

ISBN 978-602-99320-1-0



4

Proceeding

Scientific Meeting,
Welcoming 26th South-East Asian Games



The International Conference

SOLIDARITY FOR UNITY THROUGH SPORTS

Jakarta, 8 November 2011



Proceeding

The International Conference

SOLIDARITY FOR UNITY

THROUGH SPORTS

Scientific Meeting,
Welcoming 26th South-East Asian Games



Jakarta 8 November 2011



Preface

Assalamu'alaikum warrahmatullahi wabarakatuh

May we first made our highest praise and thank to Allah swt, for His bless we able to gathered here on the prestigious occasion of the Scientific Meeting for Welcoming the 26th Southeast Asian Games with general theme "Solidarity for Unity Through Sports" to share our knowledge and ideas with so much warmness and friendship from Southeast Asian sports community.

This conference serves as a platform which allows scholars, professionals, researchers and sport technocrats to share and discuss the latest knowledge and findings with the purpose of transforming a revitalization and rethinking in sport. The results from this conference are able to revitalize and uphold the spirit of Olympism in every sport practice including in the 26th Southeast Asian Games. In line with the commitment to enhance the communication bridge built through the cooperation between sport scientists, academics, practitioners and technocrats from all the Southeast Asia Nations.

I would like to deliver our highest respect and appreciation to Minister of Youth and Sport of Republic of Indonesia, Mr. Andi Alfian Mallarangeng, Ph.D., and it is my great pleasant to express my deep gratitude to Mr. Wayne Clews, the Director of Sport from ASPIRE Academy of Sport and Excellence Doha Qatar as our expert Scholar to sharing the latest issues we are concern. I really expect that this conference will be beneficial for all of us and have direct to the development of the sports.

Allow me to express my thank to the audiences from Indonesia and other foreign countries who are enthusiastic to attending this precious conference. I do hope that all audiences will gain important values and collaborate it into our own fields and make crucials changes in the future. Beside that, I also convey thank to all of scientific conference committes who has gave their outstanding commitment for presenting this International scientific conference.

Listed by the spirits of Olympism and the importance of bringing solidarity and unity through sports, let's join and blend together in the Scientific Conference for Welcoming the 26th Southeast Asian Games in Indonesia.

Wassalamu'alaikum warrahmatullahi wabarakatuh

Sincerely yours

Dr. (HC) RITA SUBOWO

CONTENTS

Part 4 of 5

THE PROFILE OF ANTHROPOMETRICAL AND PHYSICAL PERFORMANCE OF THE GIRL VOLLEYBALL PLAYERS Nining Widyah Kusnanik, Surabaya State University	341
INTERLEUKIN-6 IN HUMAN PLASMA DURING AEROBIC GYMNASTICS Siti Baitul Mukarromah, Semarang State University.....	347
EFFECT OF LEARNING STRATEGY OF GAME SERIES AND SCHOOL LOCATION ON FUNDAMENTAL MOTOR SKILL OF ELEMENTARY SCHOOL STUDENTS IN PADANG Syahrial Bakhtiar, Padang State University.....	357
LEARNING PROCESS OF STATE IN SUB <i>PENJASORKES</i> JUNIOR PURBALINGGA PURBALINGGA DISTRICT Agung Wahyudi, Semarang State University	369
THE EFFECT OF AMINO ACIDS SUPPLEMENTS ON STRENGTH AND ENDURANCE of MUSCLE Ruri Famelia, Padang State University	380
THE INFLUENCE OF COORDINATION ABILITY IN PENCAK SILAT COMPETING CATEGORY Awan Hariono, Yogyakarta State University	392
EXERCISE AS ASOCIAL INTERACTION EVENT AND LIVING NEEDS Mugiyo Hartono, Semarang State University.....	399
THE LEARNING IMPROVEMENT OF BASIC MOTION OF SWIMMING BY THE APPROACH OF USING TOOLS FOR THE BEGINNERS OF PKO STUDENTS ACADEMIC YEAR 2010 FX.Sugiyanto, Yogyakarta State University	408
GAME TONNIS AS AN ALTERNATIVE SPORTS TENNIS IN CAR FREE DAY Tri Nurharsono, Semarang State University.....	418
MAPPING THE 5th ASEAN PRIMARY SCHOOL SPORT OLYMPIAD 2011 Endang Rini Sukanti, Yogyakarta State University.....	425

THE INFLUENCE OF COORDINATION ABILITY IN PENCAK SILAT COMPETING CATEGORY

Awan Hariono
Yogyakarta State University

ABSTRACT

Pencak silat competing category one of the difficult athletic branch relative, especially for beginner. It because of in Pencak silat competing category is influenced by environmental factor which difficult to be controlled. The factors are opponent position, tall or short the opponent, equipment for protector body and of genetle protector

