

Aquatic Sport Learning

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Aquatic Sport Learning Through Multilateral Approaches

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Abstract— Learning with a multilateral approach presents the basics of sports movements in children through adjusting children's abilities to the movement techniques, equipment and rules used as well as with pleasant variations. Movement technique means that children are not required to make technical movements like in real sports, but what is important is the basic aspects of simple biomechanics. Multilateral development is a comprehensive development in the phase of children (Childhood) associated with the development of various physical conditions and sports skills as a foundation towards special development (specialization) and high achievement, but that in Indonesia there are still many physical education educators who have not seen children as children both in terms of size and physical and mental abilities. The objectives to be achieved in this study are to improve the quality of learning in aquatic sports on an ongoing basis. Targets to be achieved are produced in the form of a standard model of aquatic sports learning through a multilateral approach, model procedure manuals and work instructions can be used as targets or references for each variable in the development of aquatic sports for all sport stakeholders. The method used is Research and Development (Borg and Gall: 1989) or development research which is grouped in 3 stages, namely (1) Pre-Development Phase includes; analysis of needs and preparation of model documents, (2) Development Phase includes, development of aquatic sports learning models through multilateral approaches and their evaluation instruments through FGD, followed by small sample trials, large group trials and (3) implementation stages include; implementation of aquatic sports learning models to the object of research, namely schools or associations of fostered aquatic sports.

Keywords: physical education, learning, aquatic, multilateral, children

I. PRELIMINARY

Sports scientists have also explained and suggested to design long-term and continuous training through clear training stages from multilateral basic training, advanced training and development training, to optimal performance. But whether the

implementation in the field is in accordance with the concept, it seems that it still needs to be studied further. Multilateral coaching is a development based on the freedom of movement in children as an effort to plant a broad base in fostering achievement in the future. The importance of multilateral coaching has been recognized by sports scientists, which is characterized by the inclusion of multilateral coaching in the pyramid of coaching systems, as practiced by Bompas, Thompson, and other experts.

The gap between the above concept and the application in the field is still shown by the fall of several victims to athletes who are unable to achieve optimal performance in the golden age. Spartan, ambitious, and less responsible practice for young athletes has many negative consequences. We often see potential athletes who are injured and leave the sport. We also witnessed a number of young athletes suffering from dangerous diseases (osteoporosis, heart disease, etc.) due to their heavy training before their time. All of that is the cause of the occurrence of stopping exercise (Drop Out Phenomenon) [1].

Meanwhile the competition system developed by various sports organizations and other institutions often ignores multilateral development. Competition in the age group of children is often too special and oriented to the achievement of a particular branch or sports number so that young children do a narrow development at a young age. It even seems that there is competition between one sport and another to recruit young children into their sport by providing specialized training and competition.

On the other hand, children's interest in sports activities shows symptoms of decline. This is due to the increasingly intensive education competition and the many entertainment in the modern era such as television, computers, vcd, playstation, and others. While children's activities in playing in open fields are increasingly limited by narrowing means and an increasingly eroded atmosphere of play culture. This fact results in the low level of physical fitness of Indonesian

children. This can be seen in the data from the Center for Physical Quality Development in 2014 as follows: 11% of students have physical fitness in the very poor category, 45.8% less, 36.5% moderate, and only 4.1% are good, and 0, 3% who have a very good category [2].

The long-term coaching process is of course not only the responsibility of the trainers who work in the field to achieve sports achievements, but also the responsibility of physical education and sports teachers in schools to ensure the learning process in their class can take place properly in accordance with the applicable curriculum and oriented to an integrated sports coaching system where physical education is the foundation in building a sports system in Indonesia. This is not excessive considering the number of sports in Indonesia is dominated by school-age children. Thus it is not excessive if the implementation of physical education in schools is an important element that deserves deeper study.

