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"Community Building and Development through Physical Education and Sports"

In conjunction with

1ST CONFERENCE ON INTERDISCIPLINARY APPROACH IN SPORTS (1ST COIS)

"Integrating sports science intervention to optimize human performance"



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YISHPESS CoIS 2018



2nd Yogyakarta International Seminar on Health, Physical Education, and Sport Science (YISHPESS 2018)

1st Conference on Interdisciplinary Approach in Sports (CoIS 2018)

October 26-27, 2018,
Yogyakarta, Indonesia

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1st Conference on Interdisciplinary Approach in Sports (CoIS 2018)

October 26-27, 2018, Yogyakarta, Indonesia

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Preface

First of all, please allow us to extend our warmest greetings and welcome to you all to the 2nd Yogyakarta International Seminar on Health, Physical Education, and Sports Science (YISHPESS 2018). The conference is held in conjunction with The 1st Conference on Interdisciplinary Approach in Sports (CoIS) by the Faculty of Sport Sciences Universitas Negeri Yogyakarta in Yogyakarta, Indonesia on October 26-27, 2018.

The community building and development require integrated aspects in physical education and sports. These issues should be solved by researchers, lecturers, students and even practitioners to share and present their current research. The purposes of the conference are to share and present the reflection and research results related to Physical Education, Health, and Sports Science. In another issue, interdisciplinary approach has been defined as cross disciplines with an in-depth knowledge in one aspect working together to solve problems. Interdisciplinary approach in sports is very important to gain optimal result of performance. In line with the first goal of this conference, it seeks better understanding both in theoretical and practical situation in every expert's aspects.

With the YISHPESS's conference theme: "Community Building and Development through Physical Education and Sports" and CoIS's theme: "Integrating Sports Science Intervention to Optimize Human Performance", approximately 236 papers have been submitted at this conference but only 169 of these have been accepted for the presentation after a blind peer review process. We do hope that this conferences proceeding can enrich our understanding of the role of physical education, sports, and health in maintaining community building and development as well as become a meeting point for academics, sport practitioners and sports professional to share ideas and knowledge for improving performance in sports.

We would like to thank to all parties who helped running this program. Hopefully, all the time and efforts we have spent for these two conferences may be beneficial and impactful for the future.

Yogyakarta, October 20, 2018
Organizing Committee

Committee Report

Dear Excellences, Rector of Universitas Negeri Yogyakarta, invited speakers, distinguished guests, and ladies and gentlemen.

It is our pleasure to welcome you to the 2nd Yogyakarta International Seminar on Health, Physical Education, and Sports Science (YISHPESS 2018) and the 1st Conference on Interdisciplinary Approach in Sports (CoIS) held by Faculty of Sport Sciences, Universitas Negeri Yogyakarta. We would like to welcome all invited speakers from overseas who come from different countries to share their knowledge and ideas at this international conference.

We organize two conferences with the theme: “Community Building and Development through Physical Education and Sports” and “Integrating Sports Science Intervention to Optimize Human Performance”. These events reflect the role of sport science and physical education for developing human performance at this century.

Active participation from 11 invited speakers and 158 presenters reflect the important role of lecturers, students, researchers, and related background in sport and physical education. They will be organized into several panel and parallel sessions to facilitate main presentations and discussions. Moreover, all selected papers will be published in the international indexed proceeding.

We wish you enjoy these conferences and have a memorable time at Universitas Negeri Yogyakarta. Have a great day in Yogyakarta!

Organizing Committee

Table of Contents

Organizing Committees	iii
Preface	v
Committee Report	vi

Part 1. Health

The association between body mass index (BMI), leg power, speed, and cardiorespiratory fitness (CRF) among adolescents <i>Dzihan Khilmi Ayu Firdausi, Muhammad Eka Mardiansyah Simbolon</i>	1
The correlation between body mass index, abdominal circumference, and hip circumference on cardiorespiratory endurance using the Rockport Method <i>Prijo Sudibjo, Cerika Rismayanthi, Krisnanda Dwi Apriyanto</i>	4
Reduction of LDL Cholesterol through MICT and HIIT in rats <i>Yanuar Dhuma Ardhiyanto, Widiyanto, Samsul Mu'arif</i>	8
The effects of health educational lessons using learning activities that make students apply the knowledge <i>Hideaki Tanimoto</i>	12
The effect of sport and circulo massage on the improvement of work productivity of the physically disabled <i>Sumarjo, Sigit Nugroho, Agus Kristiyanto</i>	17
Smartphone: Social attitude and healthy lifestyle <i>Erwin Setyo Kriswanto, Indah Prasetyawati Tri P.S., Ranintya Meikahani, Fredericus Suharjana</i>	21
The potentials of spring water in Brintik Indonesia as the stroke therapy medium <i>Anita Puspa Ningrum, B.M. Wara Kushartanti</i>	26
The role of physical exercise for menopausal women <i>Ni Luh Kadek Alit Arsani, I Ketut Suidiana</i>	31

Part 2. Physical Education

The learning model of handball basic movement skills through simple games <i>Rofiql Umam, Hari Amirullah Rachman</i>	35
Developing playing activity models in physical education towards improving multilateral abilities among elementary school students <i>Ilham Eryk Pratitis Robinson, Sri Winarni</i>	37
Developing basketball using TGfU approach in elementary schools <i>Muhammad Nasihul Waffak, Pamuji Sukoco</i>	45