Ability of coordination is a biomotor component which needed for all of athletic branch. Ability of coordination needs to be trained to increase skill motion. In pencak silat competing category, the success of doing technique moving is very determined by ability of eyes in seeing movement and target when they attack or defend. Besides that, footworkin taking stand before doingattack movement and defend. For that, ability of coordination which needed in pencak silat competing category is coordination ability of eyes- hand (hand-eye coordination) and coordination ability of eyes-hand-legs

Every technique motion which done in pencak silat competing category needs complex motion. For that, it is needed good coordination ability for pesilat to make good technique. The coordination ability for pencak silat competing category are general and specific. Because of that, every action in pencak silat competing category always entangles all or almost muscle, nerve system and joints.

Key-words: coordination ability, pencak silat, competing category

INTRODUCTION

Every motion in sport is needed good ability motion skill. Motoric ability like power, speed and endurance are the following factors in appearance of adequate skill. Motoric activity consciously is the series complex muscles motion which is affected by stimulation. Pencak silat competing category is one of sport which entangles the motion from complex motoric skill. So all motoric skill needs for making technique motion in order to the series motion can be done concurently.

Pencak silat competing category is the competition which performs two pesilat(special terms in pencak silat) from different group and face to face by using defend and attack element, they are defect, evade and attack the object to make opponent fall.(Persilat, 1999). To make

defend and attack technique, a pesilat must master the technique in pencak silat. Because of that, it is needed the technique mastering in pencak silat by means of exercise in a long time and regularly, in a program and measurement.

To make a good defend and attack motion, it is needed skill and capability of basic motion technique. Motion skill is used to instruct each muscle activity to the target. Motion capability is a point which makes the easiness performance in capability (Rahantoknam, 1998:). In pecak silat competing category, skill and capability motion need to be possessed in order to pesilat easier to master and develop technique motion which have been taught, for example: beat, kick and bantingan (special terms in pencak silat).

To be able make technique motion of beat, kick and bantingan in pencak silat is needed good motion ability. Skill is the ability of a person in using the knowledge effectively and be ready to make motion. Skill which demonstrated in performance is a sign that everything has been learned (Singer, 1980). For mastering technique skill needs to pass previous motion. Students often get difficulty in practicing, because they haven't imagination motion or plan.

The success of pesilat in doing technique is not only because of motion ability, but also influenced by the ability of pesilat in interpreting each motion at match. It means that exercise which gave by trainer must orientate to the real situation on match by simulation. It will help pesilat in doing strategy on the match and improve the ability in reading and anticipating opponent motion.

In pencak silat competing category, the opponent position is always in movement and difficult to predict. So, it is needed the ability and sharpness to see and coordinate the next movement. When seeing the target, it will directly process in brain to estimate target position toward the stand distance in order to make a good motion technique. This process happens fast and invisible. Good ability to anticipate motion is needed to get motion effectively.

The accuracy to anticipate motion in pencak silat competing category is determined by eyes and coordination motion ability. It means that, eyes as the stimulus receiver, target in motion and hand or leg which respond the motion of kick or beat. Coordination ability which supported by the sharpness in seeing the object is really important to decide accuracy distance between standing position and target. This condition will only get by exercise regularly, progressive. In practice, beside to improve motion skill, also improve accuracy of anticipation, coordination and understanding of motion skill done (Sage, 1984). So, practice in good arrangement will give good and correct technique motion.

According to the result of MUNAS IPSI XI (2003), in using attack and defend element, pesilat must use pencak silat method. It means that pesilat must develop competing pattern, from start to the step for measuring distance to the opponent, and coordination in doing attack and defend to the starting position. The pesilat is not allowed to run or jump to get closer with opponent, but must use step pattern.

Continuous attacks in every fight of pencak silat match may be done four times, while the attack by using hand continuously only gets one attack score. In order to the attack can be done continuously and precise in target, it is needed the ability of pesilat to anticipate each motion which done by opponent. Anticipation ability is related to the eyes ability to respond each stimulus which received. Eyes function in pencak silat is really needed to make technique motion which done by pesilat. Without seeing the target, beat and kick which done by pesilat will not perfect. By seeing the target, brain through the nerve and muscle system will dictate hand or leg to make beat or kick motion. The perfect observation to the target will accelerate in deciding hand and leg motion to prepare beat or kick. So, the coordination in pencak silat competing category is combination from the ability in seeing the target and the moving of hand and leg in doing beat and kick.

