

Conceptual Analysis of the Contemporary Learning Strategy at School

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Abstract: One of the major professional skills and proficiency that educators need to have is the skill or proficiency in the field of education and teacher training, especially proficiency related to learning strategies. A teacher is not only required to master the field of study that will be taught, but they must also master and be able to teach the knowledge and skills to learners. Teachers as an important component of education personnel, have the task to carry out the learning process. In the implementation of learning, teachers are expected to understand about the definition of learning strategies. Learning strategy can be defined from two words that construct them, namely strategy and learning. The word strategy means the way and the art of utilizing resources to achieve certain goals. In learning process, learning strategy is implemented by utilizing various resources (teachers and media) to attain the objectives of learning. Learning variables can be classified into three, namely: learning conditions; learning strategies and learning outcomes. The learning condition variables are grouped into three, namely: the purpose and characteristics of the field of study; constraints and characteristics of the field of study and characteristics of students. Learning strategy variables are classified into three, namely: organizational strategy; delivery strategy and management strategy. Learning outcomes variables can be classified into three, namely: Effectiveness; Efficiency; and Attractiveness. In the implementation of learning, there are several variables, both technical and non-technical variables which are influential in the success of the learning process. Some of these variables are: The ability of teachers in opening lessons; the ability of teachers in carrying out core learning activities; the ability of teachers to assess the learning; the ability of teachers to close learning and other supporting factors.

Key words: Contemporary Learning Strategy

INTRODUCTION

The implementation of the quality improvement of education in Indonesia is carried out continuously to date. Various efforts have been engaged by the government in attempts to improve the quality of education ranging from the construction of school buildings / madrasah, the provision of educational infrastructure, the appointment of educational staff until the ratification of the national education system legislation and the law of teachers and lecturers. But until now all these efforts have not shown encouraging results. One of the efforts to improve the quality of education currently being conducted by the government is to improve the quality of teachers and lecturers through the certification program. Through this program the teachers and lecturers are expected to actually have the

professional ability that requires skill, proficiency or skills that meet certain quality standards or norms.

One of the major professional skills and expertise that educators need to have is the ability of the education and teacher fields, especially in relation to learning strategies. A teacher and lecturer not only required to master the field of study that will be taught only, but also must master and be able to teach the knowledge and skills to learners. As it is known that most of the teachers of primary and secondary education in Indonesia have not met the educational standards as required by regulation that is minimum educated S1 teacher (S1 non teacher training + teaching certificate). At the higher education level, lecturers of non-educational universities have almost never followed formal teacher training so that their knowledge and learning skills are based solely on experience solely, less supported by learning theories.

Teachers as an important component of education personnel, have the task to carry out the learning process. In the implementation of learning teachers are expected to understand about the understanding of learning strategies. Understanding learning strategies can be studied from two words that make up, namely strategy and learning. The word strategy means the way and the art of using resources to achieve certain goals. In learning is used learning strategy with the use of various resources (teacher and media) to reach the purpose of learning.

Learning means the effort to make students learn [1]. Pupuh Fathurrohman [2] defines it as a general pattern of teacher-student activities in the realization of teaching and learning activities to achieve the goals outlined or a number of steps are engineered in such a way as to achieve certain teaching objectives. Thus, learning strategies mean ways and art to use all learning resources in an effort to teach students. As a way, learning strategies are developed with certain rules so as to form a separate field of knowledge. As a field of knowledge, learning strategies can be learned and then applied in learning activities. While as an art, learning strategies are sometimes implicitly owned by a person without ever learning formally about the science of learning strategies. For example many teachers / teachers (especially at the college level) do not have a scientific background on learning strategies, but are able to teach well and students are taught to feel happy and motivated. Conversely, there are teachers who have completed formal teacher training and have a long teaching experience that is not good. Why is that? Of course it can be explained in The aspect of art. As an art, a person's teaching ability is acquired without having to learn the skill of formal ways of teaching.

Why is it necessary to use a strategy in learning activities?

