Students Active Participation In Scientific Learning Management

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Abstract

Purpose: To describe the active participation of students during the learning process through the implementation of scientific learning management using the problem-based learning method.

Method: The approach used in this research is a qualitative approach by descriptive design. The research was carried out at the Institut agama Hindu Negeri tampung penyang Palangka raya. The data collected by the researchers was through unstructured interviews and disguised observations. The data result of interviews was analyzed using an interactive analysis model from Miles and Huberman and the observation data analysis was done by checklist method.

Findings: The active participation of students during the implementation of scientific learning management was found in several stages, among others when: 1) the lecturer asks students to input the contents of the Lesson Plan; 2) the students are given the opportunity to select the object of observation; 3) students collect the initial information independently through the task before the lecture begins; 4) students observe the object of the problem; 5) students compile a list of questions from the object of the problem; 6) students collect information from various sources; 7) students process information from various sources; 8) students deliver the results of activities in the form of discussion.

Value: The implementation of learning management on learning process can increase the active participation of students during the learning process such as the process of gathering information and processing information to get solutions to problem-solving

Keywords : scientific learning, learning management

1. Introduction Section

The learning process is a changé in the conduct and behavior of learners resulting from experience involving aspects of skills, knowledge, and attitude (1), it is to provide learning experiences to learners through the environment and other learning resources in order to achieve learning achievement (2), in the form of educative interaction activities between two parties, namely learners and educators (3).

Learning with the right approach can be a great impact for learners, among others, develop their creativity, thinking critically, analytically and appropriately in identifying and applying learning materials and can improve the ability to construct knowledge (4), the process can be achieved through creating a conducive learning atmosphere that will make a positive learner's response to the interaction made by the educators, learners are also able to become more confident and motivated to be active in class (5).

One approach to learning which involves learners actively is scientific learning approach (6), the scientific approach emphasizes the process of seeking knowledge rather than the transfer of knowledge, learners are viewed as learning subjects that need to be actively involved in the learning process (7), to provide an understanding of knowing, understanding various materials using scientific approach, that information can come from anywhere, anytime, regardless of the direction of information provided by the teacher (8). Learning with a scientific approach will lead to increased creativity of learners in solving problems encountered during the learning process (9).

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Learning as a composite combination, which includes human elements, materials, facilities, equipment (10) and procedures that affect each other to achieve the learning objectives (11), this combination can affect the quality of learning well if supported by learning management in an effort to manage the components that support the learning process (12). Management cannot be separated from learning process as a whole, without management optimized, effective and efficient learning realization would be impossible to achieve, learning management gives full authority of educators in managing the learning process, planning, organizing, supervising, being accountable and leading human resources and goods to assist the implementation of learning in accordance with the intended purpose (13).

Based on Nirwana research, students who take learning with learning management have higher learning outcomes compared to learning outcomes of students who take conventional learning (14), Gunawan's research results also support the research. Namely, the application of proper learning management will have an impact on optimal learning implementation so that student learning outcomes become better (15). The research proves that learning that is well managed from the stages of learning planning, organizing learning, implementing education, and supervising learning can make learning run according to predetermined learning outcomes. But the different research results are shown by Maria & Sediyono's research results. Namely, the implementation of ICT-based learning management does not have a significant impact on the learning process (16). The same research results are shown by Suwito, Harun, & Ibrahim's research results, namely the implementation of learning management does not have a significant impact on the learning process, this condition shows that if the learning process does not implement learning management properly, the learning process will not run optimally (17).

Implementation of effective and efficient learning management requires the implementation of the four main functions of management which are the functions of planning, organizing, implementation and supervisory (18), unified and integrated in the management of the learning management activities areas, thus it is expected to contribute in improving the quality of education as a whole (19), these conditions caused the researchers to be interested in conducting research on the active participation of students in management learning on scientific learning in higher education institutions.

2. Methodology

The research approach used in this research is qualitative approach by using descriptive research. The study was conducted at Institut agama Hindu Negeri tampung penyang Palangka raya Indonesia (IAHN-TP) Palangka Raya Indonesia. Researchers collected information from educators who implement scientific learning management with problem-based learning methods and students involved in the learning process, then the researchers analyzed the active participation of students in management learning on scientific studies in higher education institutions during the learning process with the aim to get a description of the participation of students during the implementation of scientific learning management in university.

