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Effect of application of self-regulated learning models towards student' analytical ability in phsycal education learning

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Abstract
This research is motivated by the writer's observation in the field, that the application of physical education model in Elementary School only emphasizes on physical aspect, so the result of his learning is only a quality improvement in psychomotor aspect and ignore the cognitive, and affective aspects of the student. With the application of a model of learning that combines aspects of cognitive, affective, and psychomotor the writer expect to guide students to be able to develop intact cognitively, affectively, and psikomotorik. The purpose of this study to determine how much influencing the application of self-regulated learning model approach towards the student analytical ability on learning physical education. The research method used in this research is the experimental method. The research design used is Posttest Only Control Design. It also uses questionnaire instruments regarding analytical skills. After being tested with all requirements of data analysis, followed by hypothesis test using t-test, it is proven that the model of physical education learning using Self Regulated Learning approach has a significant influence on students' analytical ability of elementary school. It is thus expected that the Physical Education teachers use the Self Regulated Learning approach model in Physical Education learning.

Keywords: Self Regulated learning model, student' analytical ability, learning physical education

Introduction
Preliminary
Background
Physical education is an educational effort through physical activity to achieve individual development as a unity of cognitive, affective, and psychomotor aspects. Physical education not only improves the quality of the physical aspect but the development includes all the elements that exist in an individual.

In relation to the actual implementation of physical education in the field, it is necessary to apply a method or a specific learning strategy in order to facilitate learners in absorbing all the information presented by the teacher and able to help learners understand all the instructions given. The method or strategy must be a solution and can encourage students to learn well and achieve the expected learning objectives, as well as fosters a more independent, responsible, and motivated attitude to achieve the learning objectives. But the facts on the ground are still different from the purpose of making a real learning model, the reality of the learning model is only included as a prerequisite for the formation of a plan before the learning process is implemented and not necessarily well implemented by the teacher in question, this is exacerbated by the essence of the learning model itself is still technical so that learners tend to be passive and dependent on the stimulus provided from the surrounding environment so that students are less educated to be more independent, creative, responsible, and more motivated to achieve the purpose of learning activities do, so the development of teaching materials becomes more emphasis only on motor aspects and less attention to the development of affective and cognitive aspects.

In order to achieve the objectives of physical education, which includes cognitive, affective and motor aspects, it is necessary to apply a learning model that can support learners to be more independent, responsible, and motivated to achieve that goal, because so far the learning model is still technical and the learners are often less actively involved because the learning

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activities are only concentrated on the teacher. In addition, learning activities only emphasize the psychomotor aspect just as described previously, where students are only guided to complete the competency standard in the form of psychomotoric ability alone and often the cognitive and affective aspects escape from the teacher's attention. In this regard, it is necessary to develop a model of learning that applies the principles of self-regulated learning approach because learners will be guided to be more independent, responsible, and motivated to achieve predetermined learning objectives and can also encourage teachers and learners more creative and innovative in modifying the necessary facilities and infrastructure in accordance with the conditions in the field.

Based on the description above, the learning approach based on self-regulated learning is very important because it involves learning activities of students in metacognition, motivational, and behavioral. In addition there is the value of independence, personal responsibility, and motivation emphasized on learners during physical education learning activities take place and also encourage teachers to be more creative and innovative in developing teaching aids so that learning activities Physical Education can take place effectively and can achieve goals well.

Literature review
A. Physical Education
1. Understanding Physical Education

Physical education not only aims to develop one component, but includes other components as a whole Suherman and Mahendra (2001: 5) [1] Based on the modern view, a variety of definitions of the physical education of humankind are perceived as a whole as Siedentop (1990) proposes that, "Modern physical education emphasizes education through physical activity based on the assumption that the body and soul are an inseparable whole "According to William (2001: 3) [2] physical education uses physical activity to produce a comprehensive development including the physical, mental and emotional development of a person.