The use of strategies in learning activities is necessary because to facilitate the learning process so as to achieve optimal results. Without a clear strategy, the learning process will not be directed so that the learning objectives that have been set difficult to achieve optimally, in other words learning cannot take place effectively and efficiently. Learning strategy is very useful, both for teachers and students.

For the teacher, the strategy can be a systematic guide and reference in the implementation of learning. For students as users of learning strategies, can facilitate the process of learning or assist and accelerate the comprehending of the contents of learning, because

each learning strategy is designed to facilitate the learning process of students.

The correlation of learning strategies for teachers and students can improve student learning outcomes, as in the following figure:

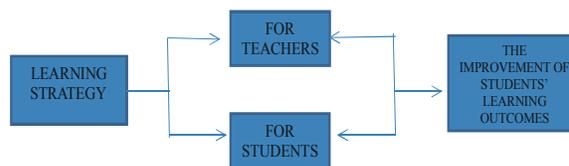


Fig. 1: The Correlation of Learning Strategy-teacher-student-learning outcomes

DISCUSSION

Taxonomy of Learning Variables: Before we discuss the efforts in understanding the learning strategy, we need to understand the learning variables. According to Reigeluth and Merrill in [1] learning variables can be classified into three parts, namely (1) learning conditions (conditions); (2) learning strategies; (3) learning outcomes.

The correlation of Learning Variables can be seen as in the following figure:

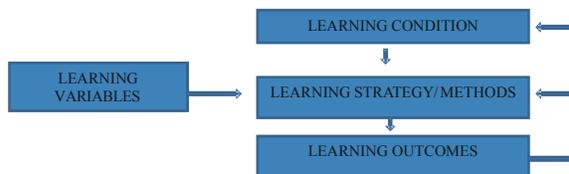


Fig. 2: Learning Variables

Learning Conditions: Learning conditions are factors that influence learning strategies in improving learning outcomes. According to Reigeluth and Merrill in [1], the learning condition variables are grouped into three, namely (a) the purpose and characteristics of the field of study; (b) constraints and characteristics of the field of study; (c) student characteristics.

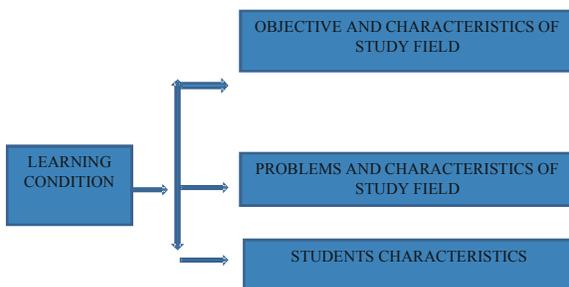


Fig. 3: Learning Conditions

- The learning objectives are statements about the expected learning outcomes. Learning objectives are of a general nature and some are of a special nature.
- Characteristics of the field of study are aspects that can provide a useful foundation in describing learning strategy. Constraints related to the limitations of resources, such as time, media, personnel and funds.
- Characteristics of students related to the students' individual qualities, such as talent, motivation, learning styles, prior knowledge they already had and so on.

Learning Strategy: Learning strategies are different ways to achieve different learning outcomes under different conditions [3, 1]. Learning strategy variables are classified into three, they are:

- Organizational strategy;
- Delivery strategy and
- Management strategy.

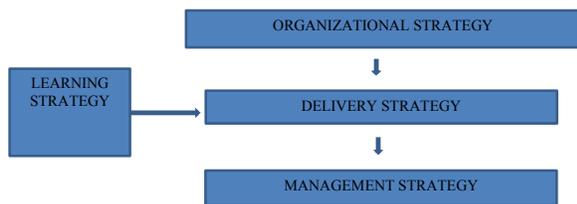


Fig. 4: Learning Strategy

- Organizing strategy is a way to organize the content of a field of study and this activity is related to content selection, content arrangement, diagramming, formatting and the like.
- Strategy of delivery is a way to convey learning to students and / or to receive and respond to input from students.
- A management strategy is a way to coordinate interactions between students and other learning strategy variables (organizational strategy variables and delivery strategies). The learning management strategy deals with the selection of organizing strategies and delivery strategies used during the learning process. Learning management strategies relate to scheduling, making progress learning notes and motivation.

