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MOTION ANALYSIS TECHNIQUES PENCAK SILAT MARTIAL ART WITH ETHNO-MATHEMATICS APPROACH

MANSUR, SISWANTOYO, IKHWANUDIN AND ALI BIN NADZALAN

Abstract: Pencak silat as a result of the people's thought process, which then developed for art performances accompanied by traditional music, and eventually developed into one of the sports competitions that were competed. For pencak silat achievement, it has developed quite well, but studies of various martial arts techniques used have not been fully explained scientifically. Besides this, pencak silat will also be explored with an ethno-mathematical approach. Starting from this, then through this research will be explored and analyzed by the martial arts movement through the approach of mechanics and ethno mathematics. This study uses descriptive quantitative and qualitative research approaches. samples used by male fighters, have won national and /or international events. Laboratory data were collected, as well as studies across ethno-mathematics disciplines. Furthermore, the data were analyzed with quantitative and qualitative descriptive analysis in accordance with the applicable procedures. The results of the study show that, Pencak silat is the result of the culture of the Indonesian nation which has a unique and multi-disciplinary knowledge. From pencak silat techniques can be revealed with a biomechanical analysis approach to effective and efficient. Besides this hall, the pencak silat engineers can also be studied with an ethno-mathematical approach. Basic movements of pencak silat with ethno mathematics approach found various patterns, symbols, and lines that varied, such as straight line patterns, curved lines, semicircles, triangles, rectangles, pentagons and others. With these results it will be more emphasized that pencak silat is a new alternative to science with an interdisciplinary approach.

Preliminary

In accordance with the existence of pencak silat is one of the results of Indonesian culture. The development of martial arts at this time can be proven by the increasingly crowded events, ranging from elementary schools, teenagers, adults and even to multi-event sports at the Asian level and the invitations of world championships. In an international multi-event match, the overall champion of the Pencak Silat branch was held by another country, so it is enough to prove that the development has progressed well in Asia to Europe.

The basic techniques in pencak silat are: (1) defense, namely: blocking, avoiding, and deflecting, (2) attacks, namely: punches, kicks, falls, and locks, (3) lower techniques, namely: bottom sweep, lower circuit and cutouts (Agung Nugroho, 2004: 5). In order to be able to do the technique properly, good biomotor capability is needed. For this reason, the process of fostering martial arts must begin at an early age. However, there are also still people who are adults who have just started martial arts training. In practicing pencak silat various techniques are introduced by a trainer or teacher.

Here the teacher or trainer must be creative and have a learning strategy in delivering pencak silat materials to students. The learning process occurs when the teacher or trainer sends messages to students. Here the role of correct motion engineering study is indispensable for the success of pencak silat learning. The learning method is adjusted to the level of age and skill level. In training for early childhood, Anggani Sudono (2000: 1) suggests that if the notion of play is understood and highly mastered, then that ability will have a positive impact on our way of helping the child's learning process. Mayke Sugianto (1995: 5) also points out that, from Frobel's experience as a teacher, he realized that playing activities enjoyed by children and toys that children like most can be used to attract attention and develop children's capacity and knowledge. Fun learning contains elements of play in the learning activities. The learning model is intended to provide convenience for students, so that a media that is fun and can be motivated by students is needed to help the process of delivering messages. The study of the movement of pencak silat techniques from the biomechanical aspect becomes very important at the beginner level, because the basis of the correct motion will provide ease in training. On the contrary, if the basis of motion and how to do it is not in accordance with the concept of biomechanics of motion, there will be many injuries.

This explorative descriptive study intends to reveal the pencak silat technique in terms of effectiveness and efficiency of motion from techniques carried out by a biomechanical approach to sports. Based on the description described above, the title of motion analysis of martial arts pencak silat with the biomechanical approach to sports can be taken.

Based on the problems outlined above, the formulation of the problem that can be proposed is as follows: How is the analysis of the movement of martial arts techniques with an ethno-mathematical approach?

This research aims to reveal the technical analysis of the movement of martial arts through an ethno-mathematical approach. these results will make it clear that with the correct motion of the technique, the effectiveness and efficiency of motion will be obtained so that it will improve performance. To reveal this, a pro motion analysis tool is used, by providing markers on the motion joints, and can be captured by the camera screen from four different angles. Next, it will be described from the tool in the form of biomechanical motion and supporting muscle contraction from each of the technical movements performed.

Research Methods

This study uses a quantitative descriptive research approach, by taking a digital Motion Analysis Pro measurement, using a camera from 6 angles. The population used is Indonesian and Malaysian fighters, the sample used is selected by the criteria of male fighter, has been a champion in national and or international events. Data was collected by tests and measurements, as well as analysis with motion pro. Furthermore, the data were analyzed with quantitative and qualitative descriptive analysis in accordance with the applicable procedures.

Research Results and Discussion

This research begins with a series of previous processes consisting of preparation for data collection, searching for people to try, and describing the results. This study explains that the data collection process was carried out in two stages, the first by documenting with a set of video cameras, and the second by using a series of Biomechanics laboratory equipment at the Faculty of Biomechanics Lab, Sport Science and Training of Sultan Idris University of Education. A set of tools used is called vicon motion. To give an overview of a set of Vicon Motion Analysis tools, the following picture is presented.

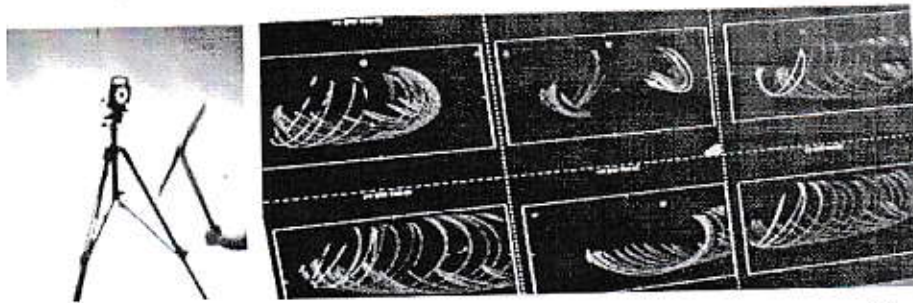


Figure 1: 6-point Vicon Motion analysis camera, and the results of checking checking conditions

On the computer screen shows that, the curved line that is green forming like a circle is the response of the camera sensor to the movement that will be carried out in an area force plate (the midpoint for the area to do the motion being tested). The following are the results of the research from the Biomechanics Laboratory as follows.

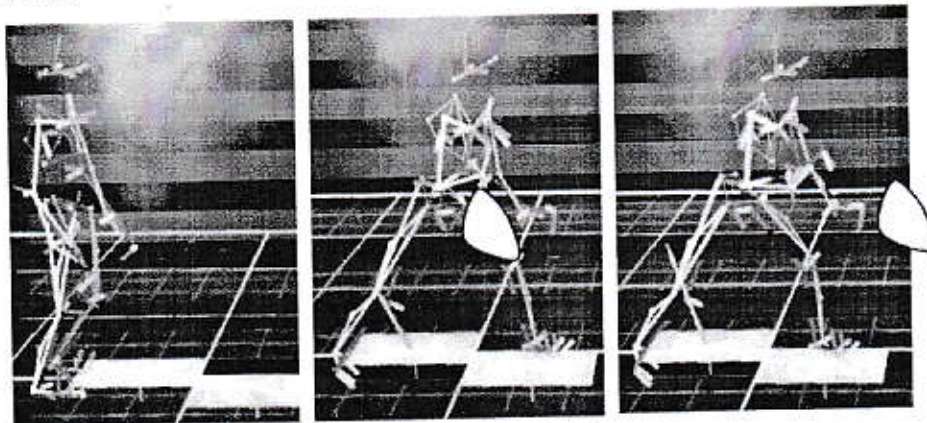


Figure 2: front tide attitude

Front tide attitude, is a prefix for athletes to initiate attacks in the form of punches and kicks. Body position is unstable, the front foot forms an angle and the weight is at the foot of the front so that it will make it easier to move. In biomechanics, the angle formed in the knee will help provide effective and efficient motion function.

Attitude of Installing Rear Cross Legs

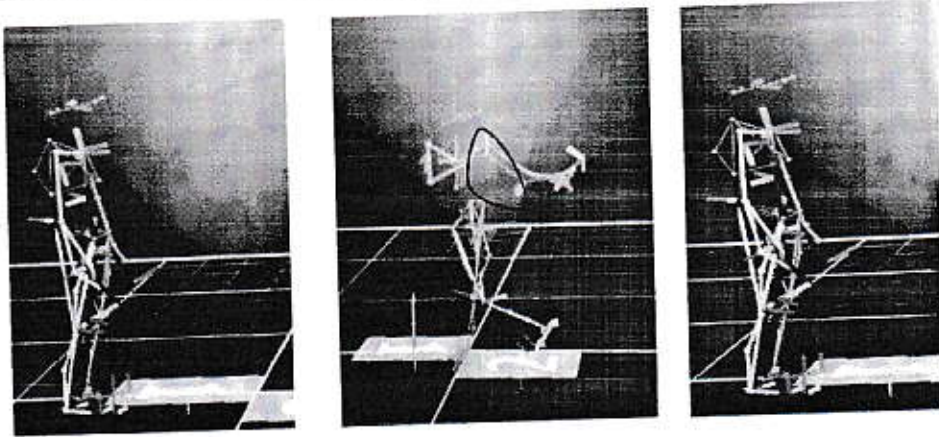


Figure 3: the attitude of the pairing of the rear cross

Attitude of the hind legs is done by stepping the foot past the back or crossing the legs. This attitude provides a basis for athletes to be able to kick T by jumping. This technique will get a range that is farther than the usual kick distance. In biomechanics, this kick technique has a shift in style by moving weight at a high speed. In line with the momentum theory, if a moving object with a higher weight and high speed, it will also get high momentum. Thus the implementation of the pencak silat match will get relatively higher kick power, so it's likely to get a bigger number.