2. Purpose of Physical Education

The physical pendididkan aims to develop one's physical aspects through physical activity,as disclosed by Barrow (in William, 2001: 4) [3] which states that physical education is education through motion activities in which the purpose of education in the form of educating a person through great muscle activity include sports, games, gymnastics, dance, and exercise, whose results are called physically educated person.From the purpose described above states that physical education aims to develop person physical aspects through physical activity so that it is expected through physical education the physical aspects of a person can be developed as a whole.

Physical education also aims to look for other influences in the scope of education that includes the mental, educational and social development of learners, it is based on the view that when the body develops physically it should also be developed and educated, and there are other social developments such as students can work.While according to

Jenny William, (2001: 4) [4] The purpose of physical education in Indonesia also refers to the definition of physical education in the context of the modern view as stated in (Law no 4 th 1950, about the fundamentals of education and teaching at school chapter IV chapter 9) that: "Physical education in Indonesia has a purpose for harmony between the body and the development of the soul, and is an attempt to make a healthy Indonesian nation born and inner, given to all kinds of schools".

From some of the above explanation the authors can conclude that the purpose of physical education in schools is to develop every element that is in a person include physical elements and elements other than the body that includes aspects of cognitive, affective and psychomotor through physical activity selected and tailored to the level of development and growth someone, thereby resulting in a thorough development as a human being in its entirety.

Learning Outcomes of Physical Education

Learning is a process of development in human life where behavior is generated or changed through practice and training (Kingsley in Ahmadi and Supriyono 2003: 127) [5] Learning is also a process of seeking information that someone does in relation to the tasks he performs under general environmental conditions at each moment that suits the individual's abilities (Kirk and Macdonald, 2008: 376) [6].

From a physical point of view it can be seen that there is a neuromuscular development of students where such development is the result of a strong and elected physical education activity (Barley and David in Freeman, 2001: 4) [7]. In addition to the development of muscle rough learning physical education also affects the development of motor coarse and also a student's skills can be improved (William: 2001: 5) [8]. The process of physical education not only produces a mature development, as an integral component, human beings are also aspects other than the body whose existence is an interconnected part, in physical education the learning outcomes other than physical elements can be seen from the students' ability to engage in emotional reactions, relationships with their friends, group behavior, mental learning and other intellectual aspects can also develop as a result of physical education learning.

B. Ability Analysis
1. Understanding Analysis Ability

Classification of analytical skills can be defined as the ability to decipher a material into a smaller material in order to facilitate the process of understanding something. (Bloom in Towbridge et al., 2000: 78) [9]. The same realistic definition is also put forward by Komaruddin (2001: 53) [10] is a thinking activity to describe a whole into a component so as to recognize the signs of components, their relationship to each

1 Suherman Adang dan Mahendra Agus. (2001). Menuju Perkembangan. Menyeluruh. Menyiasati Kurikulum Pendidikan Jasmani di Sekolah. Menengah Umum. Jakarta: Depdiknas
2 William. 2001. The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics.
3 Ibid.

4 Ibid
5 Howard L. Kingsley (dalam bukunya Abu Ahmadi dan. Widodo Supriyono yang berjudul Psikologi Belajar, 2003
6 Kirk, Macdonald, and O'Sullivan (2008) define the field of physical education (PE) and sport pedagogy as being framed by three intertwined key elements
7 Barley and David in Freeman, (2001). "The Behaioural Ecology of Efe Pygmy men in the ituri forest,Zaire. Ann arbor: Uniersity of Michigan Museum of Anthropology.
8 Ibid
9 Bloom in Towbridge et al., (2000), Taxonomy of Educational objectives The Classification of. Educational Goal Handbook I Cognitive Domain, New York
10 Komarudin, 2001, Ensiklopedia Manajemen, Edisi IX, Jakarta : Bumi Aksara

other and their respective functions in a unified whole. While the notion of ability is innate ability or is the result of practice or practice (Robbins 2000: 46) [11].

In accordance with the above exposure can be concluded that the ability of analysis is the ability to decipher a point into parts or components so that they can know the characteristics of each section and then combine it into a component as a whole as a unity in an integrated manner.