Learning Outcomes: Learning outcomes are all effects that can be used as an indicator of the value of the use of learning strategies under different conditions [1]. Learning result variable can be classified into three, they are:

- Effectiveness;
- Efficiency and
- Attractiveness.

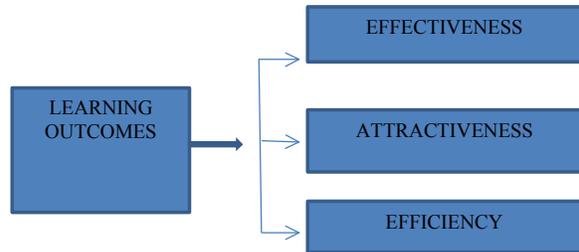


Fig. 5: Learning Outcomes

- The effectiveness of learning, measured from the level of student achievement and there are four indicators to describe it, namely (1) the accuracy of mastery of learned behaviors; (2) speed of performance; (3) the level of learning transfer and (4) the retention rate.
- Learning efficiency, measured by comparison between the effectiveness and the amount of time students spend and / or the amount of costs used in the lesson.
- The attractiveness of learning, measured by observing students' inclination to stay or continue learning.

In summary, the taxonomy of learning variables can be described as follows:

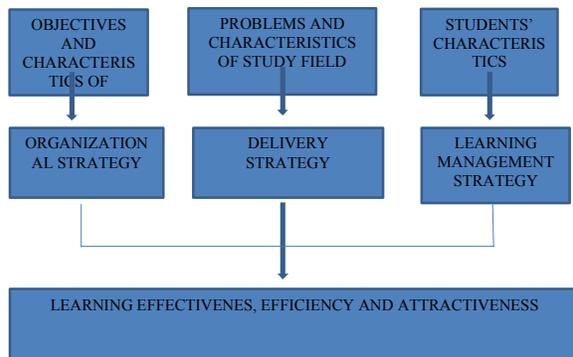


Fig. 6: Taxonomy of learning variables [1]

Based on the preceding picture it appears that the learning strategy is influenced by the condition of learning. Learning organizational strategy is more influenced by the learning objectives and characteristics of the field of study. Learning delivery strategy is more influenced by the constraints and characteristics of the field of study. Learning management strategies are more influenced by the characteristics of students. This means

that what learning strategy will be applied must be adjusted to the existing conditions. It also shows that none of the learning strategies are appropriate or suitable for all fields of study or students.

Organizing Strategy of Learning: Organizing strategy is a way to sequence and synthesize facts, concepts, procedures and principles related to a content of learning. Sequencing is related to the way in which the presentation of the content of a field of study is presented and synthesizing is related to the way to show students the relationship between the facts, concepts, procedures, or principles of a learning content.

Synthesizing is aimed to make topics in a field of study more meaningful for students. This is done by showing the related topics related to the whole content of the field of study. The existence of such significance will cause students to have better and longer retention of the topics studied [1].

Order sorting is very important, because it is very necessary in making the synthesis. Effective synthesis can only be created when content has been laid out in a certain way and more importantly, because essentially all the content of the field of study has a prerequisite of learning [1]. Learning organizing strategies can be selected into two, namely micro strategy and macro strategy [3]. The macro organizing strategy is a strategy for managing the overall order of the subject content (more than one idea), while the micro strategy is a strategy for organizing the order of serving for a single idea (concept, principle, etc.).

A number of theories dealing with micro strategies include the sequence ordering theory based on the learning prerequisites of Gagne [4], the concept-forming model of Taba and the mastery of the concept of Brunner. For macro strategies, the integration of a number of theories, such as the learning hierarchy of Gagne, the schema theory of Mayer, the subsumative sequence of Ausubel, Webteaching of Norman and the elaboration theory of Reigeluth.

