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Implementation of Deep Systems Approach Learning

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Abstract

A system is a set of components or elements that interact with each other to achieve a goal. The learning principle is a guide for teachers in implementing effective learning conditions. There are two characteristics of the teaching systems approach, namely the systems approach and the teaching and learning process to make it easierfor students to learn. The method that can be used to determine the quality of the educational process is a systems approach. Through a systems approach, you can see all aspects of the impact of a successful process. Learning is called having a system because it contains components that are interrelated and influence one another. Teachers, students, learning materials, methods, media, facilities and infrastructure are the components included in the study. The availability and effectiveness of each of these components will determine thesuccess or failure of a lesson.

Kata Kunci: Implementation, System, and Learning

PRELIMINARY

The most important thing from the educational process is learning and learning. Learning is done is in order to achieve educational goals. In learning there are several components that determine. Educators, students, facilities and infrastructure, media, objectives, environment and evaluation are the components contained in learning. The unity of these components is then called the learning system. Learning will run well and succeed, when all the components contained in it are available and run well too.

The more modern times, especially in the field of education, the various needs of the education sector are increasingly complex, and various forms of education have formed various educational systems, strategies and processes. However, everything related to education, be it systems, strategies or processes in it, is none other than to achieve one of the learning objectives in accordance with the principles of learning, to achieve quality quality education for prospective teachers as facilitators and students as objects of teaching process.

The teacher is very decisive as part of the learning system that determines the success of students in achieving goals. It is undeniable that in the classroom, the teacher will determine the content, atmosphere and learning and teaching activities. No matter how good the course is, no matter how perfect the facilities are, if the teacher does not motivate, love, understand and carry out the tasks well done, then learning will be less successful. However, no matter how smart and creative a teacher is, he definitely

needs other components in achieving his learning goals.

Methods

This research is a literature study (literature review), with a qualitative approach, and will be described descriptively. Method library research is an activity related to reading and documenting the results of library data collection and processing them into research material (Sari, 2021). The purpose of using a qualitative descriptive method is to describe the research findings in detail and clearly to support and increase the reader's understanding of the current research going on. Data collection techniques are carried out by understanding and analyzing data sources from scientific articles, theses, proceedings and books aligned with the research focus. The data obtained will be analyzed gradually, namely; (1) Read and understand the entire study and compile it data that is relevant to this study. (2) Read the abstracts of all research to understand the general description of the research to assess whether it complied the purpose of the research to be carried out. (3) Note the main points and adjust accordingly with research, as well as sources of information that will be included in the list References.

Research and Discussion

System in Learning

The term system can be used to refer to a wide ranging network from the smallest unit to the entire universe. Atoms, cells, plants, humans, birds, committees, cities, countries, worlds, and universes are examples of systems. Or cars, typewriters, heaters, computers, buildings, highways are all systems. In addition to "life" or physical systems, there are conceptual systems such as numerical systems, game strategy systems, and theoretical systems. There are also application systems such astraffic control, food service systems, poll systems, code systems, and even betting systems. All of these examples fit the definition of a system in that they consist of related and interrelated parts. All systems have unique properties which allows it to be distinguished from other, albeit very similar, systems fromenvironment.

Wina Sanjaya (2011: 2), in this case explains that, the system can defined as a unified component that is interconnected with each other to achieve a certain goal. From this concept, there are three main characteristics of a system, that is; First, a system has a specific purpose. Second, to achieve the goalA system has certain functions. Third, to move the function, A system must be supported by various components. While Oemar Hamalik(2010: 1), in this case said that the system is a concept abstract. The traditional definition states that a system is a set of componentsor elements that interact with each other to achieve a goal.

From the definition above it can be concluded that the system is a setinterrelated components that work together to achieve a single goal. Or it can also be interpreted as a system is a set of components/ subsystems arranged and linked according to a plan to achieve a goal. Although the definitions above are different, they contain elements equation that can be viewed as a general characteristic of the system that includes following matters:

a. The system is a structured unit

b. The unit consists of a number of components that influence each other

c. and each of these components has a specific function jointly carry out the function of the structure, namely achieving the goals of the system.

