

C5

PROCEEDING

OF

THE 3rd INTERNATIONAL SEMINAR ON SPORT AND PHYSICAL EDUCATION

"Striving For World Sport Achievements Through Sport and Physical Education"

Faculty of Sport Science, Yogyakarta State University

Yogyakarta, May 24, 2011



In Cooperation



Dies Natalis ke-47
Universitas Negeri Yogyakarta
"Pendidikan Berkualitas untuk Semua"

Yogyakarta State University



ISORI DIY



Ministry of Youth and Sports
Republic of Indonesia

PREFACE

Assalamu'alaikum warahmatullahi wabarakatuh

May first we made our highest praise and thank to the Mighty God, Allah SWT, for His bless for all of Us. The 3rd International Seminar on Sport and Physical Education can be held in the Faculty of Sport Science in line with the 47th Yogyakarta State University Anniversary in 2011 by many solidarity, harmony and high enthusiasm among participants.

Through this International seminar with the general theme "striving for world achievements through sport and physical education", I would like to deliver our highest respect and appreciation to our honorable guests, especially to the key speakers from Northern Colorado University, Prof. Melissa Anne Parker, P.hD., and Prof. Dr. Mohd Salleh Aman, P.hD., from University of Malaya Malaysia. Let me also give my highest gratitude to Prof. Dr. Djoko Pekik Irianto, M.Kes., as the Deputy of Improvements of Sport Achievement from The Ministry of Youth and Sports, The Republic of Indonesia. In the end, I would like to convey my deep appreciation to all participants from all around the nation and foreign countries.

Listed by the importance of bringing more educated and civilize for better future, let's join and blend together in this International seminar on sport and physical education.

Wassalamu'alaikum warahmatullahi wabarakatuh

Yogyakarta, May 24, 2011

Faculty of Sport Science

Dean,



Sunaryanto, M.Kes.

NIP. 19650301 199001 1 001

**OPENING SPEECH FOR
INTERNATIONAL SEMINAR ON SPORTS AND PHYSICAL EDUCATION
ON 24 MAY 2011, AT THE FACULTI OF SPORT SCIENCES, YSU**

Assalaamu'alaikum wr wb.

Good Morning,

The honorable speakers,

1. Prof. Melissa Parker, Ph.D

2. Prof. Moh Aman Shaleh, Ph.D

3. Mr. Agus Mahendra, MA as an Asdep, Iptkor,

Mr/Mrs. Vice Rectors, Deans, Director, and Head of Research and Community Svices Institute.

Mr. Vice Dean and Head of Department,

The distinguished guests and Journalists

Ladies and Gentlemen,

First of all, on behalf of the president of Yogyakarta State University (YSU), I would like to express my great thank to God (Allah swt) who gives us very good opportunities and health, so that we can join this very important international Seminar on Sport and Physical Education. I do hope that this international seminar can inspire us, especially in developing sports science and practices and may Allah swt always bless us. Amien.

Secondly, it is my great honor to express may warm welcoming to all audience, especially the distinguished speakers, Prof. Melissa Parker, Ph.D. (UNC, USA), Prof. Moh Aman Shaleh, Ph.D. (UM, Malaysia), and Mr. Agus Mahendra, MA as an Asdep, Iptkor, Ministry of Youth and Sports, who will share with us up to date knowledge and valuable experiences.

Thirdly, I also want to thank so much to also all presenters for pararell session who are joining this international seminar for sharing all issues we are concern. I absolutely expect that this forum will be beneficial for all of us, not only as experts, educator/trainers, but also as practitioners.

Finally, I would like to thank to the audiences who are interested in participating this very important meeting. I do hope that all audiences can take more advantages, then implement some related ideas in improving the quality of sport and physical education. Beside that I am also witting to thank to all member organizing committee, who spent much time in preparing, organizing, and controlling this event. I absolutely hope that they are able to gain more academic and managerial advantages.

Ladies and gentlemen,

It seems to me that the theme of this International seminar is very interesting and important, because we can have some good point to be addressed, such as:

- (1) Everyone has potential to develop optimally, including kinesthetic intelligence and sports. Because of the potential, he/she is eager to achieve a champion, not only the national champion, but also the regional Asian and also world champion.
- (2) Being a champion is natural intention and dream. Allah said in the Al-Quran, "Fastabiqul khairat" in another article, "Kam min fiatin qalillatin ghalabat fi-atan katsiiratan bi idznillah". We have to be ready to compete to achieve fairly and sportively the champion.
- (3) I realize that to reach the sport champion in the recent time, we strongly need to optimal utilization of the science and technology. So that why the trainer/educators and athletes who want to achieve the optimal technology appropriately
- (4) To facilitate the athlete to strive the world achievement, it seems to me that we have to stick with and to follow the International rule as discipline as possible, and also as early as possible.
- (5) To gain the world achievement, we need to internalize the honesty to every athlete, so that they can play fairly and sportively with easy.
- (6) To accelerate the effort to reach the world champion, it is strongly needed the related research, so that the training established not by feeling but by the empirical fact.

