

THE INFLUENCE OF LEARNING MODEL AND STUDENTS' PERCEPTION TOWARDS THE RESULTS OF PSYCHOMOTOR LEARNING OF PHYSICS SCIENCE IN CLASS VIII JUNIOR HIGH SCHOOL 18 PEKANBARU

Zulhelmi, Zuhdi Ma'aruf,

Berry Kurnia Vilmala,

The University of Riau, Indonesia

ABSTRACT

This research aims at looking at the effects of applying learning model and students' perception towards the results of psychomotor learning of physics science in grade VIII Junior High School 18 Pekanbaru in 2011/2012 academic year. This research is carried out using Factorial Experiment Design 2x2. The writer uses cluster random sampling technique. The sample of the research are VIIIA and VIIIG classes that consist 72 students. The independent variable is the learning model and students' perception, while the dependent variable is the results of psychomotor learning of physics science. The learning model applied is Direct Instruction and conventional learning and students' perception is differentiated between high and low. The data are collected through test and questionnaire and are analyzed with ANOVA 2x2. The results of data analysis shows: 1). There were significant differences in learning outcomes of students psychomotor Physics SCIENCE IN applying the model to the students who apply conventional learning. 2). There were significant differences in psychomotor learning outcomes between students who have a high perception and have a low perception. 3). There is no interaction between learning models and perceptions of students with learning psychomotor outcomes. Key words: Direct Instruction Model, Perception, physics science, the results of psychomotor learning.

Introduction

Physics as part of science plays a very important role in the development of science and technology. Therefore, the teaching of physics in schools should be a really well-run and should get more attention in order to be a solid foundation of development and mastery of science. There are several components that support the implementation of learning in schools, one important component is the teacher in the classroom conduct. According Wartono (1999) physics teachers in carrying out their duties obliged the child to practice the skills in a creative and innovative thinking through the study of physics that is expected of students capable of critical thinking in the development of creativity and passion.

Matter Physics lessons in junior high school science many contain material that is quite difficult to be understood students, because it involves an understanding of concepts, application of concepts and calculations as well as concerning the concepts are abstract. In the learning process science Physics at several schools during these look less attractive, so that students feel tired and have a low perception of the subjects Physics science. This resulted in passive classroom, very few students asked the teacher even though the material was taught not to be understood. In teaching such a class would be passive, they will feel as if forced to learn, they do not know the meaning of learning is done and this could result in depressed soul. Such circumstances lead to boredom, boredom, indifference, so the attention, 1852

interest, and motivation in learning is low. This will have an impact on the learning objectives is not achieved in science Physics.

The results of the research workshop MGMP science Subulussalam City (2012) conducted by teachers science junior, was low due to student learning outcomes are: (1) Submission of materials physics by more teachers tend to use the lecture method, and



occasionally interspersed with demonstrations or discussions. This resulted in the students tend to be saturated, students only concrete information that is less crowded and less attractive because the discussion is theoretical, (2) Students are never given direct experience in observing a physical process, so students think the subject matter is abstract and difficult physics be understood; (3) teaching method teachers use less varied and innovative, so boring and not attract students. The low activity of students in the study of physics is also thought to be caused students to feel the physics is a science that is not useful in later life, in addition to the assumption that physics is boring, the other results showed that while the perceptions and responses of students at 67.5% of students do not like physics because many use count and 55% less like physics because many use the formula, 75% of students answered that the method is often used by teachers in teaching are lectures, 62.5% of students are bored with the lecture method taught by teachers (repository. upi.edu, 2012). This also happens in Yuniior High School (SMP N) 18 Pekanbaru.

Learning in the Junior Physics science Pekanbaru N18 is a need to be noticed.

Because not all the material science teacher at this school physics learning strategy according to the physical characteristics of the material itself. So most of the students do not understand the material being taught by the teacher. Another problem is the lack of implementation of learning that involves students directly, such as the materials that need to be explained solely by the teachers experiment with conventional models. Should the material requires teachers should experiment to experiment and teach step by step test to students in order to achieve the purpose of the lesson and the students became more active as directly involved in the learning process. The reality of the matter in SMP N 18 Pekanbaru is the rare student who does not even have been carrying out experiments on the lab or material that requires trial. So that students assume that if subjects Physics science contains only formulas alone. It will also affect the cognitive, affective, psychomotor especially students. The causes of low student interest towards learning Physics science is already embedded in the students' thinking patterns that think the lesson was boring because science Physics teacher presents the trend of learning materials using conventional means.