Factors Influencing Analysis Ability
Associated with the domain of learning ability analysis can be classified as one aspect in learning where there are three domains in which the intellectual domain or cognitive, emotional or affective, and physical or psychomotor (Dickinson at. al, in Marchoux and pinkston, 2004: 1545) [12], while the analysis is part of the cognitive aspect which is then redefined by Bloom as the level or steps in learning (Taxonomy). In the taxonomy mentioned several variables as well as components that affect the ability of a person's analysis that includes:

a). The component of the ability to analyze is related to one's ability to describe a thing in order to be understood easily. b). The component of determining ability is related to one's ability to make a decision. c). Components of ability to compare is the ability to find advantages and disadvantages possessed by students. d). The components of grouping ability are related to the ability to classify things based on similarities or differences that the student has. e). The ability to explain component is the ability to describe in detail the things described.

C. Self Regulated Learning
1. Understanding Self Regulated Learning
The self-management strategy of learning is based on the assumption of triadic reciprocity from Bandura (Zimmerman, 2009, and Kuiper, 2002: 111) [13]. According to Bandura (in Zimmerman, 2009) [14], there are three aspects of determinants that influence in self-management in learning, namely aspects of self, behavior, and environment. Strictly speaking can be said that in self-management in learning does not only involve aspects of the self but also involves aspects of behavior and environmental aspects. The involvement of these three processes is causally causal to other processes in which; (a) the person attempts to self-regulate, (b) the result of performance or behavior, and (c) the impact on changes in the environment, and so on.(Bandura in Zimmerman, 2009) [15]; in the process each aspect determinant influence each other.

The metacognition aspect in self-management in learning refers to the decision-making process governing the selection and use of different types of knowledge (Zimmerman, 2009) [16]. Aspects of motivation in self-management in learning refers to the components that include.

(1). an expectancy component, ie beliefs students about its ability to do a task, (2) the components of values, encompassing student goals and beliefs about the importance

of interest in a task, (3) the affective component, the students' emotional reactions to a task, and (4) behavioral components that refer to the apparent behavior that arises in their interaction with the environment in order to achieve the goal.

A definition almost identical to the above definition is given by Schiefele and Pekrun (in Baumert *et al.* 2002: 54) [17] defines self-management in learning as a form of individual learning by depending on their learning motivation, autonomously develops measurements (cognition, metacognition and behavior) and monitors learning progress.

While Pudie, Hattie and Douglas (2006: 42) [18], states that the concept of self-management in learning focuses on the attention to "why" and "how" learners start and control their learning activities. The term "how" in self-management in learning refers to how learners use strategies to carry out learning tasks.

More operational than Purdi, Hattie and Douglas, Zimmerman (in Elliot, 2009: 15) [19] explains that self-management in learning consists of four dimensions, namely motive, methods, performance outcome and environment or social conditions. Based on the various definitions expressed by the experts above, it can be concluded that self-management in learning is a learning activity that involves aspects of metacognition, motivation and behavior of learners in carrying out learning activities. The involvement of metacognition aspect occurs in the form of planning of objectives and strategies of learning activities, monitoring of learning activities and evaluation of learning activities that have been implemented. Involvement of motivation aspect in the form of guidance of behavior to achieve learning activity. Aspects of behavior in self-management in learning form of embodiment of behavior to always achieve the purpose of learning activities. Students who learn by involving aspects of metacognition, motivation, and behavior will tend to be more independent in carrying out learning activities. Because they will be more responsible for their learning activities, they are aware that all learning objectives can be achieved only by the effort that they do. Thus, self-management in learning is a learning activity that involves aspects of metacognition, motivation and behavior of learners in carrying out learning activities.

2. Self Regulated Learning Components
There are three theoretical components that describe the process of self-regulation in the field of sports and education, namely learning strategy (learning strategy), management strategies, and knowledge of learning (Kermarrec, *et al.,* 2004) [20]. Learning strategies are key strategies that indicate how learners choose and process the information presented in the lesson. A management strategy is a supporting strategy that represents how learners mentally organize learning environments and facilitate information processing. The knowledge of learning relates to the general information used by learners to explain the strategic ways of learning. In the social-cognitive perspective, the existence of self-regulated

[11] Robbins. 2000. Human Resources Management Concept and. Practices. Jakarta, PT. Preenhalindo

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[20] Kermarrec *et al*., (2004) "Comparison of allele 0 sequences of the human and non-human primate ABO system. Immunogenetics"

learning is etermined by three areas of person, behavioral area, and environment.