The learning process in schools at multilateral age (primary school) is still not in line with expectations. From the observations of researchers in the field many physical education teachers in primary schools experience various obstacles in the learning process such as: limited infrastructure and facilities that make them do learning that is far from ideal. In addition, physical education teachers also carry out learning by using a single activity approach (single unit exercise), for example in one lesson session they only play soccer or volleyball or other sports by doing the sports movements as they are. Though there are still many forms of physical activity that have not been implemented in achieving physical education learning goals such as aquatic (swimming).

These conditions raise doubts about the achievement of curriculum content that includes many elements of study and various basic sports movements. In the 2006 curriculum with the Education Unit Level Curriculum (KTSP) system, elementary school teachers were required to be creative in developing the learning process in order to achieve the competency of various material contents for their students. KTSP is intended to be independent and empower the education unit through granting authority (autonomy) to educational institutions, so that it can encourage schools to make participatory decisions in curriculum development. Therefore the teacher's ability to develop physical education learning methods in accordance with curriculum demands and their contents to achieve the competencies that are expected to be achieved through the creativity and wealth of insight teachers use teaching methods.

Meanwhile, the more important thing in the aspect of physical education is the result of the physical education process itself, such as the moral and character formation of the young generation based on mental and social aspects which are still antique, luxurious, but rare in Indonesia. This can be seen from the culture of discipline, giving priority to the weak, mutual, respect and nationalism and the willingness to sacrifice for the state can not be seen clearly as a result of the physical education learning process.

Meanwhile the situation and condition of teaching skills development at Faculty of Sport Science Unimed and the

swimming societies in North Sumatra have not utilized the availability of the existing laboratories. Like the use of swimming pools that have not been optimal. This will have an impact on the quality of graduates who do not have skills in learning based on water sports. The low development of water sports and the laymanship of water sports development (aquatic) models makes thinking to find a solution so that Faculty of Sport Science students can develop skills and utilize the swimming pool as a laboratory. A good development of aquatic sports will make a learning vehicle that has a positive impact in realizing the quality of Faculty of Sport Science graduates with character.

Seeing the various gaps above, related to the development system of water sports (aquatic) development, a development of physical education learning (aquatic) is needed as a solution that is able to overcome these problems. Therefore this study tries to present a physical education learning model with a multilateral approach through water sports (aquatic) which is expected to be applied in elementary schools in accordance with the mandate of national education. This study also wants to see how far the physical education learning model through water sports (aquatic) can function positively for sports education in aspects that can be observed in the study period such as the level of physical fitness and basic movement skills of students.

II. DISCUSSION

The development of sporting achievements is an accumulation of physical qualities, techniques, tactics and sportsman psychic maturity prepared mathematically through the correct coaching process. The success of sports achievements is determined by various factors, one of which is the leveling of training according to the age level of the child. Sharkey classifies the level of training into 4 stages based on age, namely: learn basic skills, variety of skills, specific training, and high intensity training [3]. The learn basic skill stage is the basic stage to build the foundation of sportsman skills, so this stage needs to get real attention. At this stage the child is conditioned to be able to develop physical qualities, as well as techniques at the age of specialization of the sport.

At the meaningful introductory stage in children of primary education, the most important thing is to present the basics of sports movements in children through adjusting children's abilities with movement techniques, equipment and rules used and with pleasant variations. Movement technique means that children are not required to make technical movements like in real sports, but what is important is the basic aspects of simple biomechanics. The results of Harre's research who took samples of children aged 9-12 years saw how multilateral development was presented in the form of children's participation in various sports or skills. So multilateral development in this case is the involvement of children in various sports skills activities [4]. The results from Harre's research are shown by the structure of developing sports performance in figure 1.

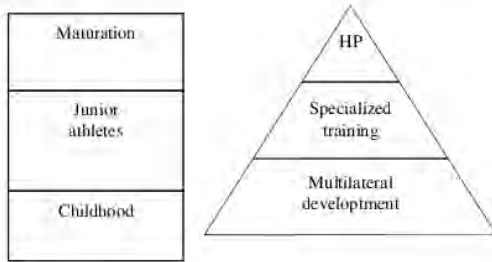


Fig. 1. Achievement development phase

From the description and figure 1 above it can be formulated that multilateral development is a comprehensive development in the phase of children (Childhood) related to the development of various physical conditions and sports skills (skills) as the foundation towards special development (specialization) and high achievement. In connection with the above system Husein Argasasmita said that this system provides the widest possible opportunity for all children and adolescents to participate in Physical Education and Sports activities, as a provision for achievement[5].

