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Foster Culture of Critical Thinking in Physical Education

Dupri Dupri*, Nova Risma, Novia Nazirun
Physical Education, Faculty of Education
Islamic University of Riau
Pekanbaru, Indonesia
*dupri@edu.uir.ac.id, novarisma@edu.uir.ac.id, novianz@edu.uir.ac.id

***Abstract*—This paper contains a literature review about the process of developing critical thinking in physical education learning in schools. The author examines critical thinking skills that arise during the learning process, approaches that will be able to foster students 'critical thinking skills, studies from the perspective of interactions between fellow students and the motion learning process that is able to foster students' critical thinking skills. The application of problem based models is one approach that is considered capable of growing students' critical thinking skills. In addition, teachers must also be able to stimulate children to think about solving problems through the concept of motion that has been prepared in learning. So there will be a quality learning process and a good impact on the development of students' movements and thought processes in solving problems.**

Keywords: critical thinking, physical education

I. INTRODUCTION

Analyzing developments that will occur in the 21st century and discussing 5 new situations or contexts in life, each of which requires certain competencies. These conditions include: 1) conditions of global competition (the need for global awareness and independence), 2) conditions of global cooperation (need global awareness, coordination capabilities, mastery of Communication and Information Technology (ICT), 3) information growth (necessary) technological literacy, critical thinking & problem solving, 4) work and career development (need for critical thinking & problem solving, innovation & refinement, and, flexible & adaptable), 5) information, critical thinking and problem solving. Furthermore Kay said, in the next five years requires very important skills, namely critical thinking (78%), (IT 77%), health and fitness (76%), innovation (74%), and personal financial responsibility (72 %).

The curriculum is the direction of implementing education in schools, and is the government's effort to achieve national education goals. Human resources (HR) always in accordance with the changes and challenges of the times. The current curriculum that is a national reference is the 2013 curriculum which is character-based. Changes in the 2013 curriculum that emphasize changes in aspects of the scientific learning process ask for special assistance for Physical Education (Physical Education) subjects. The process of scientific learning is closely interacted with the subjects of Natural Knowledge. However, the scientific learning process is needed in the aspect of life, including social life, so that the scientific learning process is not focused on learning in the classroom or in the field. Pick up subjects that have a characteristic of motion activities and are carried out outside the classroom, of course have a special commitment in the implementation of scientific-based learning through motion activities. Integrating physical activity and science learning in an outdoor education program addresses the two challenges that our children face today: physical inactivity and poor science performance these two challenges hinder the physical and mental development of our next generation [1].

Critical competence is one of the competencies addressed through this 2013 curriculum, specifically at the high school level. Of course, this is the basis for the problem, because it is able to solve problems in each field.

II. METHOD

Method used in this research is descriptive which collects literature reviews and field findings about the application of critical thinking culture to high school students in schools in physical education.

III. RESULTS AND DISCUSSION

A. Concept of Critical Thinking Ability

Critical for everyone, so in the educational process must provide learning experiences for students, one who thinks critically. Ennis argues that critical thinking is reflective and reasonable thinking that is focused on deciding what to believe or do [2]. Humans have been given reason to be used in meeting various problems in life'. So, humans must think in trouble. Kuswana describes the thought process, namely: The thought process consists of mental problems that occur naturally or planned and overcome in the context of space, time, and the media used, and produce about changes in the objects that affect it [3]. The thought process is an event that mixes, matches, consolidate, exchanges, and ranks concepts, perceptions, perceptions, and previous experiences.

Ennis put it simply that critical thinking is reflective and reasonable thinking that is focused on deciding what to believe

or do [2]. Critical thinking is solved is important by every student, so students are always able to solve problems effectively and efficiently. According to Gallahue Critical thinking, therefore is a form of cognitive accountability based on concept information, where students record relationship sand make conscious decisions based on established criteria [4]. Critical Thinking Process can be seen in the following figure 1:

