

Buku 2

by Jurnal Santiaji Pendidikan JSP

Submission date: 10-Apr-2024 08:26AM (UTC+0700)
Submission ID: 2345123473
File name: BUKU_BEST_Learning_Model.pdf (399.25K)
Word count: 12256
Character count: 67473

BEST LEARNING MODEL

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Unmas Press

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ISBN : 978-623-5839-19-6

Size : 15.5 cm x 23 cm; v + 63 pages

Editor :

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Layout & Cover Designer:

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Publisher: Unmas Press

First Printed: March 2022

FOREWORD

The author expresses gratitude to God Almighty, because of the abundance grace and the cooperation of various parties, this book has finally been completed. This book is the result of an in-depth analysis of the current conditions regarding the implementation of the current learning practices. The author would like to thank all those who have helped in the writing of this book and who have provided ideas and encouragement to complete this book. In addition, the authors would also like to thank other contributors whose works might be used in this book and also all the authors of websites and blogs whose works have been used as additional material in the writing of this book. Behind the various shortcomings, the author hopes that this book will contribute and be useful for readers. The author realizes that this book is still far from perfect. Therefore, with all humbleness, the author hopes for constructive suggestions for the perfection of this book.

Denpasar, 15 March 2022
Authors

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CHAPTER ONE

THE NATURE OF LEARNING MODEL

The cutting-edge instruction framework, students are expected to have a better level of independence and independence and be able to appear activity and imagination within the learning prepare. A productive advancement of information interior and exterior the school is only possible in case students have the abilities to start, direct, and control the look for data and after that carry out the processing and capacity of that data. Students must continuously have the opportunity to move forward their competence so that they can create in a maintainable way. So that within the conclusion they have satisfactory competence and abilities for their future careers.

Students must be acclimated to creating their higher arrange considering abilities so that they are able to form something valuable. This habituation handle can be done by applying a learning demonstrate that permits them to create and be dynamic to be creative in their learning handle. This is often necessary because the routine learning handle is now not able to meet wants of students for the knowledge and abilities, they must have to be face the challenges of the times. It takes difficult endeavours of teachers to form a

conducive learning climate and a fun environment and challenge students to be inventive. In expansion, with the proper learning performance, students will be able to think fundamentally.

Inventive teachers will continuously make thoughts in planning unused learning frameworks that are able to create students able to attain their learning objectives with full fulfilment. Subsequently, teachers, counting instructors, ought to be able to plan and execute learning forms agreeing to wants and identities of distinctive students. The learning demonstrates utilized is anticipated to extend their learning motivation and imagination. Hence, learning models that are spurring students so that they continuously progress their competence truly got to be created. Other than that, the learning demonstrate must be able to prepare students to move forward 21st abilities which is exceptionally fundamental at this time. Given that it has caused a decline in students' inventiveness and considering capacities and a decrease in students' imaginative control. To expect this wonder, instructors got to utilize learning models that are able to reply these challenges

A learning was created pointing to bargain with different difficulties that happened so that by applying this outlined learning show afterward instructors, instructors and

teachers will be able to utilize it as an compelling learning show to move forward basic considering and inventiveness. their students. This learning show can be utilized offline and online or a combination of the two learning strategies. This demonstrate cannot as it were be utilized in dialect courses/learning but can too be utilized in all subjects. This learning show cannot as it were be utilized in Indonesia but can too be utilized in different instructive and preparing educate overseas since this learning show cultivates understudy freedom to create through the exchange of learning stages and is easily adapted in various learning strategies.

There's a part of investigate on learning models, but most of these ponders centre on looking at existing models or learning models that have been created decades back. Subsequently, it is time to create a learning show that's more in line with the improvement of the millennial era. The learning truly must be developed so that students have the opportunity to memorize at a better level and are able to exchange what they have learned within the frame of beneficial learning results.

In quintessence, the instructing show may be a conceptual system that underpins teachers/teachers in supporting the victory of students/students in their

considers. The learning show was created based on the philosophical and mental introduction of the learning process¹⁰. The learning demonstrate is created so that the learning handle gives unused information and changes in understudy behaviour. Each learning demonstrate advances a directions impact, to be specific expanding understudy competence in various forms of information and abilities for distant better; a much better; a higher; a stronger; an improved" a stronger life. The learning demonstrates utilized ought to be helpful and able to persuade students to memorize.

All models are characterized by: (a) learning steps, (b) prescribed lesson structure, c) learning usage, and (d) teacher and student parts. The learning show is anticipated to allude to the scope of teacher-cantered or student-cantered learning. The part of the teacher within the classroom must moreover be clear and the level of obligation of the anticipated student must too be clear so that the learning handle will take put well. In spite of the fact that the learning demonstrate has been well planned, there are continuously shortcomings within the learning model. In this case, the teacher's part is to create learning by making advancements or adjustments to the learning show to suit course conditions. There's no viable show for each student; teachers require an assortment of

learning models. Learning models are as it were instruments that 'help instructors to educate more viably, since their educating is more precise and effective.

The learning demonstrate could be an effective apparatus for learning that obliges all contrasts between students due to contrasts in sex, race or ethnicity, and financial status. In spite of the fact that the teacher cannot control learning, the learning model is able to supply a structure that produces changes so that students can learn certain things. Unequivocal learning models can quicken student ponders, lead to expanded measures of scholastic accomplishment and increment student capacity in learning.

By utilizing the students' learning performance, teachers can be instructed how to memorize. Learning how to memorize can alter students to be able to memorize freely. The learning show basically bolsters teachers to instruct more clearly and is able to create learning encounters to realize superior learning results. Learning models can lead to progressing the quality of instructing since the learning show prioritizes the use of solid useful plans, clear question recognizable proof, and bolsters choosing a more compelling learning framework. Employing a learning show bolsters teachers to lock in students by way better serving students' needs and being more suited to their way of learning.

When teachers make express utilize of the demonstrate unequivocally, they can be more compelling in educating students. The utilize of learning models bolsters students: (a) expanding their fitness for learning, (b) holding data longer, c) building their scholastic certainty, and (d) examining quicker. The learning demonstrate guarantees to extend students' accomplishment. The utilize of learning models appropriately and routinely: (a) encourage the capability of students to memorize, (b) suit person contrasts of students, and c) construct a learning community. Learning models that are able to make strides students' considering abilities and imagination are required.

CHAPTER TWO

CRITICAL THINKING

Thinking is generally defined as a mental process that can produce knowledge. ³ Thinking is an activity of the mind to process knowledge that has been obtained through the senses and is aimed at achieving the truth. Thinking as any mental activity that helps formulate or solve problems, make decisions, or fulfill the desire to understand; thinking is a search for answers, an attainment of meaning.

¹⁴ The definition of thinking is still debated among education experts. Among them there are still different views. Although their interpretations are different, in general, ¹⁴ thinkers agree that thinking can be related to the process of making decisions and solving problems. Thinking is the process of using the mind to find ¹⁴ meaning and understanding of something, explore various possible ideas or creations and make reasonable considerations, to make decisions and solve problems and so on to make reflection and metacognition of the process experienced. Thinking is an activity that focuses on exploring ideas, providing various possibilities and looking for more correct answers.