Ladies and gentlemen,

Finally, let me express my gratitude to all audiences, especially the honorable speakers and the distinguished guests, for paying attention. I absolutely hope that this meeting will run well and make more benefits for the people and community. Finally, may I officially declare this International Seminar by saying "Bismillahir rahmaanir rahiim", may Allah swt always bless us. Amien.

Wabillaahit taufiq wal hidaayah

Wassalamu'alaikum wr wb

Rektor,

Rochmat Wahab

TABEL OF CONTENT

Preface	iii
Opening Speech	
Prof. Dr. H. Rochmat Wahab, M.Pd, M.A. (Rector of Yogyakarta State University)	v
Tabel of Content	vii
Keynote Speakers	
1. Agus Mahendra, MA (Deputy Assistance for Sports Sciences and Technology Development, Ministry of Youth and Sports)	1 - 14
2. Prof. Melissa Parker, Ph.D. (University of Northern Colorado USA) Contributions of Sport and Physical Education in Producing World-Class Achievement Athletes	15 - 41
3. Prof. Mohd Saleh Amman, Ph.D. (University of Malaya, Malaysia) Sport and Physical Education Management in Malaysia Which Supports The Attainments in Sport Field	42- 58
Parallel Presentation	
1 FLEXIBILITY EXERCISES USING THE PNF TECHNIQUE Abdul Alim, Yogyakarta State University	59 - 63
2 MODEL OF DEVELOPMENTAL BALL MADE FROM A DRY WASTE AS LEARNING TOOLS FOR PHYSICAL EDUCATION IN JUNIOR HIGH SCHOOL Adi Purwanto and Ahmad Rithaudin, Yogyakarta State University	64 - 70
3 THE GENDER DIFFERENCE IN THE PARTICIPATION IN SPORT META-ANALYSIS Agus Supriyanto, Yogyakarta State University	71 - 80
4 IMPROVED UNDERSTANDING OF SOFTBALL THROUGHT STUDENTS-ACTIVITY UNIT (UKM) OF SOFTBALL IN YOGYAKARTA STATE UNIVERSITY Agus Susworo Dwi Marhaendro, Yogyakarta State University	81 - 87
5 EXERCISE TO ENHANCE ATHLETIC PERFORMANCE IN SPORTS Ahmad Atiq, University of Tanjungpura	88 - 93
6 DEFINING PROPER EXERCISE MODELS TO INCREASE MENTAL TOUGHNESS OF ATHLETES Ahmad Nasrulloh, Yogyakarta State University	94 - 100
7 RECOVERY ABILITY OF PHYSICAL ACTIVITY WITH WHIRLPOOL METHOD Alen Rismayadi, Indonesia University of Education	101 - 109

8	THE ADVANTAGES OF <i>SWEDISH MASSAGE</i> FOR ATHLETE WHO ARE TIRED BECAUSE OF ANAEROBIC ACTIVITY Ali Satia Graha, Yogyakarta State University	110 - 116
9	PLAYING AS THE BEGINNING OF SPORT CULTURE A.M. Bandi Utama, Yogyakarta State University	117 - 119
10	13 CHARACTER OF CONDUCT A CHAMPION BADMINTON Amat Komari, M.Si, Yogyakarta State University	120 - 123
11	ORGANIZATIONAL DEVELOPMENT STRATEGY CLUB-hockey club IN BANDUNG Aming Supriyatna, Indonesia University of Education	124 - 126
12	THE ALTERATION OF MAXIMUM AEROBIC CAPACITY (VO ₂ MAX) OF JPOK-FKIP STUDENTS OF LAMBUNG MANGKURAT UNIVERSITY AR. Shadiqin, Lambung Mangkurat University	127 - 133
13	PENCAK SILAT ENDURANCE TRAINING (In Dept Overview On Pencak Silat Athlete) Awan Hariono, Yogyakarta State University	134 - 141
14	SOCCER MODIFICATION PRINCIPLES IN SCHOOL A. Erlina Listyarini, Yogyakarta State University	142 - 148
15	THE INFLUENCE OF TRAINING METHOD AND HAND STRENGTH ON THE SWIMMER ACHIEVEMENT OF BUTERFLY STROKE The Experiment Study of Faculty of Physical Education and Health Education Indonesia University of Education (2011) Boyke Mulyana, Indonesia University of Education	149 - 155
16	THE ROLE OF WHEY PROTEIN IN THE IMPROVEMENT OF ATHLETE PERFORMANCE Cerika Rismayanthi, Yogyakarta State University	156 - 161
17	THE LECTURE EVALUATION OF MOTOR LEARNING IN TRAINING DEPARTMENT OF TRAINING EDUCATION OF STATE UNIVERSITY OF YOGYAKARTA C. Fajar Sriwahyuniati, Yogyakarta State University	162 - 169
18	VOLLEYBALL TRAINING AS A MEDIA TO SHAPE CHILDREN'S LEADERSHIP SKILL Danang Wicaksono, Yogyakarta State University	170 - 174
19	TAEKWONDO ENDURANCE EXERCISE ON FIGHT CATEGORY Devi Tirtawirya, Yogyakarta State University	175 - 184
20	PHYSICAL ACTIVITY AND MOTOR DEVELOPMENT OF CHILD Dian Pujiyanto and Syafrial, Bengkulu University	185 - 190