Based on the understanding above, the ability coordination is really needed in pencak silat, especially in competing category. In doing technique motion pencak silat competing category, coordination of eyes, hand and leg is the main factor. It means besides having ability in seeing target position, a pesilat must have good footwork pattern ability. Footwork pattern has been build strongly, will be the motion pattern habit without thinking it before, so it make pesilat easy to make motion in every technique. So, which is needed in pencak silat competing category is the coordination ability between eyes, hand and leg

CONGENIALITY OF COORDINATION

Coordination is muscle ability to control motion accurately in order to be able reach one specific physic work. (Grana dan Kalenak, 1991). According to Schmidt (1988), coordination is combination motion of two or more joints, one related to other to make one motion skill. Based on two opinions, the main indicators are accuracy and motion efficiency. So, coordination is the result of combination work from the quality of muscles, bones and joints to make one motion. Motion components are energy, muscles contraction, nerve and joint.

Every motion which done in pencak silat always entangles the work of muscles, nerve, bone and joint. Because of that, coordination in pencak silat is the *neuromuskuler coordination*. *Neuromuskuler* coordination is motion which done in sequence, accurate time

and the motion has power. So, the motion is because of muscles coordination and muscles coordinate because of the command by nerve system.

Neuromuskuler coordination includes meliputi *intra-muskuler* coordination and *inter-muskuler*. *Intra-muskuler* coordination is the work from all nerve fibres and muscles which contracte maximumly. So, performance wich done is depend on interaction of nerve fibres itself. The feature of pesilat who has good ability *intra-muskuler* coordination is usually able to make motion harmoniously, accurately, economicly and effectively. While in *inter-muskuler* coordination entangles the effectivity of muscles to perform motion. (Pyke, 1991). Therefor, performance intermuscular coordination is depend on the interactions of some muscles.

COORDINATION ABILITY IN PENCAK SILAT

Coordination biomotor component is very needed in pencak silat. So basic components in pencak silat entangle synchronizes of abilities, such as: (1) see opponent position, (2) how to arrange *footwork*, (3) arrange the distance of our stand position toward the opponent, (4) hand motion, and (5) replacement body weight at doing attack or defend. Thereby, some ability become the sequence motion which harmony, compatible and concurrent, so the motion will be supple and easy. For that, the main target in coordination practice is to improve the ability motion domination in attack or defend. So, coordination always relates to other biomotor, especially agility and litheness.

Every motion in pencak silat needs power and velocity which accompanied with good ability of motion control. So, in pencak silat match entangles various techniques, such as beat, kick, refrain, avoidance and slam. For that, when doing technique motion (attack or defend), pesilat must do it swiftly and strongly so the opponent can't deflect, avoid or lambast. Thereby, it is necessary to have a good coordination ability for pesilat so each motion which done can reach the target accurately and controlled.

In pencak silat sport, mastering of coordination ability is the main condition to be able master the skill. Because of that, without having good coordination ability, the pesilat will get difficulty in doing technique motion harmoniously, balance, and concurrent. So it appears supple and easy. The advantage for pesilat who has good coordination ability will able to perform perfect skill and overcome motion problem which comes up accidentally in practice. Because of that, pencak silat is a kind of open skill, which difficult to predict environment factors so it influences motion which done.

TYPES OF COORDINATION

Basically, coordination is differentiated into two, general coordination and specific coordination (Bompa, 1994). General coordination is the ability of body in accommodating and arranging motion concurrently when making a motion (Sage, 1984). It means that each motion is done by entangling all or almost muscles, nerve system and joint. For the general coordination is needed regularity motion from parts of body in order to the motion which done can be harmonious and effective, so it can master the motion skill which have learned. General coordination is the main component in motoric performance and it shows the level of certain person (Espenschade dan Eckert, 1980). Therefore, general coordination is also the basic for developing specific coordination.

Specific coordination is the coordination between some parts of body, that is the ability to coordinate motion from all parts body concurrently. (Sage, 1984:). Specific coordination is the development of general coordination which combined with other biomotor ability which suitable with the characteristic of pencak silat sport. Features of pesilat who has good general ability in performing technique skill beat, kick, refrain, avoidance and slam can be done harmoniously, swiftly, easily, perfect, accurate and good. For that, in order to technique can be done well, then the general coordination or specific coordination are very needed in pencak silat sport because both influence each other toward motion skill pesilat. So, each motion can be done easily, simply, softly and continuously by little power but get optimal result.

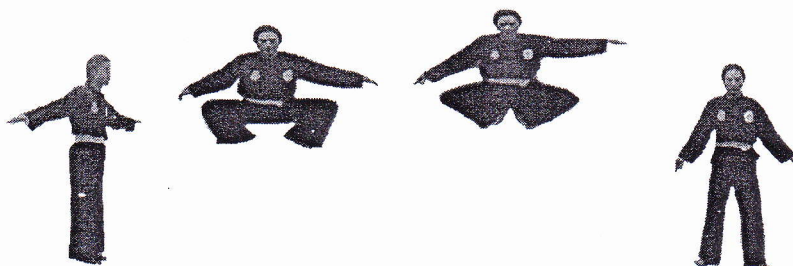
METHODS OF COORDINATION EXERCISE

Method of coordination exercise actually doesn't difficult to do. The main thing that you should know is understand the principle of coordination exercise. There are some principle coordination exercises which must notice, such as: the form of exercise in short time by developing new skill motion and the same or alike with the pencak silat motion skill.