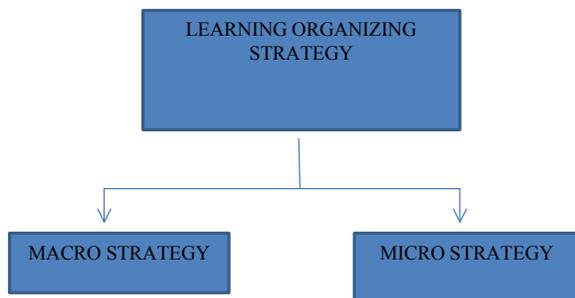


Fig. 7: Organizing Strategy of Learning

Learning Delivery Strategy: The delivery strategy emphasizes what mediums are used to convey the learning, what learning activities the students are doing and the teaching and learning structure of how they are used. A delivery strategy is the means by which students communicate learning and simultaneously to receive and respond to student input. Thus, this strategy can also be called as a strategy to implement the learning process.

Gagne and Briggs [5] call this strategy a delivery system, defined as "the total of all components necessary to make an instructional system operate as intended". Basically the delivery strategy includes the physical environment, teachers, learning materials and activities related to learning. In this case the learning media is an important component of the delivery strategy of learning. That is why, learning media is the main field of study of this strategy [1].

According to Degeng [1] completely there are three components that need to be considered in describing delivery strategy, as follows:

- Learning media is a component of delivery strategy that can be inserted with messages to be delivered to students, whether in the form of people, tools, or materials;
- The interaction of students with the media is a component of learning delivery strategy that refers to what activities are performed by students and how the role of media in stimulating learning activities.
- The form (structure) of teaching and learning is a component of learning delivery strategy that refers to whether students learn in large groups, small groups, individuals, or self-learning.

Learning Media: According to Martin and Briggs [6], the media are all the necessary resources to communicate with students. Media can be hardware such as computers, televisions, projectors and software used on such hardware.

Leshin, Pollock & Reigeluth [7] classified the media into five groups: (1) human-based media (instructor, instructor, tutor, role play, field trip), (2) printed media (books, (3) visual-based media (books, charts, graphics, maps, images, transparencies, slides); (4) visual-based audio media (video, film, tape slide program and television); (5) computer-based media (computer-assisted teaching, interactive video, hypertext).

According to Degeng [1] there are five ways to classify instructional media for the purposes of describing a delivery strategy, namely (1) the degree of accuracy of representation; (2) the interactive level generated; (3) the

level of special ability possessed; (4) the level of motivation that can be generated and (5) the level of cost required.

Students Interaction with Media: In the learning process, the media used by teachers must be in accordance with the learning objectives that have been set so as to stimulate and foster student interest in learning. Thus, there will be interaction between learning media and students in learning. The existence of a positive interaction between learning media and students will ultimately be able to accelerate the process of student understanding of the content of learning. That is why this component is more concerned about the study of what learning activities do students and how the role of media to stimulate learning activities [1].

Forms of Teaching and Learning: Learning can be done in various forms and ways. As Gagne [4] points out that effective learning must be done in various ways and using a variety of learning media. In learning activities, teachers must have tips and art to combine between the form of learning and media used so as to create a harmonious learning process. The following figure shows the interaction between media, learning activities and forms of teaching [1].

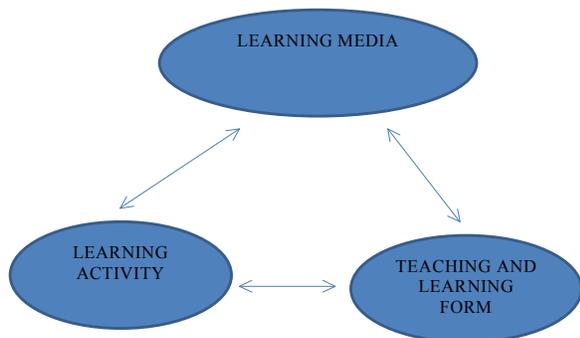


Fig. 8: Media interaction of learning activities and forms of teaching and learning [1]

Learning Management Strategy: Learning management strategies are very important in the overall learning strategy system. However good planning strategy and organizing strategy delivery of learning, but if the management strategy is not considered, then the effectiveness of learning is not maximal bias. Basically the strategy of learning management related to the effort of structuring interaction between students with the components of related learning strategies, both in the form of organizing strategies and learning delivery strategies.