21	COMPARISON OF CIRCUIT STRENGTH TRAINING INFLUENCE BETWEEN BLOCK AND NONBLOCK SYSTEMS CONCERNING THE PHYSICAL FITNESS COMPONENTS ON THE BEGINNERS SPRINTER MALE ATHLETES Eddy Purnomo, Yogyakarta State University	191 - 195
22	ANXIETY AND STRESS LEVELS OF THE RHYTHMIC ATHLETES IN THE NATIONAL STUDENT SPORT WEEK (POPNAS) YEAR 2009 Endang Rini Sukamti and Endang Murti Sulistyowati, Yogyakarta State University	196 - 200
23	THE LEVELS OF UNDERSTANDING OF PHYSICAL EDUCATION TEACHERS OF STATE JUNIOR HIGH SCHOOLS IN SLEMAN REGENCY TOWARDS <i>PENCAK SILAT</i> INSTRUCTIONS Erwin Setyo Kriswanto, Yogyakarta State University	201 - 208
24	BUILDING GYMNASTICS IN PHYSICAL EDUCATION TO FORM AND DEVELOP BASIC MULTILATERAL BODY ATTITUDE AND ABILITY FOR PRIMARY SCHOOL STUDENT Fredericus Suharjana, Yogyakarta State University	209 - 214
25	THE ROLES OF PHYSICAL EDUCATION INSTRUCTION IN ELEMENTARY SCHOOL Farida Mulyaningsih, Yogyakarta State University	215 - 220
26	THE MEASUREMENT OF DIFFERENT POSITIONS OF THE VOLLEYBALL UPPERHAND SERVE IN THE YUSO JUNIOR CLUB SLEMAN Fauzi and Achmad Robidin, Yogyakarta State University	221 - 227
27	THE DEVELOPMENT OF LIMB MUSCLE POWER IN 6-12 AGE CHILDREN IN BULELENG REGENCY Gede Doddy Tisna, Ganesha University of Education	228 - 235
28	ASSESSMENT IN SPORT AND PHYSICAL EDUCATION HEALTH Guntur, Yogyakarta State University	236 - 247
29	ROLE OF SPORTS PSYCHOLOGY IN PHYSICAL ACTIVITY Hanafi Mustofa, UPN "Veteran" Yogyakarta	248 - 253
30	ANAEROBIC INTERVAL TRAINING METHOD ON INCREASED THE FRONT CRAWL STYLE OF 100 METER-SWIMMING SPEED Heri Pendiarto, Tunas Pembangunan Surakarta University	254 - 261
31	FIRST AID TO FAINTING USING MASSAGE TECHNIQUE OF ACUPUNCTURE SYSTEM Heri Purwanto, Yogyakarta State University	262 - 268
32	EDUCATING NOVICE TEACHERS ABOUT TEACHING PERSONAL AND SOCIAL RESPONSIBILITY THROUGH APPRENTICESHIP Herka Maya Jatmika, Yogyakarta State University	269 - 276