The design of sports club of Pencak Silat in elementary school <i>Suratmin, Adnyana Putra, I Putu Darmayasa</i>	49
Analysis implementation learning adapted physical education in state high school <i>Pasca Tri Kaloka, Sugeng Purwanto, Yuyun Ari Wibowo</i>	54
Elementary school physical education and sport in integrated curriculum <i>Banu Setyo Adi</i>	58
Intervention model of perceptual motor development in preschool children movement development <i>Hari Amirullah Rachman, Yudanto, Sujarwo, Sudardiyono</i>	61
Instructional model of self-defense lesson in physical education: A systematic review <i>Nur Rohmah Muktiani, Erlina Listyarini, Mr. Saryono, Soni Nopembri</i>	66
Students, teachers, and parents: Urgency implementation of water activity in physical education <i>Suci Cahyati, Wawan S. Suherman</i>	70
Phenomenological study of experience and meaning on K-13 implementation by elementary physical education teacher Purworejo Regency <i>Muhamad Sigid, Caly Setiawan</i>	76
<i>Gobak Sodor</i> games and cardiovascular endurance of elementary school children <i>Bayu Insanisty, Dian Pujianto</i>	82
The implementation of learning big ball game in high school <i>Nurhadi Santoso, Suhadi, Sri Mawarti, Riky Dwihandaka</i>	85
Analysis for the development of a physical education learning model for children with special needs <i>Sumaryanti, Margono, Bernadeta Suhartini, Dapan</i>	88
The implementation of 2013 curriculum in elementary schools <i>Ahmad Syarif, Tomoliyus, B.M. Wara Kushartanti</i>	90
Students' participation in physical education learning through modification of equipment <i>Merryko Wahyu Juanna, Hari Amirullah Rachman</i>	94
Goenrich basic technique model with playing approach for a beginner tennis player <i>Nurkadri</i>	96
The difference in physical fitness levels of Indonesian male and female junior high school students <i>Aprida Agung Priambadha, Fitria Dwi Andriyani, Dapan, Desi Ardiyani</i>	101
The effectiveness of task assessment standard (TASK) in the teaching and learning process of physical and health education teachers <i>Mohd Izwan Shahril, Norkhalid Salimin, Shaharudin Abdul Aziz, Saryono</i>	105
Physical education teachers' knowledge and practice of educational assessment based on gender: A survey <i>Azali Rahmat, Othman Lebar, Siti Eshah Mokshin, Jamal Nordin Yunus, Napisah Kepol, Mohd Uzi Dollah, Azliza Mohammad, Razmawaty Mohamad, Laily Fazlin Khairil, Salzuriawani Ridzwan</i>	109

Bowling modification to increase the basic movement of throwing in the learning of physical education <i>Kartini, Eddy Purnomo</i>	113
The influence of visual media on the footwork in badminton <i>Abdillah, Lismadiana</i>	115
The development of athletic games model to develop character in fourth-grade students <i>Dita Ayuning Tyas, Ria Lumintuarso</i>	117
Engaging the community in project SKIP to promote early years physical literacy in Indonesia <i>Jacqueline D. Goodway, Ruri Famelia, Yung-Ju Chen</i>	120
Physical education is the basic foundation to build high performance athlete <i>Rajesh Kumar</i>	126
Validity and reliability of the holistic assessment standard (SPH) based on the invasion game category in physical education <i>Mohamad Asmadi Bin Samdin, Mohd Izwan Bin Shahril, Norkhalid Bin Salimin</i>	128
Nation character building through physical education: Lesson learned from 2013 Indonesian national curriculum <i>Wawan Sundawan Suherman</i>	133
Spiritual development through elementary physical education classes <i>Soni Nopembri, Ahmad Rithaudin, Saryono, Yoshio Sugiyama</i>	137
Developing affective instrument based on performance in extracurricular swimming <i>Rahma Afdhilla Nasution, Pamuji Sukoco</i>	141
Effects of training methods and power on shooting accuracy in football <i>Rian Desta Sintoko, Suharjana</i>	144
Motion-and-song-based warm-up model for children with visual impairment <i>Hendrik Kusworo, Sri Winarni</i>	147
Exercise box jump to increase the strength of long passes and shots <i>Fadli Suardhana Eka Putra, Hari Amirullah Rachman</i>	150
Identification of the obstacle factors for 2013 curriculum implementation of public junior high schools in Sleman District <i>Bobitya Adrina, Wawan S. Suherman</i>	153
The Influence of ball modification on <i>Sepak Takraw</i> service learning outcome <i>Khairun Nizam, F.X. Sugiyanto</i>	156
Reliability of futsal skill test for high school players <i>Agus Susworo Dwi Marhaendro</i>	160
Students reasoning achievement using games performance assessment instrument in physical education <i>Norkhalid Salimin, Abdul Razak Noruzzaman, Mohd Izwan Shahril, Md Amin Md Taff, Syed Kamaruzaman Syed Ali</i>	166

Differences of influence of playing Playdough and puzzles on fine motor skills and logical-mathematical intelligence in early childhood <i>Panggung Sutapa, Yudik Prasetyo, Fakhurahman Arjuna, Hadwi Prihatanta</i>	171
Changes in children behavior with music yoga motion exercise <i>Nurmala Dewi, Sumaryanti</i>	175
The athletics literacy through need assessment software in contribution to the physical education and health learning process <i>Muhammad Imam Rahmatullah, Yustinus Sukarmin</i>	178
Developing a model of character education of 5t-based <i>Pencak Silat</i> <i>Prabowo Hadi Saputro, Siswantoyo</i>	181
The effect of plyometrics training and strengths on power skills and agility of male player in extracurricular volleyball <i>Wiga Nurlatifa Romadhoni, Djoko Pekik Irianto</i>	186
The capabilities of sports education teachers in making character oriented lesson plans and learning practices <i>Dimiyati, Komarudin, Ermawan Susanto, Joko Purwanto</i>	190
Whole part or mini games, which one is the most effective training method to improve forearm passing ability in volleyball? <i>Yudi Pratama, Djoko Pekik Irianto</i>	194
The effect of exercise methods and coordination towards students' extracurricular basketball skills <i>Muhammad Syaifullah Irwan, Lismadiana</i>	198
Learning activity to develop physical literacy in kindergarten <i>Uray Gustian, Eka Supriatna, Edi Purnomo</i>	204
Development of authentic assessment model of learning outcomes in field tennis courses <i>Guntur, Sridadi, Ngatman, Danang Pujo Broto</i>	208
Evaluation of the 2013 curriculum implemented by physical education teachers <i>Budi Setiadi, Soegiyanto, Setiyo Rahayu, Hari Setijono</i>	214
Badminton game empowerment: A symbol of leadership in the university student association <i>Amat Komari, AM Bandi Utama, Agus Susworo Dwi Marhaendro, Raden Sunardianta</i>	220
The construction of inclusion and inclusive teaching by physical education teachers <i>Caly Setiawan, Muhammad Hamid Anwar, Fathan Nurcahyo</i>	224
A systematic review of teaching swimming based on constructivist approach <i>Subagyo, Moch. Slamet, Nur Sita Utami, Hedi Ardiyanto</i>	231
Using the context, input, process, and product evaluation model (CIPP) to evaluate elementary school teacher-learner program of physical education in Yogyakarta City <i>Agus Sumhendartin Suryobroto, Tri Ani Hastuti, Herka Maya Jatmika</i>	233