Attitude Riding the Right and Left Side

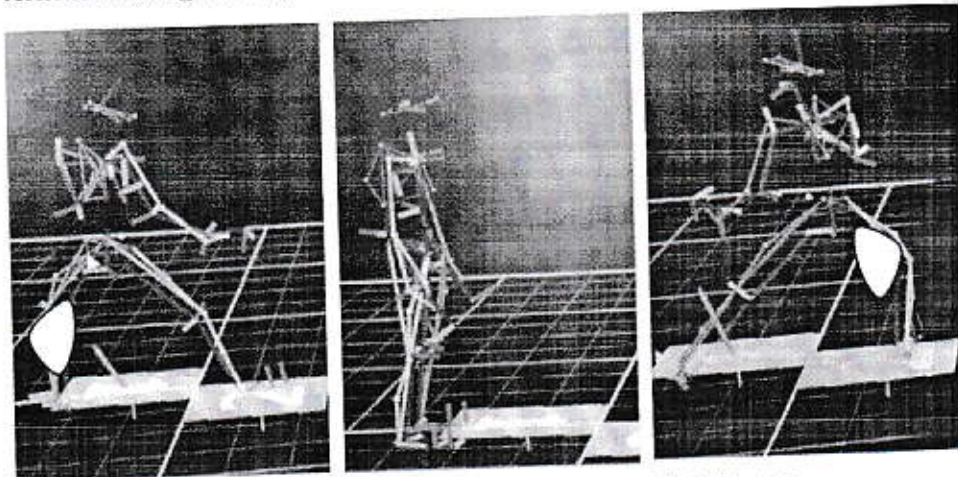
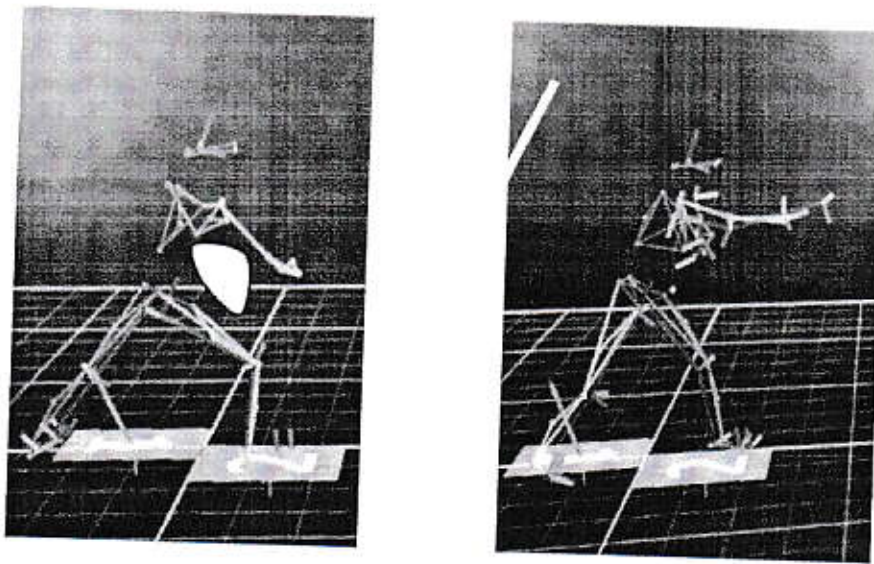


Figure 4: the attitude of attaching the right and left side style

The attitude of the horses to the right and to the left is aimed at preparing the athlete to be able to do the prefix to be able to carry on the advanced motion. The

movement is intended to initiate a kick or to survive by blocking an opponent's attack with a kick technique. Biomechanically, the weight is on the back leg, forming an angle. This technique is needed by athletes as a basis for attack and defense movements in matches.

Front Punch Technique



Picture: straight punch technique

Straight punch techniques can be done by hitting the arm directly, or starting with crossing the leg forward. This is done because of the distance of the range with the fickle opponent. The blow is done with a straight track and is assisted by the strength of the arm and shoulder muscles which eventually makes the punch stronger, faster and has higher power. Biomechanically, this movement, when viewed from a straight path, is assisted by quality muscle work, as well as an element of good physical ability, an effective and efficient work will be obtained. Straight punches in matches have the highest frequency of use compared to other types of blows. Besides the straight punch, there is also a swing punch, which is a blow by swinging the fist from the side by forming a semicircular line.

There is also a blow by swinging your fist downward with the chest target. According to Hui Zhi Zhang, (2015: 54) explained that in traditional methods of combat training, in the process of hitting, swing "quickly, accurately, and heavily" are the three most important factors: the speed and orbit of swing and the hitting position, real time speed of swing. The factors are determined that result in hitting effect. Excellence physical, reasonable swing action, hitting timing and accurate hitting position speed.











Ethno-Mathematical Approach









Ethno mathematics was introduced by D'Ambrosio, a Brazilian mathematician in 1977. The definition of ethno mathematics according to D'Ambrosio is: The prefix ethno is today accepted as a very broad reference to social culture context and therefore includes language, jargon, and codes of behavior, myths, and symbols. The derivation of mathematics is difficult, but it tends to mean to explain, to know, to understand, and to do activities such as ciphering, measuring, classifying, inferring, and modeling.









The suffix tics is derived from technology, and has the same root technique (Rosa & Orey 2011). In language, the prefix "ethno" is defined as something very broad that refers to the socio-cultural context, including language, jargon, code of behavior, myth and symbol. The basic word "mathema" tends to mean explaining, knowing, understanding, and carrying out activities such as coding, measuring, classifying, concluding, and modeling. The suffix "tics" comes from techne, and means the same as technique. Whereas in terms of ethnomatematics is defined as: "The mathematics which is practiced among identifiable cultural groups such as national-tribe societies, labor groups, children of certain age brackets and professional classes" (D'Ambrosio, 1985).

Based on the interdisciplinary approach, sports science can also be conducted with a mathematical approach. Mathematical modeling implemented in sports has begun. The following is one of the mathematical modeling in athletic sports, especially in javelin throwing numbers. According to J. Maryniak, and L. Kozdras, (2009) explained that the results of throwing in javelin depends on several factors, including strength, speed, physical and psychological preparation of the thrower. The technique of throwing, weather conditions when throwing, the type of javelin used, the field conditions also affect the results of the throw.

In the technique of pencak silat movement can be explained the existence of patterns that can study ethno-mathematics. This can be explained by symbols, as well as mathematical patterns in the form of straight lines, curves, circles, triangles, rectangles, and others. Visual symbols for various forms of physical education teaching and training in the use of the unified concept of the supply and development of the methods. Training of sport science means system is in line with the objective law. In the future, sport training will gradually increase the visual symbol application for promotion efforts and make it become the new teaching methods (Hong Gang Qu, 2015: 48). For more depth will be presented as follows.

| Technique | Picture | the ethno-mathematical approach with symbols, lines, etc. |
|----------------------|---|--|
| Respect style |  | <p>Straight line pattern</p>  |
| Rear horses |  | <p>Line patterns form angles</p>  |
| Horses - side horses |  | <p>straight line patterns and angle patterns</p>  |
| Front horses |  | <p>form a double angle pattern from both feet</p>  |
| Mobile side attitude |  | <p>pentagon pattern</p>  |

| Technique | Picture | the ethno-mathematical approach with symbols, lines, etc. |
|------------------------|---|---|
| Rear crossing attitude |  | <p>Form a cross pattern (X)</p>  |
| Front Feet Attitude |  | <p>The position of the feet is a triangle pattern</p>  |
| Straight punch |  | <p>Form a straight line pattern on the arm</p>  |
| Swing punch |  | <p>Form a half circle / curved line pattern</p>  |

| Technique | Picture | the ethno-mathematical approach with symbols, lines, etc. |
|----------------------------|---|---|
| Cutting splits in the hand |  | Form a semicircular path  |
| Double step in front |  | Form a double straight line pattern  |
| Triangle step |  | Form a triangle footstep pattern  |
| Rectangular step |  | Form a rectangular pattern  |

From the above studies, a new understanding can be obtained, that Indonesian martial arts martial arts, it turns out to store basic mathematical knowledge that can be implemented in basic movements and matches. Basic movements of pencak silat with ethno mathematics approach found various patterns, symbols, and lines that varied, such as straight line patterns, curved lines, semicircles, triangles, rectangles, pentagons and others.

Conclusion

Pencak silat is the result of the culture of the Indonesian nation which has a unique and interdisciplinary knowledge. From pencak silat techniques can be revealed with a biomechanical analysis approach to effective and efficient. Besides this hall the pencak silat engineers can also be studied with an ethno-mathematical approach. Basic movements of pencak silat with ethno mathematics approach found various patterns, symbols, and lines that varied, such as straight line patterns, curved lines, semicircles, triangles, rectangles, pentagons and others. With these results it will be more emphasized that pencak silat is a new alternative to science with an interdisciplinary approach.