33	BUILDING CHARACTER EDUCATION THROUGH PHYSICAL ACTIVITIES (GAMES) Indah Prasetyawati Tri Purnama Sari, Yogyakarta State University	277 - 282
34	GROWTH AND HEIGHT PREDICTION AS A BASIC ACHIEVEMENTS SINCE EARLY AGE Jaka Sunardi, Yogyakarta State University	283 - 292
35	IMPACT OF SPORT PARTICIPATION ON CHARACTER DEVELOPMENT: A MYTH OR REALITY? Joko Purwanto, Yogyakarta State University	293 - 299
36	FIVE-STEP MODEL OF EXERCISE-INDUCED MUSCLE HYPERTROPHY: CONTRIBUTION OF SATELLITE CELLS Kartika Ratna Pertiwi, Yogyakarta State University	300 - 306
37	THE EFFECT OF LEARNING METHOD AND MOTOR EDUCABILITY LEVEL TOWARDS THE SKILL MASTERY OF BASIC TECHNIQUE IN PLAYING SEPAK TAKRAW I Ketut Semarayasa, Ganesha University of Education	307 - 311
38	THEORY OF MULTIPLE INTELLIGENCES APPLICATIONS IN PHYSICAL EDUCATION IN ELEMENTARY SCHOOL Komarudin, Yogyakarta State University	312 - 317
39	BIG BALL GAME WITH KORFBALL Lilik Indriharta, UPN "Veteran" Yogyakarta	318 - 325
40	IMPROVING THE STUDENTS' EMOTIONAL INTELLIGENCE THROUGH THE PHYSICAL EDUCATION Lismadiana, Yogyakarta State University	326 - 329
41	WHEN POSITIVISM PARADIGM BECOMES OVER DOMINANT IN PHYSICAL EDUCATION M. Hamid Anwar, Yogyakarta State University	330 - 333
42	APPLICATION OF <i>AWARENESS TRAINING MODEL</i> TO ENHANCED PSYCHOLOGICAL ASPECT OF VOLLEYBALL PLAYER Nasuka, Semarang State University	334 - 341
43	PHYSIOLOGICAL AND PSYCHOSOCIAL PROFILES OF FEMALE ATHLETES IN "MASCULINE" SPORT (A DESCRIPTIVE STUDY ON FEMALE ATHLETES PARTICIPATING IN SOCCER, TARUNG DRAJAT AND BOXING) Nina Sutresna, Indonesia University of Education	342 - 347
44	THERAPEUTIC MODALITIES IN RECOVERY PHASE TO ENHANCE ATHLETIC PERFORMANCE Novita Intan Arovah, Yogyakarta State University	348 - 354

45	PARTICIPATION MOTIVE IN PHYSICAL ACTIVITIES Nur Indri Rahayu, Indonesia University of Education	355 - 362
46	NUTRITION FOR MAXIMAL PERFORMANCE Pipit Pitriani, Indonesia University of Education	363 - 368
47	EXERCISE AND NUTRITION INTAKE TO IMPROVE SPORT PERFORMANCE OF DIABETIC ATHLETE Putu Adi Suputra, Ganesha University of Education	369 - 375
48	THE SUCCESS FACTORS OF SWIMMING COACH R. Agung Purwandono Saleh, UPN "VETERAN" Yogyakarta	376 - 381
49	MAPPING OF PHYSICAL EDUCATION TEACHERS BASED ON THE NUMBER OF ELEMENTARY SCHOOL STUDENTS IN BANYUMAS REGENCY R. Sunardianta, Yogyakarta State University	382 - 387
50	GENETICS ASPECT OF SPORT PERFORMANCE Rachmah Laksmi Ambardini, Yogyakarta State University	388 - 393
51	IMPROVING LEARNING IN PHYSICAL EDUCATION FOR LOWER GRADE ELEMENTARY STUDENTS AT SDN CATURTUNGGAL III, YOGYAKARTA USING TEACHING GAMES FOR UNDERSTANDING (TGFU). Saryono, Yogyakarta State University	394 - 404
52	BLOOD GLUCOSE AS A PRIMARY ENERGY IN VOLLEYBALL MATCH AFTER USING POINT RALLY SYSTEM Sebastianus Pranatahadi, Yogyakarta State University	405 - 413
53	DEVELOPMENT OF MODEL LOCAL GENIUS IN KINESIOLOGY COURSES Sigit Nugroho, Yogyakarta State University	414 - 420
54	ENHANCING INCOME GENERATE OF BANTUL DISTRICT CITIZENS POST EARTHQUAKE THROUGH <i>LIFESKILL</i> EDUCATION Siswantoyo, Yogyakarta State University	421 - 426
55	METAANALYSIS OF THE IMPLEMENTATION OF MOSSTON TEACHING STYLE AND METZLER INSTRUCTIONAL MODEL Soni Nopembri, Yogyakarta State University	427 - 431
57	IMPROVING INTRINSIC MOTIVATION TO STRIVE ACHIEVEMENT IN HOCKEY Sri Mawarti, Yogyakarta State University	432 - 436
58	SPORT TO FORMING THE CHARACTERS: FACT OR MYTH Sri Winarni and Tri Ani Hastuti, Yogyakarta State University	437 - 444

