematics and Science Education, Faculty of Education, University of Malaya.

Lesson Plan For (MIDG) Soccer Dribbling Skills

Objective (Behavioural)

Students:

The student will be able to dribble soccer ball correctly using the baseline measurement of the fundamental soccer dribbling skills of control, speed and change of direction as shown in the video during mental imagery practice and teacher's demonstration. (Psychomotor & Cognitive)

- Control: keep the ball under control while dribbling by using inside and outside of the foot and heads up and heads down to see the obstacle around you
- Speed: Ability to run fast with the ball and keeping the ball close to the feet using upper part of the toes to push the ball with little kicks while dribbling and do not kick the ball and run after it.
- Change of Direction: using inside and outside of both feet to change direction of the ball while dribbling.

Equipment needed (21 students):

- 23 soccer balls
- One set of cones
- 1 whistle

Volume 7 Issue 8, August 2018

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

- 1 stopwatch
- 1 assistant (coach/teacher)

Lesson plan for mental imagery group (MIG)

**EFFECTS OF MENTAL IMAGERY AND DEMONSTRATION ON THE ACQUISITION OF SOCCER
DRIBBLING SKILLS OF PRIMARY FOUR PUPILS**

Physical Education Student's Research Program:

Master of Education, Department of Mathematics and Science Education, Faculty of Education, University of
Malaya.

Lesson Plan For (MIG) Soccer Dribbling Skills

Objective (Behavioural)

Students:

The student will be able to dribble soccer ball correctly using the baseline measurement of the fundamental soccer dribbling skills of control, speed and change of direction as shown in the video during mental imagery practice. (Cognitive)

- Control: keep the ball under control while dribbling by using inside and outside of the foot and heads up and heads down to see the obstacle around you
- Speed: Ability to run fast with the ball and keeping the ball close to the feet using upper part of the toes to push the ball with little kicks while dribbling and do not kick the ball and run after it.
- Change of Direction: using inside and outside of both feet to change direction of the ball while dribbling.

Equipment needed (21 students):

- 23 soccer balls
 - One set of cones
 - 1 whistle
 - 1 stopwatch
 - 1 assistant (coach/teacher)
-

Appendix B

Mental Imagery Session: The picture below is a video session for mental imagery practice before the children move onto the pitch. This session is for both MIDG and MIG participants.