Bibliography

1. Agung Nugroho. (2004). *Silat Basics*. Yogyakarta: FIK UNY.
2. Agung Nugroho. (2004). *Pencak Silat Comparison, Implementation, and Management*. Yogyakarta: FIK UNY.
3. Awan Hariono & Siswantoyo. (2008). *Pencak Silat for Early Age*. Yogyakarta: FIK UNY.
4. Azhar Arsyad. (2002). *Instructional Media*. Jakarta: PT Raja Grafindo Persada.
5. Barri Arrohhim, Faritodi. (2008). Development of "The Smart" Stamp Media Learning (Cheerful and Agile Silat) In *Introducing Basic Pencak Silat Techniques For Early Childhood*. Essay. FIK UNY.
6. Barton, B. (1996). Making Sense of Ethnomathematics: Ethnomathematics is Making Sense. *Educational Studies in Mathematics*, 31 (1-2), 201-33. Rosa & Orey, 2006)
7. D'Ambrosio, U. (1985). Ethnomathematics and place place in the history and pedagogy of mathematics. *Forthel, Earning of Mathematics*, 5 (1), 44-48.
8. D'Ambrosio. (1999). Literacy, Matheracy, and Technoracy: A Trivium for Today. *Mathematical Thinking and Learning* (2), 131-153.
9. Djoko Pekik Irianto. (2002). *Basic Training*. Yogyakarta: FIK UNY.
10. Hong gang Qu. (2015). On The Theoretical Base Visual Symbols Used in Physical Education and Training. *Sport Engineering and Computer Science-Lou* (Ed.). Taylor & Francis Group, London. pp. 31-34.
11. Hui Zhi Zhang. (2015). Comparative Study of Beijing elite Female Softball Player Batting Training. *Sport Engineering and Computer Science-Lou* (Ed.). Taylor & Francis Group, London. Pp. 37-41
12. Johansyah Lubis. (2004). *Pencak Silat: A Practical Guide*. Jakarta: PT Raja Grafindo Persada.
13. J. Maryniak, and L. Kozdras, "Mathematica Modeling and numerical Simulation of javelin Throw", *Human Movement*, vol. 10 no. 1, pp. 16-20, 2009.

STATISTICAL ANALYSIS OF THE EFFECTS OF LEARNING MODELS OF CRAWL-STYLE FOR ADOLESCENTS

SUBAGYO AND SISWANTOYO

Abstract: This research aims to know the differences influence the results of the methods of teaching pure and part progress part and influence the percentation of body fat high low against the results of learning swimming with crawl-style and can be used as a medium of teaching for teachers or trainers and students in learning self-reliance.

The research methods with experiments design, field experiments suitable research to test the theory as well as get answers to practical questions, flexibility, and power for diverse problems an important feature of the experiment field with 2 x 2 factorial design. sample research amounted to 16 people. the subject of research is the junior high school students in a special region of yogyakarta. Data analysis with quantitative descriptive approach percentage.

Experimental research: the influence of the overall results of the methods of teaching and presentation of body fat against the results of the learning style of swimming crawl junior high school students in a special region of yogyakarta. zoned 1) differences influence the results of the methods of teaching part pure and progression with p: 0.031 meaning different. 2) difference results learn swimming crawl style groups that percentage of the high fat and low with p:0.662 there were no significant differences. this indicates that the hypothesis is no difference between high and low-fat percentage against the results of learning swimming crawl accepted. 3) interaction between the methods of teaching part pure and part progression with high body fat percentage low and fluit: 0.109 with ultra-compact p:0 which means no significant interaction. fluit: 0.109 with p:0.74 no significant interactions. the zero hypothesis fluit < f tab stating there is no interaction between teaching method and percentage of fat against results of swimming crawl style.

Introduction

In line with the government's program is to advance the nation, then the government needs to undertake development efforts in all fields, especially in the field of development of human resources in realizing the human whole indonesia, among them are human development excels in sports.

Increased development efforts in the field of sport, through a national working meeting exercise in 1999 by issuing a 2000-2024 years sports policy contained in the vision of the sport, as for the empowerment sports vision sports, the realization of human quality, healthy indonesia, advanced, sportsmanship, and achievers.

Physical education in schools is one of the efforts to realize the whole indonesia human good in sports as well as others through school. As for the purpose of education given in various physical level of education is to help students to improve

the physical freshness degree movies, basic skills, and health through the introduction and cultivation of the attitude of positive mental attitude and maturing that is implemented in a variety of physical activities in order to: (a) achieve the physical growth, particularly the ideal height and weight, physical development and harmoniously who have adequate resistance, (b) improve attitude and behavior that such positive discipline, honesty, teamwork, respect for others, kompetitif at heart healthy eating and strict regulations that apply.

Physical education and health curriculum in schools, both secondary school primary, secondary schools and the first level of secondary school public physical education material, divided into two groups, i.e., the subject matter and material choices. Subject matter includes athletics, gymnastics, and games. While the material of choice physical education, among others, swimming, pencak silat, badminton, tennis in spell, tennis, sepak takraw and traditional games.

Swimming pool material is part of an existing selection of material in the educational curriculum of physical, thus if the material added in extracurricular activities through the schools, then the implementation certainly should get the attention of in the learning process. When viewed even further the achievements of existing pools in Indonesia is far from other countries, but when viewed in the championship between the gathering at the national level participants most was students in all schools. In the age group, most athletes are on the level of education of elementary and secondary schools. Based on this attention to repair swimming pool learning in elementary and secondary schools need to get attention, in hopes of giving great contributions in the field of sport.

Sports swimming is one of the many sports that are taught in all schools. On the implementation of sports swimming requires special facilities and infrastructure, unlike other sports which are relatively easier to be held. Sukarno (1979:30) suggests that to be able to swim well need to pay attention to some of the principles are (1) float (2) slide (3) continuous motion (4) water resistance. Dadeng act (1991:16) swimming pool with study suggests both needed three staples, namely (1) breathing, air (2) and (3) slide the float.

The results of the learn to swim very determined by many factors. Factors that influence the learn to swim among them 1) factor of teacher-pupil factor 2) 3) 4) lesson material factors and infrastructure 5) factor method of teaching.

Kasiyo (1979:31) stated that teaching methods can be differentiated into two approaches namely between teachers and pupils with an approach based on the presentation of learning materials ... The method of teaching is one of the factors that influence the outcome of learning swimming because if the methods used by the teacher to change the condition of the pupils of the state do not know he know the right method can be used. Then the results of the learning to be achieved can be realized the ability of swimming crawl style technique is good and correct.

Manglisco (1982:53) suggests that the technique of swimming styles crawl includes (1) the movement of the arm (2) the movement of the legs (3) position of the body and (4) breathing.

To teach the skills of particular sports swimming needs to held the use of the right method. Harsono (1988:141) says that the method of teaching skills can be provided in two ways, namely by way of part and whole.

The reality on the ground is still a lot of election methods of teaching that are applied by the teachers to teach the skills of particular sports pool by using the method of sections, that is to say, material movement pool divided into sections then combined into a single movement. Another thing that is often not considered in teaching is less considering the characteristics of individual students. Students have different characteristics to one another, be it the characteristics of physically or psychologically. Specific physical factors need to get attention for yourself, because of factors such as age, weight, height, and gender. These aspects affect the results of the study. Other physical aspects that can affect the results of the study pool factor is the profile of the body, especially the thickness of the body fat, because of the thickness of the body associated with percentage body fat. Holliday (1978:117) argues that in the outline of the human body is composed of 40% muscle, 10% 15-30 organs, adipose, 15% of the skeleton, and 25% in the form of liquid. While fox (1988:560) suggests that the average fat percentage for men between 15 to 17% while for women 25%. Thereby buoyancy has more women than men.

Based on the description outlined above can deduce problems about the teaching pool that much influenced by several factors. Among the factors the selection of teaching methods, especially methods of teaching the most appropriate pool, to consider the difference in the characteristics of the student body profile in particular children in the form of the composition of the body fat, because fat body affecting buoyancy and buoyancy effect in learning swimming. Formulation of the problem of the study are: (1) whether there is a difference between teaching methods influence the results section is pure and methods section progression against the results of the learning style of swimming crawl? (2) is there a difference between influence and high body fat percentage low against the results of the learning style of swimming crawl? (3) is there any interaction between teaching methods and results of the body fat percentage against the results of the learning style of swimming crawl?

Research Methods

This type of research is research experiments. Zainudin (1988:56) experimental research is basically like to test the relationship between cause and effect. In this case, the definition of operational research in this experiment are:

1. Teaching methods

The method of teaching is a way of approach to the delivery of the subject matter against the students that includes (a) the methods of part pure i.e. Delivery method with the road divided the material into sections and delivered from the sake of part (b) of the methods section progress i.e. Delivery method with the add new material and after conquered combined with previous controlled material.

2. Body fat percentage is the result of the measurements using a skinfold caliper to get results body fat percentage the body fat measurement in the area of subscapular or triceps then converted with the table in accordance with age each.

3. The results of the learning style of swimming crawl are the distance that can be achieved by students with the correct technique based on an assessment by a judge in a certain distance. The focus of this research is the mastery of the technique of movement. In this study population that is taken is the first level of secondary school students (jss) country 5 yogyakarta sex son that follows the activities of extracurricular.

Sampling in this study using a purposive sampling. According to sujana (1992:168), purposive sampling is a sampling consideration, sampling is done based on certain considerations. Suharsimi (1982:124) taking of purposive sample is usually done as certain considerations either time, effort and costs so that it could not take a large sample and distant.

In this study, the sample used is students who could not swim. In addition, the students used to study samples consisting of fatty or students presents high fat and low-fat percentage. Of sample who have met the criteria set by the researchers, the sample is then placed into their respective groups in accordance with the design of the research that has been made.

Data collection instruments

Instruments for collecting data in the research of the experiment are:

1. Measurement of body fat percentage
To a large measure fat percentage according to pate (1993:314) magnitude of skinfold on an area can provide estimates accurately. Manglischo (1982:351) body fat percentage measurement can be done by skinfold caliper
2. Measuring results learning pool
To determine the ability to swim for children of school age by using corner swimming test, collins (1978:339). Thomas (1996:24) that the guidelines key success crawl style pools can be known with its swimming pool, measure the distance traveled.