Regarding the foundation of youth training, Hans Peter Thumm stated that, one of the biggest problems in sports coaching in developing countries is the weakness of early age coaching that has not been properly systemized [6]. This causes athletes' achievements at high achievement levels to be unstable and tend to be volatile. Below is an illustration of how the foundations are very important in supporting achievement building.

Figure 2 below compares how a fragile foundation (in the left figure) and its unstable and easily collapsed effect (in the middle picture) is compared with a solid foundation that guarantees stable performance in athletes through adulthood (right picture). The characteristics of the fragile foundation with the application of early specialization have characteristics and characteristics: rapid improvement, achieving success in fast time, and the results of peak achievements are achieved before full adulthood. But this condition has consequences; the occurrence of stagnation in adulthood, subsequent progress is very dependent on existing conditions, the occurrence of psychological barriers with high drop outs and the risk of injury.

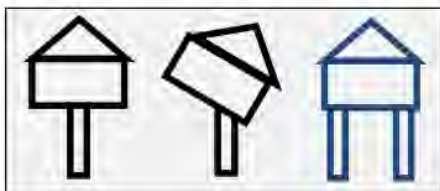


Fig. 2. Broad foundations and early specialization [6]

While the characteristics for coaching that have a broad foundation are: it takes longer to achieve but is more stable, the best achievements are achieved in adulthood, the risk of injury

is small, there are fewer drop outs, the level of techniques mastered is high, the greater the opportunity to choose alternative numbers or sports according to their potential. Thus broad grounding is the best system for athletes as a means of achieving performance with the lowest risk and can maintain performance in the long term and stable. Based on the description above becomes the basis of the urgency of research on the development of physical education learning models through aquatic sports with a multilateral approach especially for the enrichment of swimming learning materials at Faculty of Sport Science, Medan State University and the development of aquatic sports in Sumatera Utara.

A. Multilateral Coaching

Multilateral coaching which is also called multi-skill is the development of various motor skills and abilities by adapting various training load needs to develop overall adaptation [4]. This means that every child at a young age requires the development of multilateral skills as the foundation of motion needed to build good physical fitness and prepare for motor skills training towards further development in sports achievement. Multilateral coaching becomes important when a child is faced with a variety of physical activity choices both at school and at sports associations. Often children fail to determine the most appropriate choice to determine which physical activities and sports are most suitable for their potential. Therefore it is very important for children to try to do various physical activities as well as basing their whole body as well as to understand their potential abilities in various physical activities.

This is reinforced by the opinion of Gabbard and friends who convey that, multilateral development in the development phase of skills as movement variability (diversity of movements), where the diversity of these movements is the provision of variations in the experience of movement with a particular theme [7]. By providing diverse experiences of movement, children will have stronger patterns and awareness of movement to be able to perform more efficiently in a variety of varied situations.

With regard to age, multilateral development can begin from the age of 6 to 10 years to underlie before athletes enter the specialization stage. This stage is called the initiation stage[4]. At this stage multilateral development is carried out by carrying out physical movements and exercise programs with low intensity with an emphasis on excitement in children.

B. Development of Physical Education Learning Models Through Aquatic Sports with a Multilateral Approach

Multilateral in German means *vielezeitige* which means many sides, in this context there are three multilateral concepts proposed by Jurgen Weineck, namely: 1) Subsider concept, which means that multilateral is another physical skill activity of special sports that is needed as a supporter to overcome disturbances and obstacles (injuries, etc.) to the performance of the specific sport that they practice. 2) The concept of structure, namely other motion skills activities that can support the specific sports movement structure occupied. 3) The concept of perspective, namely the coaching of sports in young

people by doing sports activities in general both as their specialization goals and other sports and movements to find and get the potential of sports that will be occupied later [8].