The first source of research data were informants, namely lecturers to gain data on the implementation of scientific learning management with problem-based learning methods. The second source of research data were from the informants who were students where it is used to gain data on students' activities during the learning process. The third source of research data was from the process of observation on the implementation of learning in the classroom, this is to get a picture of the active participation of students in learning management on scientific studies in higher education institution.

The primary and secondary research data collection techniques were with unstructured interviews on educators who implement scientific learning management with problem-based learning methods and students who follow the learning process. While for the sampling technique, purposive sampling was used as a sampling technique for the educators because they are considered to

understand most of what the researcher expected and snowball sampling technique was used where the interview was done to gain saturated data or data obtained from the same source. The third data collection technique of the research was with disguised observation to get the image of students' active participation in learning management on scientific study of a higher education institute.

To test the validity of data which was in the form of interviews and observation, the researcher used the triangulation technique of the sources. To test the validity of the research instruments which were in the form of interviews and observations, the researcher first determined what theory or concept will be used as a reference interview and observation. The concept or theory is then derived into several indicators used to serve as the operational benchmark of the concept. As for the reliability test in the interview instrument, there is more emphasis on the constancy of the results raised by the sources. Reliability on observation instruments was based on rules/guidelines made by the researchers and observed at the time of observation.

Data analysis technique from the data source of informants' interview results of lecturers and students used field data analysis model of interactive analysis models from Miles and Huberman, where the stages of data collection, data presentation, data reduction, and conclusion are done simultaneously with the process of collecting data and are interacting with each other. Whereas data analysis result of observation was done by checklist method.

3. Result

This study examined the perceptions of lecturers and students who implement scientific learning management with problem-based learning methods, and the level of student participation during which the learning process takes place. The findings on these perceptions are described as follows:

3.1. Lesson Planning

Lesson planning is a projection of something that will be done by lecturers in teaching and learning process, learning will be more optimal if the lecturers prepare the lesson planning firsthand (20). Based on the results of interviews on educators, various activities during the planning process were found. These activities include: First, the lecturer will formulate the lesson plan. Formulating the Lesson Plan in addition to referring to the curriculum and syllabus, lecturers also pay attention to the rules contained in Permenristekdikti no. 44 of 2015 on national standards of higher education, among others; 1) learning achievement of graduates, in the form of the minimum capability which covers attitude, knowledge and skill aspects; 2) learning characteristics, is where the characteristics of the learning implementation process are interactive, holistic, integrative, scientific, contextual, thematic, effective, collaborative and learner-centered; 3) learning methods, includes group discussions, simulations, case studies, collaborative learning, cooperative learning, project-based learning, problem-based learning, or other learning methods that can effectively facilitate the achievement of graduate's learning; 4) assessment principles, includes educative, authentic, objective, accountable and transparent principles. The importance of making lesson plans for lecturers is to help them think through lessons before they are taught so that learning difficulties can be predicted and solutions can be sought, lecturers can organize facilities, equipment, teaching aids, time and content in order to achieve learning objectives as effectively as possible and connect goals and procedures to the overall objectives of the subjects taught (21).

Both lecturers develop problem-based learning tools. The learning tools are instructional manuals used by lecturers and guidebooks used by students. Learning guideline is a guide that can be a reference for lecturers and students in implementing the learning stages and provide direction in solving the constraints faced in the learning process (22).

Third, after the Lesson Plan and learning tool in the form of guideline is made, the lecturers then submit to the study program to be evaluated whether it is following the existing curriculum and syllabus (23). Planning cannot be separated from the element of supervision including monitor and evaluation, it is necessary to avoid deviations, so that supervision in planning can be done in a

preventive and repressive way, where preventive supervision is an inherent supervision with the planning, while repressive supervision is a functional oversight of the implementation of the plan, both done internally and externally by the supervision apparatus assigned (24).