Suharsimi arikunto (2002:144) states, the validity is a measure that shows the level of levitan and the validity of an instrument. Sutrisno hadi (1991:60) to test the validity of the instrument with the rating scale, it should be first tested the reliability by the rater. Test the validity of the instrument using the correlation part total. For testing the hypothesis of this research will be used two variants of analysts path. Kerlinger (1998:395) analysis of the factor of the variant is a statistic method to analyze independent consequences or result of two interactive against free variable bound.

The results of the research and the discussion

The presentation of the data

1. Data analysis
Data research results to be presented here is the data value of the results of the study conducted by a judge. Judge based on the assessment grid that has been created and has been tested mo techniques include vecobakan swimming crawl style in the form of (1) the position of the body (2) the technique of movement

distance (3) engineering arm movement (4) breathing movement techniques. Of the total sample is divided into four treatment groups:

- A) group 1 with symbol a1b1 student group with percentage fat was given treatment method of teaching with the pure.
- B) group ii was given a symbol of groupings a1b2 i.e. Groups of students who have a low-fat percentage given the given the treatment methods of teaching with the pure.
- C) group iii who is given the symbol a2b1 i.e. Groups of students have high-fat percentage given the treatment method of teaching by part progression.
- D) data collection instruments

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- C) group iii who is given the symbol a2b1 i.e. Groups of students have high fat percentage given the treatment method of teaching by part progresip.
- D) group iv who are given the symbol of groupings a2b2 i.e. Groups of students have a low fat percentage given the treatment methods of teaching with the progressive

Table 1
Data research results learn swimming crawl style

| Presentasi body fat | Methods of teaching | | Result |
|---------------------|---------------------|------------------|---------|
| | Bagian murni | Bagian progresip | |
| High | N=8 | N=8 | N=16 |
| | X=3,310 | X=4,007 | X=7,317 |
| | Sb=1,256 | Sb= 0,804 | |
| Low | N=8 | N=8 | N=16 |
| | X=2,834 | X=3,771 | X=6,605 |
| | Sb=0,973 | Sb=1,039 | |
| Result | N=16 | N=16 | |
| | X=6,144 | X=7,7778 | |

Table 2
Frequency distribution of values the results of learning by teaching method is part of the pure

| No | Interval | Fabsolut | Frelatif |
|----|-----------|----------|----------|
| 1 | 0,01-1,00 | 0 | |
| 2 | 1,01-2,00 | 3 | 18,75% |
| 3 | 2,01-3,00 | 5 | 31,25% |
| 4 | 3,01-4,00 | 4 | 25% |
| 5 | 4,01-5,00 | 4 | 25% |
| | | 16 | 100 |

Table 3
Frequency distribution table value of the results of the study with teaching methods part progresip

| No | Interval | Fabsolut | Frelatif |
|----|-----------|----------|----------|
| 1 | 0,01-1,00 | | |
| 2 | 1,01-2,00 | 1 | 6,25% |
| 3 | 2,01-3,00 | 4 | 25% |
| 4 | 3,01-4,00 | 3 | 12,5% |
| 5 | 4,01-5,00 | 9 | 56,25% |
| | | 16 | 100 |

Table 4
Results of swimming pool learning styles. Crawl for a high body fat percentage

| No | Interval | Fabsolut | Frelatif |
|----|-----------|----------|----------|
| 1 | 0,01-1,00 | 0 | 0 |
| 2 | 1,01-2,00 | 2 | 12,5% |
| 3 | 2,01-3,00 | 2 | 12,5% |
| 4 | 3,01-4,00 | 4 | 25% |
| 5 | 4,01-5,00 | 8 | 50% |
| | | 16 | 100 |

Table 5
Results of learning swimming style crawl to a low body fat percentage

| No | Interval | Fabsolut | Frelatif |
|----|-----------|----------|----------|
| 1 | 0,01-1,00 | | |
| 2 | 1,01-2,00 | 1 | 6,25% |
| 3 | 2,01-3,00 | 6 | 37,5% |
| 4 | 3,01-4,00 | 3 | 18,75% |
| 5 | 4,01-5,00 | 6 | 37,5% |
| | | 16 | 100 |

Table 6
Summary of test results between normality and fat percentage method

| Group | N | Lo | Li | Conclusion |
|-------|----|------|------|------------|
| A1 | 16 | 0,16 | 0,25 | Normal |
| A2 | 16 | 0,12 | 0,25 | Normal |
| B1 | 16 | 0,22 | 0,25 | Normal |
| B2 | 16 | 0,18 | 0,25 | Normal |

Table 7
Summary of test results of its homogeneity

| Varian | B price | D _b | X _{2o} | X _{2t} | Conclusion |
|--------|---------|----------------|-----------------|-----------------|------------|
| A | 1,16 | 1 | 0,012 | 3,84 | Homogen |
| B | 2,09 | 1 | 0,01 | 3,84 | Homogen |

Table 8
Statistical analysis of two variant lines

| Source | B _k | D _b | B _k | F | P |
|----------|----------------|----------------|----------------|-------|-------|
| Antar a | 5,346 | 1 | 5,346 | 5,031 | 0,031 |
| Antar b | 1,015 | 1 | 1,015 | 0,955 | 0,662 |
| Antar ab | 0,115 | 1 | 0,115 | 0,109 | 0,743 |
| Galat | 29,756 | 28 | 1,063 | - | - |
| Total | 36,233 | 31 | - | - | - |

Source: statistical analysis of the results of calculation variants contained in attachments

Description:

Between a f-test between methods of teaching

Between the b test f between fat percentage

Inter test ab f methods and interaction between fat percentage

Discussion

Different methods of teaching which is committed against a group of students showed significantly different results. It is based on an analysis of the statistics. Variant 2 lines show the $f = 5.03$ count that cost less than the f table: 4.20 with $\alpha = 0.05$ whose price is smaller than $f_{table} = 4.20$ with $\alpha = 0.05$. When seen from the statistics, the difference in the method of teaching by progressive part method showed better results, compared with the methods of teaching with the method of section. This is apparent from the results of the value of the acquired learning students with an average of 3.889. The results of the average value of 3.889 showed better results than with methods of teaching pure part with the average results of 3.072.

Results of testing the hypothesis that says there is a difference between the methods of part pure and progressive part of the method, of the results of the learning to swim-style crawl proved significantly. By looking at the average value of the results of the study as well as an analysis of variant 2 line to test f , then the teaching with the methods of the progressive part to teach swimming crawl style better than when taught with the pure.

The difference in results of teaching swimming crawl style with a large difference percentage body fat showed the results did not differ significantly because when viewed from the results of the analysis variant 2 f line between groups low body fat percentage shows the price of 0.995 prices is much smaller at a price f table 4.20 on taraf $\alpha = 0.05$. But when viewed from the magnitude of the average value of each group showed different results. The average high fat percentage is 3.659 and average low fat is 3.302.

Test results of the interaction between teaching method and percentage of body fat are not the result of a significant interaction, interaction of f -test showed. Calculated this result 0.109 is much smaller when compared with the price of table 4.20 f .

Methods of teaching with a pure part of the group i and group ii or higher and lower fat group showed an average result $\bar{x} = 3.310$ and $\bar{x} = 2.834$. So the high-fat group i results average higher than group ii low-fat percentage.

The methods section progress imposed on group iii and kelompok iv atau kelompok lemak lebih tinggi dan rendah menunjukkan hasil nilai rata-rata $\bar{x} = 4.007$ dan $\bar{x} = 3.771$. Jadi kelompok iii the percentage of low-fat with the same method that is part of the progression method result from better group iii.

Groups that have high-fat percentage when viewed on an average value of the results of the study with the method of pure and part progression part method. The results are given with the treatment method of the section progress the result is better compared to the pure part method. A comparison of the value is purely for the part and 3.310 4.007 to part progression.

The percentage of the low-fat group was given a different teaching method of treatment of the value of the results of his studies of average value showed different results. Progression section method the result is better when compared to the pure part method. Comparative value method to 2.834 part pure and 3.771 for a progressive part method.

Conclusion

1. Methods of teaching

Based on the data analysis being done, to test the hypothesis that has been made, then in this study, it can be concluded that the hypothesis that says "method of teaching by different parts of the progression method with the method section is purely against the results of learning swimming crawl style. The hypothesis is proven to differ significantly

2. Fat percentage

The results of the data analysis about the calculation showed that the differences anava body fat percentage highs and lows do not indicate different results against the results of the study pool significantly. Although the views of the average value of the results obtained, the average students who have high-fat percentage results showed better

3. Calculation of the statistical analysis of the interaction of variants do show that there is no significant interaction between teaching method and body fat percentage against the results of the learning style of swimming crawl

Bibliography

1. Dadeng kurnia (1991). Renang, jakarta : pengurus besar persatuan renang seluruh indonesia. Jakarta.
2. Harsono (1988). Coaching dan aspek-aspek psikologis dalam coaching. Bandung : cv tambak kusuma.
3. Holliday, M.a(1978). Body composition and energy needs during growth dalam falker.f and tamer, new york : j.m humant growth plenum press
4. Kasiyo (1979). Renang metodik dan pola.
5. Kerlinger f.n (1998). Azaz-azaz penelitian bihaviorial, terjemahan tondung simatopang, yogyakarta : gadjah mada university press.
6. Manglich o.c.w (1982). Swimming faster a comprehensive guide to the science of swimming. My field publishing co california
7. Pate rotch, clenangham (1984). Dasar-dasar kepelatihan, terjemahan kasiyo, semarang : ikip semarang press
8. Ray collins and patrick b (1978). A comprehensive guide to sports skill tests and measurement. Usac: charles c thomas publisher
9. Suharsimi (1982). Prosedur penelitian suatu pendekatan praktis. Ikip yogyakarta
10. Sujana (1992). Metode statistik. Bandung, tarsino
11. Sutrisno hadi (1991). Analisis butir untuk angket, tes dan skala nilai, yogyakarta : andi offset
12. Tomas david g ms (1996) renang tingkat nushir, terjemahan affous palangkaraya. Jakarta : pt raja gravindo persada.