In the context of learning, the development of thinking skills is aimed at several things, including (1) getting training

to think critically and creatively to make decisions and solve problems wisely, for example flexible, reflective, curious, able to take risks, not despair, willing cooperate and others, (2) apply knowledge, experience and thinking skills in a more practical way both inside and outside school, (3) produce creative and innovative ideas or creations, (4) overcome rushed ways of thinking , blurred and narrow, (5) improving cognitive and affective aspects, and so on their intellectual development, and (6) being open in receiving and giving opinions, making judgments based on reasons and evidence, and daring to give views and criticism. The development of thinking skills includes 4 things, namely (1) the ability to analyze, (2) teach students how to understand statements, (3) follow and create logical arguments, (4) eliminate the wrong path and focus on the right path.

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Critical thinking is reasoned and reflective thinking by emphasizing making decisions about what to believe or do. The following are examples of critical thinking skills, for example (1) comparing and distinguishing, (2) making categories, (2) examining small parts and the whole, (3) explaining causes, (4) making sequences, (5) determine reliable sources, and (6) make predictions.

Critical thinking has 4 characteristics, namely (1) aiming to achieve a critical assessment of what we will receive or

what we will do with logical reasons, (2) using assessment standards as a result of critical thinking and making decisions, (3) apply various structured strategies and provide reasons for determining and applying standards, (4) seek and collect reliable information to be used as evidence that can support an assessment. Critical thinking skills are the ability to (1) determine the credibility of a source, (2) distinguish between relevant from irrelevant, (3) distinguish facts from judgments, (4) identify and evaluate unspoken assumptions, (5) identify the existing bias, (6) identify the point of view, and (7) evaluate the evidence offered to support the confession

Critical thinking characteristics, namely (1) using evidence well and balanced, (2) organizing thoughts and express them briefly and coherently, (3) distinguish between logically valid conclusions from flawed conclusions, (4) postpone conclusions to sufficient evidence to support a decision, (5) understand the difference between thinking and reasoning, (6) avoiding the possible consequences of actions, (7) understanding the level of trust, (8) seeing similarities and analogies in depth, (9) being able to learn and do what they want independently, (10) apply problem-solving techniques in various fields, (11) be able to structure problems with formal techniques, such as mathematics, and

use them to solve problems, (12) can break irrelevant opinions and formulate essence, (13) accustomed to asking other people's point of view to understand the assumptions and implications of that point of view, (14) sensitive to the difference between the validity of beliefs and their intensity, (15) avoiding the fact that one's understanding is limited, even to people who do not act inquiry though, and (16) recognizes the possibility of one's opinion being wrong, the possibility of opinion bias, and the dangers of siding with personal opinion.

Critical thinking can be taught through: (1) lectures, (2) laboratories, (3) homework, (4) a number of exercises, (5) papers, and (6) exams. Thus, critical thinking can be included in the curriculum by considering: (1) who teaches, (2) what is taught, (3) when to teach, (4) how to teach, (5) how to evaluate, and (6) conclude

A number of goals in developing critical thinking skills include (1) giving general teachers about concepts in order to achieve goals through helpful instructions, (2) designing learning using the web and useful issues, (3) integrating various teaching outcomes, (4) encouraging community learning in the classroom, (5) creating fun and relevant critical thinking opportunities for students.

The most common definition of thinking is the development of ideas and concepts within a person. The development of these ideas and concepts takes place through the process of establishing relationships between the pieces of information stored in a person in the form of notions. Thinking as a person's mental ability can be divided into several types, including logical, analytical, systematic, critical, and creative thinking. Logical thinking can be interpreted as a student's thinking ability to draw valid conclusions according to logical rules and can prove that the conclusions are valid (valid) in accordance with previous known knowledge.

Analytical thinking is a student's thinking ability to describe, detail, and analyze information used to understand knowledge by using reason and logical thoughts, not based on feelings or guesses. Systematic thinking is students' thinking ability to work on or complete a task in accordance with the right, effective, and efficient sequence, stages, steps, or planning. The three types of thinking are interrelated. Someone to be said to think systematically, then he needs to think analytically to understand the information used.

To be able to think analytically requires the ability to think logically in drawing conclusions about a situation. Critical thinking and creative thinking are the embodiment

of higher order thinking. This is because the ability to think is the highest cognitive competence that students need to master in class. Critical thinking can be seen as students' thinking ability to compare two or more information, for example information received from outside with the information they have. If there are differences or similarities, then he will ask questions or comments with the aim of getting an explanation. Critical thinking is often associated with creative thinking.

The world community faces global problems such as population development, limited resources, changing modes of employment, climate change due to global warming, cultural changes, and dynamic changes in the economy of society. Competition is getting tougher but on the other hand cooperation and flexibility in dealing with work and something is still needed. This condition is a challenge for the world of education as well as the obligation of teachers who directly face future generations. Educators need to be increasingly aware that the message of education is not just conveying material but educating to build critical and creative abilities. Educators need to pass on a culture to be careful, systematic, evaluative, analytical, flexible, and accept different ideas. In order to provide these expectations, especially for mathematics teachers, this paper will discuss

the issues of critical thinking skills, creative thinking skills, and learning that encourages these abilities.

¹⁷ Critical thinking ability is a high-level thinking ability which is included in the 4C (critical thinking, communication, collaboration, creativity) 21st century learning. ¹⁷ 4C ability is an important ability according to ⁶ 21st century learning ability. Critical thinking ability can be developed and stimulated through learning, especially learning that is theme and problem based. Very appropriate if applied to the curriculum used today. Teachers should be oriented to the acquisition of knowledge not to the product of knowledge. So that students are able to think critically, in preparing learning the teacher designs learning that is challenging, interesting and can use various methods and models, one of which is problem solving.

The use of higher order thinking skills at this time is encouraged in learning. This is ¹⁵ based on the results of the PISA research which revealed that learning outcomes in science still revolve around the realm of low-level thinking. So, it can be said that learning outcomes are still product-oriented, not the process of acquiring knowledge. When connected with 21st century learning, conditions are needed that are able to stimulate children's thinking skills so that ¹⁶ higher-order thinking skills can increase. Thinking can be

divided into critical thinking and creative thinking. These two types of abilities are also called higher order thinking skills. Both types of thinking are based on critical decisions or judgment. Critical decisions are the basis of critical thinking and creative thinking. Creative decisions are also the basis of critical thinking and creative thinking. So, it can be said that critical thinking is based on critical decisions and creative decisions. In other words, critical thinking includes critical thinking and decisions. Based on some of the opinions above, thinking is defined as a cognitive process that involves thoughts, about the content, problems, or subjects to acquire knowledge, skills and find solutions to a problem. can think critically.

The progress of human civilization occurs because of the critical thinking ability of humans. It is from this critical thinking that gave birth to modern human culture in the current era of globalization. Ordinary people usually think that critical thinking is finding fault or criticizing others. In this case critical thinking is a high-level thinking ability that should be developed in students through learning. Understanding critical thinking is reflective thinking that focuses on deciding what to believe and do. So, it can be said that the ability to think critically can determine a person's decision in taking what is believed.