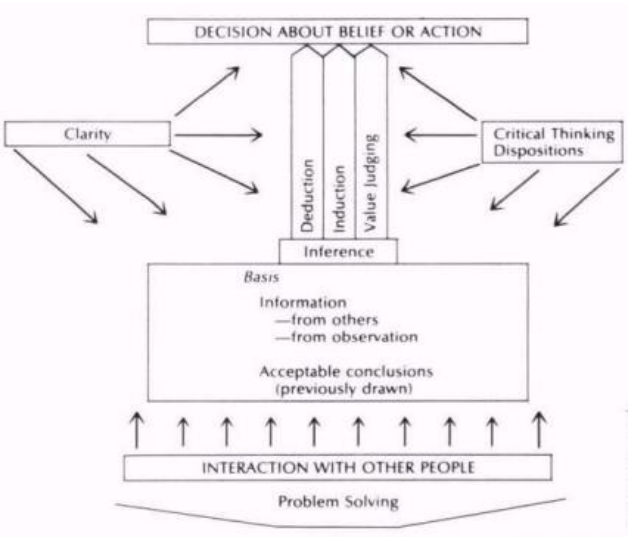

Fig. 1. The process of deciding what to believe or do.

Critical Thinking Figure 1 shows that Critical Thinking Happens Tishman and Perkins (in Walkuski) critically think about ways of working that fit with their daily abilities and experience states that: An initial model is proposed from critical thinking in physical education this model, critical thinking in physical education can be visualized as loosely configuring a four-step process: cognitive organizing, cognitive actions, cognitive outcomes, and psychomotor outcomes [5].

In cognitive learning students need to be given the opportunity in inquiry or observation activities. McBride et.al., explains that: However, to involve critical thinking, students must first given the opportunity to ask questions. Only during investigation and critical thinking skills can be activated through cognitive functions such as comparing, contrast, categorize, hypothesize, synthesize, estimate, and problem solving [6].

Physical education learning which has a special role in the delivery of educational values through movement can also contribute to students' thinking abilities. Walkuski explains that: Critical thinking does have a place in the psychomotor domain. Physical education and sports environment can provide support an environment for individuals to learn how to think critically ... Students can be challenged to produce unique solutions for movement problems, making new versions of games, and thinking about issues related to fitness and health [5].

Then according to Cottrell it was published: discussing the positions, arguments, and conclusions of others; Evaluate evidence for alternative points of view; weigh arguments that refute and prove sufficient; able to read between the lines, see beyond the surface, and arrange for wrong or unfair acquisitions; recognize the techniques used to make certain positions more attractive than others, such as faulty logic and persuasive devices; Consider the problems by means of structure, bring logic and insight must carry; draw conclusions about whether the arguments are valid and justified, based on good evidence and reasonable assumptions; Provide a structured perspective, clearly, a way that gives reasons to ensure others [7].

B. The Concept of Cognitive Learning in Motion Learning

In motion learning cognitive processes occur which results from cognitive processes will be discussed in motion. Cognitive processes will occur when students are confronted when they occur. The concept of cognitive learning is different from the concept of academic learning, because understanding cognitive is understood academically. Gallauhe answers that: Learning cognitive concepts need not be equated with academic concept learning. Academic concept learning addresses specific fields of traditional subjects such as mathematics, language arts, science, and its kind. Learning cognitive concepts is a far more inclusive term it includes academic learning because it is only one of several components [4].

In the learning process that discusses the learning process on the cognitive aspects of students. One example is when learning through the bottom, students learn who are doing the movement through the bottom. Students choose this movement from head to foot. Students pay attention to how the movement passes below as is done so that the ball can pass properly. It is in this activating process that it realizes it is activated, to then produce movement through the bottom. Then the teacher gives, how to convey questions about movements to friends who are far from us. At this stage the process of solving the problem through critical. Gallauhe argues that learning cognitive concepts provides children with tools for critical thinking. He uses movement activities to help retention, recall, decision making, and application [4].

The process of motion learning in learning *passing* occurs in cognitive learning when students are confronted with the problem solving process for making decisions and confronted with several alternative answers available. In this process students come out at a higher level, because students judge several of each answer choices. Students are faced with decision making decisions. Regarding this matter can be disproved with cognitive learning theory issued by Gallauhe namely cognitive learning theory views learning as a process that involves experimentation, exploration, and individual decision making; this is a process that requires the reconstruction of the wrong event to be a new one, true, whole [4].

C. Neurology Review

The brain consists of several billion nerve cells. These nerve cells are called very small neurons and are connected to one another. The functioning of this neuron will be seen when the neuron receives information from other parts of the body and then the information is synthesized by other neurons to be

sent back to other parts of the body regarding the response made according to existing needs. Complex and conscious thought processes occur in the cortex, which is located at the top and sides of the brain. Thick, wavy toupee. The part of the cortex located near the forehead, called the prefrontal cortex, plays an important role in a variety of human activities, such as attention maintenance, punishment, planning, decision making, coordinating activities that function, and thinking thoughts that think like which is not productive. Other parts of the cortex are equally important because they involve information and auditors, the complexity of the characteristics of tourism objects, and storing general knowledge about the world.