CHARACTER EDUCATION CAMP: A MODEL ANALYSIS RESULTS FOR THE IMPLEMENTATION OF CHARACTER EDUCATION INTO THE GLOBAL ERA

TAAT WULANDARI, ANIK WIDIASTUTI, NASIWAN AND SISWANTOYO

Abstract: This study aims to reveal character values that are instilled through the activities of "CEC" (Character Education Camp). "CEC" is organized by State Senior High School 2 Jember to build the students' characters. In order to describe the implementation of character education in State Senior High School 2 Jember, this study employed a qualitative method with a case study approach. The research was conducted in State Senior High School 2 Jember. Furthermore, the subjects of research were the teachers, the students and the principal. The data collection techniques employed observations, interviews and documentations. Then, the data validity in this research used a data triangulation. In addition, the data were analyzed using an interactive analysis proposed by Miles and Huberman. The findings show that the "CEC" activities are full of character values needed to build the students' personalities. Activities within the "CEC" include marching, prayers on time, training of Nationalism and Love of the Homeland, mealtime rules, outbound, and inauguration of *Bantara*. The character values of the activities are spirituality, self-discipline, honesty, mutual help, mutual respect, and punctuality.

Introduction

Reorganization of character education for Indonesian society is needed since it is important to see the dynamics of the changing world order with the strength of globalization. The impacts of globalization are moral and intellectual degradations and conflict potentials among groups (race, ethnic, religion) which can then lead to multidimensional crises in complex contexts. Multidimensional crises faced by Indonesian citizens should be used as a reference for the improvement of the character education in a better direction. The nation's character education is beneficial to create a civilization that is able to bring the nation's life to a more qualified and meaningful direction.

The establishment of a qualified and meaningful nation life is certainly not separated from the role of educational institutions, such as schools. Education plays an important role in dealing with the changes. Also, education provides a clear direction on how to respond to the changes. The changes will be easier to respond and serve as a foundation in completely realizing the development of Indonesian society if education is used as the main pillar in responding the changes.

School as a part of the education systems has a vital function for the nation's character building. Currently, schools tend to emphasize only on the academic ability, without accompanied by the character building which introduces values

cognitively. In fact, character education should bring the students to an experience of value appreciation affectively and ultimately to apply the values in daily life. To achieve praxis, there is a very important inner experience that should be practiced by the students. Through this experience the students are encouraged to possess a determination to apply the values. This effort is called as Conation. Related to this, Buchori (2007) states that the stages to guide the students to strengthen their determination are called as conative steps.

Schools in Indonesia have tried to find ways in instilling character values to the students. A school that builds the students' characters through different ways is Senior High School 2 Jember (State Senior High School 2 Jember). Self-discipline is a character that students should possess. Self-discipline can motivate people to do what they know and what they want as a realization of a personal responsibility for themselves and for other aspects (John Garo, 2011: 45). The instilling of this character is very important to know how to introduce self-discipline to students in State Senior High School 2 Jember. Through the cognitive measures undertaken in this school it is hoped that the values are applicable to other schools with similar characteristics. Regarding this, this study aims to investigate the character values in the activities of "CEC" (Character Education Camp) in State Senior High School 2 Jember.

Character is a very important part in determining students' personalities. This is in line with the statement by Lickona (2013: 50) which states that "character observing contemporary philosopher Michael Novak, is a compatible mix of all those virtues identified by religious traditions, literary stories, the sages and persons of common sense down through history". The description means that a character is a harmonious blending of all policies identified by religious traditions, literary tales, and experiences of wise men who witnessed a certain historical process.

Wynne says that there are two notions of character; firstly, it shows how a person behaves, and secondly, the term "character" is closely related to an individual personality. Besides, Samsuri (2010: 2) states that the term "character" covers at least two things: values and personalities. Character is a reflection of values which are inherent in an entity. Moreover, "good character" is a actualization of a good value possessed by a person, beyond the question of whether "good" is something "authentic" or is merely a camouflage. This explanation shows that the study of character education is highly related to the area of moral or ethical philosophy that is universal, such as honesty. Character education according to Febristina Nuraini is a system of instilling character values to school communities which includes the components of knowledge, awareness or willingness, and actions to implement those values in the relationship with The One and Only God, self, colleagues, environment and nation so that later on, people are able to be perfect human beings (2012: 86).

Regarding the opinion it is concluded that character education is not only related to relationships with other people but also related to our attitudes towards The One and Only God, self, environment and nation. Others argue that a character education as a value education makes "explicit efforts to teach values, and to help students develop dispositions to act in definite ways" (Curriculum Corporation,

2003: 33). Good and bad issues, virtues, and priorities are important aspects of the character education.

Character as a personality aspect is a reflection of the whole personality of a person such as mentality, opinion and behavior. Furthermore, the learning of etiquette, politeness, and custom makes character education emphasized on actual behaviors about how a person's personality is considered good or bad based on contextual and cultural norms.

What is an ideal character education? The definition of character education should include aspects of personality building which contain dimensions of universal virtue values and cultural awareness in which the norms of life grow and develop. In summary, character education enables individual transcendental awareness to manifest it in constructive behaviors based on the life context in which it stands such as possessing global awareness, but at the same time being capable to take an action in local contexts.

Character grows from self-esteem both as individual and as its transformation to be a part of children of the nation. An independent human or nation will be able to assert the self-esteem. It is an opinion or a mindset that an independent opinion will refuse subordination and favor. Moreover, independence is heroism. Independence is a self-confidence and a pride that includes an ability to decide what is best for themselves, and self-achievement to refuse servility. Independence is also an equality demand. Furthermore, independence is self-esteem, and it changes a servile opinion. When independence is elevated to the level of nation and state, it is a national doctrine, a doctrine for freedom and sovereignty, to give priority to national interests, which is called as the society's interests. The nonexistence of self-esteem in a person or society is a defect in education.

According to Timothy Wibowo (2011: 2) character education planning is intended to answer the various problems of the nation that are currently seen, heard and perceived. It is identified that the problems arise from the failure in inserting moral values to the students through an education process. To instill the values to the students in a different way, "CEC" is proposed as one of the solutions which is conducted through camping activities. Camping is usually done in a nature setting by using a tent. In addition, it is done by a group of people in order to raise their awareness of nature, to love and to get closer to nature. Camping is also familiar with scouting activities. Since it is related to scout, it is obligatory for the students to carry out the camping activities.

According to Sulaeman (1983), camping can provide a certain quality of pleasure that is hard to find in other activities as leisure. Camping is a creative recreational activity and contains elements of education which is done by staying overnight and doing activities in groups in a natural setting. Furthermore, camping helps build and foster good characters, as a means of the mind refreshment. Camping is an activity in which students are able to experience directly the natural life by doing outdoor activities. Each participant is expected to train themselves physically and mentally/spiritually. Also, the students should be able to instill values of oneness and unity, working procedure and organization, self-discipline, dexterity, intelligence, fortitude, ordinary, patriotism, and skillfulness. (Sulaeman, 1983: 2).

Camping is assumed to be able to provide some essential values, such as good personalities or characters, and mental and physical health. Moreover, it helps to promote loyal, obedient, good, and qualified generations so the students are able to build and develop the NKRI (Unitary State of the Republic of Indonesia). In line with the purpose of the camping, the activities in character education camp strongly support the character building. The activities can build students' physical and mental conditions during the process of character building for the young generation in Indonesia.

Research Method

This study is qualitative naturalistic research that aims to find out the character values in Character Education Camp in one of the Senior High Schools in Jember. The research setting is State Senior High School 2 Jember which is located at Java Street No. 16, Jember, East Java. This is one of the leading schools in Jember Regency that possesses various academic, non-academic achievements, and firm school rules. This school sets a high commitment in building the students' characters. Improving the quality of education is further enhanced by the use of audio visual learning system, as well as the Internet installation.

The research was conducted through the stages of research planning, data collection which employed observations, interviews, surveys, and documentation, and research report writing. The instruments, such as interview guidelines and observation sheets were validated through an expert judgment. In addition, the questionnaires were validated through a try out. Moreover, the technique of data validity used data triangulation.

The data were analyzed using a data analysis component of interactive model proposed by Miles & Huberman. The analysis consisted of three components: data reduction, data presentation, and conclusion/verification (Miles & Huberman, 1992: 16). The qualitative data analysis can be conducted during the research and post-activity of data collection (Agus Salim, 2006: 22). The analysis starts from the initial stage to the conclusion of the research results. Therefore, as stated by Miles & Huberman, qualitative data analysis is defined as a flow model.

Research Findings and Discussion

On 7 April 2006, the school had made more efforts to improve the quality of education. Under the supervision of Drs. Sukantomo, State Senior High School 2 Jember sets a vision of "Actualizing balanced intellectual and moral competence to reach competitive achievements based on Faith and Piety". To reach the vision, the school performs the following missions: developing a strong passion in learning to achieve optimal achievements; developing a democratic situation in accordance with the school environment; improving professionalism in the learning process; developing fraternity, brotherhood and partnership with concepts of *asah, asih, asuh*; improving self-discipline, and transparent management oriented to *MPB*; and establishing excellent and professional public services. In the 2006-2007 Academic Year, State Senior High School 2 Jember was located in 10,996 m² area and consisted of 25 classrooms. There were 60 teachers including 7 Social Science subject teachers.

1. Implementation of Character Education

The implementation of character education should include aspects of personal development covering universal values and cultural awareness in which the norms of life grow and develop. Character education is able to generate transcendental awareness of individuals manifested in constructive behavior based on any life contexts to possess a global awareness, still being capable to behave in accordance with the local contexts.