So is the case with the learning outcomes of students psychomotor low. The average value of class VIII science Physics SMPN 18 Pekanbaru is 68.39 with KKM Physics science subjects in Pekanbaru SMPN 18 Academic Year 2011/2012 was 70. The tendency of teachers for teaching Physics science limited to the conventional model, and if ever there was a demonstration conducted unstructured. As yet prepared tools and materials before demonstrations. As a result, many students who do not like Physics science lessons and student scores to be low.

In Physics science learning in school students have different perceptions of the material being studied. Perception is the process by which a message or information regarding entry into the human brain. Through perception, people in constant contact with the environment. This relationship is done through the senses are the senses of sight, hearing, touch, taste and smell (Slameto, 2003). Sarwono (2009) reveal perception in terms of psychology is to understand the process of information retrieval. Tools to obtain such information is sensing (vision, hearing, touch, etc.). Instead, the tools to understand it is

consciousness or cognition. Perception is defined as a process of combining and organizing data of our senses (sensing) to be developed in such a way that we can recognize around us, including ourselves aware of (Salih, 2009).

There are students who have a positive perception towards learning, there is no perception at all, not even a little also students who have negative perceptions of learning physics. Individual's perception of a thing that affects how people behave on the object perceived. If people have a positive perception towards something positive then the

individual's behavior and approached the object. If people have a negative perception of a thing then the individual's negative behavior and away from the object. The results Badi'ah (2012) suggests that there is a significant and positive relationship between students' perception of learning physics outcomes. Based on physics with the opinion of several experts in the above and the results of this study concluded that the perception is everything experienced by a person who comes from the environment, which includes the process of receiving, selecting, organizing, interpreting or interpreting, testing, delivering and assessing reactions to an object, people or situations that are positive and negative. Perception is the process of information processing in the form of the stimulus, which is received through the sensory organs and transmitted to the brain to be selected, organized interpretation causing a form of interpretation or judgment of sensing or previous experience. Perception is the result of interaction between individuals outside world (environment) with the experience of individuals who have internalized a sense organ of sensory system as a liaison, and interpreted by the nervous system in the brain. This is in line with the understanding of psychomotor skills in teaching Physics science.

Psychomotor aspects related to motor skills associated with limb or actions that require coordination between nerves and muscles. Bloom (Zulhelmi, 2007), argues that the psychomotor domain associated with the achievement of learning outcomes through manipulation skills that involve muscle and physical power. Motor aspect is important to do, because it can support students' cognitive learning outcomes are based on the psychomotor. In the psychomotor aspects of the most important is how to give hands-on experience to develop students' competence to be able to explore and understand natural phenomena scientifically. So the mind (cognitive) students based on the movement and actions (psychomotor) well developed (Zulkarnaini, 2007). In a study by La ode Syamsi physics (2010), students are required to understand the concepts that exist because it will allow students to finish the problem, solve the problem and get to know the symptoms of the natural surroundings. To solve the problem, students should know the relevant rules based on the concepts gained. Dahar (1996) in La ode Syamsi (2010) argues that people need to know and understand a concept because the concept is the idea of the highest or building blocks of human thought. During the students' learning activities take place should be left to explore / discover for yourself the meaning of something that is learned. They need to be given the opportunity to act as a problem solver as scientists do, that way they are expected to be able to understand these concepts in their own language. In addition it is suggested that teaching is not emphasized in the activities of memorizing information / material in the form and content fact only isolated, but the underlying principles of the discipline. By understanding the principles of the student will be able to investigate and solve problems. They require knowledge of procedural and declarative knowledge. Learning model is suitable for Direct Instruction.

In 2004 service guide curriculum development, one of the learning model considered most relevant to psychomotor aspects of learning is learning models Direct (Direct Instruction / direct instruction), because learning model is basically developed for the purpose

of fostering the skills aspect of procedural and declarative. Through this learning model, students are trained step by step to reach the stage of implementation science learning devices defined in the learning objectives particularly in view of the subjects Physics science. The results Hertanti et al (2012) states that there is a significant effect of direct teaching model (Direct Instruction) physics student learning outcomes. Likewise, research Kristina (2009) stated Increased psychomotor aspects between the first cycle to the second cycle was 57.35% to 70.6% with the criteria to be good enough.