Management strategy is concerned with determining when a strategy or strategy component is appropriately used in a learning situation [1]. According to Degeng [1] there are at least four matters that become the management strategy, namely:

- Scheduling the use of learning strategies;
- Recording of student learning progress;
- Motivational management and
- Learning control.

The four things can be described as follows:

Scheduling the Application of Learning Strategies: In every act of learning, a teacher must be able to make a reasonable calculation of what learning strategy will be used in a learning activity. In a learning activity of a teacher is unlikely to use a single strategy, but must be able to formulate a variety of strategies so as to be the right one to improve student learning outcomes. Therefore, a teacher is required to be able to think about when, what strategies and how many times a learning strategy is used in a lesson. To determine what strategies, when and how many times a strategy is used is certainly closely related to the existing learning conditions.

Consider that learning strategy is strongly influenced by learning condition, (1) purpose and characteristics of field of study; (2) constraints and characteristics of the field of study and (3) characteristics of students. Use these three learning condition variables to design the schedule of the learning strategies application.

Preparing the Students' Progress Records: In teaching a teacher must know how far the content of learning that has been taught can be achieved by students. Because it is an obligation, the teacher needs to conduct evaluation / test result of learning to student, in order to know the level of student learning progress. However, the problem is when, how many times and how do I perform the test results? This should be considered by a teacher. In this case the knowledge of teachers about the science of learning evaluation will be very helpful to answer the question: when, how many times and how to do the test results of learning?

The student progress record is very important for the teacher, because it can be used to see the effectiveness and the learning eve, the teacher will be able to determine the next steps, such as (1) whether the learning strategy used is appropriate; (2) whether the low student learning outcomes are caused by teachers or students factors; (3) whether scheduling the use of learning strategy is appropriate or inappropriate and so forth.

These factors are the reasons why making a record of student learning progress is very important.

Motivational Management: Motivational management is related to efforts to improve students' motivation in learning activities. If student learning motivation is low, any strategy that will be used in learning will not be able to improve student learning outcomes. Therefore, motivational management becomes an integral and essential part in every learning process. Each learning strategy has essentially implicitly contained a motivational component, albeit in different ways. However, there are also some learning strategies specifically designed to improve students' learning motivation.

According to Degeng [1] the role of delivery strategy to improve learning motivation is much more real than organizing strategy. This means the art and way of scheduling the use of delivery strategies can affect students' learning motivation. Given this, a teacher should be able to develop specific tips for scheduling the use of a delivery strategy.

Learning Control: The learning controls are related to the freedom of the students to make choices in the content area being studied, the speed of learning, the components of instructional strategies employed and the cognitive strategies employed [1]. In order for students in learning activities to make those choices, then a teacher should be able to design learning activities that are able to provide various alternative learning options for students. If the teacher is able to design such learning then the learning system that is individual will be done. With such a learning system, the teacher is more of a role as an instructional designer than just as a deliverer of the content of learning.

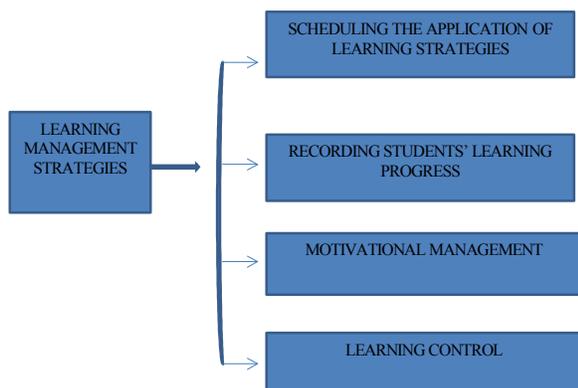


Fig. 9: Learning Management Strategies

Implementation of Learning Strategy: Although theoretically a teacher has theoretically understood the operational steps of a learning strategy, a teacher will not certainly be able to successfully implement the strategy in the implementation of learning in the classroom. The success of teachers to apply a learning strategy depends on the ability of teachers to analyze existing learning conditions, such as learning objectives, characteristics of students, learning resource constraints and characteristics of the field of study. The results of the analysis of the learning conditions can be used as a foundation in determining the learning strategy that will be used.