Learning is an activity designed to teach students. Process learning is a series of activities involving various components, then every educator must understand the learning system through understanding that, at least every teacher will understand the learning objectives and expected results. The system is useful for designing/planning processes learning. Planning is a process and mindset that can help create the desired result (Sanjaya, 2008: 51).

Systems Approach in Learning

Approach serves to describe the nature of what will be do when solving problems. Approach can be opinion, philosophy or beliefs that are believed to be true (Hamalik, 2002: 9). As draft methodologically, the systems approach is a tool for decision makers to consider all issues related to the decision decisions, while the systems approach as a conceptual framework aims to find commonalities and various tendencies in phenomena that are exist through a multidisciplinary analysis. As a new scientific method, systems approach seeks to create new ways of thinking that can be applied both to science life and behavioral sciences.

The characteristics of the learning system approach, namely there are two main

characteristics, namely: a. Systems approach as a particular view of the learning process where teaching and learning activities take place, there is interaction between students and students teachers, and make it easy for students to learn effectively; b. The use of the methodology to design a learning system that includes procedures for planning, designing, implementing and evaluating the entire process learning focused on the concept of achieving learning objectives. Pattern The learning system approach can be carried out through the following steps following (Hamalik, 2002:19):

1) Identification of educational needs (formulating problems);

2) Analysis of the need to transform into learning objectives (problem analysis);

3) Designing learning methods and materials (development of a solution);

4) Implementation of learning (experimental); and

5) Assess and revise.

As a system, all the elements that make up the system have properties interdependent, all of which are to achieve a certain goal. The success of the learning system is the success of the realization of goals learning. Therefore, the main purpose of the learning system is successful achievement of goals by students (Marwiji, 2018: 8). As can be seen from the description above, an effective and efficient learning requires good management of learning elements. In the systems approach, for achieve learning objectives as much as possible must be supported by the elements good learning elements, including goals, students, teachers, methods, media, facilities, learning environment and assessment.

Benefits of Systems Approach in Learning

There are several benefits of a systems approach in learning, as stated by Wina Sanjaya (2011: 7-8), namely; First, through system approach, direction and learning objectives can be planned clearly. The formulation of objectives is one of the characteristics of the systems approach. Determination learning components are basically directed to achieve goals. There fore, all the efforts of teachers and students are aimed at achieving that goal has been established. Thus, through a systematic approach, each teacher can better understand the purpose and direction of learning, so that through the objectives clearly not only can be known the steps of learning and development other components, but also used as a criterion of effectiveness. process learning. We can imagine what happens in the learning process without a clear purpose. Of course the learning process will not be focused, deep the meaning of learning will be meaningless and difficult to determine effectiveness learning process.

Second, the systematic approach requires teachers to carry out activities that are systematic. System thinking is coherent thinking so that it is possible maximum results through clear and definite steps. Because with systematic steps, we need to start from the whole series activities and through the learning process gradually, so that the possibility failures can be avoided. Thus, a systematic approach too avoid unnecessary activities.

Third, the systems approach can design learning with optimize all potential and available resources. This system is designed to achieve the learning objectives in the best possible way. Therefore, Systems thinking is thinking about how students can achieve that goal given. To achieve the learning objectives within the framework of the system, every teacher tries to take advantage of all the potential that is relevant and available.

Fourth, the systems approach can provide feedback. Through process feedback in a systems approach, it can be seen whether the goals have been successful achieved. This is very important because achieving goals is the main goal of thinking system. For example which components need to be repaired and which components need to be maintained if it is known based on feedback that the objective is not achieved.

System Implementation in Learning

The system approach applied in learning is not only in line with the development of science and technology, but also with the development of systematic learning psychology based on principles

behaviorism and humanistic psychology (Adnan, 2018: 100). Aspects of the systems approach learning includes philosophical aspects and processes. The philosophical aspect is the view life which is the attitude of the designer,

reality-oriented system. While the process aspect is a process and a set of conceptual tools.