Perception of physical education teachers on the implementation and evaluation of curriculum 2013 <i>Ermawan Susanto, Pamuji Sukoco</i>	236
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Part 3. Sport Science

A comparative study of effect of interval and continuous training toward oxidative stress level, antioxidant enzyme capacity, and resistance of erythrocyte membrane <i>Moch. Yunus, Endang Sri Wahjumi, Nurul Riyad Fadhli</i>	241
Evaluation program for special class of sport in senior high school level <i>Ridho Gata Wijaya, Nurhasan, Edy Mintarto</i>	247
Strategy of sport industry development as supporting tourism in DIY <i>Ahmad Nasrulloh, Sumaryanto, Sigit Nugroho, Sumarjo</i>	252
Roles of parenting aquatic athletes through mediators achievement motivation <i>F.X. Sugiyanto, Agus Supriyanto, Nur Indah Pangastuti</i>	259
Martial art of Dayak Central Kalimantan (a study of history, philosophy, and techniques of traditional martial arts) <i>Eko Hernando, Siswantoyo</i>	262
Evaluation of student selection test model of sports-specific class <i>Tri Hadi Karyono, Abdul Alim</i>	267
Positive mental health and its association with posture: With reference to school children <i>Ghansham K. Dhokrat</i>	269
Comparative study on mental health among badminton players and table tennis players of the Kalaburagi District in India <i>H.S. Jange</i>	271
Effective counseling methods to overcome the psychological factor of a sportsperson <i>C. Veerender</i>	273
The picture of teaching physical education and sports in primary school in Burundi Country <i>Japhet Ndayisenga, Wara Kushartanti</i>	277
Psychology preparation of athletes in Malaysia: It looks impressive, but they have no real value in reality <i>Shaharudin Abd. Aziz, Mohd. Izwan Shahril, Zulkifli Mamat</i>	280
The history of Pencak Silat goes to the world in the period of 1980-2000 <i>Firdhana Wahyu Putra, Siswantoyo</i>	284
Analysis of interpersonal communication in sports <i>Ika Novitaria M, Ari Subarkah</i>	288
Chronological changes during 10-day intermittent fasting with low energy intake on high intensity aerobic performance and lipid constituents <i>Ashril Yusof, Mohamed Nashrudin Naharudin</i>	292

Evaluation of aeromodelling coaching system <i>Liesda Oktoviani Nugraha, Wara Kushartanti</i>	298
Games to introduce basic motion of martial arts <i>Sulasikin Sahdi Kadir, Siswantoyo</i>	301
Identification of basic agility movement skills on soccer students of KU between 11-13 years <i>Wahyu Wibowo Eko Yulianto, Siswantoyo, R. Agung Purwandono Shaleh</i>	305
The effects of circuit and fartlek exercise method and peak expiratory flow on Vo_2max <i>Leo Pratama, Wara Kushartanti</i>	310
Football skills: Training methods and motor educability <i>Yudha Rello Pambudi, Widiyanto</i>	316
The effect of artistic gymnastics talent scouting application to artistic gymnastic basic skills <i>Endang Rini Sukanti, Sebastianus Pranatahadi</i>	319
The effect of various passing exercise and ankle coordination on the accuracy of short passing in football <i>Ega Gian Vembiarto, Lismadiana</i>	322
Influence of training method and leg power on running speed <i>Galih Dewanti, Ria Lumintuarso</i>	327
Training model of badminton footwork for beginner <i>Ari Subarkah, Ika Novitaria</i>	333
The contest validation of circuit training design to improve biomotor components in table tennis performance <i>Tomoliyus, Devi Tirtawirya, Rumpis Agus Sudarko, Hasman Alhafiz Arif, Hary Widodo</i>	336
The combination of dribbling and shooting training models based on speed and agility in football <i>Yulianto Dwi Saputro, Sudarsono, Luthfie Lufthansa</i>	339
The exercise method and eye-foot coordination in soccer playing skills for 14-15 years old players <i>Marzuki, Pamuji Sukoco</i>	346
The effect of physical condition on the artistic gymnastic basic skills <i>Ratna Budiarti</i>	351
Coaching achievements KKO in senior high school as an evaluation to sport achievements <i>Fajar Sriwahyuniati, Risti Nurfadhila</i>	354
The effect of plyometric training to speed of volleyball athletes <i>Mansur, Subagyo Irianto, Faidillah Kurniawan</i>	357
Relationship between flexibility with balance in the elderly based on clinical pathophysiology <i>Cerika Rismayanthi</i>	359
The role of sports medicine in elite sports <i>Evert Verhagen</i>	361