Learning Objectives: In the learning process, teachers must first establish the learning objectives to be achieved. According to Bloom's taxonomy in [8], theoretically the learning objectives are divided into three categories, namely (1) the objectives of learning the cognitive domain / cognitive competence; (2) the purpose of affective learning / affective competence; and (3) learning objectives of the psychomotor domain / psychomotor competence. Meanwhile Hall and Jones in (Kosasih, 2016) distinguish competence into five aspects, namely (1) cognitive competence, which includes knowledge, understanding and attention; (2) Affective competence, which includes values, attitudes, interests and appreciation; (3) appearance competence, which includes demonstration of physical or psychomotor skills; (4) Product competencies, including skills for change; (5) Explorative or expressive competence, which concerns the provision of experience of value in life.

The existence of differences in learning objectives will also have implications for the different learning strategies that must be applied. Thus, in the application of a learning strategy cannot ignore the learning objectives to be achieved.

Characteristics of Students: Characteristics of students relate to aspects inherent in students, such as motivation, talent, interest, initial ability, learning style, personality and so forth.

Characteristics of students who are very complex must also be used as a foundation in determining the learning strategy that will be used. Without considering the characteristics of these students, then the application of certain learning strategies cannot achieve maximum learning results. For example, students who have low learning motivation with students who have high learning

motivation would require different strategies in learning. Similarly, students who have visual learning styles and students who have a kinesthetic learning style are certainly not biased in the process of applying the learning strategy. Therefore, a teacher should truly understand the characteristics of students who take the learning process.

Problem of Learning source / Media: Learning media is an intermediary or messenger from sender to message recipient [9]. Gearlach & Ely in (Pupuh Faturrohman, [2]) said that the media when understood in general is human, material or events that build a condition that makes students able to acquire knowledge, skill or attitude. Atwi Suparman [10] defines the media is a tool used to deliver messages or information from the sender to the recipient of the message. Gagne [4] states that media are various types of components in the students' environment which can stimulate them to learn. While AECT [11] states the media as the form and channel that people use to channel messages or information. The availability of learning resources / media, both human and non-human (hardware and software), greatly affects the learning process.

Some research results conclude that the availability of learning resources greatly affect students' learning outcomes. In the application of learning strategies, each learning strategy is used for the material or content of a particular learning and it also requires a particular media / learning resources. Submission of learning in a large class requires the use of different media types of small classes. Likewise for individual learning and self-study, without adequate learning resources it is very difficult for a teacher to implement the learning process.

Given the importance of the existence of learning resources, then every teacher should have the ability to develop learning resources / learning media.

For the development of instructional media, certain procedures are needed in accordance with the type of ability to be achieved, the content structure of the field of study and meet the general criteria applicable to the development of learning products. In order to make this media product used model of learning media development proposed by Sadiman [9] as the following picture:

Needs analysis is necessary to be carried out that the developed media will extremely be appropriate as required. If creating a media program, of course hope that the media is only used in learning activities. The media program is only used if it is needed / required students. Therefore, the first step in media development is to perform needs analysis. The formulation of goals is something that is

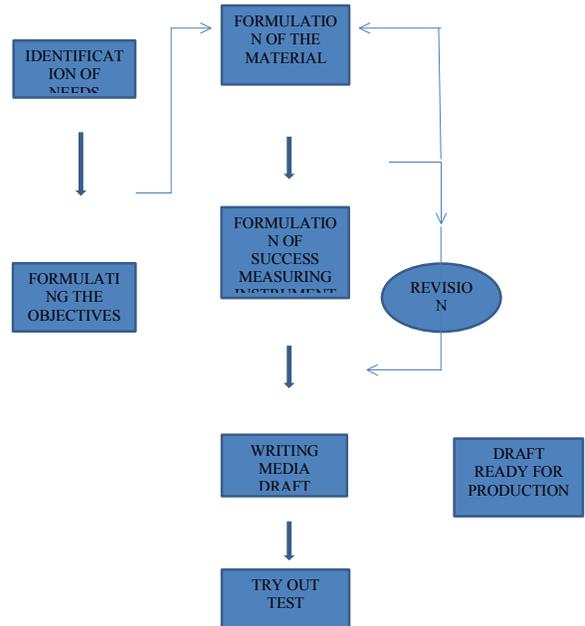


Fig. 10: Model of Learning Media Development [9]