59	LEARN TO RUN WITH THE MOTION OF PLAY ELEMENTARY SCHOOL STUDENTS Sriawan, Yogyakarta State University	445 - 451
60	SERVICE MANAGEMENT OF SWIMMING POOL FACILITY IN SPORT SCIENCE FACULTY OF YOGYAKARTA STATE UNIVERSITY (YSU) Subagyo and Miswanto, Yogyakarta State University	452 - 458
61	KASRONBOL: NEW PERSPECTIVE IN TEACHING GAMES Sudardiyono, Yogyakarta State University	459 - 464
62	THE SIGNIFICANT RELATION BETWEEN PHYSICAL FITNESS AND BODY FAT PERCENTAGE AMONG AEROBIC GYM MEMBER Sukirno, Semarang State University	465 - 470
63	CONFLICT MANAGEMENT PROFESSIONAL COMPETITION FOOTBALL OF INDONESIA Sulistiyono, Yogyakarta State University	471 - 478
64	MAPPING AND DEVELOPMENT OPPORTUNITIES OF INSTITUTIONAL COOPERATION OF HEALTH AND RECREATION EDUCATION DEPARTMENT WITH RELATED INSTITUTIONS Sumarjo, M. Kes, Yogyakarta State University	479 - 486
65	PROBLEMS OF WOMEN IN SPORTS ACHIEVEMENT Sumintarsih, UPN "Veteran" Yogyakarta	487 - 493
66	KINESTHETIC SENSITIVITY IN PROGRESS JUMP SERVE ON VOLLEYBALL Syarif Hidayat, Ganesha University of Education	494 - 500
67	BASKET BALL GAME DEVELOPMENT MODEL TO IMPROVE STUDENTS INTERESTED IN LEARNING HEALTH SPORT AND PHYSICAL EDUCATION IN ELEMENTARY SCHOOL Tantra Sandey Paramitha, Indonesia University of Education	501 - 514
68	THE BASKETBALL EFFECTIVENESS SHOOT THROUGH LAY UP SHOOT AND DIRECT SHOOT TO THE RING-BOARD ON FEMALE STUDENT PHYSICAL EDUCATION, HEALTH, AND RECREATION IN ACADEMIC YEAR 2009/2010 FACULTY OF SPORT SCIENCE YOGYAKARTA STATE UNIVERSITY Tri Ani Hastuti, Yogyakarta State University	515 - 521
69	COPING IN SPORT Wasti Danardani, Universitas Pendidikan Ganesha	522 - 526
70	HYPERBARIC OXYGEN AND LACTATE REMOVAL Widlyanto, Yogyakarta State University	527 - 532

71	THE DIFFERENCE OF EFFECTS OF LEARNING APPROACH AND EYE-HAND COORDINATION TO THE BASKETBALL FREE THROW RESULT (AN EXPERIMENTAL STUDY IN PRACTICE DRILL AND PLAY GAME OF MALE STUDENTS OF SPORT AND HEALTH EDUCATION OF TEACHING AND LEARNING FACULTY OF TUNAS PEMBANGUNAN SURAKARTA UNIVERSITY)	533 - 540
	Wisnu Mahardika, Tunas Pembangunan Surakarta University	
72	BOW TRAINING TO IMPROVE SKILLS ARCHERY	541 - 544
	Yudik Prasetyo, Yogyakarta State University	
73	HANDBALL SPORT EDUCATION LEARNING MODEL	545 - 553
	Yudanto, Yogyakarta State University	

THE MEASUREMENT OF DIFFERENT POSITIONS OF THE VOLLEYBALL UPPERHAND SERVE IN THE YUSO JUNIOR CLUB SLEMAN

By:
Fauzi and Achmad Robidin
Yogyakarta State University

ABSTRACT

This study aims at determining differences in different positions on volleyball upperhand serve from the right position (on the rear position one), from the middle position (on the rear of position six), and from the left position (rear position five) in YUSO Junior club, Sleman. This research is to determine which is the most effective serve of the YUSO junior club, Sleman.

The subjects of this research are 25 volleyball junior athletes in the YUSO junior club, Sleman. The data were collected using the instruments of serve accuracy tests that had been modified. The validity coefficients of the instruments was 0.747 and the reliability coefficients of the instruments was 0.855.

The results of data analysis using the ANOVA (F test) technique showed that there were no significant difference in the measurement position on volleyball upperhand serve from the right position (on the rear position one), from the middle position (on the rear of position six), and from the left position (rear position five) in its accuracy tests. This can be seen from the results of the ANOVA (F test) analysis which showed $F_{count} < F_{table}$ (F_{count} 0, 130 $< F_{table}$ 3.161). The F test results infer that volleyball athletes who perform serve at the three positions will gain the same quality of serves.

Keywords: Serve Positions, Serve Accuracy

INTRODUCTION

Serve is the beginning of volleyball games which is intended to obtain the score. Serve techniques develop into one of the techniques to attack the opponents. There are various forms of volleyball serve techniques with the variety of advantages and disadvantages. As noted by Vieira (1996: 26), serve is the only technique that is determined by individual factors themselves since in performing a serve, there are no other parties can be blamed for the failure to perform serves except the player himself. Tosses of the opponents are also influenced by the qualities of the serve reception. Therefore, performing serves, players should do their best to make the opponents difficult in receiving serves, so that opponents will have difficulties to carry out attacks. The success in performing serves can be seen from the flow and the accuracy of the ball which can make the opponents difficult.

