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MANAGEMENT OF MODEL LEARNING OF THINK-PAIR-SHARE (TPS) IN IMPROVING STUDENT LEARNING RESULTS IN CHEMISTRY SUBJECTS MATTER (CASE STUDY AT SMAN 1 KOTA SUKABUMI AND SMAN 5 CIMAHI)

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Abstract

The problem of difficulty learning chemistry can be caused by several factors, including learning models that do not suit students' needs, which can also make it difficult to understand chemistry material and anxiety related to learning chemistry can also affect students' ability to understand the material. Learning management is very important because it helps teachers manage the learning process effectively and efficiently, ensure optimal use of resources, and create an inclusive and positive learning environment for students. With good learning management, teachers can manage diversity in the classroom, encourage students' active engagement, and facilitate the development of their pedagogical skills. In addition, learning management helps teachers measure student progress periodically and provide necessary feedback to improve learning. Overall, learning management is a key element in creating effective and meaningful learning experiences for students. The aim of this research is to obtain an overview and analyze: planning, organizing, implementing evaluations, problems and solutions to Think-Pair-Share model learning in improving student learning outcomes in chemistry subjects. Theory this research uses management theory from George R. Terry and constructivist learning theory from Lev Vygotsky. This research uses a qualitative approach with case study research methods, data collection techniques using interviews, documentation and observation. The research results describe that the management of the Think-Pair-Share learning model in: (1) planning, (2) implementation, (3) organizing, (4) implementation, and (5) evaluation has been implemented in accordance with the principles of the Think-Pair learning model. Pair-Share at SMAN 1 Sukabumi and SMAN 5 Cimahi. The conclusion is that the Think-Fair-Share (TPS) learning model in improving student learning outcomes at SMAN 1 Sukabumi and SMAN 5 Cimahi has been implemented quite well and applies management functions starting from planning, organizing, implementing and evaluating.

Keywords: Management, Think-Fair-Share Learning, Student Learning Outcomes.

INTRODUCTION

Education is one effort to improve the quality of human resources. One of the determining success factors in the learning process is the learning model. Learning management has four minimum standards, namely planning, organizing, implementing and evaluating classroom learning (Ekawati, 2018). This is stated in Permendikbudristek RI number 47 of 2023 concerning Management Standards for early childhood education, basic education, secondary education in chapter I general provisions article 1 there are the following things: 1. Management standards are minimum criteria regarding planning, implementation, and

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evaluation of learning activities carried out by educational units so that learning is carried out efficiently and effectively, 2. School/madrasah-based management, hereinafter abbreviated as MBS/M, is a form of learning management autonomy in educational units in managing learning activities. The reason why management is important in classroom learning is because teachers can ensure that the material is delivered in the most effective way so that it is easy for students to understand (Wahid, 2018). The TPS Learning Model was first introduced by Frank Lyman in the mid-1980s. Frank Lyman is a professor of Education at the University of Maryland, introducing the TPS model as a strategy to increase student participation and interaction in learning. TPS learning is carried out in an effort to create a more cooperative and interactive learning model. In this model, students are asked to think individually (Think), discuss with one or two friends (Pair), and then share their ideas and answers with the class as a whole (Share).(Meilana, 2021). This model has become popular for its ability to increase student participation, encourage discussion, and give students time to reflect before sharing with classmates. The TPS model of learning is often recognized as an effective model in increasing student interaction and involvement. This model makes students think independently about a given problem, then discuss it with several friends, then share the results of the discussion with classmates. Based on the background of the problem above, there are several problems that can be identified: students find it difficult to study chemistry, students' low ability to analyze questions so that students find it difficult to solve problems given questions after learning directly seen from the test scores where the percentage of ability is quite low at 60%, still below the KKTP, student activity in chemistry learning is still low so student learning outcomes are also low, seen from student test scores(Sunyono, 2009).

Furthermore, based on a preliminary study conducted by researchers on 9 - 10 October 2023 at one of the state high schools in Sukabumi City and Cimahi City, the results show that the TPS model of learning management has been implemented well. This TPS model uses three phases, namely Think, Pair, Share. Starting with the teacher giving assignments and practice questions to each student (Think) then group work together, each group consisting of two people (Pair), then the results of the work of the group sitting together are presented to their friends in front of the class (Share), then discussed and concluded together. The teacher creates student work groups, explains the tasks of each group, arranges the group's seating positions, becomes a facilitator, directs group work steps, motivates students, and the teacher straightens out students' inaccurate concepts. The teacher successfully manages time, class, class comfort, and the material taught clearly. It turns out that many students' learning outcomes are above the KKTP. Based on the description above, the researcher intends to conduct research entitled "TPS Model Learning Management in Improving Student Learning Outcomes in Chemistry Subjects". (Case Study at SMAN 1 Sukabumi and SMAN 5 Cimahi).