Long-term effect of marathon to cardiac health – potential myocardial fibrosis <i>Inarota Laily Mukti, Evert Verhagen, Harald Jorstad</i>	363
Physical activity and mental health in young people <i>Stuart J.H. Biddle</i>	366
Linkages of sports activities with spirituality and religiosity of community: The case in Muslim majority country <i>Rakesh Tomar</i>	369
Shooting drills with target changes to improve the accuracy of penalty kick in soccer <i>Arif Hidayat</i>	374
Effect of strength, flexibility, balance and confidence of successful wall climbing athletes in South Sumatra <i>Bayu Hardiyono</i>	377
The effect of moderate intensity continuous training (MICT) and high intensity interval training (HIIT) on erythrocytes, leukocytes, and platelets level <i>Andryas Yuniarto, Panggung Sutapa</i>	383
The motion analysis technique of flat tennis services <i>Akhmat Bagus Ajizi, Ria Lumintuarso</i>	386
An evaluation of the implementation of special sport class program of junior high schools in Sleman Regency <i>Dana Frasetya, Guntur</i>	390
Sports management implementation of Indonesian sports committee in optimizing sports achievement <i>Andes Permadi, Sugeng Purwanto</i>	393
Recovery does not prevent myocardial damage due to overtraining (Biomolecular and pathobiology studies) <i>Made Kurnia Widiastuti Giri, Muchsin Doewes, Ketut Indra Purnomo, Herka Maya Jatmika</i>	397
The effect of listening music on reaction time of badminton players <i>Adnyana Putra, Ni Made Sri Dewi Lestari, Putu Adi Suputra</i>	401
Physical fitness profile of Indonesian female rugby athletes for Asian Games 2018 <i>Junaidi</i>	405
Holding bow digital test for strength and endurance arm muscles of archery <i>Heru Prasetyo, Siswantoyo</i>	409
Rhythmic gymnastics of the early childhood <i>Endang Murti Sulistyowati, Endang Rini Sukanti</i>	412
The development of the kick <i>Abhorigi Chagi</i> instruments of <i>Kyorugi</i> taekwondo athletes <i>Ayub Tatya Admaja, F.X. Sugiyanto</i>	416
Can mental skills intervention improve resilience of adolescent badminton athletes? <i>Gita Widya Laksmi Soerjoatmodjo, Clara Moningka</i>	420

The development of the forearm passing training model in volleyball for beginner athletes <i>Syamsuryadin, Mansur</i>	423
The influence of plyometric exercise on the long pass results of football players in one football club in Magelang Indonesia <i>Yusuf Sanggantara, Suharjana</i>	426
Sports development index of Berau District East Kalimantan Province <i>Oktofianus Matheus Molu Wato, Hari Amirullah Rachman</i>	429
The effect of training method and motivation to increase VO2Max of Basketball players <i>Deden Ardiansah, F.X. Sugiyanto</i>	432
Contributing factors to the lack of parental involvement in Sepak Takraw <i>I Ketut Semarayasa, Setya Rahayu, Soegiyanto KS, Taufiq Hidayah</i>	438
The effects of plyometric training and age on the agility of Silat fighters <i>Rodhi R. Hidayat, Tomoliyus</i>	441
Developing core stability exercise model of playing approach for children aged 10-12 years to improve accuracy in 15 meters archery <i>Oktita Indah Pratiwi, Mansur</i>	447
The role of parenting style in youth sport talent <i>Adhim Rahtawu, Agus Kristiyanto, Sapta Kunta Purnama</i>	451
Using the prototype of table tennis software in managing table tennis tournament <i>Deny Budi Hertanto, Sigit Nugroho, Hadwi Prihatanta</i>	456
The enlivening system of basketball in South Sumatera <i>Riyan Pratama</i>	461
Influence of training method and concentration to the accuracy of short service backhand in badminton <i>Oloan Victory Manurung, Dimiyati</i>	464
The effects of exercise method and arm strength on 200 meters freestyle swimming achievements <i>Evan Billy Andrianto, Dimiyati</i>	468
The effect of circuit training on aerobic fitness and body fat percentage <i>Presto Tri Sambodo, Suharjana, Galih Yoga Santiko</i>	472
The analysis of diving resistance by using dry static method for freediving beginners <i>Syamsul Bakri, Suharjana</i>	476
Contribution of leg muscle explosive power and flexibility on lay-up shoot in basketball <i>Oki Candra</i>	479
Analysis of the implementation of elementary school sport club management <i>Hendra Jaya Pratama, Lismadiana</i>	483

Characteristics analysis of badminton in female single player <i>Nugroho Agung Supriyanto, Ainur Rasyid</i>	486
A comparison study of running on sand and tartan track to increase cardiovascular endurance of Universitas Negeri Jakarta students <i>Kuswahyudi, Ramdan Pelana</i>	489
Shooting training models with the playing approach for futsal extracurricular of junior high school students <i>Anggel Hardi Yanto, Panggung Sutapa</i>	493
The potential of sport tourism in the Southern Coastal Area of Yogyakarta <i>Ardiansyah Pradipta Kurma Sulistya, Ilya Rosida Perdana, B.M. Wara Kushartanti</i>	498
Comparing the effects of plyometric depth jump and rim jump training on the explosive power of leg muscle and the level of creatine phosphokinase of basketball players <i>Eko Juli Fitrianto, Del Asri, Johansyah Lubis</i>	503
The effectiveness of circuit training with constant break and decreased intervals on VO_2 max, power, and recovery <i>Sigit Nugroho, Riky Dwihandaka</i>	510
The relationship between blood glucose level and stamina of Sepak Takraw athletes <i>Arfandi Akkase, B.M. Wara Kushartanti</i>	515
The differences of psychological characteristics between male and female tennis players <i>Abdul Alim</i>	517
An evaluation of swimming coaching programs <i>Indra Gunawan, Sugeng Purwanto</i>	519
The phenomenological study of fanaticism of football PSS Sleman supporters <i>Ricki Agusman, Caly Setiawan</i>	523
The effect of training method and speed on VO_2 max of futsal players <i>Benny Criya Permana, F.X. Sugiyanto</i>	526
The effectiveness of post-workout fitness and sports massage in changing blood pressure, pulse rate, and breathing frequency <i>Bambang Priyonoadi, Ali Satia Graha, Rachmah Laksmi Ambardini, B.M. Woro Kushartanti</i>	529
Mood state profile as overtraining predictors: Considering gender and two different class types <i>Eka Novita Indra, Yustinus Sukarmin, Eka Swasta Budayati, Widiyanto</i>	534
The effect of weight training method and aerobic endurance on the improvement of anaerobic endurance <i>Rian Dio Juliandri, Yustinus Sukarmin</i>	538
The development of football basic skill learning model <i>Slamet Riyadi, Rumi Iqbal Doewes, Fadilah Umar</i>	541