Volleyball serves used to only be done from the rear of position one. With the development of volleyball games, serves can be done from the right (rear of position one), middle (rear of position six), and left (rear of position five) as long as it does not exceed the width of the volleyball field. In the volleyball game, since serve is the main factor to get scores, it means that the athletes should do serves with concentration to get maximum results. The accuracy determines the levels of volleyball serve acceptance difficulty. Therefore, serves in volleyball require accuracy of serve targets to get the scores.

Given the importance of serve in the volleyball games, there are needs to do measurement research on the accuracy related to the different position / place of serves of the volleyball serves.

LITERATURE STUDY

1. Accuracy

a. Understanding Accuracy

Being accurate means in accordance with the desired expectations or desires. Accuracy is the ability to direct something consciously to the desired object. According to Porwadarminta (1976: 1055), the accuracy can be defined as pertinence. In the context of sports, Suharno (1982: 35) states that accuracy is the ability to drive something to its intended target. Sajoto (1995: 9) states that accuracy is the ability to control the free movements toward a target.

Based on the opinions of the above can be concluded that the accuracy is the ability to direct something to the objects in accordance with the will or desire with a particular purpose. Thus, the purposes of this research is the measurement of the serve place / position on specific targets.

b. Factors Affecting Accuracy

The accuracy is influenced by various factors both internal and external. Internal factors are factors that come from within someone, so that it can be controlled by the subject. External factors are influenced from outside of the subjects, so that it cannot be controlled by the subject. Suharno (1982: 26) states that the determinants of accuracy are: (1) high coordination, (2) the size of the target, (3) the sensory acuity, (4) the distance to targets, (5) technique mastery, (6) the speed of the movement, (7) feeling and accuracy, and (8) the strength of the movement.

Coordination of sensory acuity, technique mastery, the speed of the motion, feeling and accuracy, as well as the strength of the movement are the internal factors that is influenced by the subjects themselves. The size of the target and distant to the target are external factors originating from outside the subjects. Sukadiyanto (2002: 102-104) suggests there are several factors that affect accuracy. They are the level of difficulty, experience, skills, the type of skills, feelings, and the ability to anticipate the motion.

Based on the above description, it can be concluded that the factors that determine the accuracy is the factor that comes from within oneself (internal) and factors originating from outside (external). The internal factor is the skills (coordination, movement strength, movement speed, technique mastery, ability to anticipate the movement), and feeling (feeling, accuracy, sensory acuity). While external factors are degree of difficulty (the size of target, distance), and environmental circumstances.

2. Serve

a. Serve Definition

Serves literally means presentation. Serve is the first ball to be presented by a team to start a game. Viera (1996: 27) states that serve is the only technique used to start the match. Suharno (1982: 24) suggests that serve is as the sign of the start of the game or the first attack for the team who performs serve. Serve is also the only technique that is not affected by external factors. Therefore, in a game, most of the serve failures are influenced by the emotional state of the server. Based on the above description can be concluded that the serve is to start of the game.

b. Kinds of Serves

According to Yunus (1992: 69) the various kinds of serves can be divided into several types, namely: underhand serve, upperhand serve, as well as jumping serve.

1) The Underhand Serve Technique

a) Initial Attitude

Stand in the serve area overlooking the field. For those who do not use your left hand, place your left foot in front vice versa. Hold the ball in the left hand with open palms. Bent knee slightly and move body weight in the middle.

b) Execution

Float ball in front of right shoulder, at 10 to 20 cm height. At the same time, pull the right hand back and then swing to the front top and bottom of the ball on the back. Straighten the arms and tense the palm of the hand.

c) Follow up

After beating the ball, move the body weight forward followed with right foot forward. After that, immediately go back into the field to take a position with a ready stance to normal. Get ready to receive a refund or an attack from the opponents.



Figure 1.
The Underhand Serve Technique

2) The Upperhand serve technique

a) Initial Attitude

Stand in the serve area overlooking the field. For those who do not use your left hand, place the left foot in front and vice versa (there are also players who stood with the two legs parallel to the face to the net). Hold the ball in the hand,

b) Movement Execution

Float ball in front of or higher than the head. Hit immediately the ball with the right hand on the center back of the ball and force the ball to cut the center line of the ball. Stiffen the wrist.

c) Follow up

Move the arm in line with the force produced to the front. If the blow is done by a quick movement (whack), there is no follow up movements.