RESEARCH METHODS

This research uses a qualitative approach (Musianto, 2002)with the case study method (Basar, 2021). The aim is to analyze and describe the background, characteristics and unique characteristics of the case, or a status of the individual which then from the typical characteristics above will be made into something general. To obtain empirical data that is

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appropriate to the scope of the problem as viewed using various concepts and to obtain answers to research questions, steps will be taken that are in accordance with the qualitative research process. The procedure followed in this research went through three stages, namely: 1) preparatory study, 2) general exploratory study, and 3) centralized exploratory study.

RESULTS AND DISCUSSION

a. TPS model learning planning

George R. Terry in his book Principles of Management states about planning as follows, namely: "Planning is the selecting and relating of facts and the making and using of assumptions regarding the future in the visualization and formulation to proposed of proposed activation believed necessary to achieve desired result". (Jamaludin, 2022). Planning is selecting facts and relating facts as well as making and using estimates or assumptions for the future by describing and formulating the activities needed to achieve the desired results.(Alfian, 2018). In planning lessons, teachers need to consider factors such as student characteristics, curriculum, available resources, and learning environment(Terry, 2021)

By referring to statutory regulations in the education sector, learning objectives must be in accordance with Law Number 20 of 2003 concerning the National Education System. These goals include developing students' knowledge, skills, and attitudes to prepare them for both college and professional life, in line with the school's vision and mission. Based on the discussion above, it can be temporarily concluded that in order to improve learning outcomes, the Think-Pair-Share (TPS) model learning planning at SMAN 1 Sukabumi and SMAN 5 Cimahi integrates management principles by George R. Terry. Learning objectives. TPS is focused on comprehension and communication skills. The TPS planning stages involve preparation, class division, implementation of the "Think", "Pair", and "Share" phases, and reflection. Overall, TPS learning planning is an integrated strategy that requires careful thinking to achieve learning goals in accordance with the school's vision, mission and management principles.

1) Vision and mission

This research includes an analysis of the vision and mission of two different senior high schools (SMA), namely SMAN 1 Sukabumi and SMAN 5 Cimahi. Both schools focus on developing the morals or character of students by utilizing the potential that exists in students. This vision and mission helps set learning goals, and each school has different advantages, reflected in the contents of their vision and mission. In the next section, the research reviews chemistry teachers' learning tools from both schools, including annual programs, semester programs, learning outcomes, ATP, teaching modules, KD mapping, syllabus, and RPP.

2) Objective

In a juridical context, the educational goals of high school students can be explained by referring to Law Number 20 of 2003 concerning the National Education System. According to the law, the aim of learning in high school is to provide holistic secondary education,

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developing students' knowledge, skills and attitudes. This is done to prepare them well, both for college and professional life, while forming citizens who are well-rounded and have good moral values. It is important to note that learning objectives in high school cover three aspects of competency, namely knowledge, skills, and attitudes. This goal is designed to achieve a description of these achievements in one or more learning activities. Interviews with chemistry teachers at SMAN 1 Sukabumi revealed that the goal of implementing School Development Team (TPS) learning is to increase students' understanding through thinking processes, sharing ideas with colleagues, and deepening understanding through discussion. This approach also aims to increase student engagement, develop communication skills, and encourage critical and collaborative thinking. Meanwhile, the chemistry teacher at SMAN 5 Cimahi stated that the aim of implementing the Think-Pair-Share (TPS) model is to increase student understanding, develop communication skills, increase student involvement, promote critical thinking, collaboration, and overcome doubts. This approach is also in line with management principles, especially careful learning planning.

3) Learning Principles

The Think-Pair-Share (TPS) learning principle, which involves the main steps such as individual thinking (Think), discussing with a partner (Pair), and sharing the results of the discussion with the whole class (Share), describes a learning approach that involves active student involvement. Through interviews and documentation studies with chemistry teachers at SMAN 1 Sukabumi and chemistry teachers at SMAN 5 Cimahi, it can be concluded that this principle aims to promote critical thinking, collaboration and active participation in the learning process. In the context of George R. Terry's management theory, learning principles such as TPS can be understood within a planning framework. Learning planning, according to Terry, involves selecting facts, connecting facts, and making and using assumptions or estimates to achieve desired results in the future. This approach allows the use of learning methods that are appropriate to learning objectives and creates an interactive and participatory learning environment . Based on the discussion above, it can be temporarily concluded that the Think-Pair-Share (TPS) learning principle, which involves individual thinking, pair discussion, and sharing results with the whole class, is implemented by chemistry teachers at SMAN 1 Sukabumi and SMAN 5 Cimahi with the aim of increasing students' understanding, develop communication skills, and stimulate critical and collaborative thinking.

4) Learning stages

Based on the learning planning stages, the Think-Pair-Share (TPS) model requires alignment between learning objectives and implementation methods. The results of interviews with chemistry teachers at SMAN 1 Sukabumi and SMAN 5 Cimahi provide a detailed description of the steps taken in implementing TPS. First of all, the initial preparation stage is the main foundation. Teachers must clearly determine the learning objectives to be achieved, choose material that is appropriate to the TPS method, and design questions or topics that can stimulate students' critical thinking. After that, dividing the class into pairs becomes the next critical step. The “Think” phase provides time for students to reflect individually, encouraging critical thinking and reflection. Meanwhile the "Pair" phase involves student collaboration in sharing

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ideas with their learning partners, discussing differences in views or opinions. The next phase is "Share," where several pairs are selected to share their thoughts with the rest of the class.