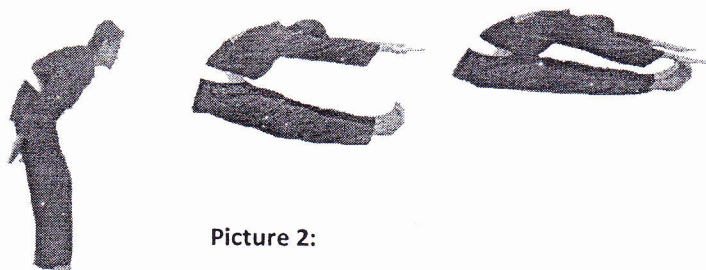
- a. Exercise by specific pencak silat technique with various difficulty level and various situation.
- b. Exercise by arrangement can attract and elevate motivation, so it can accelerate student to adapt various skill.
- c. Coordination exercise for pesilat is better to do in matras with its equipment.
- d. It must entangle various motion skill from other sport branch which have same characteristics or almost same.
- e. Coordination exercise can be given from childhood, so children 8-12 years old have been trained by various coordination exercise.

- f. Emphasisment coordination exercise must be ballance between parts of body, upper part body, lower part body, right part body, and left part body.

Form of coordination exercise will not give in this discussion (will be discused separately). Below are the sample of measuring rod form operation coordination which can be done in pencak silat.



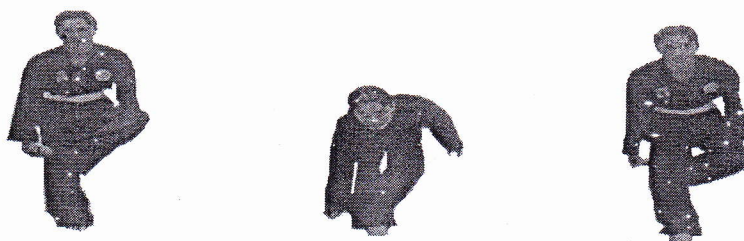
Picture 1: , motion 1 , 2, 3, and 4



Picture 2:



Picture 3:



Picture 4:

CONCLUSIONS AND SUGGESTIONS

1. For enrichment of motion skill, coordination exercise for pesilat must entangle some skill components from other sport branch. For example, the sport which needs motion kicking, beating, avoiding, jumping, throwing, catching and sliding.
2. In coordination exercise must entangle ability two sides of body, not only train the main part body. It means that exercise for hand and both hands (right and left) must be balance. It is also for legs, must be both (two sides).
3. Coordination exercise can be done by games form, single or couple.
4. For the form of coordination exercise, it is better to shincronize with specification sport branch.

REFERENCES

- Bompa, Tudor O. (1994). *Theory and Methodology of Training. The Key to Athletic Performance*. 3rd Edition. Dubuque, Iowa: Kendal/Hunt Publishing Company.
- Grana, William A. and Kalenak, Alexander. (1991). *Clinical Sports Medicine*, Philadelphia: W.B> sounders Company.
- Mandlikova, Hana and Stove, Batty. (1989). *Total Tennis (A Guide to The Fundamental of The Games)*. Brookvale. N. S. W: Simon and Schuster.
- MUNAS IPSI XI. 2003. *Peraturan Pertandingan Pencak Silat IPSI*, Jakarta: PB. IPSI
- Rahantoknam, B. Edward, (1988). *Belajar Motorik:Teori dan Aplikasinya Dalam Pendidikan Jasmani dan Olahraga*. Jakarta: P2LPTK Ditjen Dfikti Depdikbud.
- Pate, Russel R., McClenaghan, Bruce and Rotella, R. (1984). *Scientific Foundations of Coaching*. New York: CBS College Publishing.
- Persilat. 2001. *The InternationalPencak Silat Competition Regulation*. Kuala Lumpur: Pesaka
- Sage, George H. (1984). *Motor Learning and Control (A Neurophyschological Approach)*. Dubuque, Iowa: Wm. C Brown Publishers.
- Schmidt, Richard A. (1988). *Motor Control and Learning (A Behavioral Emphasis)*. Champaign, Il: Human Kinetics Publishers, Inc.
- Singer, Robert N. (1980). *Motor Learning and Human Performance (An Application to Motor Skills and Movement Behaviors)*. New York: Macmillan Publishing Co. Inc.