In the industrial world and today's global developments it is necessary to do this development of the national education system which has implications for the development of discipline teachers, socio-cultural, and the values of the nation's heritage, Forms of construction. effective as follows (Sitorus, 2019: 39). (a) Social competence. (b) Following education and training. (c) The national education system emphasizes its importance religious approach. (d) Participated or involved in taking policy. (e) Responsible in carrying out the task. (f) Development the personality of the teacher who is able to place the basis of belief in the god that is Almighty as the basis of all behavior. (g) Recognition and rewards

on teacher professionalism. (h) Provide opportunities to develop its potential and capabilities. (i) Recognition and appreciation of teacher professionalism. (j) Development of a teacher's personality that is able to place the basis of belief in God Almighty as the basis of all behavior. (k) Building a resilient education system by increasing efficiency and the effectiveness of education management, both at the macro and micro levels. (l) Creating regional institutions so that they have a role in the involvement of greater in education. (m) Creating a working atmosphere and conducive situation. (n) Improving teacher quality standards with education sustainable. (o) Encouraging the role of teachers including social

institutions society and the business world as government partners in development and administration of education.

In the field of education, the existence of information systems is an integral part inseparable from the educational activity itself. These two fields are quite mutually exclusive depend on shaping the character of the world of education. In describing relationship between the two aspects of management, education is the driving force educational information system. An educational institution has components components needed to run an educational enterprise, such as students/students, facilities and infrastructure, organizational structure, processes, human resources (teachers), and organizational costs.

Criteria and Variables that Can Affect the Learning System

- Learning Outcomes as Criteria for the Success of the Learning System

Learning is a complex system whose success can be seen from two aspects, namely product aspects and process aspects (Sanjaya, 2011: 13). The success of a learning system is determined by the product side and the side process. Learning success from just one aspect will not be perfect. From a product standpoint, learning success is the success of students on the results obtained, ie focus on student mastery of the subject matter. learning success seen from the side of the process, namely students have a creative and independent attitude, morals noble, and a sense of responsibility. Therefore, both parties need to be considered in determining student learning outcomes.

Planning learning using a systems approach several benefits, including (Sanjaya, 20011: 7-8): a. Through a systems approach, direction and learning objectives can be planned clearly. We can imagine

what will happen, when in a learning process without any goals clear. Of course, the learning process will not be the focus, in a sense learning will be meaningless and difficult to determine the effectiveness of the process learning. b. The systems approach guides teachers to systematic activities. c. The systems approach can design learning by optimizing everything potential and available resources. d. The system approach can provide feedback. Through the feedback process in the system approach can be known whether the goal has been achieved or not. This is very important because Achieving goals is the main goal in systemic thinking.

- Variables Influencing the Success of the Learning System

According to Wina Sanjaya (2011: 15), variables that can affect activities the process of learning systems including teachers, student factors, facilities and infrastructure, tools and media available, as well as environmental factors.

1) Teacher factor

The success of a learning system depends on the teacher. This matter because the teacher is dealing directly with students. In a system learning, the teacher can act as a planner or

designer of learning, executor, or both. As planners, they need to understand well applicable curriculum, student characteristics, as well as the facilities and resources available available, so all of these can be used as an integral part of development of study plans and designs. (Sanjaya, 2011: 16). Teacher as executor does not only play a role model or role model for students who are also managers learning. Thus the effectiveness of learning lies on the shoulders of the teacher.

2) Student Factors

Students are unique organisms that develop according to stages development. Child development is the development of all aspects personality, but the tempo and rhythm of development of each child in all aspects are not always the same. In addition to other characteristics inherent in children, the process learning can be influenced by the development of different children. like a teacher, from the student's point of view, factors that influence the learning process include aspects such as student background (Sanjaya, 2011: 17). Background aspect includes the gender of the student, place of birth and place of residence of the student, social level student economics, and from which family the student comes from. Judging from the basic nature students include basic abilities, knowledge and attitudes. These characteristics are different on each student. For example, in terms of ability, there are students who are capable low and there are students with high abilities. Such differences demands different treatment either in placement or grouping students and in the treatment of teachers in adjusting learning styles. All of it will affect the learning process in the classroom.