Adjustment of teen-aged athletes in badminton boarding school <i>Veronica Anastasia Melany Kaihatu, Adriatik Ivanti, Supriyanto</i>	545
The promise of a holistic ecological approach to study badminton talent development in Indonesia <i>Hysa Ardiyanto, Caly Setiawan</i>	550
Bodyweight circuit training for basketball beginner athletes' aerobic endurance <i>Risa Herdiyana Bastian, Tomoliyus</i>	554
Physical education sport and health national curriculum and elite sport development: Policy, synergy, or conflict? <i>Sulistiyono, Wawan S. Suherman, Dwi Kurnianto</i>	558
Ethical issues in researching immigrant youth physical activity: A New Zealand perspective <i>Muhammad Hamid Anwar, Caly Setiawan, Herka Maya Jatmika</i>	563
Sports achievement issues: Professionalism, policy, racism, cheating, abuse, doping, gender <i>Sujarwo, Suharjana, Hari Amirullah Rachman</i>	569
The effects of training method and aerobic capacity on the anaerobic endurance of taekwondo athletes in Dojang Lampung Barat <i>Guntur Yuli Satria, Hari Amirullah Rachman</i>	573
Dive sports career opportunities in Indonesian professional sports <i>Satrio Sakti Rumpoko, Vera Septi Sistiasih, Ratna Kumalasari</i>	579
Implementation of sport science coaching: Improving strength and conditioning performance of tennis junior athletes <i>Rina Ambar Dewanti, Beltasar Tarigan, Dian Budiana</i>	582
Measurement of the muscle fitness level of 9-12 years old badminton players with the Kraus Weber method <i>Dinan Mitsalina, Widiyanto</i>	586
The analysis of volleyball coaching achievement obstacles in Lampung Province Indonesia <i>Kusbani, Soegiyanto KS, Hari Setijono, Sulaiman</i>	589
The effects of training methods and eye-hand coordination on groundstroke accuracy <i>Rekyan Woro Mulaksito Mulyadi, Suharjana</i>	592
Stem cell therapy in anterior cruciate ligament (ACL) injury <i>Ukhti Jamil Rustiasari, Muhammad Ikhwan Zein</i>	597
Developing FIVE® neuromuscular warm-up as futsal injury prevention program <i>Saryono, Muhammad Ikhwan Zein, Ahmad Rithaudin</i>	601
Profile of pre-practice hydration status of Indonesian junior sub-elite karate athletes: Pilot study <i>Djoko Pekik Irianto, Danardono, Muhammad Ikhwan Zein</i>	604

Comparative study of explosive strength among boxers and taekwondo players of Osmania University Hyderabad India <i>Janagama Prabhakar Rao, Yerraguntla Emmanuel Shashi Kumar</i>	607
Effect of weighttraining exercises to develop speed and shoulder strength among javelin throwers of Acharya Nagarjuna University Guntur <i>P.P. Satya Paul Kumar</i>	609
Body responses to combination of endurance and strength training for kids aged 13-14 years old <i>Danang Wicaksono</i>	611
The development of a hitting practice tool model on woodball <i>S.M. Fernanda Iragraha, Sugiharto, Soegiyanto K.S., Hari Setijono</i>	614
The development of smart flexibility tools to measure the digital-based abilities <i>Ardhana Purnama Putra, Siswantoyo</i>	618
Ergocycle test for the disabled children <i>Sri Ayu Wahyuti, Siswantoyo</i>	622
Need assessment for development of digital-based learning media for Jurus Regu Pencak Silat <i>Noor Ika Rifky Syarif Hidayat, Siswantoyo</i>	624
Need assessment of software preparation for Pencak Silat physical test in early age <i>Dewi Nurhidayah, Siswantoyo</i>	627
A study of individual and team game players with respect to visual and auditory reaction time <i>Haricharan Gajbhiye</i>	630
Effect of plyometric training for development of speed among high jumpers of India <i>Hiremath Rajashekhar Mallikarjunayya</i>	632
Valuation of 2-minute, 4-minute, 6-minute and 8-minute run - walk tests for male physical education students <i>Uday N. Manjre</i>	634
Comparative study of agility among korfbal and netball players in Hyderabad India <i>Loka Bavoji Laxmikanth Rathod</i>	636
A study on the aerobic fitness among hockey and football players of Gulbarga University India <i>Pasodi Mallappa Sharanappa</i>	638
The periodization of 4 and 6 weeks circuit training and age to improve the aerobic endurance of basketball beginner athletes <i>M. Rachmat Darmono Umar, Tomoliyus</i>	640
Construct validity for talent identification test athletic with Aiken's V <i>Budi Aryanto, Awan Hariono, Cukup Pahalawidi</i>	647

Evaluation program of physical and health educational learning in junior secondary school in The Gayo Lues Region of Aceh
Rani Fitria 650

A comparative study of mental health between athlete and non-athlete
Bhaskar Salvi 653