Critical thinking ability has a purpose, not only carelessly thinking so that through this goal look for causal reasons that will affect the decision making of these various opinions, the definition of students' critical thinking skills is a cognitive process that involves thoughts, about the content, problems, or subjects to obtain knowledge, skills and find solutions to problems so that they can logically reason information, give right and accurate decisions. It is necessary to study an indicator of how a child can be said to be critical or not. It is through indicators that make the boundary line clear. Many experts who explain the dimensions and indicators of a person can be called critical thinking. Critical thinking skills according to dimensions and indicators that can be measured: (1) basic clarification, namely formulating problems, analyzing arguments, asking and answering questions; (2) the basis for supporting the argument is to assess the credibility of a source of information, make observations and evaluate reports on the results of observations; (3) inference, namely making deductions and assessing deductions, making inductions and evaluating inductions, evaluating; (4) advanced clarification, namely defining and assessing definitions, identifying assumptions; (5) strategies and tactics, namely deciding and implementing actions, interacting with other people.

The development of thinking skills is aimed at several things, including (1) getting training to think critically and creatively to make decisions and solve problems wisely, for example being flexible, reflective, curious, able to take risks, not giving up, willing to cooperate and others; (2) apply knowledge, experience and thinking skills in a more practical way, both inside and outside school; (3) generate creative and innovative ideas or creations; (4) overcoming hasty, vague, and narrow ways of thinking; (5) improve cognitive and affective aspects, and so on their intellectual development; (6) being open in receiving and giving opinions, making considerations based on reasons and evidence, and daring to give views and criticisms. It is often mentioned in the curriculum that developing students' critical thinking skills is a very important final goal.

Often, teachers express about the number of students who 'don't think'. They go to school but their way of learning is limited to listening to the teacher's explanation, then they don't try to understand the material taught by the teacher. During the exam, the students re-expressed the material they had memorized. This way of learning, is not a success, and is a way of learning that we do not want. Regarding grades and exams, it must be admitted that the student can answer questions.

Some of them may get high marks and are considered successful students. Although there has been no concrete research result, that if the students are asked-after the exam is over-whether they still remember the material they have learned, then it is not surprising that they have forgotten what they have learned. The learning process as described above can be found in many schools. The new learning process is carried out to achieve the learning objectives at a low level, namely knowing, understanding, and using, but has not been able to grow the habit of creative thinking, which is the most essential part of the learning dimension.

Most of the learning process still makes students unable to become understand. Learning activities are in the form of activities to increase knowledge, attend activities, listen and record teacher explanations, and answer in writing the questions given during the exam. New learning is implemented at the level of the process of conveying, imparting, and transferring knowledge from teachers to students. Students as human beings created by God are the most perfect in the world because they are given brains, and are shackled by teachers. Students who are clearly gifted with brains should be empowered, facilitated, motivated, and given the opportunity to think, reason, collaborate, to

construct knowledge according to their interests and needs and be given the freedom to learn.

In fact, teachers have realized that learning to think so that children become intelligent, critical, and creative and able to solve problems related to their daily lives is important. This awareness has also underpinned the development of our curriculum which is now more focused on contextual learning. However, it is true that teachers have not done anything, have not seriously designed learning ¹⁸ based on the premise of the learning process. In the learning process the teacher only provides knowledge to students. Students must build their own knowledge by using their brains to think. Teachers can help with this process, by teaching, designing information to be more meaningful and more relevant to student needs. This is done by providing opportunities for students to find or apply ideas themselves, and by inviting them to be aware of and consciously use their own strategies for learning.

The learning process is needed to improve understanding of the material being studied. In the learning process there is the influence of mental development used in thinking or cognitive development and concepts used in learning. ¹² Critical thinking is not the same as accumulating information. A person with a good memory and a lot of facts

is not necessarily a critical thinker. A critical thinker is able to conclude from what he knows, and knows how to use information to solve problems, and look for relevant sources of information for himself.

Critical thinking is not the same as being argumentative or criticizing others. Critical thinking is neutral, objective, unbiased. Although critical thinking can be used to point out mistakes or bad excuses, critical thinking can play an important role in working together to find the right reasons and perform constructive tasks. Critical thinkers are able to introspect about possible biases in the reasons they put forward. So, the critical thinking skills above, it can be said that critical thinking skills are thinking skills that involve cognitive processes and invite students to think reflectively on problems.

Some of the criteria that we can use as standards in this critical thinking process are clarity, accuracy, relevance, logic, and breadth. Thinking honesty, completeness of information and how the implications of the solutions that we put forward. These basics, in principle, need to be developed to train our critical thinking skills. So, critical thinking is how to balance the aspects of thinking that are above into something that is systemic and has a strong scientific basis or value. In addition, we also need to take into

account the natural aspects contained in humans because the results of our thoughts cannot be separated from the things we think about. As in nature, humans are subjects in this life. This means that humans will tend to think for themselves or referred to as egocentric.

In the process of thinking, egocentrism is the main thing that we must avoid. Especially if we are in a team that requires good cooperation. Egocentric will make our thinking becomes closed so it is difficult to get new innovations that can be present. In the end, this egocentric attitude will bring humans into an individualistic community that is not sensitive to the surrounding environment. It's not a solution, it just adds to the problem. The more often we practice critical thinking scientifically, the more we will develop into not only excellent critical thinkers, but also problem solvers in the environment.

Someone who has critical thinking skills has a skeptical attitude, is very open, appreciates honesty, respects various data and opinions, respects clarity and thoroughness, looks for other different views, and will change his attitude when there is an opinion that he considers good.

In critical thinking must have a criterion or benchmark. To get there, you have to find something to decide or believe in. Although an argument can be compiled from several

sources of learning, it will have different criteria. If we are going to apply standardization, it must be based on relevance, accuracy of facts, based on credible sources, thorough, unbiased, free from erroneous logic, consistent logic, and careful consideration.

Analyzing skill is a skill to describe a structure into components in order to know the organization of the structure. In this skill, the main goal is to understand a global concept by describing or detailing the globality into smaller and detailed parts. Analytical questions require the reader to identify ²¹ the logical steps used in the thinking process to arrive at a conclusion. Operational words that indicate analytical thinking skills include: describing, diagramming, identifying, describing, connecting, detailing, and so on.

³ Synthesizing skills are the opposite of analytical skills. Synthesizing skills are the skills to combine parts into a new formation or arrangement. Synthesis questions require the reader to integrate all the information obtained from the reading material, so that they can create new ideas that are not explicitly stated in the reading. This synthesis question provides an opportunity for controlled free thinking.

This skill is a skill that applies concepts to several new meanings. This skill requires the reader to understand the reading critically so that after the reading activity is complete

students are able to capture some of the main thoughts of the reading, so that they are able to pattern a concept. The purpose of this skill is that the reader is able to understand and apply concepts to a new problem or scope.

Conclusion ³ skill is the activity of the human mind based on the knowledge; it can move to reach another new ²¹ understanding. it can be understood that this skill requires the reader to be able to describe and understand various aspects gradually in order to arrive at a new formula, namely a conclusion. The human thought process itself can take two ways, namely: deduction and induction. So, the conclusion is a thought process that empowers knowledge ³ in such a way as to produce a new thought or knowledge.

³ This skill requires careful thinking in determining the value of something with various existing criteria. Judging skills require the reader to give an assessment of the value measured by using certain standards. Evaluating skill is the highest stage of cognitive thinking. At this stage the student demands that he is able to synergize other cognitive aspects in assessing a fact or concept.