very important in learning. Objectives can give direction to the learning process undertaken and the purpose of learning can be used as a reference in measuring whether our actions are right or wrong. In the development of instructional media, objectives should be made a foothold in the development process. The media developed must be in accordance with the learning objectives that have been formulated.

From the intended purpose, the next activity is to develop / formulate the items of learning materials. The learning materials should be related to the objectives and once the material is formulated newly created tools to measure the success of learning. The next stage is to develop or do the writing of learning media. To see the validity of instructional media should be tested. If in the test phase it turns out that the media that has been developed there are still shortcomings that must be revised. If the learning media is considered good, media production process must be done.

Characteristics / Structure of Study Field: The structure of the field of study is related to the relationships between the parts of a field of study. The structure of the subject area of mathematics course is different from the structure of the field of study of history. Differences in the structure of the field of study require different learning strategies. For example in a history course a teacher can start learning from any subject, otherwise mathematics

courses cannot be done like that. That is why, a teacher's understanding of the structure of the field of study he taught is very important in determining the method of learning that will be used.

Factors Supporting the Learning Success: In the implementation of learning, many variables affect the success of a teacher. Mastery and skills of teachers in the mastery of learning materials and learning strategies are not a guarantee to be able to improve student learning outcomes optimally. In general there are several variables, both technical and non-technical influential in the success of the learning process.

Some of these variables, among others:

- The ability of teachers in opening the lessons;
- The ability of teachers in carrying out the core learning activities;
- The ability of teachers in assessing the learning;
- The ability of teachers in closing the learning and
- Other supporting factors.

The Ability of Teachers in Opening Learning: At the beginning of the learning process and once a teacher enters the classroom, it is appropriate that a teacher should greet all the students in the classroom and pray with the students. Do not let a teacher go to class immediately start learning without saying hello and praying with the students. Similarly after greeting and praying, the teacher should check the attendance of the students. After the activity is completed, then a teacher starts learning.

In every beginning of the learning the teacher should explain the goals / competencies to be achieved and the benefits to the student's life. At this stage should also be able to link the contents of learning that will be discussed with previous learning that has been studied students. The process of linking and connecting the student's prior knowledge with the content of the lesson to be discussed is helpful in improving students' learning motivation.

Teachers' Ability in Conducting the Learning Core Activity: The core activities of learning are the most influential activities in improving student learning outcomes. How good or poor the teachers' skills in core activities will indicate the good or poor of student learning outcomes. Several factors related to the core activities of learning, among others:

- Teachers' ability to apply learning strategies;
- The accuracy of the content / learning materials submitted by teachers and
- The ability of teachers to master the competencies taught.

Another thing to consider in developing these materials, according to Nana Syaodih Sukmadinata [12] is the pattern or arrangement. There are several patterns of development of subject matter that can be selected by teachers, namely: (1) chronological pattern, the composition of learning materials containing the time sequence; (2) the causal pattern, the composition of learning materials containing causality; (3) logical patterns, the composition of learning materials starting from the simple to the complex; (4) psychological patterns, the composition of learning materials that start from the public into more specific parts; (5) spiral patterns, arrangement of learning materials centered on a particular topic or material that is popular and simple, then developed, deepened and expanded with more complex material; (B) preparation of hypotheses, (c) data collection, (d) testing, (b) preparation of hypotheses, (c) data collection, (d) testing hypotheses and (e) formulation of conclusions.

In order to know the ability of teachers in applying learning strategies, then the following questions can be used as indicators of teacher success levels in the core stage.