Using the Prototype of Table Tennis Software in Managing Table Tennis Tournament

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Abstract—currently, the table tennis game still has many problems. Poor registration process often stirs up controversy due to the limitation placed on the number of participants who can attend the game. The magnitude of the participants due to the large numbers of diverse age groups further complicates timely and accurate scheduling. There are also varieties of age fraud being done as a result of lack of computerization in athlete registration system. This study is aimed at: (1) The production of the design for the table tennis software and (2) Getting a good performance from the table tennis software design. The special research is targeted at a well-performing and well-validated table tennis information system. In this research, the creation of the system is founded upon the software design method in reference to Pressman (2012). The first step is analysis, which consists of user needs analysis, job analysis and technology analysis. The next includes the design of block diagrams, interface design and program flowchart design (flowchart). After that comes the process of translating the modules of the design results -using the programming language, into the form of application or as it is commonly called; coding / implementation. The last stage is testing the system using Black Box Testing system. In this stage, the functionality of each button and the items contained in each form is tested for effectiveness. The result of functional testing with black box testing as a base is; first, it states that all buttons, interface pages and menus can work properly. The app is then further tested for eligibility by the users of the tournament, referee and general users. As a result, the referee's feasibility test scores 90 from a scale of 100 (very feasible), and the user aspect scores 80 out of a 100 (feasible) scale. Generally, referee users and ordinary users attest to the fact that this app is worth using.

Keywords—*information system, table tennis, tournament*

I. INTRODUCTION

Table tennis is a widely popular sport in the world. Its inclusion as a sport competition in the Olympiad buttresses this point [2]. In addition to that, table tennis has the agenda of holding ITTF cadet challenge championships, ITTF junior circuit, world junior championship, youth Olympic, Paralympic, world championship, and world cup. In Indonesia, championships such as POPNAS, OOSN, PORSENI, POSPENAS, PON, championship age group and national championships between private institutions are routinely implemented. The rapid development of table tennis through these championships has effected an increase in the number of participants, which enables the committee or match organizers, work extra hard especially in terms of the system match schedule creation.

The current table tennis game is still lapped with numerous unresolved issues. Poor registration process is one of these issues and is a resultant effect of limitation in the number of participants who can attend the game. A good game scheduling method is expected to affect positively, the quality of organizing a sports tournament [1]. According to Sonia [5] the problems associated with the game increases the table tennis athletes' tendency to have high levels of anxiety before the match. Creation of match system schedules which had been done manually is very difficult and complicated. Often, human error causes errors in terms of making system schedules match. Development in the world of information technology has been so rapid that production of a scheduling system of table tennis match can be facilitated with its help. According to Wasul [3], the modeling of the game system is very important in order to help the implementation of the game.

To achieve the above, it is necessary to build an information system capable of managing a table tennis match. This also includes athlete data management, participant registration input, automatic schedule creation, and publication of match results. The scheduling of a computer-based table tennis match system is expected to simplify and reduce the possibility of human error while in the process. Scheduling information system in table tennis match can be developed with the concept which enables organizers or organizers of the championship create the game schedule quickly and accurately. It can also be directly published through the internet.

Generally, this research is aimed at getting the result of the designing of information system software in the table tennis match. It has a good performance, can improve the quality of table tennis competition, and have good implementation effectiveness. The specific objectives of this research are: (1) Produce the design of information system software table tennis match, and (2) Getting a functional performance of the design software system information game table tennis match.

The benefits of this research are: (1) providing a vehicle to the public to know how the running of a table tennis match from registration to final in an efficient, inexpensive and accurate design works (2) providing a wide opportunity to the community to learn and understand the system of table tennis in a light, simple way and (3) positively impacting on the improvement in quality of match implementation, reducing the impact of cheating and age theft, expanding the implementation of table tennis information via the internet.

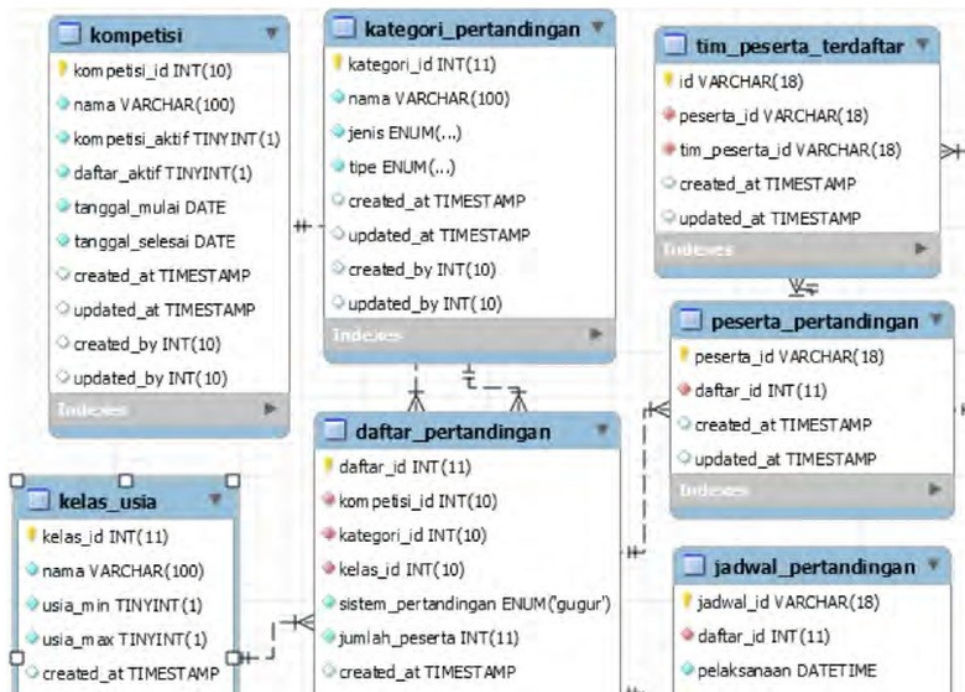


Fig. 1. Database design using erd

II. METHOD

The specified type of research used in this study is 'research and development' with reference to Pressman [4]. The steps of this research consists of descriptions and needs analysis, design, manufacture or implementation, testing and validation, improvement, weeding, trial usage or implementation, revision and finishing. In this article is only the results of the design is discussed.