CHAPTER THREE

CREATIVE THINKING

Creativity is a process that makes a person more sensitive to various problems, shortcomings, lack of insight, and incongruity, then the difficulties are limited, find solutions, make estimates, develop hypotheses to be tested, and finally provide a result. The type of creativity can be developed into various kinds by starting with small tests. In addition, so far one's goal is to maximize students' memory in obtaining information, teach students to be creative, analytical, and practical based on the advantages of their thinking so as to enable students to dominate their strengths, improve their weaknesses and code material with unique directions.

Creativity is essential for life, work, and functioning effectively in all other aspects of life. Creative thinking refers to the processes to produce a creative product which is a new innovative work obtained from an activity that is directed according to the goal. In other words, creative thinking involves intensive production that meets novelty, so that someone can be said to be creative by producing something that is already known. If you produce something new

according to you, but has been produced by someone else, then you can still be said to be creative.

Creative thinking is a mental activity to make continuous connections, so that the right combination is found or until someone gives up. Creative association occurs through similarities or through analogical thinking. Associations of ideas form new ideas. So, creative thinking ignores established relationships, and creates separate relationships. ¹¹ This understanding shows that creative thinking is a mental activity to find a combination that has not been known before. Creative thinking can also be seen as a process that is used when an individual brings up or brings up a new idea. The new idea is a combination of previous ideas that have never been realized. This understanding focuses more on the individual process to come up with new ideas which are a combination of previous ideas that have not been realized or are still in thought. This understanding of creative thinking is marked by the existence of new ideas that are raised as a result of the thinking process.

Students' creative thinking begins with critical thinking which requires teachers to motivate so as to realize students' creativity when teaching and learning takes place as well as guided by methods and strategies. Teachers are influential in realizing student creativity. Because creativity

can be realized when stimulated to think creatively and begins with students' critical thinking, of course the teacher stimulates students to think critically by using learning methods and strategies. The emergence of creativity only occurs for students who have the motivation, curiosity, and imagination to find answers in solving a problem. Creativity is influenced by the children themselves, teachers or parents and their environment.

²⁰ The ability of creativity is also needed to work in the 21st century. Within the framework of 21st century competencies, it ²⁰ shows that students must have life and career skills, learning and innovation skills (critical and ²⁰ creative), the ability to use information and communicate to meet future challenges, students must meet adequate skills including: (1) basic skills that include reading, writing, arithmetic and mathematics, speaking, and listening. (2) thinking skills which include thinking creatively, making decisions, solving problems, seeing the picture of ideas, knowing how to learn, and reasoning.

If students are still fixated on the level of knowing and understanding the concept of the lesson, it will be difficult to face global competition which not only requires an individual to be smart and intelligent, but also requires ²² creativity. Creative thinking is a thought process that

produces a variety of possible answers. In problem solving when applying creative thinking, it will produce many useful ideas in finding solutions to problems.

Creative thinking is a combination of logical thinking and divergent thinking which is based on intuition but is still conscious. When someone applies creative thinking in a problem-solving practice, divergent thinking generates many useful ideas in solving problems. In creative thinking two parts of the brain will be indispensable. The balance between logic and creativity is very important. If one puts too much logical deduction, creativity will be neglected. Thus, to bring out creativity, freedom of thought is needed, not under control and pressure.

Using open-ended problems can provide students with many sources of experience in interpreting problems, and it is possible that the generation of different solutions is linked to different interpretations. Students can not only become fluent in generating multiple problems from a situation, but they can also develop flexibility by generating multiple solutions to a problem. In this way students can also be developed in generating new solutions.

Creative thinking is thinking consistently and continuously producing something creative as needed. Someone who is creative usually (1) often rejects standard

techniques in solving problems, (2) has a broad interest in problems related and unrelated to himself, (3) is able to view a problem from various perspectives, (4) tends to look at the world. relatively and contextually, not universally or absolutely, (5) usually take a trial-and-error approach in solving problems that provide alternatives, are forward-looking and optimistic in facing change for the sake of progress. To be creative, a person must: (1) work at the edge of competence not in the middle, (2) review ideas, (3) do something because of internal encouragement and not because of external encouragement, (4) divergent/spreading mindset, (5) pattern lateral/imaginative thinking.

The indicators of creative thinking include: (1) Curious, (2) looking for problems, (3) enjoying challenges, (4) optimistic, (5) being able to distinguish judgments, (6) comfortable with imagination, (7) seeing problems as opportunities, (8) seeing problems as interesting, (8) emotionally acceptable problems, (9) challenging assumptions/presumptions, and (10) not giving up easily, try hard. Creativity can be seen from 3 aspects, namely an ability, behavior, and process.

Furthermore, to be able to think creatively, a person needs to have a creative thinking method. Various methods that can be used include: (1) evolution, i.e. new ideas are

rooted from other ideas, new solutions are derived from previous solutions, new things are improved/improved from old things, every problem that has ever been solved can be solved again in a better way, (2) synthesis, namely the existence of two or more existing ideas combined into a new idea, (3) revolution, namely the best new idea is a completely new thing, a changes from things that already existed, (4) re-application, namely looking further into the application of ideas, solutions, or something that has been formulated previously, so that other possible applications can be seen, and (5) changing direction, namely attention to a problem is shifted from one particular point of view to another. It is intended to solve a problem, not to implement a problem solving.

To improve and develop creative thinking skills, a good effort to do by teachers is to improve a conducive learning environment in supporting the development of creativity, namely a learning environment that directly provides opportunities for us. to think openly and flexibly without fear or embarrassment. The learning situation that is formed must facilitate discussion, encourage one to give ideas and opinions.

Brainstorming is a technique that aims to help small groups to produce quality ideas. It is based on the concept

that a good idea should be separated from the evaluation or evaluation of the quality of the idea. Therefore, in brainstorming: (1) there is no criticism of any ideas, (2) ideas must be written without editing, (3) wild, funny, or lackluster ideas are acceptable, (4) all kinds of suggestions and opinions are very important. expected, and (5) contributing based on the opinions of others is acceptable.

In looking at the relationship between creative thinking and critical thinking, there are two views. The first view is that creative thinking is intuitive which is different from critical (analytical) thinking which is based on logic, and the second sees creative thinking as a combination of analytical and intuitive thinking. Intuitive thinking means thinking to get something by using instincts or sudden feelings (insight) without being based on general facts. Creative thinking is a mental activity that pays attention to originality and insight (ideas). Thinking critically and creatively enables students to study problems systematically, meet various ¹⁵ challenges in an organized way, formulate innovative questions and design/design original solutions. Creative thinking as opposed to destructive thinking, involves seeking opportunities to change things for the better.

In essence, the notion of creativity is a person's ability to create something new, both in the form of ideas and real works, in the form of aptitude and non-aptitude characteristics, in new works or in combination with things that already exist, and all of them are relatively different from the existing ones. existed before. Actually, there are many definitions of creativity, for example, there are those who interpret creativity as an effort to do new and amazing activities. On the other hand, there are those who think that creativity is creating surprising new innovations. Creative thinking thrives when it is supported by internal and situational factors. Creative people have diverse temperaments.