This research will be seen the influence of the Direct Instruction Model and student



perceptions of the learning outcomes of psychomotor science Physics in Class VII SMP N 18 Pekanbaru. The objectives of this study were to determine: 1). differences in psychomotor learning outcomes of students who apply Physics science IN models with students who apply conventional learning. 2). differences in psychomotor learning outcomes between students' perceptions science Physics high with students who have low perception towards learning Physics science 3). Interaction between learner models and perceptions of students with learning outcomes of students psychomotor science Physics. Contribution expected from this research are 1). Students can increase the positive perception towards learning Physics science which can also lead to an increase in the teaching-learning process which simultaneously increase the learning outcomes science Physics, 2) For teachers to make this model as an alternative to the right to increase the process and learning outcomes better science Physics for students who are high or low perception towards learning Fisika.3 science) For schools, the results of this research could make a valuable input for the improvement of teaching and learning in secondary schools in general and in particular Junior High School (SMPN)18 Pekanbaru.

Literature Review

The nature of learning in the Junior Physical Science

Science is the result of human activity in the form of knowledge, ideas and concepts about the natural surroundings organized obtained through a series of scientific processes. Because in fact it is the study of natural science, both living beings and inanimate objects. Many experts are talking about the definition of science. Department of Education (2004:5) states that science is: 1) a collection of scientific knowledge that has been arranged in a logical and systematic way, 2) as a method that has certain steps which are deductive and inductive thinking patterns, 3) as a tools to control and care for nature and develop production for human welfare, 4) as a major factor affecting confidence, human thinking and attitudes towards the universe.

Carin and Sund (1980) (in Hendro and Jenny, 1993:5) also defines the science as: 1) the scientific attitude, 2) scientific process and scientific products. Furthermore opinion Carin and Sund is described by Hendro and Jenny (1993:5) as follows:

a. Science can be seen as a factor that can change the attitudes and outlook of man in the universe, from the point of view of the mythological being a scientific standpoint.

b. Science can be seen as a process of human efforts to understand natural phenomena. This requires a certain etiquette that are analytical, thorough, complete, and linking natural phenomena with each other so that the natural phenomena that form a whole new perspective on the observed object.

c. IPA can be viewed as a product of human efforts to understand natural phenomena. This product is in the form of principles, theories, laws, concepts, and facts all of which are intended to illustrate the various natural phenomena.

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Physics is a branch of science that studies matter and energy in all its forms and changes. As part of the science, physics also has characteristics that are not much different from the characteristics of science in general. According Lufri (1993:9) "is a matter of physics and energy. The essence of physics is change the form of a substance without form new types of substances. The material undergoes a change due to material gain energy ". Druxes revealed (1986:12) "physics can be considered as a science trying to decipher and explain the laws of nature and events in nature according to the image of the human mind". Physics is also a process and product are inseparable. Ade et al (1998: xi) explains that: "Physics is the study of natural phenomena and matters relating with it. Physic consists of three important aspects, namely as the product, processes, and attitudes. Physics is not a mere collection of knowledge, but rather a process and the scientific attitude ".



This means that in the process of learning physics in order to obtain optimal learning results, according to Wayan (2000:41) "as a subject of study students must be physically and mentally involved in the problems of observation, experiment, quantification of data, to draw conclusions for the concept- concepts of physics so it will be planted as a scientific attitude in students.

Products physics according to Wayan (2000:42) are "facts, concepts, principles, theories and laws". Expected product is master concepts, principles, theories and laws of physics by learners who will be able to push development cognitive and thinking skills. " While the physics Wayan (2000:42) reveals is "more concerned with how students acquire scientific information from at memorizing their involvement laws that embodies in the form of the equations of physics".

Direct Instruction Model

Models Direct Instruction is a model that focuses on learning approach to help students learn basic skills and gain information that can teach you step by step. Basic skills are especially a procedural knowledge of how to implement something, and declarative knowledge about knowledge something. Direct instruction designed specifically to develop the learning process so that the knowledge of procedural and declarative knowledge structured.