Based on the findings of lecturers' perceptions of the implementation of lesson plan, active participation of students were not found in the process, this is because the planning process becomes the lecturer's responsibility before implementing it the learning process because lesson planning is used as a guide for lecturers in carrying out the learning process (25), and can serve as guidelines and standards in achieving goals (26), because good lesson planning will create a good learning process (27).

3.2. Learning Organization

Learning organization is an attempt to manage existing resources to achieve learning objectives (28). A good learning organization will not work perfectly without someone who would run and do it, without clarity of whose work and who will do it, a good learning organization results in a good organizational form of learning, from work systems, structures, resources to other aspects (29). Based on the interview results of educators and students as well as the data triangulation with the observations, various activities during the process of organizing them were found. These activities include:

First, the lecturer explained the contents of syllabus and Lesson Plan with the intent that the students can understand the method, the assessment of learning, knowing and trying to achieve the desired learning objectives (30), with students understanding the purpose of learning, this can improve their learning motivation (31). Next, the lecturer asked students to give insights of the Lesson Plan contents on what they expected, input from the students can be a consideration. With lecturers giving students the opportunity to provide input on what kind of learning they hope to get, a sense of responsibility was given to them to undergo a good learning process, because the students would want a learning approach in accordance with their development phase which is independent learning and emotional freedom as well as showing an attitude of responsibility (32).

Secondly, the lecturer gave and explained the instruction manual, the learning stage, the type of observation object as well as students were given the opportunity to select the object of observation, because to increase student interest in learning, lecturers must know what their interests are, then design a learning strategy relevant to the interest (33).

Third, giving individual tasks in the form of journal reviews, thus giving individual tasks before the lecture begins, it will make the learning process smooth because initial knowledge was obtained from the independent task which will support new knowledge gained in the classroom (34).

Fourth, forming a learning group, the method of Group Work which is applied can provide learning experiences for students to solve a problem together in groups, increase student interest in learning because students feel that they are helping each other in finding new information, in addition to that group work can also eliminate boredom (35).

Based on the findings of lecturers' and students' perceptions on the implementation of learning organization, it is found that students actively participate in the process, among others 1) the lecturer asked students for their input of the Lesson Plan contents on what they expect, input from students can be a consideration; 2) students are given the opportunity to choose the object of observation; and 3) students collect initial information independently through tasks before the lecture begins.

3.4. Learning Implementation

The implementation of learning is the process of influencing students to do what the lecturers want based on the lesson plan that has been made for them to do, so the implementation of learning is related to the ability to influence others because the essence is the relationship between humans (36). Based on the results of interviews of lecturers and students as well as in data triangulation with

observations, various activities that involve the active role of students during the learning process were found. These activities include:

Observation Stage. At this stage, students were given problems in written form or the form of a video, containing phenomena that required explanation. The learning activities undertaken by students in the process of observing are reading, listening and seeing and the competencies which are developed is to train sincerity, thoroughness and seek information contained in the phenomenon (37).

Questioning Stage. At this stage, students make questions based on their observations and identify the various problems contained in the object of observation. Questioning is a learning activity that is done by asking questions about the information that is not understood from what is observed or questions to obtain additional information about what is observed (37).

Collecting Information Stage. At this stage, students can collect various information to get answers about the existing questions. The stage of collecting information can be effective if students are given a specific time to perform data collection activities such as reading library references, conducting some field observations, conducting experiments in the laboratory and conducting interviews with certain sources (38).

Information Processing Stage. At this stage, students bring various information that is gained into the group discussion process and collectively conclude to the questions and make reports to be communicated with other groups in the process of joint discussion. Processing information is a process of importing information that involves the use of knowledge from several sources that must be studied to increase the breadth and depth of research information (39).

Communication Stage. At this stage, the students present the results of their activities in the form of presentation in front of other groups and students from other groups can give comments on the presentation shown (discussion process). Learning process will be effective, if communication and interaction between lecturer and student happened intensively, in this kind of learning communication Educative interaction is happening in the form of exchanged message which is nothing but learning material, lecturers are placed in a position as a communicator because of the duties and roles of lecturers as pedagogic leaders while students are as a communicant or student (40).