Of the several concepts above, the first and second concepts are coaching concepts oriented towards alternative healing in physiotherapy of active motion and remedial efforts towards the problem of formation and mastery of movement skills that arise for athletes who have been training towards achievement. The third concept is a multilateral activity for young athletes or students, as a foundation for coaching towards the next age. This concept is a guide for teachers and sports coaches to foster young athletes or students in school. This multilateral concept is the basis for the preparation of the sports achievement development pyramid that is now developing in the world.

Of the three concepts above, the third concept is an operational guideline that will become the foundation in the study of this next research. This is done based on the physical education learning system that is currently running in Indonesia which is oriented to the inculcation of general basic motion and the basis of sports movement where physical education is applied as a means to achieve physical fitness and as a foundation in carrying out sports performance development in the future.

1) *Multilateral Basic Motion*

From the multilateral definition discussed above, multilateral motion is an amalgamation of various basic movements and the basic motion of sports skills. Basic motion is divided into three main types of motion, namely: locomotor motion, non-locomotor motion and manipulative motion. Locomotor motion is the movement of the whole body through a room or a certain distance such as motion to walk, run, jump and so on. While non-locomotor motion is motion where only the parts of the body that move such as pushing, pulling, leaning, and so on and manipulative motion is the movement of skills that use equipment such as throwing, catching, beating, kicking, volleyball, etc [9].

The three types of motion are partly used in sports, part of the motion used in sports movements is what is called the basis of sports motion. These types of motion will be discussed in more detail with various examples below. a) Locomotor Motion: Kogan explains locomotor motion simply: "go somewhere" ie moving across space and distance by running, skipping, jumping, rotating walking, tiptoeing and so on. Various variations of locomotor motion above can be varied in a water environment. b) Non-locomotor motion: non-locomotor motion is motion where only the body parts that move such as swinging and twisting arms, pushing, pulling, leaning, and so on. Kogan gives a simple limitation: "movements are those that stay in one place" [10]. This means that unlike locomotor motion, non-locomotor motion is carried out where there is no displacement. c) Manipulative Motion: Manipulative motion is the motion where the object moves, such as in throwing, catching, escorting, kicking, and variations of the above mentioned motion [11].

Based on the description above, the basic motion concept as the basis for multilateral motion in this study is designed in aquatic sports in a water environment (swimming pool).

2) *Aquatic Sports (swimming)*

Aquatic is a term for water sports coordinated by FINA (Federation Internationale de Natation). Broadly speaking, aquatic sports can be divided into several groups, namely swimming, diving, beautiful swimming, open water swimming and water polo. But of all only swimming, beautiful swimming, beautiful jumping and water polo that competed in the Olympics. Swimming (aquatic) is a physical activity (body) that has been carried out by humans long ago, before humans recognized and used the swimming pool as it is now as a place to develop human abilities in sports. Swimming is a very good education for someone.

III. CONCLUSION

Physical education and sports learning in schools, especially aquatic, the goal is not to achieve the achievements of sports branching, but to foster children's abilities as a whole (multilateral). The overall abilities include physical and motor skills and functional values, namely cognitive, affective, and social. Physical and motor skills really need to be given to children on a complex basis as a basis for developing subsequent abilities or developing sports skills. Through physical education and sports activities, it is hoped that students can grow and develop well, be healthy and physically refreshed, and their personalities develop harmoniously. It is not only his physicality that is actively carrying out activities, but his psychology also plays an active role. Through physical education and sports learning, children are developed the ability to think (cognitive), behavior (affective), and social. Implementation of physical education, sports and health as a whole (multilateral) in the long term is more beneficial than specifically concentrated on branching, for example swimming. Providing pedagogic branching specialization too early in the sport is actually less beneficial for the child's personal development. Presentation of material in physical education and sports learning is given in the form of play and adapted to the abilities of children.

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