One of the assessment instruments that can measure students' creative thinking skills is an *essay* that requires creative answers. This instrument should be equipped with an assessment rubric that is in accordance with the creative thinking component according to the expert. Assessment of creative thinking skills is not fixed with standard standards, but can use various assessment tools that already exist and are then modified as assessment tools for creative thinking. Creative thinking skills can be measured using portfolio assessment, self-assessment, peer assessment, questionnaires, and so on depending on the learning to be carried out.

The thing that forms the basis for creative thinking is a new work or product in response to a learning concept. This makes creative thinking skills included in higher order thinking. This creativity is in the process of producing something new even though the elements existed before as a sign of innovation. Innovation is part of creativity because it adds new elements in producing a product. The product is a manifestation of student creativity, the understanding of the product itself is that the product is one of the dimensions of creativity where the other dimensions are person, process, and press or encouragement. Creativity is at the top level so that the indicators of creativity include low- and high-level cognitive processes. High-level cognitive processes are processes where students do something complex on the material they get. For example: active, applying to a new problem, applying it when creating a new product or critically evaluating it.

Creativity is a combination of talents, processes and environments that interact between individuals and groups to create a product that is good and useful as a determination in a social contact. The process towards creativity makes a person more sensitive to lack of insight, incongruity, difficulty being limited, and sensitive in finding solutions,

interpreting the future, proving conjectures, and finally providing a result.

Problem solving with teacher guidance through product making makes students active in learning activities and spurs creative thinking patterns in solving problems. High-level cognitive processes include: identifying important information, recalling relevant prior knowledge, taking notes, organizing information, developing information intentionally, summarizing and organizing understanding.

CHAPTER FOUR

THE 21ST CENTURY SKILLS

21st century skills are increasingly being discussed in the world of education. Educational institutions are challenged to find ways to enable students to develop successfully according to the times to have creative thinking skills, flexible problem solving, collaboration and innovation. Identification of student competencies that need to be developed is very important to face the 21st century. Traditional approaches that emphasize cognitive development that do not develop critical thinking skills or student independence must be immediately changed and even abandoned. In 21st century learning, every student must engage in inquiry-based learning that is meaningful, has truth value and relevance, to develop the higher order thinking skills they need. In essence, skills in the 21st century that must be developed are communication skills, collaboration, critical thinking and problem solving, and creativity and innovation.

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Communication is the process of language exchange that takes place in the human world. Therefore, communication always involves humans both in intrapersonal, group and mass contexts. Communication researchers prove that until now language is recognized as

the most effective medium in communicating in an interaction between individuals such as counselling and coaching activities, teaching and learning processes, workplace meetings and others.

Communicating means the development of speech and language that has emotional and social content, namely how the communication session can take place reciprocally.

Communication is an activity that is very often carried out by everyone in any scope, wherever, and whenever. Because communication is very important for our lives. Everyone needs communication because of communication everything becomes more understanding.

Communication brings together the communicant with the communicator. Communicants who receive while the communicator who conveys the message. Interacting by means of communication does not have to be with words but can also use gestures such as smiling, winking, waving, and can also use the feelings that are in one's heart. But the communication message will be accepted by the communicant if the communicant understands what the communicator is conveying.

Childhood is the most appropriate age to develop language. Because at this time it is often called the golden age where children are very sensitive to good stimuli related

to physical, motor, intellectual, social, emotional and language aspects. To help children's cognitive development, it is necessary to obtain a learning experience that is designed through observing and listening appropriately. Along with the times, we certainly need to know how to communicate effectively. Because by being able to communicate effectively, of course, we are no less competitive with other countries.

⁶ Effective communication is communication that is able to produce attitude changes in other people that can be seen in the communication process. ¹⁷ The purpose of effective communication is actually to make it easier to understand ¹⁷ the message conveyed between the information provider and ¹⁷ the information recipient so that the language used by the information provider is clearer and more complete, and can be understood and understood well by the recipient of the information, or the communicant. Another goal of Effective Communication is so that the delivery of information and feedback or feedback can be balanced so that there is no monotony. In addition, effective communication can train the use of nonverbal language well.

⁴ In the learning process the teacher must familiarize his students to communicate with each other both about lessons and other things, both with teachers and with

students. The language used by students in communicating will have an impact on the students themselves. The use of bad words in communication has a negative impact. Messages conveyed by students cannot be accepted by the recipient of the message. This will trigger errors in receiving messages that can lead to misunderstandings or conflicts in interacting. In addition, allowing students to use harsh words in communicating can create bad habits for children. The use of good words in communication will have a positive impact on children. The child will feel satisfaction because the desired goal is achieved so that the child's self-confidence will increase.

Collaboration is one of the skill that students have to develop in this era. Students will learn better if they are actively involved in the learning process in small groups. Students who work in small groups tend to learn more about teaching materials and remember them longer than if the teaching materials were presented in other forms, for example in lectures, regardless of the teaching materials. The word 'collaborative' implies working in a group of two or more to achieve a common goal, while respecting each individual's contribution to the whole. Collaborative learning is a learning method that uses social interaction as a means of knowledge building. Furthermore, teachers must trust

students to perform in ways that the teacher has not necessarily determined a head of time, and argues that "collaborative learning therefore implies that teachers must rethink what they have to do to get ready to teach and what they are doing when they are actually teaching.

¹ A learning includes collaborative learning if the group members are not certain or predetermined, can consist of two people, several people or even more than seven people. Furthermore, collaborative ¹ learning can occur at any time, not necessarily at school, for example a group of students helping each other in doing homework, even collaborative learning can take place between students from different classes or from different schools. So, collaborative learning can be informal, that is, it does not have to be carried out in the classroom and learning does not need to be structured strictly.

¹ Collaborative learning is learning that involves students in a learning process. groups to build knowledge and achieve shared learning goals through social interaction under the guidance of educators both inside and outside the classroom, so that meaningful learning occurs and students will appreciate the contributions of all group members.

⁶ Students must be taught to be able to collaborate with others.

Collaborate with people who have different cultural

backgrounds and values. In exploring information and constructing meaning, students need to be encouraged to collaborate with their classmates. In working on a product, students need to be taught how to appreciate their strengths and abilities. s each person and how to take on roles and adapt appropriately to them.

Critical Thinking and Problem Solving is another skill that students must have to be able to encounter all problems they face in their life. Every human being must have the skill to think. Thinking is a natural nature that is carried out at all times in all life activities. Thinking itself is divided into several levels ranging from the simplest which only requires memory, to the highest level and requires reflection. Critical thinking is a directed and clear process that is used in mental activities such as solving problems, making decisions, persuading, analyzing assumptions and conducting scientific research.

Critical thinking is the ability to think in an organized way. Critical thinking is the ability to systematically evaluate the weight of personal opinions and the opinions of others. Critical thinking is essentially an active process in which a person thinks deeply about things, asks questions for himself, finds relevant information for himself rather than accepting things from others.

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The purpose of critical thinking is to achieve deep understanding. the simple critical thinking is to guarantee, as far as possible, that our thinking is valid and correct. With the ability to think critically students will be able to solve the problems they face. One cannot study well without thinking well. Critical thinking is related to career success, but also to success in higher education.