Direct instructional model approach to teaching is something that can help students learn basic skills and gain information step by step. Direct instructional model designed specifically to improve student learning outcomes on procedural knowledge and declarative knowledge are well structured and can be studied directly step by step. Learning require planning and implementation very carefully on the part of the teacher as a teacher-centered model. Processing system lesson conducted by the teacher should ensure the involvement of students, primarily through attention, hearing and recitation (Q & A), which is the process of guiding planned . Teaching is a process of guiding experience. The experience itself is only obtainable if the student is to deactivate itself reacting to the environment. In order for students active in learning the teachers need to plan to teach (Misrarita, 2008).

Direct teaching is a learning model that focuses on teacher and served in 5 steps: (1) the delivery of learning objectives, (2) demonstrate knowledge and skills, (3) provision of guided practice, (4) granting the expansion of understanding and provide feedback back, (5) provision of extension training and transfer of knowledge, Arends in (Nur, 2007). While by joice in (Nur, 2007) model of teaching that refers to direct instruction includes 5 steps: (1) the orientation stage, (2) the presentation, (3) Test of practice phase structure, (4) the stage of guided practice, and (5) independent practice phase.

Direct teaching can form lectures, demonstrations, training or practice, and working in groups according Kardi (Nur, 2007). Direct instruction is used to convey the lesson that

transformed directly by the teacher to the student, the preparation time is used to achieve the learning objectives as efficiently as possible. Thus, in models of direct instruction, the teacher can design exactly the time used.

Tabel 1. Syntax of Direct Instruction Model

Phases Teacher behavior

Phase 1

Delivering objective and prepares students

Teacher presents the objectives, background information on lessons, the importance of learning, preparing students to learn.

Phase 2

Demonstrate knowledge or skills

Teachers demonstrate the right skills, or presenting information step by step.

Phase 3

Guiding training

Teachers plan and provide initial training guidance

Phase 4

Checking understanding

and provide feedback

Check whether the student has successfully done a good job, give feedback

Phase 5

Provide opportunities for advanced training and implementation

Teachers prepare for advanced training opportunities, with particular attention to the implementation of more complex situations and everyday life

(Source: Kuswanto, 2004)

Observation of teachers who managed to show that most of them use direct instructional model procedure. Implementation of direct instructional model is the action taken by the teacher during the ongoing learning and the evaluation of results. Direct instructional model systematically help students through the steps or stages of learning and then some students will be active itself with the activities of guided practice and independent practice, this means that students will have access to clear in the study of a subject matter.

Conventional Learning Model

Conventional learning is a teaching method that is still widely used by teachers or educators. Preparation of teaching that is easy and not difficult to make this method is carried out by teachers. Learning the conventional learning methods that consider students come to class with an empty mind and without prior knowledge of the concepts of physics, so the teacher lecturing to pour the material physics of the mind to mind student. Furthermore teacher asked students to memorize the material, and if it has been memorized students are considered to have a grasp of the material physics. This is also confirmed by Dufresne et al. (In Dian, 2011:30) in the conventional method of teaching science has been more emphasis on the duty of a teacher to provide instruction or lectures during the learning process takes place, while students listen passively. Nurhadi (in Kurnia, 2011) revealed some of the characteristics of conventional learning, namely: (1) the student is a passive recipient of information, (2) individual student learning, (3) learning is very abstract and theoretical, (4) the formula that is out the student must be explained, accepted, memorized and practiced, (5) students passively receive formula or rules (read, listen, take notes and memorize), (6) the skills developed on the basis of the exercises, (7) the teacher is determinant of the course of the process learning, (8) learning outcomes as measured by test and, (9) do not pay attention to the learning experience of students

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Perceptions of Students Against Physical Science Lesson

Kotler (2000) describes the process of how a person's perception of selecting, organizing and interpreting information inputs to create a meaningful overall picture. Perception can mean an analysis of how to integrate our application to things around individual impressions or concepts that already exist, and then identify the object. To



understand this, it will be an example as follows: first-time individuals who had not previously come across the fruit we know, and then there are those who tell us that the fruit called mango. Individuals then observe and study the shape, taste, and so forth, from the fruit carefully. Then arises the concept of mangoes in the mind (memory) individuals. On another occasion, when encounter the same fruit, then the individual will use his impressions and concepts that we have to recognize that what we saw was the mango.

Of perception definition above it can be concluded that the perception in learning science Physics is a process of how students select, organize and interpret input information and experiences that exist and then interpret them to create the whole picture, which means in science teaching physics itself.

