1. INTRODUCTION

The learning conditions as factors influencing the effect of methods in improving learning outcomes are classified into three, namely: 1) the purpose and characteristics of the field of study, 2) constraints and characteristics of the field of study, and 3) the characteristics of learners Reigeluth and Merrill (1979). Characteristics of learners is a quality of individuals related to talent, interest, motivation, goal orientation, intelligence, learning styles and learning outcomes that have been owned.

Learning style is an interesting variable to be studied, as it relates to one's cognitive style in optimizing cognitive strategy. According to Pritchard (2008), learning styles are an individual way of gaining knowledge and skills that contribute to academic achievement.

Learning styles as one of the factors that influence learning outcomes are characteristics that show a person's habitual patterns or ways of using ability, (Winkel, 1989; Kolb, 1984; Sternberg & Zhang, 2000; Santrock, 2007; Lee, 2005). Learning styles contain several components, including cognitive style and learning type (Riding and Pearson (1994), Winkel, (1989). According to Riding and Pearson (1994), learning styles are "an individual’s repertoire of learning strategies (the ways in which learning tasks are habitually responded to) combined with cognitive style (the way information is organized and represented). Learning styles describe individual differences that show the preferred way of learning and in processing information (Salkind, 2006).

Learning styles are a way that learners use to understand something in the learning process to achieve academic achievement (Keefe, 1990, Raiff, 1992, Yuson, (2005). The learning style relates to the way students manage in the face of...
problems. according to Yuson (2005) helps many learners in solving problems. This paper is inspired by the problems faced by learners, namely: 1) many learners who do not know how to learn meaningful and 2) can not focus good attention. It recommends the importance of knowing the different types of learning styles of learners. Understanding the learning style of learners well will be able to help educators understand the shortcomings that occur in learners Raiff (1992). Knowing the learning styles of learners, will help educators in providing appropriate learning strategies to apply for learners in a lesson.

2. METHODS

This article uses an in-depth literature study of the various sources of learning style theory. The literature study is done by comparing and analyzing the theoretical literature sources about learning styles. Sources of literature in the form of books, articles of national and international journals both in print and electronic versions relating to research problems. Theories obtained are used as the basis for reference in the development of related learning styles in teaching.

3. RESULTS AND DISCUSSION

Learning styles are known as factors that contribute to the individual's academic achievement. There are several types of learning styles already known in the literature review. Some of them are Salmes's learning style in Yuson (2005) which states there are five elements of learning style, namely deep learning style, surface learning style, motivational learning style, organized learning style, and hardworking learning style.

Some learning styles are often encountered in learning practices as follows:

1. Learning Styles Claxton and Murrel

Claxton and Murrel in Zaini (2002) found at least sixteen styles of learning styles and grouped them into four general categories. First, the personality model relating to basic personality characteristics. Second, the information processing model describes how people acquire and process information. Third, the social interaction model emphasizes how students interact and behave in the classroom. Fourth, the instructional preferences model that focuses on learning media occurs such as listening, reading, experiencing directly.

According to Zaini (2002), students are in continuum, on the one hand, students view the situation in its totality, see the whole pattern, or gestalt. They see the forest rather than the trees inside. Such students are called sensitive fields that have characteristics, among them, tend to be friends, prefer to study social materials, such as social studies, social sciences, and literature. Instead, they have difficulty in observing the details and studying the structured material. For example, students with field sensitive learning styles may have difficulty understanding the mathematical problems because they can not identify and distinguish between relevant and irrelevant information. Finally, they are more responsive to praise and encouragement and more easily influenced by criticism. Characteristics of this learning style is characterized by a high curiosity, independent, but less disciplined. They are also more task-oriented. They learn better with unstructured tasks, such as problem solving. On the other hand, they have difficulty in learning social materials and working with others. They do not require praise and encouragement and are not affected by criticism.

Some studies show that boys are generally more field independent, which then gave birth to different parenting patterns. Some scholars argue that it relates to one's cultural heritage. For example, among American youths of Mexican descent and of African descent,
they are more field sensitive than the majority of American society (Zaini, 2002). Although all the time a person can be more or less field sensitive or field independent, every human tend to remain and not the same with each other.

2. Perry Learning Style

Another somewhat different model was put forward by Perry in Zaini (2002). He argues that students develop through nine different stages of development, which are then summarized into three stages. Through this stage a student changes his ability to understand the difference in information and knowledge, to understand the roles of lecturers and students, and to make decisions in social complexity and personal life.