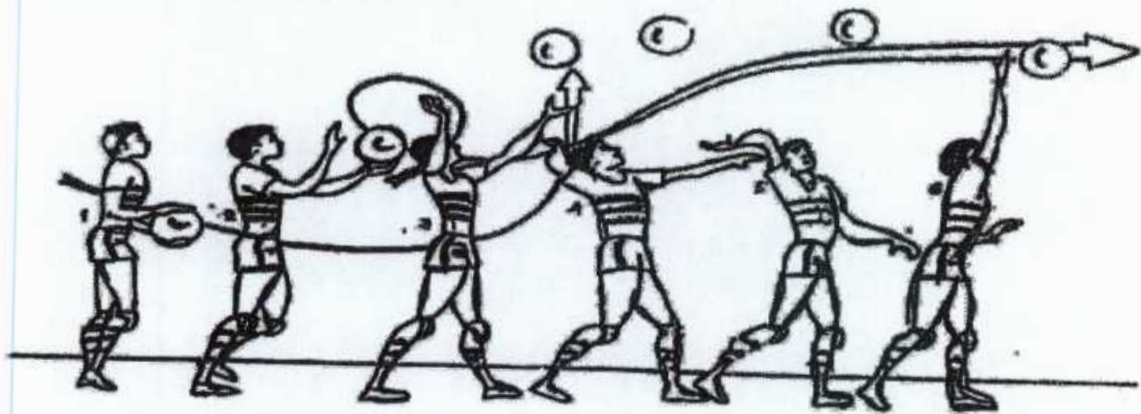


Figure 2.
The Upperhand serve technique

3) Jumping Technical Serves

a) Initial Attitude

Stand in the serve area overlooking the field. Hold the ball using both hands.

b) Movement Execution

Float ball as high as approximately 3 feet in front of the body, then lower the body by bending your knees to perform prefix jump as high as possible. Then, hit the ball as high as possible as using smash. Whip the wrist us as soon as possible so that the ball top spin is high and land down on the opposite field fast.

c) Advanced Movement

After doing a blow with the ball reaching as high as when flying through the air, land directly on the field and immediately take a position ready to receive a refund or an attack from the opponent.

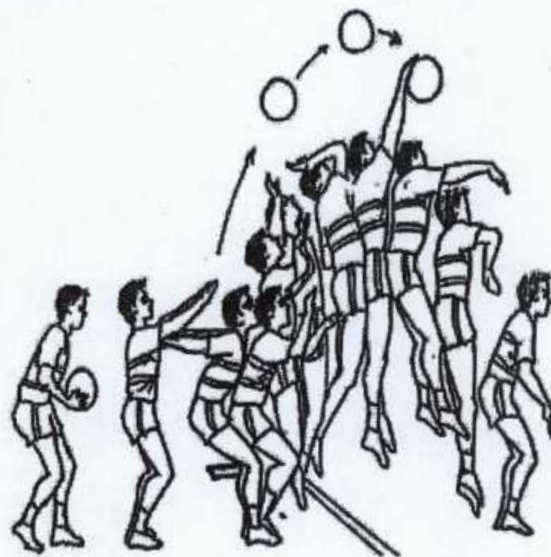


Figure 3.

Attitude When a hit ball In The Jumping Serve

Based on the importance of serve, experts create a variety of techniques and variations in serve. According to where the ball was hit, the kind of serve can be divided into: (1) underhand serve and (2) upperhand serve. Based on the movements of the ball after being hit, serve can be divided into floating serve and spin serve.

RESEARCH METHOD

A. Research Design

This research is quantitative. The method used is survey method with the test and measurement approach. This study aims to determine the influence of differences in place / position of serve to the accuracy of the volleyball serve. This research has three independent variables namely: serve from the right (rear of position one), serve from the middle (rear of position six), a serve from the left (rear of position five).

X3

X2

X1

- X1 = serve from the right (rear position one).
- X2 = serve from the middle (rear position six).
- X3 = serve from the left (rear position five).

B. Operational Definition of Research Variables

The variables of this research are the objects of research that are variable of serve position which are the right position (rear position one), the middle position (rear position six), left position (rear position five).

Accuracy of serve is the ability to direct a blow to the opponent's field goal. To measure the serve accuracy, this research used modified Russel-Lange Volleyball test.

C. Population and Sample Research

The populations in this study were 40 volleyball athletes in the age of 17-20 who had ever represented YUSO club, Sleman in various championships. The samples were 25 chosen using random sampling using lottery so that the athletes will have equal opportunity to be the samples.

D. Instruments and Data Collection Techniques

The data collection was conducted using direct measurement on the respondents using the measuring instrument in accordance with its object and then the measurement results were presented one by one. Instruments in this study were tests to determine the ability of the subject in the variable to be measured. Therefore, modifications need to be conducted on this serve test. The instrument used in this study was the modification of the Russell-Lange volleyball serve test. The validity of the test determined based on subjective assessments on players conducted by 7 juries was 0.677. Reliability with the test-retest method was 0.870. Therefore, modification of these tests is needed to find the validity and reliability.