Psychomotor Skills Learning Outcomes

Learning can be defined as a change in behavior. Learning in Skinner's view (Sagala, 2007) is a process of adaptation or adjustment behavior. Learning is also understood as a change in behavior. At the time of the study the response the better, or that it did not learn the response decreases. So learning is a change in the odds or chances of a response. Learning is a daily event at the school. With student learning can improve the cognitive, affective and psychomotor.

According to the Ministry of Education (2006), in the learning process of students psychomotor skill aspect will develop through several stages, namely:

1. Cognitive Stage

This stage is characterized by movements stiff and slow. This occurs because the student is still in early stages of learning to control movements. Students should think first before doing the movements and frequent mistakes that students are frustrated.

2. Phase Association

At this stage, a student takes a shorter time to think about his movements. Students begin to associate the movement is studying the movement known. This phase is still in the middle of the psychomotor development. At this stage, students still use their intellect to make a move but the time needed to think less. Therefore, the movement has started is not rigid.

3. Phase Autonomy

This stage is called the stage of autonomy because students already do not require the presence of an instructor to perform movements. These movements have been made spontaneously and therefore movements are performed also does not require students to think about the movement.

According to Dave (in Ibrahim, 2006) is one of psychomotor skills sequentially. Dave also developed a taxonomy of psychomotor learning outcomes:

1. Imitation (Imitation) is the ability to perform simple activities and matches exactly to that seen or noticed before. For example, observing and imitating the behavior of others.

2. Manipulation (manipulation) is the ability to perform simple activities that have not been seen but based on the guidance or direction of work alone.

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3. The accuracy (precision) is the ability to perform activities so as to produce accurate work product precision. Usually done with appropriate independent even without the presence of the original source.

4. Articulation (articulation) is the ability to perform activities of complex and precise that his product is the whole thing. Combining two or more skills, sequencing and implementation is done constantly.

5. Naturalization (Naturalization) is the ability to perform activities of reflexes, ie, activities that involve physical labor so high effectiveness. Combining two or more skills and sequencing done in a consistent and easily. The performance takes place



automatically and physical movements that are irrelevant greatly reduced.

Zulhelmi (2006) said tests to measure psychomotor domain is the appearance or performance tests (performance) students who have mastered. Psychomotor tests included in the non-formal test, the test is according Lunetta et al (1981), namely:

1. Paper and Pencil Test

This paper and pencil tests such as written tests, although the form of the written form of the activity, but the target is the student's ability to display the work.

2. Identification Test

Test is shown to measure the student's ability to identify something, such as finding the damaged or does not work anymore.

3. Test Simulation

This test is done if there is no real tools that can be used to demonstrate student performance, so expect to use simulation test can still be assessed. Does someone have mastered skills with the help of artificial appliances or demonstration as if using something tool.

4. Job Performance Tests

Performance tests conducted with real equipment and aim to find out whether students can master the skills to use these tools.

Methodology

Research executed in Class of VIII SMPN 18 Pekanbaru at even semester of School Year 2011 / 2012. Research time started from March till June 2012 during 4 months.

Population which is taken in this research is class student of VIII SMPN 18 Pekanbaru amounting to 273 student which enlist at even semester of school year 2011 / 2012 which is distribution into seven class. To the seventh of population group to test Normality and Test homogeneity. Test of Normality performed within this research is test of normality by using ratio of Skewness or ratio of Kurtosis from result of program output of SPSS version 11.5.

From test of Normality obtained by Class of VIII E distribution is not normal Test Homogeneity to six class done/conducted with SPSS 11.5 with probability value is 0.068 bigger than 0,05 so that can be told is sixth of class is homogeneous. Intake of sample [done/conducted] at random (sampling random simple) from to six research population group and chosen two class that is class of VIII A and of VIII G. For the determination of experiment class and control done/conducted with class and toss of VIII G as experiment class and also VIII A control class.

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This research is the including type research of True experiment Design with device of factorial 2 x 2. As for device of factorial can be described as by following

Model of Study (A)

Direct Instruction (1) Conventional(2)

Perception Of

Student (B)

High (1) A1B1 A2B1

Low (2) A1B2 A2B2

Factorial Picture Device 2 x 2

Free variable in this research is model of study (A) that is model of Direct Instruction (1) in experiment class and is conventional (2) in class of control. Moderator variable [is] perception of student to study of physics of which categorized become highly (1) and lower (2) and variable tied is the results of psychomotor learning

Instrument Research that is peripheral of data collecting instrument and study.