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Creativity and innovation should be nurtured continually to enable students to compete with highly creative world nowadays. Creativity is an idea or human thought that is innovative, efficient and understandable. Creativity is the ability to produce new forms in the arts or in the arts, or in solving problems with new methods. Creativity is an imaginative activity that manifests the ingenuity of the mind that is capable of producing a product or solving a problem in its own way.

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The creative process will only occur if it is raised through problems that spur on five kinds of creative behaviour as follows: 1) Fluency, namely the ability to express ideas -Similar ideas to solve a problem. 2) Flexibility, namely the ability to generate various kinds of ideas to solve a problem outside the usual category. 3) Originality, namely the ability to provide a unique or extraordinary response. 4) Elaboration (details), namely the ability to state the direction

of ideas in detail to make ideas into reality. 5) Sensitivity, namely the sensitivity of capturing and generating problems in response to a situation. Children's creativity can develop well if it is supported by several factors such as the following: 1) Provide mental stimulation good Stimulation is given to the cognitive and personality aspects as well as the child's psychological atmosphere 2) Creating a conducive environment A conducive environment needs to be created to make it easier for children to access whatever they see, hold, hear, and play to develop their creativity. 3) The role of teachers in developing creativity Creative teachers will provide the right stimulation to children so that their students become creative. 4) Parental participation Parents referred to here are parents who give children freedom to carry out activities that can develop creativity. Innovation is an idea, item, event, method that is felt or observed as something new for a person or group of people (society), whether it is the result of invention or discovery. Innovation is held to achieve certain goals or to solve a certain problem.

CHAPTER FIVE

CONCEPTS OF BEST LEARNING MODEL

BEST stands for brainstorming, exploring, sharing, transfer of learning. Brainstorming is a stimulus to generate creative ideas by exploring students' minds so that the cognitive structure or the so-called relevant main knowledge becomes active. Brainstorming is a traditional way to acquire scientific concepts and students' beliefs about science and to study.

Brainstorming provides opportunities in a real, active and effective learning environment by participating in bilateral and collective discussions according to a pattern of thinking that is consistent with their abilities and attitudes. In brainstorming, learning emphasizes the psychomotor domain, because the psychomotor domain includes the affective and cognitive domains. In learning, there are cognitive and affective domains in practical activities, although only slightly. Basically, the application of the brainstorming method can actually stimulate the affective aspect of learning.

As for a good social attitude, of course, it can be seen from the friendly relationship between students in producing something or solving problems. The cognitive aspect can be measured through a post-test which is held after students

produce their products. Classroom activities can be developed to improve learning activities, apply active, creative and calming learning methods for students and copy harmonious and mutually beneficial cooperation with third parties in improving the quality of learning.

Brainstorming is able to help students solve problems with innovative solutions, take advantage of other people's ideas that are developing or building relationships between students and assessing views between students. Brainstorming teachers are able to make broad conclusions about ideas from students' thinking, more democratic and respectful of different views.

The advantages of the brainstorming method include: building knowledge, improving mental abilities and helping students learn without any criticism, rules or evaluations in terms of restrictions on generating ideas. The advantage of brainstorming techniques for teachers is that they have the opportunity to give problems and ask students to give as many suggestions as possible ⁵ in a short period of time in order to increase fluency. For students, students have the opportunity to try, observe, assume, assess and conclude.

Steps The stages of the brainstorming method, include: a. preparation (preparation), b. fact – finding, c. warm up, d. search for ideas, e. solution finding, f. implementation

The steps in the brainstorming session includes: a. warm-up which aims to attract students' attention, b. getting ideas aims to find out what students think of the learning topic accompanied by differences in ideas, c. writing on the board aims to bring out students' knowledge by involving it systematically and focused in the process, d. write and present ideas: stimulate students to write down information and display it, e. avoid frustration aims to mobilize all students by collecting all kinds of ideas, f. avoid saturation aims to bring together all kinds of points and information and integrate knowledge in a way to make the session more interesting.

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Exploring is one of the best ways to present the learning materials approximately to teach any learning subject. An exploratory learning approach does not only focus on how to transfer knowledge, understanding, and interpretation, but must be balanced with improving the quality of teaching materials. Information is not only compiled by the teacher. There needs to be student involvement to expand, deepen, or organize information on their initiative. In this case, students compile and validate information as input for learning.

The complexity of exploration activities in the learning process which requires a dialogue process that is (1)

interactive (2) adaptive, interactive and reflective (3) describing levels of mastery of the subject (4) describes the level of activity related to improving the skills of completing tasks so as to gain meaningful experience.

An exploratory approach develops as a learning approach in the field of environment or science. There are five factors that make learning activities more meaningful, namely active learning, constructive learning, intense learning, authentic learning, and collaborative which emphasizes the statement that exploratory learning places more emphasis on experiential learning than on experiential learning. subject matter.

From the experience of using cooperative and collaborative models in the practice of classroom management, it turns out that they are able to improve student learning performance in carrying out exploratory steps. This learning model can be developed through the form of questions. As Socrates said that good questions can increase students' motivation to explore science more deeply.

Exploration is a work process in facilitating the student's learning process from not knowing to knowing. Students connect previous thoughts with their learning experiences. They depict deep understanding to provide insightful responses as well. How to distinguish the roles of

each in joint learning activities. They do the division of tasks such as in the task of recording, searching for information through the internet and providing creative responses in dialogue.

In addition, students follow up the search for information by comparing the results of the study. Collectively, they can also develop information search results in the form of graphs, tables, diagrams and present their ideas. The characteristics of exploration-based learning: (1) Involving students in seeking information (certain topics), (2) Using a variety of approaches, media and learning resources, (3) Facilitating interaction between students.

Characteristics of confirmation-based learning: (1) Teachers provide positive feedback on students' learning outcomes, (2) Teachers confirm students' exploration results, (3) Teachers provide opportunities for students to reflect on their learning experiences.

Cognitivism has several branches of knowledge , including the theory of assimilation, attribution, component performance, elaboration, mental models, and cognitive development. Elaboration theory is a theory of instructional design based on the argument that lessons should be organized from simple material to complex expectations by

developing understanding in a more meaningful context so that they develop into integrated ideas.

This concept has three keywords that focus on the sequence of concept elaboration, theory elaboration, and simplification of conditions. Learning starts from simple concepts and easy work. How to teach thoroughly and in depth, and apply the principles to be more detailed. The principle must use a topic with a spiral approach. A number of concepts and stages of learning must be divided into learning episodes. Next, students choose a concept, principle, or version of the work that is elaborated or studied.

The elaboration approach develops in line with the growing paradigm shift in teacher-centered learning to student-centered learning as a new need in implementing learning steps. The selection and sequencing of materials that can improve the achievement of goals. The proponents of this theory also emphasize the importance of the functions of motivator, analogy, summary, and synthesis that help increase the effectiveness of learning. This theory also pays attention to the complex aspects of cognitive and psychomotor learning. The basic idea is that students need to develop contextual meaning in the order in which knowledge and skills are assimilated.

Sharing is a process that is essential in learning to educate students to be develop their social skills. One of the forms of sharing which is commonly carried by the teacher in the classroom is group discussion and also whole class discussion. This can be in the form of small group and or bigger group. The essence of sharing is communicating their knowledge to others in order other students have more understanding and learn also from their friends. The sharing process definitely useful for the future social life of the students in the community.