1. The first stage is called dualism which is marked by a black or white world view that is completely wrong. Knowledge is seen as a collection of facts to be memorized and educators are figures who are authorized to provide all the answers.

2. The second stage is called multiplicity that learners consider the uncertainty of the knowledge they receive, all opinions are considered equal. Learners can recognize the diversity of opinions and views about an issue. Learners in this position will always raise their hands in class discussions or in debates because they see such activity solely as an equally acceptable expression of difference of opinion. The opinions of educators and learners of both are equally appreciated.

3. The third stage is called relativism ie learners can understand that facts often related to context and decision-making should be based on logical or consistency criteria. Learners at this stage solely as people who have more experience in a particular discipline. Compared to the previous two stages, at this stage they are better equipped to develop rational discourse skills, support the establishment with evidence, and use logic to criticize ideas and opinions. They learn more through discussions to get an opportunity to practice their skills and understanding.

4. Learning Style Honey and Mumford

The next learning style model is the learning style of Honey and Mumford. The learning style expressed by Honey and Mumford in Pritchard (2008) are activist, reflective, theoretical and pragmatic learning learning style. Pritchard (2008) describes the learning styles of Honey and Mumford models in the form of images as follows:

Figure 1. Dimensional learning styles of Honey and Mumford

a) Activist Learning Style

According to Honey and Mumford in Nor bin Ihkasan (2005), someone who has an activist learning style likes to actively and actively engage in learning activities. These students usually have an attitude of impatience and haste. This right is caused by high curiosity about new problems. They are also fond of looking for new experiences, always excited, open minded, have strong self motivation and always take initiative to solve their own problems.

According to Nor bin Ihkasanan (2007), activist learning style is suitable to choose engineering majors. Activist learning styles will learn more memorable if in learning, given the opportunity to use equipment and work in groups. In
addition, students also need to be active by involving themselves in learning activities undertaken.

b) Reflective Learning Style

Honey and Mumford in Nor Bin Ihkasanan (2007) explain learners who have reflective learning styles prefer to pay attention, think and make self-reflection to what is around it. They have their own ideas, pay attention, find solutions, interpret, assess and make self-reflection with the thinking skills it has. Learners in this group have critical thinking skills and creative, like to interpret and assess a problem from various perspectives, principles, decisions or projects, make self-reflection, cautiously, think carefully about the options before making a conclusion, learn and make work systematically.

In doing a job or solving various problems, these learners need sufficient time to make preparation work, have a careful attitude, be alert and carefully think through the options especially in practicing workshops at Honey and Mumford in Nor bin Ihkasanan (2007).

c) Theoretical Learning Style

Learners who have a theoretical learning style are fond of using principles and theories to make conclusions about a problem. Students of this group integrate the results of knowledge in a logical order and think of a problem following certain steps and are logical. They are more disciplined, have objective judgment, rational and logical thinking, are less creative because they emphasize the use of the left hemisphere, are fond of exploring the causes and consequences of an applicable problem and are interested in studying the phenomena prevailing in the wild around Honey and Mumford in Nor bin Ihkasanan (2007).

Learners who apply this learning style more emphasize the theoretical aspects in their learning. In understanding an in-depth concept, learners of this type of habit are applying theory as the underlying concept of the problem being studied. According to Julie in Nor bin Ihkasanan (2007), learners who apply this learning style have power when in a research situation, designing with models, concepts, theories and systems when asked to understand and take part in complex situations.

In conducting the study, students of this group are happy to create and test hypotheses to draw conclusions based on the evidence obtained. This fact is supported by Honey and Mumford in Nor bin Ihkasanan (2007), which suggests that students who apply theoretical learning style use more rational and logical thinking.

In addition, learning in the technical field not only requires an activist learning style, and reflective, but learners also need to be theoretical. Theoretical learners will be disciplined in learning activities. Rosewell in Nor Bin Ihkasanan (2007), states that a student who has a theoretical style of learning will learn easily if they understand the theory and concept of a topic in comparison to their active involvement in learning activities.

d) Pragmatic Learning Style

Honey and Mumford in Nor bin Ihkasanan (2007) say pragmatic learners are more practical and concerned about the truth than existing theories, laws or principles. They prioritize the application of theories, laws or principles that exist in real situations, and try as much as possible to realize ideas, theories or some ideas that are technical. In addition, they are also more expressive than creative and likes to make comparisons. Learners in pragmatic learning styles like using concrete materials to run learning activities.