- Is the learning strategy used by the teacher is able to stimulate and encourage the active students to experience and implement the learning activities in accordance with the competence to be achieved?
- Does the strategy used by teachers encourage and engage students to work with other students?
- Is the strategy used by teachers to encourage students to explore and expand students' understanding?
- Are teachers able to use appropriate learning resources with defined competencies?
- Is the strategy used by the teacher to create a pleasant learning environment?

In addition, the accuracy of the content / learning materials presented by the teacher also became one of the benchmarks of the success of learning. In order to know this then the following questions can be used as an indicator of the level of accuracy of content / learning materials.

- What is the content of the learning presented in accordance with the basic competencies and indicators in the curriculum?
- Is the theoretical and empirical content of the learning presented accurately or correctly?
- Is the learning content elaborated and developed from the basic competencies and indicators in the curriculum adequately?

Similarly, to know the ability of mastering the competence of teachers, the following questions can be used as an indicator of the level of control of competence.

- Do teachers have mastered and can demonstrate competencies that should be mastered by students through examples or modeling?
- Are teachers able to provide explicit and clear models of learning behaviors in accordance with their competencies?
- Are teachers able to respond to student questions and comments appropriately and adequately?

Teachers' Ability to Conduct Learning Assessment: To find out whether the students have mastered the competencies that have been established then a teacher is required to be able to conduct an assessment. In order to know the ability of teachers to conduct learning assessment, the following questions can be used as an indicator of its assessment.

- Does the teacher encourage students to express and deduce what they have learned?
- Does the teacher make judgments with tools that are compatible with clearly defined competencies and performance?
- Does the teacher give students an opportunity to conduct self-assessment and / or peer assessment?
- Do teachers use assessment authentic in the learning process?

With the assessment of the learning process, then students will know the ability clearly so that students can improve and improve the quality of learning. Similarly with assessment activities, it is very important for a teacher because of the results of a teacher's evaluation can find out how far the objectives have been achieved. In addition, with the evaluation of a teacher will be able to understand the weaknesses of learning strategies that have been done. Thus, evaluation is also one of the techniques to improve the learning program.

Teachers' Ability to Close the Lesson: Closing the lesson skill is very important for a teacher. At the end of the lesson the teacher often closes the lesson simply by stating that the lesson is over. Closing the learning process is not just a statement that the lesson is over. To know the ability of teachers in the process of closing learning, the following questions can be used as an indicator assessment.

- Does the teacher provide feedback and / or conclusions on the material being taught?
- In giving feedback and / or conclusions, have teachers linked the content of learning to the issues and technologies developed in the community?
- Does the teacher give the task to do at home?
- In giving a task whether the teacher has developed new problems for the development of a concept that has been mastered students?
- Does the teacher strengthen the learning achievement of the students?

Supporting Factors: In addition to the variables as described above, there are still several factors that influence teachers' ability to apply a learning strategy. The factors are as follows:

- The ability of teachers to use language clearly and easily understood by the students;
- Good attitude, courteous and respectful of students;
- The ability to organize time in accordance with the allocations provided;
- The way to dress and dress up is polite in accordance with prevailing norms.

CONCLUSIONS

Learning strategy means ways and art to use all learning resources in an effort to teach students. As a way, learning strategies are developed with certain rules so as to form a separate field of knowledge.

Learning variables can be classified into three, namely:

- Learning conditions (conditions);
- Learning strategies and
- Outcomes of learning.

The learning condition variables are grouped into three:

- Purpose and characteristics of field of study;
- Obstacles and characteristics of the field of study and
- Characteristics of students.

Learning strategy variables are classified into three:

- Organizational strategy;
- Delivery strategy and
- Management strategy.

Learning result variable can be classified into three:

- Effectiveness;
- Efficiency; and
- Attractiveness.

There are several variables in the implementation of teaching and learning, both technical and non-technical are influential in the success of the learning process. Some of these variables are:

- The ability of teachers to open lessons;
- The ability of teachers in carrying out core learning activities;
- The ability of teachers to assess the learning;
- The ability of teachers to close learning and
- Other supporting factors.

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