The teaching and learning process is an overall educational process. From this statement, it means ⁵ that the success or failure of educational attainment ¹ depends on how the teaching and learning process runs. In the teaching and learning process, not only teachers are required to be active, but students must also be active as a form of good communication between teachers and students, students and groups. This is always related to the subject matter, media, and methods used. A teacher should have the ability to choose the right method of learning.

Knowledge Sharing learning strategy is one of the active learning strategies. This strategy can make students ready to learn learning materials quickly and can be used to see the level of students' abilities in forming teamwork. This

strategy ¹⁷ requires students to be able to work together to solve a problem on the topic being discussed.

Through the use of Knowledge Sharing learning strategies, the abilities that students can have include showing acceptance by agreeing, listening, and responding to something, participating in discussions through responding, supporting or opposing an idea, discussing problems, formulating problems, concluding an idea, and ¹¹ the ability to find a solution to a problem.

The five aspects of abilities obtained through the use of Knowledge Sharing learning strategies are aspects of students' abilities in the affective domain. Therefore, the use of Knowledge Sharing learning strategies can improve students' affective abilities.

In addition, knowledge sharing can also open up opportunities to explore knowledge to obtain or create new knowledge.

The knowledge sharing approach from the perspective of innovation or exploratory knowledge sharing is expected to become a knowledge sharing trend in the future. With the knowledge sharing model, what will happen is knowledge exchange between individuals through the formation of a knowledge network that functions to ensure the flow of knowledge.

Problems that often occur during the teaching and learning process are caused by the way the teacher delivers the teacher in the classroom is very boring, as a result some students have difficulty in accepting the explanation from the teacher. While in other classes taught by different teachers, students revealed interesting learning methods such as small group discussions, where students were divided into several small groups, with small group discussions students found it easy to understand the lessons given.

In a learning process, certain methods are needed to achieve the learning objectives carried out. In learning activities, of course, it cannot be separated from the interaction between students and students and students with educators. In an interaction, of course, good communication is needed in learning. Discussion is a responsive scientific conversation containing the exchange of opinions woven with problematic statements of the emergence of ideas and testing of ideas or opinions carried out by several people who are members of the group which are directed to obtain solutions to the problem and to seek the truth.

In group discussions, students can express their opinions, express their knowledge and complement each other among students in the group concerned. Students who

are less accustomed to expressing opinions in study groups are assisted to speak in small groups, foster a friendly atmosphere, are attentive to the opinions of others, and may be pleasant, can gather various opinions about parts of the problem in a short time, can be used together other techniques so that the use of this technique varies.

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Group discussion is an orderly process that involves a group of people in informal face-to-face interactions with various experiences or information, drawing conclusions or solving problems. Group discussion is a meeting of two or more people, which is shown to exchange experiences and opinions, and usually results in a joint decision.

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A group discussion technique is a form of activity characterized by an attachment to a subject matter or question, where the members or participants of the discussion honestly try to reach conclusions after listening and studying, as well as considering the opinions expressed. put forward in the discussion.

10

Transfer of Learning is a learning activity that allows students to apply their knowledge in various forms of things. This learning activity enables students to develop their previous knowledge and build their experiences. Learning transfer is the transfer of habits of thinking, feeling or work, knowledge or skills, from one learning state to another. The

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term learning transfer means the transfer or ⁹ transfer of learning outcomes from one subject to another or from everyday life outside the school environment.

Learning is defined as long-term changes in mental representations and associations as a result of experience. Then the transfer is intended as a transfer or ⁹ transfer of ⁸ learning outcomes from one subject to another. Educators hope that students are able to transfer learning from one problem to another in the learning chain, from one year at school to another, between school and home, and from school to work.

In many cases, early learning aids learning or performance in other situations. Transferring from one situation to another often occurs when the two situations overlap. When transfer occurs because the original learning task and the transfer task overlap each other, it is referred to as specific transfer.

Transfer of Learning is a term that refers to the process of transferring knowledge that occurs in the classroom between teachers and students. In the implementation of learning, connectivity between students and teachers is very important, this is because the effectiveness of learning is strongly influenced by this.

Learning transfer is the transfer of habits of thinking, feeling or work, knowledge or skills, from one learning state to another. Students' knowledge and skills as a result of learning in the past often affect the learning process they are currently experiencing. Transfer in learning, which is commonly referred to as transfer of learning, implies the transfer of learning outcomes from one situation to the next.

The word "skill transfer" does not connote the loss of past skills because they are replaced by new skills in the present. Therefore, the above definition must be understood as the transfer of influence or the influence of the skill of doing something on the achievement of the skill of doing something else. Each transfer of influence as mentioned above in general always has a positive or negative impact on activities and learning outcomes of other subject matter or other skills.

Each student can provide solutions to abstract things if he understands the concepts he describes. In presenting problems to students, you should start with more general problems so that students will be able to more easily understand and understand what they want to learn. Most of the difficulties in channelling what will be learned by students are because educators use concepts that are still abstract so that the transfer process is hampered because

students still cannot understand the concepts given well. This research has also shown that developing a good representation will allow students to think flexibly about complex areas.

⁸ The act of transfer plays an important role in assessing the quality of a community's learning experience. Different types of learning experiences may look the same when a learning test focuses solely on recall (e.g., on the ability to repeat facts or previously taught procedures), but experiential learning looks very different when transfer tests are used. Some types of experiential learning result in more effective memory but weak transfer, in other procedures effective memory plus positive transfer.

¹³ Key characteristics of learning and transfer that have important implications for education: (1) Early learning is required for transfer, and a sufficient amount is known about the types of learning experiences that support transfer; (2) Knowledge is highly contextualized which can reduce transfer; abstract knowledge representations can help promote transfer, (3) Transfer is best viewed as an active, dynamic process rather than a passive end product of a set of learning experiences, (4) All new learning involves transfer based on prior learning, and this fact has implications

important for the design of teaching that helps students learn.

Learners are, of course, more likely to transfer what they learn in school when they approach each topic in class with a genuine intention to apply it. But other factors also affect the probability of transfer, often because they affect a learner's ability to retrieve what they have learned. The following principles identify Factors that influence Transfer including, (1) Meaningful learning promotes better transfer than learning by rote, (2) The more thoroughly something is learned, the more likely it is to be transferred to a new situation, (3) Good Positive transfers as well as negative transfers are more common when a new situation is the same or at least looks similar to the previous situation.

CHAPTER SIX

STAGES OF BEST LEARNING MODEL

In the BEST learning model (Brainstorming, Exploring, Sharing, Transfer of learning), teachers train students to apply critical thinking aspects in student learning. Critical thinking patterns are needed by students because our world is always changing and challenging requires students to always think ahead or think ahead. To build ⁹ their knowledge, students need to develop their higher levels of thinking, such as critical thinking systems, decision making, and problem solving.

The pattern of critical and creative thinking is very much needed by students considering that there have been significant changes in the last few decades in the field of education. Whereas previously the teachers was at the centre and emphasized what was taught, education today ⁹ involves teaching how to think, and in particular, how to be a critical thinker. Critical thinking is necessary in every profession, and allows one to face reality in a natural and reasonable way. ⁹ Critical thinking has been investigated mostly in terms of thinking skills involving the cognitive domain. For decades, the improvement of student thinking has been the focus of educational studies and programs. Some use the phrase 'cognitive skills' while others refer to 'thinking skills',

but they all distinguish between high-level and low-level skills.