Self-regulated learning takes place on a degree where students can use personal processes to strategically manage the behavior and learning environment around them. Behavioral self-regulation refers to students' ability to use self-evaluation strategies to gain accurate information and check on the continuation of feedback results.

3. Relationships Self-regulated learning with analytical skills

Based on the theory of social cognition expressed by Bandura (2005: 251) [21], that the ability of the analysis is influenced by several factors, namely the influence of the environment, the nature of a person, and the behavior of one's learning, the theory assumes that these factors are related to each other and affect participants educate. Character of learning variables can describe the nature and tendency of students, environmental variables describe the external factors that also affect the students, students' behavioral behavior describes the behavior and the way students learn that brought in learning situations.

In accordance with the basic assumption of self regulated learning that students can improve their ability to learn through the use of metacognition strategies and selective motivational strategies, students can proactively choose structures and create favorable learning environments to achieve learning goals, students can play a significant role in choosing shape and learning activities according to their needs. Thus the authors assume that the analytical ability is closely related to the self-regulated learning approach model because in the learning students not only involved physically but involving other aspects related to cognitive aspects, affective aspects, as well as psychomotor aspects.

Research method is scientific way to get data with purpose and specific uses (Sugiono, 2006: 1) [22]. Based on the problems that the author thoroughly, the research method that the authors use is the experimental method. An experimental study intended to determine whether or not a result of "something" is being imposed on the subject under investigation. In other words experimental studies trying to examine the presence or absence of causal relationships, the way is to compare one or more experimental groups treated with one or more comparison groups that are not receiving treatment. In this study, the experimental group is a group given the treatment of self-regulated learning approach (SRL). While the control group is the group treated through conventional learning. The study of conventional approaches is meant that approach in the process still refers to the core of the technical approach, a technical approach is an approach whose learning activities tend to emphasize the mastery of sports skills in which all learning decisions are fully determined by teachers and teachers directly involved in the learning patterns. While the data collection in this study using research instruments in the form of questionnaires. According to Arikunto (2007: 140) [23]. argued that: "Questionnaire is a written statement used to obtain information from respondents in the sense of a report about his personality or things that we know". While the type of questionnaire used in this study is a closed questionnaire, Arikunto (2007: 141) [24] suggests that: "Questionnaire closed is a questionnaire that has provided the

answer, so that respondents just choose the answer".

Research result
In accordance with the purpose of research that the authors do is to determine the effect of the use of self-regulated learning model of learning ability in the analysis of elementary school students, questionnaires are distributed as a means of collecting data.

Data obtained from the final test results in the form of questionnaire conducted on the sample in this study then processed based on the provisions and statistical rules, the results of statistical processing described in the table below:

1. Average calculation result and standard deviation
The first step in processing the final test result data by calculating the average value and standard deviation of each group in detail can be seen in the attachment. The results of the calculation can be seen in the following table 1:

Table 1: Average calculation result and standard deviation

Group	Average ($\overline{X}$)	Standard Deviation (S)
Experiment	154.55	9,33
Control	126,95	7,3

2. Result of calculation of normality data test
Having known the average value and standard deviation of each group, the authors do the normality test to determine the level of dissemination of data from the questionnaire distributed in the research that the authors do by using the Liliefors test approach, in this test the authors use a real level of 0.05. The results of normality test processing can be seen in the following table 2.

Table 2: Normality Test Result Calculation

Group	L_o	L_{table}	Informations
Experiment	0,1681	0.190	Normal
Control	0,055	0.190	Normal

3. Homogeneity data calculation results
After it is known that the data generated in this study is normal, then the prerequisite test of statistical test with the test data homogeneity to be known data distribution of the normal or not produced variance, the results of homogeneity test can be seen in the following table 3.