Based on the findings of lecturers' and students' perceptions on the implementation of the learning process, the active participation of students in the process were found, among others 1) observing stage, students observe the object of the problem; 2) questioning stage, students compile a list of questions from the object of the problem; 3) the stage of collecting information, students collect information from various sources; 4) stage of processing information, students process information from various sources to get a conclusion; 5) communicating stage, students deliver the results of activities in the form of discussion.

3.5. Learning Supervision

Supervision of learning is a job done by lecturers to determine whether the learning purpose is running well to achieve the goals set if the goal has not been achieved then a lecturer should measure back and set the situation that allows the goals to be reached (36). Supervision of learning is through monitoring activities, control (supervision), evaluation, reporting, as well as follow-up on a regular and continuous basis (41), while based on the interviews of lecturers and students and in the data triangulation of observation, some activities that involve the active role of students during the process of supervision of learning were found. These activities include:

Monitoring of Learning. Monitoring activity is a cycle of learning activities which includes aspects in terms of collecting, reviewing, reporting and action on the learning process information being implemented that can provide information on the sustainability of the learning process to quickly establish the change towards a continuous improvement (42). Monitoring of the learning process is done through observation, note-taking, recording, interview and documentation (2).

Supervision of Learning. Supervision is an effort to provide services and assistance to students both individually and in groups to improve the learning process, which aims to make the learning outcomes efficiently and effectively obtained by certain predetermined plans (43).

Evaluation of Learning. Evaluation is done with the aim to (1) obtain data that support the level of competence and achievement of students in achieving the learning objectives after they have followed the learning process within a certain period of time, and (2) know the effectiveness level of teaching method that has been used by the lecturer (44).

Based on the findings of lecturers' and students' perceptions on the implementation of learning supervision, active participation of students in the process were found, among others 1) the learning monitoring stage, the student as the object of monitor; 2) stage of learning supervision, students receive guidance from lecturers to improve the quality of learning; and 3) the learning evaluation stage, students are evaluated towards the implementation of the learning process.

4. Discussion

The research findings show that the implementation of scientific learning management with problem-based learning methods can increase the active participation of students during the learning process. This active participation can increase because scientific learning makes the role of the student in the learning process active through the process of seeking knowledge by conducting a scientific inquiry to discover facts, construct new concepts, and new values as needed by themselves or in groups. Thus the scientific approach is one approach that emphasizes the students' inductive reasoning where students specifically view the phenomenon or situation then draw general conclusions (45).

Problem-based learning can help improve the development of learning skills in an open, reflective, critical and active learning mindset and facilitate successful problem-solving, communication, teamwork and interpersonal skills better than other approaches (2), whereas the purpose of learning is not on the students' mastery of knowledge as much as possible, but with the development of such learning model, students have the ability to think critically and to have problem-solving skills as well as develop the ability to actively build their knowledge (38).

5. Conclusion

Based on the results of the study, the active participation of students at several stages of the scientific learning management process was found. These stages, among others, are:

1. Lesson Planning Stage. At this stage there is no active participation of students, this is because the process of planning becomes the responsibility of lecturers before implementing the learning process.
2. Learning Organization Stage. At this stage, the active participation of students in the process were found, among others 1) the lecturer asked students for their input of the Lesson Plan contents on what they expect, input from students can be a consideration; 2) students are given the opportunity to choose the object of observation; and 3) students collect initial information independently through tasks before the lecture begins.
3. Learning Implementation Stage. At this stage, the active participation of students in the process were found, among others 1) observing stage, students observe the object of the problem; 2) questioning stage, students compile a list of questions from the object of the problem; 3) the stage of collecting information, students collect information from various sources; 4) stage of processing information, students process information from various sources to get a conclusion; 5) communicating stage, students deliver the results of activities in the form of discussion.
4. Learning Supervision Stage. At this stage, the active participation of students in the process were found, among others 1) the learning monitoring stage, the student as the object of monitor; 2) stage of learning supervision, students receive guidance from lecturers to improve the quality of

learning; and 3) the learning evaluation stage, students are evaluated towards the implementation of the learning process.

Acknowledgment

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