Pragmatic learning style is more emphasis on learning through experience (experiential learning), because according to Honey and Mumford Nor bin Ihkasanan (2007), students who are pragmatic can master a subject that is learned easily after
through practical sessions and theory. Pritchard (2008) says that this learning style will lead learners to be more practical, like trying ideas, theories, and techniques in learning.

4. Learning Style of David A. Kolb

Kolb's learning style model (1984) emphasizes more on the activity-centered styles by identifying the four phases of learning. At each learning phase there is a different process and ability to acquire new information or skills. Kolb (1999) suggests the existence of four poles (a-d) that illustrate a person's tendency in the learning process. The tendency of a person to run the habit of learning according to Kolb is usually not dominant at one particular pole, therefore the result of this learning style measurement will be represented by four types of learning style: 1) poles of concrete experience (CE) and reflective observation (RO) represented by learning style Diverging, 2) reflective observation (RO) poles and abstract conceptualization (AC) are represented by assimilating learning styles, 3) Abstract conceptualization (AC) and active experimentation (AE) poles represented by converging learning styles, and 4) active polarization experiments (AE) and the concrete experience (CE) is represented by the accommodating learning style. The four poles of the learning style are described as follows:

Based on figure 2, Kolb (1999) explains from each pole as follows:

a. Pole Feelings/Feeling (Concrete Experience)

Individuals learn through feelings, by emphasizing the aspects of concrete experience, more concerned with relationships with others and sensitivity to the feelings of others. In the learning process, individuals tend to be more open and able to adapt to the changes it faces.

b. Polar Thinking (Abstract Conceptualization)

Individuals learn through thought and are more focused on the logical analysis of ideas, systematic planning, and intellectual understanding of the situation or subject matter encountered. In the learning process, individuals will rely on systematic planning and develop theories and ideas to solve the problems it faces.

c. Pole Observation / Watching (Reflective Observation)

Individuals learn through observation, emphasis on observing before judging, listening to a case from various perspectives, and always listening to the meaning of the things observed. In the learning process, the Individual will use his thoughts and feelings to form opinions.

d. Pole Action / Doing (Active Experimentation)

Individuals learn by action, tend to be strong in terms of ability to carry out the task, dare to take risks, and influence others through his actions. In the process of learning, the child will appreciate his success in completing the work, his influence on others, and his accomplishments.

Further Kolb (1984) developed four phases of the learning cycle and identified the following four learning styles:

1. Converging: these types are those who rely on abstract conceptualization and active experimentation; they are happy to
find concrete answers and move quickly to find problem solving; they are very good at defining problems and making decisions; they are not emotional; they prefer to work with ideas rather than working with others.

2. Diverging: these types are those who use concrete experiences and reflective observations to generate ideas; they are good at brainstorming and making alternatives; they are most happy to interact with others.

3. Assimilating: these types are those who rely on abstract conceptualization and reflective observation; they are happy to assimilate information and rearrange it with proper logic; they are good at planning, developing theories and creating models, but are less interested in applying theory in real life, they learn well by reading, listening, observing, and contemplating the information obtained.

4. Accommodating: these types are those who learn well by using concrete experience and active experimentation; they often use trial-and-error strategies rather than read their instructions first, or intuition to solve problems, they tend to take risks and get into the problem, they are good at adapting to new situations.

In class activities, converging learners tend to prefer solving problems with definite answers. Diverging divergent learners tend to benefit more from discussion groups and work on projects collaboratively. Students assimilating tend to feel very comfortable observing, paying attention to role play (role play) and simulation in the classroom, and create concepts. Attached learners are more likely to be on the move, being good players in role play, group work, simulations, and field trips.

Kolb in Yildirim (2010) suggests that Individuals with diverging learning styles are more likely to learn through observation, individuals with converging learning styles tend to learn through action, individuals with assimilating learning styles tend to learn through thinking, and individuals with accommodating learning styles tend to learn through feelings.

4. CONCLUSION

Based on the result of the writing which has been described above, it is concluded that learning style is a characteristic variable of learners which theoretically has an important role in determining the way one manages knowledge information, attitude and skill. The way individuals learn to acquire knowledge, attitudes and skills and transform them into academic practice becomes urgent in the formation of learners' personality.

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6. REFERENCES