The first stage of design is creating the system needs analysis. The result is a list of needs. Among others are the rules of organizing table tennis matches, table tennis implementing components, and athlete / club data. Appropriate computer equipments, language and programming tools and game referees are also required. The next stage is designing the system. Development of applications, database design, interface design and programming flow should be done with excellently. The next stage is implementation. Once the system is built, functional testing is carried out by the user by the user.

III. RESULTS AND DISCUSSION

The results of the design are described in the following: System requirements analysis are (1) PHP web programming software is used for the display design and simultaneously programmed with HTML language. (2) MySQL software is used to create database, (3) Table Tennis Regulations, (4) HelpNDoc is utilized as the software in designing help files, (5) Web hosting and web server (6) Computer device used: Intel core processor 2 duo centrino 2.20 GHz, 320 GB hard

drive, keyboard, mouse (7) Xampp as MySQL database link with PHP (8) References in relation with software, databases, web-based programming and mysql.

System design is inclusive of database, program flow, database relation diagram and display design. The designed database (see Fig. 1) consist of 9 tables which were generated from the data dictionary, namely: the athlete table, the match system table, the user table, the category table, the verification table, the club table, the table of match participants, the schedule table and the user activity table.

The athletes table contains information and data on athletes who are members of a table tennis club. The match system table contains information on choices fall, competition, half competition. The user table comprise of information on system users in all levels; from super admin, admin, special users or regular users. The category table comprises of the grouping of match participants by age. The verification table contains information on potential participants of the match or event to be proposed. The club table contains information on club data and its members. The participants table contains information on all participants who have verified final matches. The user activity table contains information on user activities performed, such as when signed in to the system, accessed any menu, and more. The basic process of this system is displayed in an outline from the designed Data Flow Diagram, consisting of DFD from level 0 to level 3. Below is an example of Data Flow Diagram Level 0. In Data Flow Diagram level 0, (see Fig. 2) two external entities which are public and admin are displayed.

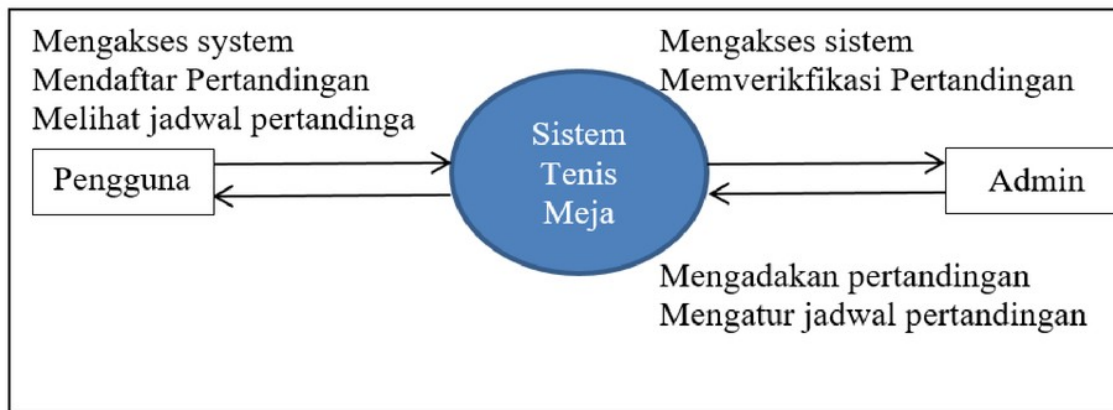


Fig. 2. Data Flow Diagram Design Level 0

In the design view, two examples of the application design are displayed; the display login menu and the main menu view. The login menu (see Fig. 3) comprises of the login button, the exit button, the background image, and the

status bar. The main menu consists of Master Data menu, Game play menu, Registered Team menu, Dashboard menu, System Settings, description box, status bar and buttons related to table tennis.

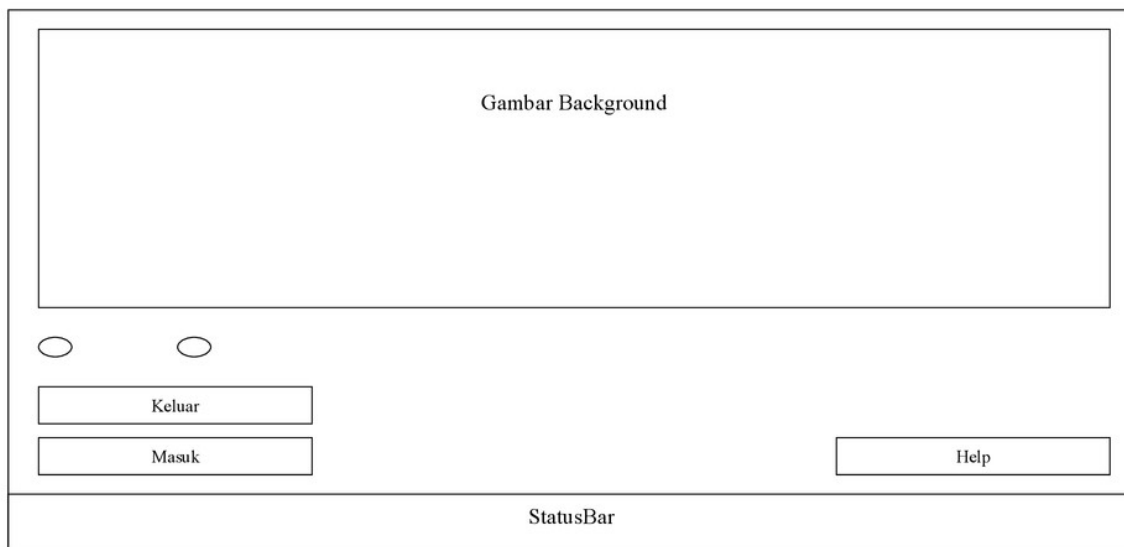


Fig. 3. Form Login Design

Login Form, a part of the display is used to determine the category of users who use or run the program information system. In login form, there are two choices of user categories, namely admin and public. Users who choose the admin category are required to press administrator button

after which a form will appear, then entry of user login and password is demanded before entry into the main form (see Fig. 4). Admin has full access rights which can display, add, change and delete the data presented. While in the public category, users can directly login.