There are four important points about brain learning in cognitive development and development, Ormrod explains it as follows: Most learning involves changes in neurons and synapses; Developmental changes that occur in the brain can be made into increasingly complex and efficient thought processes; Many parts of the brain work together to facilitate complicated thought and behavior processes; The brain is still able to last a human life. Many researchers believe that this is the basis of physiological learning (and cognitive development) associated with changes that occur in the relationships between neurons. Specific synapses or existing or compiled synapses learning [8]. Provision of motion problems in physical education is one form of stimulation for cognitive learning. Ormrod argues that the formation of new neurons determines stimulation by new learning experiences, and their role in the learning process that they do not yet have [8].

D. Initial State of Students

There are several aspects which are then questioned compared to the learning objectives one of which is the initial state of the student. Learn more about the collection of learning things, in essence, can focus on any teaching-learning process, but not necessarily all of them related to certain teaching and learning (initial potential). Learn more about the initial contributions needed at the beginning of a particular teaching process and are evident, as long as the teacher and student support to achieve certain specific instructional goals (actual initial state) [9]. Intelligence *(intelligence)* is the ability to apply previous knowledge and flexible experience to handle new challenging tasks [8].

Sternberg in Ormrod made three distinctions so called *triarthic.* First of all people can be less or less intelligent in three different fields. Analytical-analytic *intelligence (intelligence)* involves the ability to understand, analyze, comprehend, and understand the types of information and difficulties found in the academic environment and intelligence tests. *Intelligence creative (creative intelligence)* involves imagination, discovery and synthesis of ideas in the context of thinking-a new conversation. *Practical-practical intelligence (intelligence)* requires the ability of knowledge and skills needed to manage and help everyday life [8]. Critical thinking students who learn about this research can help students with modalities. In this study, student intelligence cannot choose and make factors that can indeed improve students' thinking abilities. Need further research that discusses moderator variables in evaluating student learning outcomes.

E. Sociocultural Perspective

The neighborhood and place of participation also participate in the cognitive development of students. Ormrod revealed that cultural values and expectations also affect the willingness and ability of students to engage in adversity. In addition, discussing culture on group harmony can make children reluctant to renew perspective perspectives that are often needed in critical thinking. Piaget holds that social interaction is equally important for cognitive development. Through interactions with other people that are fun (like conversations) or also unpleasant (like squabbling) young children as a whole discuss different individuals will see different things and views are accurate or logical [8]. Complex mental processes begin as social activities; As development, children gradually internalize the processes they use in social contexts and begin to use them independently Vygotsky in Ormrod. Vygotsky's theory believes that adults are people who support children's cognitive development intentionally and systematically. Adults sustainably participate in these activities successfully. Vygotsky stresses the importance of society and encourages cognitive growth so that his theory is referred to as a sociocultural perspective [8]. In the process of physical learning, students will be very influenced by dynamic social, as well as the social role of learning that increases individual motivation to receive learning material. In adolescence this is also the social aspect of determining his behavior. Desmita explains that "The development of social life is characterized by variations involving peers in their lives. Most of it is spent involved or hanging out with their peers [10]. The role of peers is important for children who are playing this. Hartup adds that peers provide important social and psychological functions for adolescents, by contrast, the studio finds harmonious peers during adolescence, supporting positive mental health at age middle-aged [10]. The role of the teacher is needed in facilitating a pleasant learning experience and able to stimulate thinking skills [10]. Gholami explore the question early in the educational journey, educators will benefit from the design and implementing simulation exercises that encourage students to use the attributes associated with developing critical thinking skills [11]. Research Gholami project as a priority in critical assessment of planning and deduction, also on the metacognition awareness scores of nursing students after learning problem-based learning [11].

IV. CONCLUSION

Based on the results of the study and the results of the study, it can be concluded that Physical Education can stimulate thinking skills through a problem-based learning process. Physical education learning itself is certainly not enough, because the critical needs process needs a long and relatively long process and needs support from all parties. So, there needs to be continuity between Physical Education and other subjects that also support each other in providing problem-based learning in achieving national education goals in accordance with the applicable curriculum.

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