Character education is one of the educational issues which is considered effective in providing answers for the education system needs in Indonesia or for Indonesian citizens. Education does not only prepare students for holding a profession or a position only but also solve problems appeared in everyday life. Therefore, education is a solution to prepare the future. Dealing with it, future belongs to a person who prepares her/himself in an early age.

Character education is dynamics of sustained ability development in human to internalize the values so as to produce a stable and active disposition of the individual. These dynamics become more intact, and these elements become the dimension that animates the individual development process. Thus, character is a dynamic process of the individuals' logical anthropological structure which does not merely stop based on the individuals' natural determination. However, it is a life effort to be more integral in overcoming the natural determination of individual and to engage in self-perfection.

Zubaedi (2011: 17) defines character education as an effort to instill intelligence in thinking, appreciation manifested attitudes, and experience in the form of behavior in accordance with the noble values that become an identity. They are manifested in the interaction with God, self, society and environment. Donie Koesoema (2010: 194) reveals that character education is promoted individually and socially in generating a conducive environment for the individuals' freedom.

Character education shifts from awareness, understanding, concern, and commitment to actions. This is in line with Mulyasa's opinion (2013: 3) which suggests that character education has a more complex meaning than moral education. It is because character education is not only about right-wrong problems but also about how to instill good habits in life, so students are expected to possess awareness, high understanding, concern and commitment to apply the values in everyday life.

Promoting character education is a government effort to produce the next good generations of the nation. School is considered effective to support and promote qualified young generations because in schools, the students are taught to apply and to practice the values and norms that exist in the community. Character building is applied in State Senior High School 2 Jember, which has a high commitment in building the students' character. It is evidenced by the firm school culture applied in the school.

During the learning process, the process of student character instilling is also conducted. It is proven by an activity of reciting *Asmaul Husna* at the beginning of the learning process for Muslim students. *Dhuha* prayer in congregation is also scheduled for Muslim students. The fingerprints system for attendance is provided

at the school mosque. In addition, character behavior habituation is also supported by the provided rule book for the students and the punishment given to the students if they disobey the school rules.

Activities in Character Education Camp provide the main purpose to build the students' characters. The instilling of character values to initiate the camp activities was conducted by the instructors from Battalion 509. It is very effective in building characters that the students should possess.

2. Character Values in Character Education Camp

(a) *Basics of Marching*

Activities for Basics of Marching are physical training to improve students' marching skills. Through the activities, students learn basics of marching and self-discipline. The values in basics of marching are self-discipline and hardwork. Hurlock in Syarif Yusuf & Nani (2012: 30) suggests that school is a determinant factor in developing the students' personality, in the way of thinking, acting, or behaving. School acts as family substitutes, and teachers as school substitutes. Schools cannot be disregarded, because the generation that will perform every element of a nation development was born at schools. Although there are trends of homeschooling, the existence of school will remain a mandatory pedestal of people who want to be a dignified and knowledgeable person.

(b) *Nationalism and Love of the Homeland*

The materials are related to Nationalism and Love of the Homeland and the presenters of the materials are from TNI (Indonesian National Armed Forces). In this session, the students are instructed to kiss the land which symbolizes the motherland. The values that can be taught to the students are a sense of national pride and love and respect for the nation. Character Education Camp is an activity to establish self-discipline and responsibility that is addressed to the students of class X through the scouting activity. Character is a reflection of humans' ways of thinking, saying and behaving. Therefore, it is necessary to generate character education starting from an early age to produce generations who are able to think critically, positively, creatively and dynamically and then able to actualize and apply the values into utterances and behaviors.

(c) *On Time Prayers*

This activity facilitates the students to perform prayers in congregation on time including *tahajud* and *dhuha* prayers regularly. The values taught are spirituality and self-discipline. The results of educational research by Michael Russel (Syarif Yusuf & Nani, 2012: 31) suggest that the definition of an effective school is an institution which is able to develop academic achievements, social skills, politeness, positive attitude toward learning, low absenteeism, and work skills for students. Based on this definition, school is not only a place to learn certain lessons, to produce rankings, to become a class champion, and to pass exams but also a place to play a role in training social skills, as the essence of a school. However, it is not

completely understood by people that this social skill is born in the real discipline of society.

(d) Mealtime Rules

Eating in the Character Education Camp is timed and the provided portion must be finished by him/her or assisted by others. An undisciplined behavior in this activity is not allowed. The values taught in this activity are honesty, punctuation, gratitude, and mutual help.

(e) Inauguration of Bantara

The inauguration of *Bantara* is held on the last day of camp with a ceremony and some activities. Through the activities, the students were instructed to go into a muddy pond that used to be a catfish pond to take a *Bantara* emblem. The values that are taught are persistence and determination in reaching a goal.

The implementation of the nation's character education must be based on noble values of this nation as mentioned in Pancasila, The 1945 Constitution, *Bhineka Tunggal Ika*, and NKRI (Unitary State of the Republic of Indonesia). If the overall values are implemented with a high commitment, the whole society and the younger generation of Indonesia will become a tough generation and will be able to face all challenges of this era. Generating good citizens needs to be supported by character education and development of school culture; in this case it means the culture of the school environment.

The nation development is determined by the quality of Human Resources. Human resources are born in an educational institution that we are familiar with the term "school". The development of a country cannot be merely assessed by the physical development that the citizens can use. Behind the physical and infrastructure development lie many ideas that are managed in a certain way by stakeholders.

In addition, various policies have been issued by both the government and the private sectors for the contributions of the nation development. A factor determining the policy which is capable of bringing benefits is culture. Culture is the result of the educational process itself as stated by VigotksyinSyamsu Yusuf & Nani (2012: 83) that mentions that school is one of the cultural agents that determine the development of adolescent ways of thinking. Through culture, school will be a place where the teachers are able to give exemplary behaviors in real contexts to the students.

Character Education Camp in State Senior High School 2 Jember was conducted due to a problem related to the mandatory scouting activities for the students which were regularly conducted before such as trainings of *Bantara*, and competitions. Instead of successfully building the students' characters, problems and complaints from parents who disagreed with the activities appeared. The method used to instill responsibility is the method of value clarification (giving advice, punishment and reward), and modelling method (Leader Modelling). One way that can be used to build student character is scouting that is compulsory for all students.

School as the second home for students is the first and foremost institution in building the students' character. State Senior High School 2 Jember builds students'

characters by fostering the character values in the school environment. Character Education Camp is held as a way to build the students' characters. Character Education Camp was initiated due to confusion in how to educate students to possess good characters and how to avoid complaints from the parents. It is the reason why students' characters are built through the activities of Character Education Camp which also generate students' self-discipline.

Self-discipline needs to be instilled in students' characters. By doing so they will be able to live more orderly and set a clear target of success. This is in line with the implementation of Character Education Camp activities in State Senior High School 2 Jember which establish self-discipline, spirituality, responsibility, independence, honesty, care, and other characters. The values of Character Education Camp contain nationalism, love of homeland, and some activities such as basics of marching, outbound, campfire, and inauguration of *Bantara*.

Students who disobey the rules during Character Education Camp or the ones who often violate the rules at the school are given punishments, such as shouting, walking, running, pushing up and so on. These punishments are really helpful and meaningful for the students. Each student is required to participate in this Character Education Camp. If he/she does not join, he/she should participate in the next Character Education Camp with the juniors. Character Education Camp is free of charge because it is already included in the student admission except the scout staff (walking stick).

The students who have participated in Character Education Camp are more organized, obedient, and disciplined. After joining the Character Education Camp, it seemed that they are more excited in learning and attending other school activities. The implementation of Character Education Camp is considered successful to achieve values as the objectives. The values taught are honesty, self-discipline, religion, togetherness, tolerance, nationalism and others.

School culture is an aspect that affects the student character building. Self-discipline can be improved by the establishment of school culture that applies school rules firmly and consistently. Thus, every member of the school, especially students will perform disciplined attitudes. It is in accordance with the model of character education activities according to Mary Humphrey (2005: 11) which is presented below:

Table
Model of Character Education Activities

| <i>Right Action</i> | <i>Right Speech</i> |
|---|--|
| 1. Being Responsible | 1. Being respectful |
| 2. Showing perseverance | 2. Using polite words |
| 3. Keeping promise | 3. Choosing words that do not hurt others' feeling |
| 4. Showing kindness | 4. Choosing motivating words |
| <i>Right Thought</i> | <i>No Action</i> |
| 1. Thinking of others' needs | 1. Using intuition |
| 2. Planning with care and consideration | 2. Using senses |
| 3. Considering what is fair and right | 3. Gathering information through observation |

Based on the definitions, it is understood that the model of character education activities is done in several steps and with different approaches. Also, using intuition, senses, and conducting observations without performing actions are used as a model to apply the character education. This means that the used model depends on the needs and the conditions that exist. The model is related to each other, because when it is applied, there will be an evaluation drawing certain conclusions from the model.

Conclusion

Character Education Camp activities held by State Senior High School 2 Jember are full of character values which are necessary to build the students' personalities. It is held because there were problems and complaints from parents who do not agree with the scouting activities that are obligatory for students such as *Bantaratraining*s and competitions. Instilling a character of responsibility to the students employs a method of value clarification (giving advice, punishment and reward) and modelling method (Leader Modelling). The "CEC" activities assisted by instructors from Battalion 509 are very effective in building the characters that should be possessed by the students.

Activities and materials in Character Education Camp include basics of marching, performing prayers on time, and activities of promoting nationalism and Love of the Homeland, mealtime Rules, outbound, and inauguration of *Bantara*. The character's values in the activities are spirituality, self-discipline, honesty, mutual help, mutual respect, and punctuality.