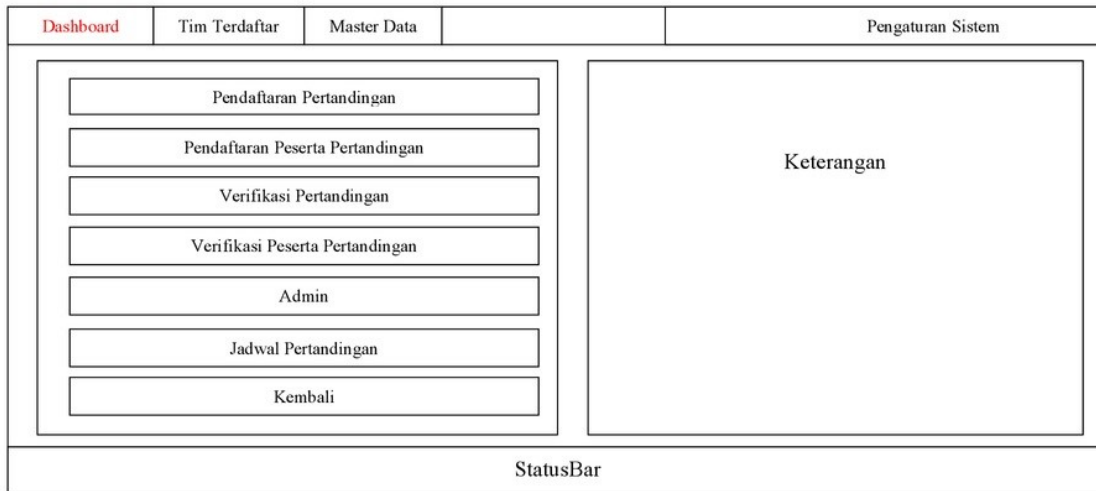


Fig. 4. Main Form Design

The next step is implementation of the program. At this stage, database design is built into MySQL 4.0, interface design is built in Delphi, program codes are written according to DAD, ERD, and Flowchart programs. Each design is assembled into a unified system, interconnected with each other. The next step is installation to the windows system in

order to run the prototype version program. The final step is setting of the content to neatly fit into categories therefore making it easier for users to find their needed content. Below is an example of the implementation of table tennis app (see Fig. 5 and Fig. 6).

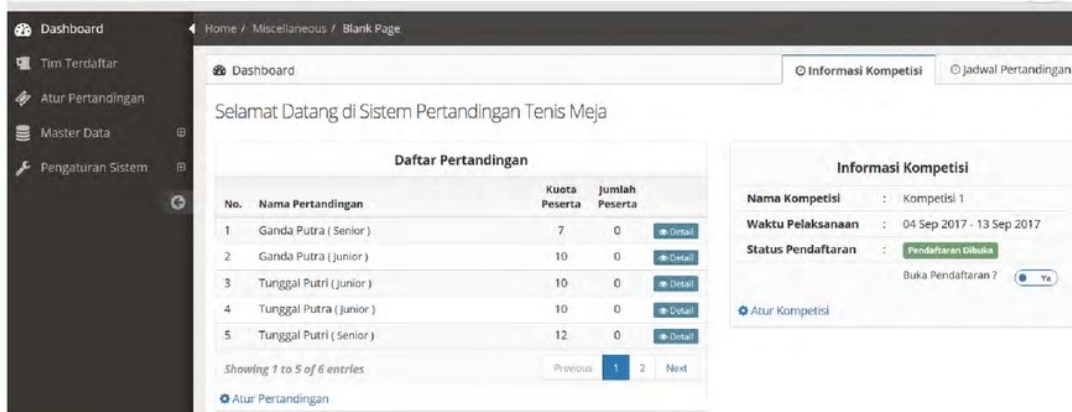


Fig. 5. User Input Data Form

Finally, functional testing of apps and feasibility testing is carried out by media experts. Based on data, functional testing states that all menus, buttons and display are working properly. The results of functional testing using black box testing state that all buttons, interface pages, and menus are working properly. The app is then tested for eligibility by users of the game referee and general users. As a result, the

referee's feasibility test scores 90 from a scale of 100 (very feasible) and the user's test scores 80 from a scale of 100 (feasible). Referee users and ordinary users claim that this app is worth using. The completion of the feasibility test instrument can be viewed in detail in the appendix of this summary.

No.	Nama	Jenis Kategori	Action
1	Ganda Putra	Ganda Putra	[edit] [delete]
2	Tunggal Putri	Tunggal Putri	[edit] [delete]
3	Tunggal Putra	Tunggal Putra	[edit] [delete]
4	Ganda Putri	Ganda Putri	[edit] [delete]
5	Ganda Campuran	Ganda Campuran	[edit] [delete]

Fig. 6. Input data form in match category

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PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13

PAGE 14

PAGE 15

PAGE 16

PAGE 17

PAGE 18

PAGE 19

PAGE 20

PAGE 21

PAGE 22

PAGE 23

PAGE 24

PAGE 25