Instrument used to collect data is the results of psychomotor learning test and giving of perception questioner the done/conducted after study end. Technique analysis data in this research is done by using descriptive analysis with aim to for the showing of difference of



result learn science Physics student psychomotor among both class covering absorption, complete learn student and is complete of study items. As for its rule is
= 100 %

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= x 100%
= 100%

Complete criterion of study target and student expressed complete if obtaining score ≥ 70 and is complete of study items and classical expressed complete if ≥ 85 % or student of TP complete.

Analysis of Inferential used to test hypothesis, because compared to come one variable tied hence its hypothesis use variant of analysis (ANOVA) Examination between sample done to number - number of significant of value with number of significant smaller than 0,05 meaning H_0 refused with the meaning there are difference of variable of dependent between group. To know influence model study and perception of student to study of science Physics with level criterion of significant which smaller than 0,05 ($p < 0,05$) hence there are difference and if level of significant bigger than 0,05 ($p > 0,05$) hence [do] not there are difference.

Research Finding

A. Result Of Analysis Data Skill Of Psychomotor

1. Descriptive Analysis

Descriptive Analysis of data result of psychomotor learning can be explained as follows:

a. Absorption

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Table 2. Absorption Skill of Psychomotor Student of SMPN 18 Pekanbaru

No Interval Absorption

Category

Absorption of Control

Class (%)

Absorption of Experiment

Class (%)

1 85-100 Excellent 14.28 64.86

2 70-84 Good 2.87 29.72

3 50-69 Satisfactory 54.28 5.42

4 0-49 Less than

satisfactory 28.57 0

Mean (%) 59 86

Category Satisfactory Excellent

Based on data from Table 2 shows the experimental class average absorption in the category excellent, while the control class average absorption is satisfactory. From Table 1 also shows that the percentage of excellent and satisfactory categories in experimental classes larger than the control class. This occurs because the class is given to the treatment of experimental models of learning that Direct Instruction models, while the control class learning is done with conventional models.

b. Completeness of student

Table 3. Psychomotor Learning completeness Students on Topic Light

Class Classical Completeness (%) Completeness Category

Experiment 91.89 complete

Control 8.57 incomplete

Of note in Table 3 Experimental class students gained mastery learning subject matter in the classical light reflectance is 91.89% with a complete category. While the control class



students gained mastery learning subject matter in the classical light reflectance is 8.57% with incomplete category. It states that students who pass the subject matter light on the experimental class more than the control class.

c. Completeness Learning Objectives

Table 4 . Psychomotor Learning Materials completeness Reflection of Light Topic

Class Classical Completeness (%) Completeness Category

Experiment 92.44 complete

Control 31,98 incomplete

From Table 4 it is known that mastery learning material in the experimental class was 92.44% and the control class is 31.98%. Learning materials in the control class is declared as a percentage of incomplete mastery learning material is ≥ 85 . While the experimental class learning material declared complete. Looks sharp distinction average mastery of the subject matter between the experimental and control classes.

2. Inferential analysis

Based on the results of inferential analysis of the data psychomotor learning outcomes science Physics class VIII SMPN 18 Pekanbaru, found the following results . First, there are significant differences science psychomotor learning outcomes between groups of physics students who follow the model of direct instruction with groups that follow conventional models, with $F_h = 89.09 > F_t = 7.01$; significant value of 0.001, $p < 0.05$., Then H_0 rejected and H_a accepted Secondly, there are significant differences science physics psychomotor learning outcomes between students who have a high perception of the students who have a low perception of the value of $F_h = 28.32 > F_t = 7.01$; significant value of 0.001 $p < 0.05$ means H_0 is rejected and H_a accepted. Third, there was no significant interaction between models of learning and students' perception of learning outcomes psychomotor psychomotor 1861

learning outcomes with value $F_h = - 25.81 < F_t = 7.01$; significant value of 0.001, $p < 0.05$, then H_0 is accepted and H_a rejected at the 95% confidence level.