E. Validity and Reliability

The validity of this test will be tested on subjects outside the subjects of the present research by using the corrected item-total correlation method. Reliability of this instrument was tested using the test-retest method with Product Moment.

F. Data Analysis Techniques

The data were analyzed using ANOVA. The variance analysis function was to test whether there are significant differences in the average value of one group from the others.

RESULTS AND DISCUSSION

A. Validity and Reliability Test Results

Prior to conducting the research and collecting the data, the researcher conducted trials on the instruments using subjects which were not the subjects of this research. The tests included validity and reliability tests using the methods of corrected item-total correlation for the validity and the test-retest Product Moment formula for the reliability. The result of test validity and reliability were 0.747 and 0.855, respectively.

B. Research Results

Based on the analysis on the data using ANOVA, the results are as follow.

Table 1. Summary of the results of ANOVA analysis

Total Varians	Total Square (JK)	dk	Average Square (RK)	F
Average	213,653.45	1	213,653.45	0.130
Inter groups	12.83	2	6.45	
Intern groups	3,555.72	72	49.85	
Total	217222	75	-	-

From the table above, it can be seen that F_{count} was 0130, to seek the F_{table} at the significance level of 5% with $K - 1$, $(3 - 1 = 2)$ where K = the number of groups, $N - K$ ($75 - 3 = 72$), in where N = total number of samples. From the calculation it is obtained: $F_{table} = 2 / 72 = 3.161$. It can be concluded that $F_{count} < F_{table}$ at the significance level of 5% ($0.130 F_{count} < F_{table} 3.161$). It can be inferred that there was no significant difference from the three groups of serve positions from the right, middle, and left.

C. Discussion of Research Results

Based on the test above, the ANOVA test showed that there were no significant differences in the serve accuracy from a different position, namely the right position (rear position one), middle (rear position six) and left (rear five positions). The results for the tests shows that from the three serve positions there is no significant difference in the levels of serve accuracy. In this study, researchers distinguish the accuracy of serve from the right position (rear position one), the middle position (rear position six), and left position (rear position five) and the results whose that there was no significant difference from the overall positions. It means that the average serve measurements from the right position (rear position one) is equal to the average serve measurements from the middle position (rear position six), and the same as the average serve measurement results from the left position (rear position five). Thus, the positions had no distinct influence on the serve accuracy measurement. Therefore, in accordance with regulatory changes to the serve by the FIVB (international federation de volleyball).

CONCLUSION

A. Conclusion

Based on research results, it can be concluded that there was no significant difference in the accuracy of the serves performed from three positions, namely: the right position (rear position one), middle (rear position six), and the left (behind the top five) in volleyball.

B. Implication

In accordance with the findings in this study, the implications of these findings are as follows.

1. The results can be materials in the exercise where the positions of the serve do not have different influence on the serve accuracy.
2. Accuracy of serve is influenced by the stability.
3. For tossers, it is more effective to perform serve from the right (rear position one) because, it is easy to get back in the game and perform defense.

C. Research Limitations

There are still limitations and weaknesses that cannot be avoided from this research such as:

1. The problems of physical and mental condition during the tests are nor considered.
2. The matter of time and the place at the implementation of the test are not considered.
3. The foods consumed by the athletes before the test are not considered.

BIBLIOGRAPHY

- Agus Irianto. (2004) *Statistik: Konsep Dasar & Aplikasinya*. Jakarta: Kencana Prenada Media.
- Bertucci, B. (1982). *Championship volleyball, by the experts*. USA: Leisure Press All rights reserved.
- Husaini Usman. (2008). *Pengantar Statistik*. Jakarta: Ikrar Mandiriabadi.
- Poerwodarminto. (1995). *Kamus Besar Bahasa Indonesia*. Jakarta: Balai Pustaka.
- Sajoto, M. (1995). *Peningkatan dan Pembinaan Kondisi Fisik Dalam Olah Raga*. Semarang: Dahara prize.
- Suharno. (1982). *Dasar-Dasar Permainan Bolavoli*. Yogyakarta: FKIK IKIP Yogyakarta.
- Sukadiyanto. (2002). *Teori Metodologi Melatih Fisik Petenis*. Yogyakarta: Penerbit Universitas Negeri Yogyakarta.
- Sutrisno Hadi. (1993). *Statistik Jilid III*. Yogyakarta: Andi Offset
- Suharsimi Arikunto. (1997). *Prosedur Penelitian Suatu Pendekatan Praktek*. Jakarta: Rineka Cipta.
- Viera. (1996). *Bola Voli Tingkat Pemula*. Jakarta: PT. Raja Grafindo Persada.
- Yunus. (1992). *Olahraga Pilihan Bolavoli*. Jakarta: Depdikbud Direktorat Jendral Pendidikan Tinggi.