Based on the data collected, there are core activities implemented in Best's learning, namely brain storming, exploring, sharing, and transfer of learning. These steps can improve students' critical and creative thinking skills. The steps taken are as follows: The first is brainstorming. In this activity the teacher tries to explore as much of the students' knowledge regarding the material being studied as possible so that all previous knowledge can be strengthened by what is being studied. The stages in the brainstorming are as follows:

1. teachers asks students what they know about the topic being studied;
2. Teachers provide opportunities for all students to express what they have understood about the topic being studied
3. Teachers provide opportunities for students to ask questions about the topic being studied
4. Teachers give other students to answer other questions.
5. The teachers emphasizes and adds to the students' answers

The second step is exploring. In this activity the teacher tries to develop what students already know by holding various activities and providing additional explanations. The steps in the exploring are as follows:

1. Teachers explain the subject matter/lecture
2. Teachers give students to ask questions about the material being explained
3. Teachers give other students to answer their friend
4. Teachers provide additional explanations for answers students
5. Teachers provide exercises to develop student understanding

The third step is sharing, which is communicating what has been known to others. Students are trained to convey what they know in the form of small groups and classes. The activities carried out in the sharing are as follows;

1. Teachers provide opportunities for students to discuss in small groups
2. Teachers provide opportunities for students to present ¹ the results of their discussions in front of the class
3. Teachers provide opportunities to ask questions about student presentations

4. Teachers provide opportunities for other students to provide additional explanations
5. Teachers give additional emphasis and explanations to complete student explanations

. The fourth activity is transfer of learning, where students are trained to transfer what they have learned in the form of products in the form of writing, paragraphs, texts, designs, objects and other products, including those in the form of presentations. such as speeches, storytelling, conferences and so on the phase of transfer of learning are as follows:

1. Teachers provide exercises to students to apply what has been understood in the form of products/works (monologue/dialogue, products, for example: speeches, conversations, conferences, paragraphs, texts, pictures), objects, etc.)
2. Teachers provide opportunities for students to present their work

Based on the explanation above, the BEST learning model (Brainstorming, Exploring, Sharing, Transfer of learning) can improve students' critical and creative thinking patterns. Where every learning activity begins brainstorming to explore various knowledge that students already know so

that it can be integrated into the topic being studied. This step is very appropriate for every lesson because students are trained to remember what they have learned so that they can support what will be learned and learn to connect previous phenomena with what will be studied. This activity will not only stimulate inductive thinking but will also help the deductive process.

Furthermore, exploration process is very appropriate to be carried out after the process of extracting student knowledge at the brainstorming. In this phase, the teachers develop student knowledge by exploring various sources of material related to the topic being studied. This stage allows the teachers to explain various problems that have not been understood by students at the brainstorming stage.

next stage Sharing, which is carried out by the teachers to provide opportunities for students to communicate what they already know to their friends and also discuss what they do not know. This activity uses more group activities followed by presentations to the class. At this stage, students can practice the skills of learning together and living together so that these skills can later support their social life in society.

The last stage is Transfer of learning, where students are given the opportunity to use the highest skills as

described in Blooms' taxonomy, namely creativity. Students are trained to apply what they have learned in the form of products in the form of writing, designs and goods. This activity allows students to develop their creative power to create something that may be useful for other students or the surrounding community.

REFERENCES

1. Leung, A. S. M., & McGrath, S. (2010). An Effective Learning Model to Support People Development: The Emerging Approach of the Hong Kong Institute for Vocational Education. *International Education Studies*, 3(4), 94-106.
2. Enkenberg, J. (2001). Instructional design and emerging teaching models in higher education. *Computers in Human Behavior*, 17(5-6), 495-506.
3. Ristiasari, T., Priyono, B., & Sukaesih, S. (2012). Model pembelajaran problem solving dengan mind mapping terhadap kemampuan berpikir kritis siswa. *Journal of Biology Education*, 1(3).
4. Lancaster, J. W., Stein, S. M., MacLean, L. G., Van Amburgh, J., & Persky, A. M. (2014). Faculty development program models to advance teaching and learning within health science programs. *American Journal of Pharmaceutical Education*, 78(5).
5. Mahanal, S., Zubaidah, S., Sumiati, I. D., Sari, T. M., & Ismirawati, N. (2019). RICOSRE: A Learning Model to Develop Critical Thinking Skills for Students with Different Academic Abilities. *International Journal of Instruction*, 12(2), 417-434.

6. Tremblay, P. (2013). Comparative outcomes of two instructional models for students with learning disabilities: Inclusion with co-teaching and solo-taught special education. *Journal of Research in Special Educational Needs*, 13(4), 251–258.
7. Metzger, K. J. (2015). Collaborative Teaching Practices in Undergraduate Active Learning Classrooms: A Report of Faculty Team Teaching Models and Student Reflections from Two Biology Courses. *Bioscene: Journal of College Biology Teaching*, 41(1), 3–9.
8. Palmer, D. (2005). A motivational view of constructivist-informed teaching. *International Journal of Science Education*, 27(15), 1853–1881.
9. Sunaryo, Y. (2014). Model pembelajaran berbasis masalah untuk meningkatkan kemampuan berpikir kritis dan kreatif matematik siswa sma di kota tasikmalaya. *Jurnal Pendidikan Dan Keguruan*, 1(2), 209679.
10. Changwong, K., Sukkamart, A., & Sisan, B. (2018). Critical thinking skill development: Analysis of a new learning management model for Thai high schools. *Journal of International Studies*, 11(2), 37–48. doi:10.14254/2071-8330.2018/11-2/3

11. Lloyd, M. 2010. Thinking Critically about Critical Thinking in Higher Education. *International Journal for the Scholarship of Teaching and Learning*, 4 (2), 1-16
12. Solis, M., Vaughn, S., Swanson, E., & Mcculley, L. (2012). Collaborative models of instruction: The empirical foundations of inclusion and co-teaching. *Psychology in the Schools*, 49(5), 498-510.
13. Sun, C., & Feng, G. (2009). Process Approach to Teaching Writing Applied in Different Teaching Models. *English Language Teaching*, 2(1), 150-155.
14. Leung, A. S. M., & McGrath, S. (2010). An Effective Learning Model to Support People Development: The Emerging Approach of the Hong Kong Institute for Vocational Education. *International Education Studies*, 3(4), 94-106.

In this millennial era, everything has become more sophisticated and practical with the aim of helping the human being in daily activities. Globalization has penetrated today's generation which has also caused a shift in the world of education. The increasing number of technology users in the world of education will lead to changes in learning models. Because it is more effective and efficient, without requiring a lot of time and effort. Moreover, students are required to have higher critical and creative thinking skills to be able to face the reality of life in the millennial era. BEST learning model is designed to help students to maximize their opportunities in learning to develop their critical and creative thinking skills. Students are engaged in a series of learning activities which include brainstorming, exploring, sharing, and transfer of learning.



Buku 2

ORIGINALITY REPORT

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