B. Discussion

In this study, the acquisition of learning outcomes are obtained scores of individual students sampled the study after being given a number of tests of psychomotor science Physics. Scores obtained describing students' psychomotor skills learning materials that have been given in the learning process. Opinions are developed on the decrease in student learning outcomes, especially in subjects science junior physics today is alarming. Only a few students were able to pass the limit value exhaustiveness Minimal Criteria (KKM). Most of the students considered physics lessons are lessons that only counts only and not attractive. Many of these concepts are very difficult be understood of physics students in the learning process for students only be hearers of information then they have to memorize the information. A lot of the subject matter of physics that students should have to experience for yourself or practice concept is to be found, but the students just made the object of recipient information. Such information can not last long in the memory of the students, because students never responsible for the process of knowledge building in him. While the demands of nature Physics science learning is a process, product and scientific attitude This also happens in SMP 18 Pekanbaru . For it applied the model of learning science direct instruction. Direct Interaction model in improving learning outcomes is very suitable for learning psychomotor science Physics, because in light of the material students need to master the declarative and procedural knowledge in direct interaction model step by step teachers and teachers guide students individually in groups. If the teacher feels the student is capable of then they can receive advanced assignment of teachers, so they are expected to actually understand both cognitive and psychomotor.

Conventional learning model in teaching physics science commonly used, does not

show the creativity of students. Students are listening to a lecture and then students were given a questionnaire or form counting exercises. Conditions such learning is very boring for students. Students difficult to understand the lesson because students come to class considered to have no prior knowledge of physics concepts that will be provided and no experience at all about skill psychomotor. So the direct instruction model selection is crucial in learning applied physics. This study has revealed that the model of Direct Instruction have a positive influence on learning outcomes of students psychomotor physics. direct instruction model application in the study, researchers looked significantly raised student creativity and attention to students' learning problems and given very good. Students more freedom to do the lab work and cooperation of the students look very good in group work. Declarative and procedural knowledge obtained by the student will be able to last longer in his mind, because they experience themselves in accordance with the constructivist paradigm that says if students are able to develop and build their own knowledge through a process of learning the knowledge of the students will be more remembered in the longer as facilitator. Role of teachers as teachers as facilitators in the delivery model of direct instruction reflected declarative knowledge related subject matter in early learning and procedural knowledge to skills students need to do their psychomotor and further training individually or collectively Acquisition expected learning outcomes in this study, not only limited cognitive abilities of students to a given subject matter but also psychomotor learning outcomes. Physics science psychomotor learning outcomes better in classes that implement the model direct instruction compared to a conventional classroom. This difference can be seen from the average learning outcomes in the classroom psychomotor direct instruction was 85.87, while in the conventional class 58.91.

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Many psychological factors that also affect learning outcomes . Psychology one factor affecting student on academic achievement is students' perception of learning Physics science . Students who have cognitive or psychomotor skills are high enough if the perception in itself is less then earned achievements will not be maximized. Students' own perceptions can emerge from the student or can be generated by the environment or the people around him. People who are around the students are parents, family, friends and teachers at school class. Perception is (Kotler 2000) the process of how people select, organize and interpret information inputs to create a meaningful overall picture. Perception can be defined on how to integrate the analysis of students applying to the things around him with impressions or concepts that already exist, and further recognize the concept. Perceptions of learning Physics science is a process of how students select, organize and interpret input information and experiences that exist and then interpret them to create the whole picture, which means in Physics science lesson itself. Students' perception learning to be a very important factor because of the perception of high student achievement will accelerate.

Many students have a low perception towards learning science Physics. Physics science they regard learning as a "scourge" and science Physics teacher "killer". When this happens to students, then there will be problems with the students' motivation and interest rates. The teacher has a strategic role to raise positive perception of students towards learning physics science. The analysis of data showed the average psychomotor learning outcomes of students who have a high perception of better than students who have a low perception towards learning Physics science is 79.95 for perception high compared with low perceptions 64.74. Perception student of science physics can be generated with a method or application of a variety of learning models. The attitude of teachers who have discipline, responsibility and caring in guiding the students can contribute to improve the perception of students. Lack of understanding of the students about the importance of studying physics and physics too focused on calculations or formulas that are difficult to understand, so that students are



excited to learn Given this reality, researchers conducted a study on the influence of the learning model that included the effect of students' perception results Physics science psychomotor learning.