References

1. Darmiyati Zuchdi. (2009). *Pendidikan karakter*. Yogyakarta: UNY Press.
2. Depdiknas. (2003). *Undang-Undang No. 20 Tahun 2003 tentang Sistem Pendidikan Nasional*. Bandung: Fokusmedia.
3. Febristina Nuraini. (2012). Stimulasi motivasi belajar sebagai upaya menumbuhkan karakter pada anak usia dini. *Prosiding*. Yogyakarta: Fakultas Ilmu Sosial Universitas Negeri Yogyakarta.
4. John Garmo. (2011). *Pengembangan Karakter untuk Anak: Panduan Pendidik*. Jakarta: Kesaint Blanc.
5. Rika Budhiarti. (2012). *Implementasi Pendidikan Karakter di SMK N 3 Malang*. Accessed from <http://karya-ilmiah.um.ac.id> on Monday, 27 May 2013 at 11.41 a.m.
6. Sulaeman. (1983). *Petunjuk Praktis Berkemah*. Jakarta: Gramedia.
7. Suyanto & Djihad Hisyam. (2000). *Pendidikan di Indonesia Memasuki Millenium III*. Yogyakarta: Adicita
8. Timothy Wibowo (2011). *Mewujudkan Pendidikan Karakter yang Berkualitas*. <http://www.pendidikan-karakter.com>. Accessed on Thursday, 18 October 2012 at 14.53 p.m.
9. Yulia Kusuma Wardhani & Harisurningsih. (2013). *Penerapan Pendidikan Karakter Ditinjau Dari Segi Pembelajaran Di Departemen Bangunan Smk Negeri 1 Blitar*. Accessed from <http://ejournal.unesa.ac.id> on Monday, 27 May 2013 at 11.50 a.m.



APPLICATION OF BASIC STATISTICAL ANALYSIS FOR GYMNASTICS TALENT SCOUTING

ENDANG RINI SUKAMTI, SISWANTOYO AND OKKY INDERA P

Abstract: The purpose of the research is to define evaluate the biomotor component of the students even though the test could potentially harm the students either physically.

Material and Methods : This study is a descriptive research, with research sample childhood students participated (n=194). Data collecting with test and measurement, and data analysis by descriptive quantitative.

Results : It is presented the Based on the observation guidelines, the results of the research shows that the biomotor component female profile is as follows: (1) very talented, (7.7 %), (2) talented, (19.1 %), (3) average talented, (42.8 %), (4) not talented, (14.9 %), and (5) very poor talented, none (15.5 %). The results of the second, biomotor component talented in scouting talent are as follows: (1) power, (24.589 %), (2) agility (22.075 %), (3) balance, (17.942 %), (4) strength, (10.885 %), and (5) flexibility (7.795 %). According to the results of the research, and based on the observation guidelines, it can be concluded that the biomotor component profile of the assessed school students is average

Conclusions: the most dominant factor in artistic gymnastics Talent Scouting is good with children, mainly daughter-sex power with other components of the biomotor follow. This defined the need for synergy from the Regent Office, teachers, coaches, and teachers to improve ability of biomotor which has an important role in the sport of gymnastics for a long term training program within the scope of the achievement

Introduction

Article 21 of the Act of the Republic of Indonesia number 3 the year 2005 about national sports System mentions that coaching and sports development is carried out through the introduction of sports, scouting, monitoring, as well as the development of talent and increased achievement. In addition to Act 3 the year 2005 Number Republic of Indonesia mentions that the Government and the local government is obliged to do coaching and sports development in accordance with the authority and responsibility. This means the construction of sports especially sports achievements be shared responsibility in order toward achievement.

In the stage of peak performance achievement required regular, structured, measurable and programmed exercises. Breeding and scouting talent needs to be done as early as possible because to print the athlete achievement takes a long time. The target of breeding is elementary school children ranges from 6-12 years old. This age group needs to be given continuous, uplifting and continuous training

from the talent / seedling scouting, forming, sports branches and performance improvements. The process is divided into several stages: short term, medium term, and long term. Bompá (2009) states that for artistic aged gymnastics begin training for daughters between the ages of 6-8 years and 8-9 year olds, a specialization stage between the ages of 9-10 years for girls and 14-15 years for the son while the age of achievement achievers at the age of 14-18 years for the daughter and at the age of 22-25 years for the son.

The dominant elements in talent scouting include several aspects: anthropometric, biomotor, and psychological aspects. Aspects of anthropometry related to weight, height, chest circumference, pelvic circle and so on. Biomotor aspects include strength, flexibility, balance, agility, power and so on. Each sport in talent search (talent scouting) has standards for every aspect. As with gymnastics there are major criteria in anthropometry that distinguishes it from other sports. Bompá (2009) adds that the basic components of biomotor include strength, robustness, speed, coordination and flexibility. The other components are a combination of several components so as to form one term itself, such as power is a combination or product of strength with speed; agility is a combination of speed and coordination. Here is a chart that shows the interconnection between biomotor capabilities. In equilibrium, coordination, agility and power are needed, reaction speed is also needed in gymnastics, while speed is needed but very little (Corbin, Welk & Corbin, 2009). Sleeper, Kenyon, Casey (2012) suggests that speed, strength, endurance, agility, flexibility, balance and strength are physical abilities that play a role in the success of a competitive gymnast. Individual tests for flexibility, strength, endurance, and strength have been proposed as a useful tool for measuring potential in gymnastics.

Similarly, the biomotor aspect is a criterion that should be owned by athletes gymnastics. Of the various studies that have been done have not found biomotor stratification (strength, flexibility, balance, power, and agility) in the gymnastics branch. Therefore the research intends to conduct research on biomotor stratification in the early artistic gymnastics talent scouting.

Research Methods

This study is a descriptive research to determine the independent variable value (either one or more variables) without comparing or relating the variables (Sugiyono, 2004, p.11). The variable of this research is the biomotor component profile.

The subjects of this research were 194 students school. This was a census research because every subject was used as a research sample. Therefore, there was no generalization in this research, and the result was applicable only to student School in special region Yogyakarta, which was the subject of the research.

The instrument that was used to collect the biomotor component data from the School students was a non-test, which includes the observation guidelines that consist of five aspects such as flexibility, strength, power, agility, and balance. Each aspect has five descriptors. The instrument that was used to evaluate the technique of descriptive quantitative with percentage was used as the data analysis technique for this research (Suharsimi, 2006, p.215). Because there was no hypothesis in this

research, the analysis was directed to answer the problem formulations. The analysis steps were as follows: (1) the aspect score of each student was summed, (2) the total aspect score of each student was divided by the total aspect observed, (3) the quotient result was converted to the assessment standard, (4) and the biomotor component score of a student was converted into percentage in talent scouting.

Result and Discussion

Stratification of Biomotor Dominant Factor in Scouting Artistic Gymnastics Early Age Gymnastics. Trainers have to focus attention on those qualities, abilities and components of training which are directly connected with efficiency of game activity. As experts note (Zhelezniak, Portnov, & Savin, 2001; Raiola, 2012; Korobeynikov, Korobeynikova, Iermakov, & Nosko, 2016). Specialists of this problem (Baginska, 2017; Kolumbet, 2017) note close interrelation between coordination abilities and technical and tactical skills and point that they are in one factor of athlete's achievements – "technique coordination". However, as some authors note

Other authors (Khudolii, Ivashchenko, Iermakov, & Rumba, 2016) recommend to use widely in training process of young athletes a method of the connected influence to simultaneous improvement of coordination abilities and technical and tactical skills. In practice the young athlete has the high level of development and master technique of motor action in standard conditions. But can't optimum apply them in variable situations. The positive interference (transfer) of one more integrated factor (abilities) can consider this phenomenon as result on another – less integrated (technique of a game) (Liakh, 2006; Zimmerman, 1988)

Other authors (Sadovskij, 2003; Liakh & Vitkovskij, 2010; Pion et al., 2015) prove that purposeful development and improvement of coordination abilities of young athletes will allow:

- to acquire much quicker and more rational the various physical actions;
- to acquire new programs at the more qualified level and to reconstruct old training programs;
- to move ahead to the heights of sports skill quicker and to remain longer in professional sports;
- to improve successfully the sports technique and tactics;
- to cope easier with tasks which demand high level of psychophysiological functions' development in the sensomotor and intellectual spheres;
- to acquire the skill to spend own energy resources rationally and economically;
- to adapt quicker to the new rivals, partners and conditions of competitive activity

Analysis of dominant factor of biomotor test in scouting artistic gymnastics talent early child son, in this research done with steps as follows:

1. Determine the best test results from biomotor, including:
 - a. Specifications: sit and reach, right front split, and bridge (bridge)
 - b. Strengths, including: push-ups, sit-ups, and chin-ups

- c. Power jump without prefix
 - d. Agility
 - e. Balance
2. Calculate the z-score value of the data
 3. Calculate the value of t-score based on z-score value
 4. Calculating the average t-score of the test results of the formation and strength, because the two tests consist of several tests.
 5. Five t-scores were obtained from the five tests
 6. Determine the score categories based on the t-score score, into 5 categories.
 7. Summing up the t-score and categorizing the score into 5 categories: very talented, talented, gifted, gifted, and very talented
 8. Regression analysis
 9. Seeking relative donations and the effective contribution of each predictor
- Analysis from point a to point g, with the help of Microsoft Excel, the results can be seen in the attachment. The results are summarized in the following table.