Table 3: Homogeneity Test Result Calculation

Group	(S^2)	F_{count}	F_{table}	Conclusion
Experiment	87,21	1,63	2,15	Normal
Control	53,31			

4. Computation results of Variance and Combined Variance between experimental group and control group
After obtaining the average value and standard deviation, the next step is to find the value of the variance and the combined variance of the two groups in detail can be seen in the attachment, the results can be seen in the following table 4.

Table 4: Results of Calculation of Variance and Combined Variance between Experiment Group and Control Group

Group	Variance (S^2)	Combined variance
Experiment	87,21	8,38
Control	53,31	

[21] Bandura Albert, (2005) Self reinforcement: theoretical and metodological consideration. Stanford university
[22] Sugiyono. (2006). Metode Penelitian Pendidikan. Bandung : Alfabeta
[23] Arikunto, S. 2007. Prosedur Penelitian. Jakarta : Rineka Cipta.
[24] Ibid

A. Hypothesis Testing

Once it is known that the value of the final test result is known and processed and analyzed by statistical approach, the next step is to use the test of difference of two average one party. The hypothesis couples the authors propose are:

Ho: The learning model with Self Regulated Learning approach does not affect the students' primary school analysis skills

Ha: Learning model with Self Regulated Learning approach gives significant influence to the students' elementary school analysis ability.

Ho : $\mu 1 \leq \mu 2$

Ha : $\mu 1 > \mu 2$

The results of the test calculation of the difference of two average one party can be seen in the following table 5.

Table 5: Result of Test Calculationt

Group	t_{count}	t_{table}	Information
Experiment & Control	10,4125	2,0051	Ho: is rejected and Ha: accepted

Based on the calculation of t test above, it can be known that the tcount of Self Regulated Learning model and the learning group without Self Regulated Learning model is 13.3706, whereas the value with probability of 0.95 and with dk = 38 at significance level $\alpha = 0,05$ obtained t-table value = 2.0051. the value indicates that the calculation results are in the acceptance area of the hypothesis (Ha) can it says that Ho is rejected and Ha accepted.

From the results of hypothesis testing above, it can be concluded that t-count larger t-table t-count> t-Table then Ho is rejected while Ha accepted means there is a significant difference between the implementation of self-regulated learning model with no application of self-regulated learning model of learning ability of elementary school students.

In addition to improving the cognitive aspects of the use of self-regulated learning approach in physical education learning also affects the affective aspects of students, this can be seen from the increased discipline of students because at the time of learning takes place students must focus on learning and reduce interaction with their friends, and more obedient to the rules made by the teacher. A part from the student discipline was the application of self-regulated learning model also affects students' motivation, this can be seen with students who are very enthusiastic in following the learning activities that take place and feel unencumbered with the competence he must master, because by managing himself students can quickly understand the material given teachers.

Conclusions and recommendations

A. Conclusion

Based on the results of data analysis proved that there are differences in the ability of a significant analysis between students who apply the model of self-learning learning model approach with students using conventional approach. Where the learning model using self regulated learning approach gives higher and significantly influence to the students' elementary school analysis ability than conventional approach.

B. Recommendations

Based on the results of research that has been done, there are some things that will penuilis convey as input and suggestions as follows:

1. To the teachers of physical education, the results of this study proves that the implementation of Self Regulated Learning model of learning gives a significant influence on the ability of elementary school students analysis, so the authors suggest to use Self Regulated Learning learning model on physical education education.

2. To colleagues who will conduct research on the approach model of self-regulated learning, the authors recommend to look for variables and samples more relevant for the advancement of science education, especially the field of physical education.

3. The publication of the use of Self Regulated Learning approach to teachers of Physical Education and stakeholders related to the world of education is required.

4. Realizing that this research is not perfect for it, the authors suggest to other researchers to do better research.

Thus the conclusions and suggestions that the author can put forward, hopefully the results of this study can be useful for the author and give a significant contribution to the advancement of education in Indonesia.

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