Because, after all factors students and teachers are very decisive factors in the interaction learning.

3) Facility and Infrastructure Factors

Means are anything that directly supports smooth learning process, for example learning media, learning tools, school supplies, and so on. While infrastructure is everything something that can indirectly support the success of the buying process lessons, for example the way to school, school lighting, restrooms, and so on so on (Sanjaya, 2011: 18). Complete facilities and infrastructure will help teacher in learning, so that the facilities and infrastructure is one important components that can affect the learning process.

4) Environmental Factors

In terms of the environment, there are two factors that affect the process learning, namely class organization factors and social psychological climate factors. Factor class organization which includes the number of students in one class is important aspects that can affect aspects of learning. Class organization too big will be less effective in achieving learning objectives, because Class groups that are too large tend to have many members groups/students are reluctant to participate actively in any group activity. Factor Socio-psychological climate means harmonious relations between people involved in the learning process. This social climate can be intertwined internally or external. Internally, the socio-psychological climate is the relationship between people involved in the school environment, for example the social climate between students and students, between students and teachers. The external sociopsychological climate is harmony the relationship between the school and the outside world, for example school relations with parents of students, school relations with community institutions, and others (Sanjaya, 2011: 21). Schools that have a good relationship internally and externally, it allows the learning climate to be cool and calm so that it will have an impact on student learning motivation. It's been understood how complex the process of learning and learning is because it involves various factors both coming from the teacher, coming from students, and coming from both of which are macro or principle, as well as micro or operational and practical. Therefore, according to Abdorrakhman Gintings (2010: 5), before the teacher organize learning and learning activities, there are four questions that must be submitted to and answered by the teacher himself. Question those are; what will be taught? Who will study? And how they study?. After the teacher gets answers to these questions then based on that answer, the fourth question is, how should organize learning? The right answer to this question will help the teacher's success in organizing learning and learning because it is in accordance with the objectives contained in the curriculum and according to the personality aspects of students (Gintings: 2010: 5). Therefore It can be expected that there will be

learning activities that are conducive to achievement learning objectives.

- Strategies for Designing Learning Systems

The strategy for designing a learning system is a program implementation plan to design an effective system. Due to the actual receiving process complicated, a strategy is needed. With a certain strategy, the designer evaluates all significant possibility so that a decision/solution can be taken for achieve the set goals of the system. There are three stages in planning design of a system, namely; (a) analyze system demands; (b) designing system, and; (evaluating the impact of the system (Hamalik: 2010, 19). At the analysis stage system demands, the designer needs to identify the following, namely: (a) what is must be carried out in relation to system objectives, and; (b) the state of the existing system now with regard to the sources and constraints that related to the achievement of system goals. Goals, resources, and constraints are necessary gets considered, which means the designer is in a position to assess all existing system components and methods of organizing them.

In the system design phase, the designer selects and arranges components and specific processes to be implemented in the system, and perform testing. The program at this stage is related to the formulation of objectives, job descriptions, types learning, task analysis, learning and motivation, concepts and principles, problem solving, and motor perceptual skills (Hamalik, 2010: 120). On stage of assessment (evaluation), the designer compares real behavior with behavior planned. Whether the system needs to be redesigned or not depends on the magnitude of the difference between what was planned and what was in reality. So this stage is related to system evaluation (Hamalik, 2010: 20).

Conclusion

The system is a set of components or elements that interact with each other to reach the goal. The systems approach is involved in human systems with machines and then carried out also in the field of organization and management. The design of teaching and learning systems through procedures the education and training developed has a systems approach method. The method contains two aspects, namely philosophical and process aspects. teacher, student, learning materials, methods, media, facilities and infrastructure are components that included in the learning section. These components can determine the success of learning. Therefore, the implementation approach the system can be applied through the implementation of the components the.

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