Based on the data obtained by researchers to determine the interaction between the students' perceptions of learning model. The results showed there was no significant interaction between the perceptions of students and learning models. However, if we look at the average (mean) of psychomotor learn whether they have high or low in the perception of the group that implements the model direct instruction higher at 87.64 and 80.33 in the high group in the low group, compared with the average learning outcomes in the psychomotor students who apply conventional learning on perceptions of 58.44 and 59.12 on the perception of high-low. Currently, many students who have a low perception of teachers less attention, should conditions low perception students more attention. Students less attention to learning Physics science either because they use the learning model that does not match the characteristics of the subject matter or because of the way teachers teach is always monotone. Innovative learning model that is needed in the current conditions. In the conventional model of learning the presentation of information with the lecture method still dominates. Conventional learning is based on the assumption that knowledge can be transferred intact from the mind to the mind of the teacher to the student.

Model conventional emphasis on teacher learning as an information center and students as recipients of information (Darma, 2007). While the model adopts constructivist learning, student creativity is very highlighted. Students actively and responsibly in responding to problems - problems that are given by way of active discussions with colleagues and conduct experiments science Physics. Students' understanding of the subject matter in depth occurs because students do their own through a process of discovery.

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Understanding of physics concepts better will lead to improved student learning outcomes are low perception, when conditioned on a situation that requires them to learn a lot more active not only as a passive listener perceptions of learning it can be resurrected. In conventional teaching students who answered incorrectly will be given punishment so that it can reduce the motivation to learn. While the model of Direct Instruction students are given the freedom to exercise up to evoke perception and lead to improved learning outcomes, especially in the psychomotor domain.

Implication

The study provides an overview and advice to education providers (Principals, Teachers science physicist), that in order to obtain better learning results in science subjects of physics need to find strategies that can involve intellectual, affective, and psychomotor learners simultaneously and proportionally .

Importance of learning science lab activities in physics, as in learning science requires physics concepts and generalizations are not just given to the students instead found and established himself by learners. Therefore, students should be actively involved in the exploration labs and activities thought to form a concept of physics themselves.

The existence of practical activities in science learning physics is needed. Because learning science Physics will be developed in learners is a process science, science products and scientific attitude. For that teachers are required to implement innovative learning models that can involve students actively in the process of teaching study. Characteristics of the material in the Junior Physics science especially in light of material (optic) is very demanding students to acquire declarative knowledge about the concept of the light itself and the knowledge procedural to find or prove the laws of physics are contained in the concept for the application of that model .Because of Direct Instruction in Physics science learning this material is appropriate, moreover to train students psychomotor skills.



Students' psychological factors also have contributed greatly to the learning outcomes of students psychomotor science Physics. One of them is the perception of students towards learning Physics science, because perception is a process that involves the inclusion of a message or information to the human brain. Through perception, people in constant contact with the environment. This relationship is done through the senses are the senses of sight, hearing, touch, taste and smell (Slameto, 2003). Sarwono (2009) expressed in terms of the psychology of perception is the process of finding information for understanding. Tools to obtain such information is sensing (vision, hearing, touch, etc.). Therefore giving students hands-on experience while learning is absolutely necessary.

Development of mini physics laboratory devices can also be done by physical science teachers in a school or in Studio MGMP science and Physics. Things to note the validity and reliability of the device is developed. Learning science through the physics mini lab more meaningful because it can improve learning outcomes in the cognitive, affective, and psychomotor. Likewise, students are more active when compared with traditional learning patterns.

Development of mini laboratory devices can be made to other subject matter in the physical science subjects, even also for subjects allied to physics (such as Chemistry or Biology) Similarly, the manufacture of scientific instruments physics lab may use simple stuff with tools simple, but still has economic value, educational, psychological, and sociological high.

Conclusion

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Based on the analysis of the findings of the research results obtained in this study are as follows:

1. Average absorption psychomotor students, mastery learning, and mastery of psychomotor learning materials on the subject matter of physics science light SMP N 18 Pekanbaru eighth grade classes that implement the Direct Instruction model better than classes that implement conventional models.
2. There is a significant and positive difference in learning outcomes among students psychomotor Physics science applying conventional models of Direct Instruction and the $F_h = 89.09 > F_t = 7.01$ at 95% confidence level.
3. There are significant differences and positive learning outcomes psychomotor science Physics students between the high and low perceptions of the value of $F_h = 28.32 > F_t = 7.01$ at 95% confidence level.
4. There is no interaction between models of learning and students' perception of psychomotor learning outcomes of students with a grade science Physics $F_h = - 25.81 < F_t = 7.01$

From these findings it can be concluded that there is a significant application of the Direct Instruction students' perception and psychomotor learning outcomes science Physics students in class VIII SMPN 18 Pekanbaru.

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