Tabel 1
Category Result Statistica analysis Test Biomotor Scout Gymnastics Female Artistic Talent

| Biomotor | Category Scores | Frequency | |
|-------------|-----------------|-----------|------|
| | | f | % |
| Flexibility | Very Good | 0 | 0,0 |
| | Good | 26 | 13,4 |
| | Average | 134 | 69,1 |
| | Poor | 27 | 13,9 |
| | Very Poor | 7 | 3,6 |
| Strength | Very Good | 3 | 1,5 |
| | Good | 28 | 14,4 |
| | Average | 119 | 61,3 |
| | Poor | 35 | 18,0 |
| | Very Poor | 9 | 4,6 |
| Power | Very Good | 15 | 7,7 |
| | Good | 37 | 19,1 |
| | Average | 83 | 42,8 |
| | Poor | 29 | 14,9 |
| | Very Poor | 30 | 15,5 |
| Agility | Very Good | 6 | 3,1 |
| | Good | 53 | 27,3 |
| | Average | 77 | 39,7 |
| | Poor | 23 | 11,9 |
| | Very Poor | 35 | 18,0 |
| Balance | Very Good | 14 | 7,2 |
| | Good | 25 | 12,9 |
| | Average | 84 | 43,3 |
| | Poor | 47 | 24,2 |
| | Very Poor | 24 | 12,4 |

Table 2
End Result Artistic Gymnastics Artist Early Age Children

| CATEGORY | Category Scores | Frequency | |
|--------------------|-----------------|-----------|------|
| | | f | % |
| Very Talented | 22 - 25 | 15 | 7,7 |
| Talented | 18 - 21 | 37 | 19,1 |
| Average | 13 - 17 | 83 | 42,8 |
| Poor Talented | 9 - 12 | 29 | 14,9 |
| Very Poor Talented | 5 - 8 | 30 | 15,5 |
| Total | 194 | 100 | |

From the results mentioned above, then analyzed with regression analysis to know the contribution of each independent variable (biomotoric) to the dependent variable of artistic gymnastics artistic of early child age. The results of multiple regression analysis, are summarized in the following table.

Table 4
Incorelation Matrix

| r | x1 | x2 | x3 | x4 | x5 | y |
|----|-------|-------|-------|-------|-------|-------|
| x1 | 1.000 | 0.134 | 0.318 | 0.268 | 0.174 | 0.465 |
| p | 0.000 | 0.029 | 0.000 | 0.000 | 0.007 | 0.000 |
| x2 | 0.134 | 1.000 | 0.214 | 0.232 | 0.287 | 0.497 |
| p | 0.029 | 0.000 | 0.002 | 0.001 | 0.000 | 0.000 |
| x3 | 0.318 | 0.214 | 1.000 | 0.437 | 0.102 | 0.657 |
| p | 0.000 | 0.002 | 0.000 | 0.000 | 0.077 | 0.000 |
| x4 | 0.268 | 0.232 | 0.437 | 1.000 | 0.168 | 0.654 |
| p | 0.000 | 0.001 | 0.000 | 0.000 | 0.009 | 0.000 |
| x5 | 0.174 | 0.287 | 0.102 | 0.168 | 1.000 | 0.527 |
| p | 0.007 | 0.000 | 0.077 | 0.009 | 0.000 | 0.000 |
| y | 0.465 | 0.497 | 0.657 | 0.654 | 0.527 | 1.000 |
| p | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

p = One-Tail.

Table 5
Beta Coefficient and Parsial Correlation

| X | Beta (b) | Stand. Beta (β) | SB(b) | r-parsial | t | p |
|---|-----------|-------------------------|----------|-----------|--------|-------|
| 0 | -0.282617 | 0.000000 | | | | |
| 1 | 0.187455 | 0.167459 | 0.035930 | 0.356 | 5.217 | 0.000 |
| 2 | 0.209570 | 0.218886 | 0.030620 | 0.447 | 6.844 | 0.000 |
| 3 | 0.240042 | 0.374491 | 0.021996 | 0.623 | 10.913 | 0.000 |
| 4 | 0.219695 | 0.337394 | 0.022165 | 0.586 | 9.912 | 0.000 |
| 5 | 0.232256 | 0.340402 | 0.021527 | 0.618 | 10.789 | 0.000 |

Galat Baku Est. = 0.298

Corelation R = 0.913

The results of multiple linear regression analysis (multiple regression) mentioned above, the correlation coefficient obtained dual (R) of 0.913, the coefficient of determination (R^2) 0.833; and Fregresi 187.369 with significance (sig) or p-value 0.000. It is evident that the significance is less than the specified significance level, i.e. 5% ($p < 0.05$); then the Fregresi signifikan, which means the correlation coefficient the significant double. Seen from asking the coefficients (β) are all positive, thus it can be concluded that there is a positive and significant contribution test results against biomotorik on the early childhood sex daughter.

The magnitude of the contribution of 0.833 or 83.3% and further to know the contribution of each of the factors biomotorik in early childhood the son-sex, the data were analyzed with the help of the SPS software 2005, may expressed also the relative contribution (%) and contributions effective SR (SE%) of each Predictor summarized in the following table.

Table 6
Summary of Predictor Contribution Weight (Biomotor)

| No. | Predictors (Independent Variable) | Relative Contributions (SR) % | Effective Contributions (SE) % |
|-----|-----------------------------------|-------------------------------|--------------------------------|
| 1. | Flexibility | 9,359 | 7,795 |
| 2. | Strength | 13,069 | 10,885 |
| 3. | Power | 29,524 | 24,589 |
| 4. | Agility | 26,505 | 22,075 |
| 5. | Balance | 21,543 | 17,942 |
| | Total | 100,000 | 83,287 |

From the table as presented in the table above, it can be explained that giftedness in early child of female sex is determined by power factor (24,589%); followed by agility (22,075%); balance (17,942%), strength (10,885%) and flexibility (7,795%).

Conclusions

Based on the results of data analysis research, hypothesis testing and discussion, can be drawn some conclusions as follows: The results of this study indicate that the stratification of biomotor in scouting talent artistic gymnastics 7.7% very talented, 19.1% talented, 42.8% average talented, 14.9% not talented, and 15.5% very poor talented. Biomotor talent in scouting artistic gymnastics talent of early age is determined by power factor (24,589%); followed by agility (22,075%); balance (17,942%), strength (10,885%) and flexibility (7,795%). the most dominant factor in artistic gymnastics Talent Scouting is good with children, namely daughter-sex power with other components of the biomotor follow. This defined the need for synergy from the Regent Office, teachers, coaches, and teachers to improve ability of biomotor which has an important role in the sport of gymnastics for a long term training program within the scope of the achievement

References

1. Baginska, O.V. (2017). Correlation of factorial weights of separate motor coordination structure indicators, which characterize motor function level of different age groups' schoolchildren. *Pedagogics, psychology, medical-biological problems of physical training and sports*, 21(3), 100-104. doi:10.15561/18189172.2017.0301
2. Bompa, T.O. & Haff, G.G. (2009). *Periodization theory and methodology of training. Fifth Edition*. Canada: Human Kinetics.
3. Bompa, T.O. and Buzzichelli, C. (2015). *Periodization training for sport*. United States: Human Kinetics.
4. Corbin, C.B, Welk, G.J., & Corbin, W.B. (2009) *Concepts of fitness and wellness*. Toronto: McGraw Hill Companies.
5. Kolumbet, A.N. (2017). Ways of technical training perfection in rowing on kayaks. *Physical education of students*, 21(3), 121-125. doi:10.15561/20755279.2017.0304
6. Korobeynikov, G., Korobeynikova, L., Iermakov, S., & Nosko, M. (2016). Reaction of heart rate regulation to extreme sport activity in elite athletes. *Journal of Physical Education and Sport*, 16(3), 976-981. doi:10.7752/jpes.2016.03154.
7. Kludolii, O. M., Ivashchenko, O. V., Iermakov, S. S., & Runba, O. G. (2016). Computer simulation of junior gymnasts' training process. *Science of Gymnastics Journal*, 8(3), 215-228.
8. Liakh, V., & Vitkovskij, Z. (2010). Coordination training in football. Moscow: Soviet sport. (in Russian).
9. Dallas, George., Kirialanis, Paschalis. (2013). *The effect of two different conditions of whole-body vibration on flexibility and jumping performance on artistic gymnasts*. *Science of Gymnastics Journal*. Vol 5 pp 67-77.
10. Raiola, G. (2012). Didactics of volleyball into the educate program for coaches/trainers/technicians of Italian Federation of Volleyball (FIPAV). *Journal of Physical Education and Sport*, 12 (1), 25-29.
11. Pion, J. A., Fransen, J., Deprez, D. N., Segers, V. I., Vaeysens, R., Philippaerts, R. M., & Lenoir, M. (2015). Stature and jumping height are required in female volleyball, but motor coordination is a key factor for future elite success. *Journal of Strength and Conditioning Research*, 29(6), 1480-1485.
12. Sadovskij, E. (2003). Principles of coordination abilities' training in oriental martial arts. BelaitPodlinska. (in Russian)
13. Sleeper, Mark D., Kenyon, Lisa K., Casey, Ellen. (2012). Measuring Fitness in Female Gymnasts: The Gymnastics Functional Measurement Tool. *The international Journal of Sports Physical Therapy*. Vol 7 Number 2 pp 124-138.
14. Sugiyono. (2004). *Metode penelitian administrasi [Administration research method] (11th ed.)*. Bandung: Alfabeta.
15. Suharsimi (2006). *Prosedur penelitian: Suatu pendekatan praktik [Research procedure: A practical approach] (Sted.)*. Jakarta: Rineka Cipta.
16. Sakadiyanto dan Dangsina, Mubik 2011. *Pengantar teori dan metodologi metodologi fisik*. Bandung : CV Lubuk Agung
17. Zhelezniak, In.D., Portnov, In.M., & Savin, V.P. (2001). Sport games. Technique, tactic, training. Moscow: Academy.
18. Zimmerman, K. (1988) Coordination abilities in sport game. *Theorie und Praxis der Körperkultur*, 1, 251 - 253. (in German).