5) Learning Implementation Plan (RPP)

Based on the learning planning stages, the Think-Pair-Share (TPS) model requires a learning implementation plan (RPP). The results of interviews with chemistry teachers at SMAN 1 Sukabumi and SMAN 5 Cimahi created a learning implementation plan (RPP) for chemistry subjects using the TPS learning model.

6) Syllabus

Based on the learning planning stages, the Think-Pair-Share (TPS) model requires a syllabus. The results of interviews with chemistry teachers at SMAN 1 Sukabumi and SMAN 5 Cimahi created a chemistry subject syllabus.

b. Organizing TPS Model Learning

At SMAN 1 Sukabumi and SMAN 5 Cimahi, chemistry teachers are committed to improving student learning outcomes through organizing the TPS Learning Model. Through interviews with them, an overview of:

1) Grouping students

It turns out that TPS model learning is not only limited to understanding the material, but also involves aspects of student involvement, critical thinking, and collaboration between students. The chemistry teacher groups students two by two.

2) Preparation of teaching materials

Chemistry teachers prepare chemistry teaching materials based on the syllabus and adapted to the TPS learning model.

3) Determination of learning media

The teacher determines teaching media in the form of a periodic table of elements and question cards

c. Implementation of TPS model learning

Chemistry teachers at SMAN 1 Sukabumi and SMAN 5 Cimahi have adopted the Think-Pair-Share (TPS) Learning Model with structured steps to improve student learning outcomes. This approach follows the management principles of George R. Terry, who defines management as a process of planning, organizing, implementing and evaluating to achieve goals through the use of human and other resources.

1) Preliminary activities

Teachers introduce concepts in interesting ways, using questions or pictures to arouse students' interest. The aim is to open students' minds to the material to be studied, in accordance with the concept of planning in management.

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2) Core activities

Students are asked to think individually about the concept or assignment given. They create notes, formulate ideas, or solve problems related to the topic. This "Think" phase provides time for students to process information personally, reflecting the organizing principle in management. Next, in the pair activity stage, students pair up to discuss and exchange ideas. Through social interaction and collaborative learning, they strengthen their understanding. This is in line with the actuating principle in management, where students take action to strengthen understanding through collaboration.

3) Closing activities

The teacher facilitates a class discussion or group reflection on what has been learned. Students share their findings from paired discussions, and the teacher summarizes key points. Evaluation is carried out to ensure overall understanding, reflecting the controlling stage in management.

d. Evaluation of TPS model learning

Evaluation of the implementation of the Think-Pair-Share (TPS) Learning Model at SMAN 1 Sukabumi and SMAN 5 Cimahi aims to measure the extent to which this model can improve student learning outcomes.

Evaluation indicators are as follows:

1) Evaluation objectives

The purpose of evaluation is to measure student learning outcomes by involving critical aspects, including students' abilities to think critically, communicate, collaborate, participate actively, and understand the material. To produce a more detailed evaluation, several evaluation techniques are used.

2) Evaluation techniques

The evaluation technique used at the research site is as follows:

a) Oral examination

b) Written exam

3) Evaluation result

Evaluation results can also be used to monitor students' understanding of chemistry material. In addition, this evaluation shows a positive correlation between good learning management and student learning outcomes, consistent with findings in various studies that support effective learning management practices to achieve positive learning outcomes. The discussion above shows that the evaluation of the Think-Pair-Share (TPS) model at SMAN 1 Sukabumi and SMAN 5 Cimahi generally highlights increased student engagement and learning outcomes through the various evaluation techniques applied.

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4) Follow up on evaluation results

If student learning outcomes increase, TPS model learning can be applied to this material. On the other hand, if student learning outcomes do not improve, another learning model will be applied. Alhamdulillah, from the evaluation results it was found that there was an increase in student learning outcomes so that the TPS model learning was in line with the author's expectations in this dissertation.

e. TPS Learning Problems in Improving Student Learning Outcomes

Problem indicators are as follows:

1) Problems faced by teachers

Chemistry teachers at SMAN 1 Sukabumi and SMAN 5 Cimahi face several challenges in implementing the Think-Pair-Share (TPS) learning model to improve student learning outcomes. The problems faced by teachers in TPS model learning are the involvement of all students in discussions, relatively long periods of time in discussions, student group arrangements, mastery of the material, evaluation of student discussion participation.

2) Problems faced by students

Some of the problems faced by students in this TPS model of learning are as follows: students' lack of self-confidence, dependence on partners, difficulty communicating, noisy class atmosphere, differences in understanding of chemistry material.

3) The problems faced relate to infrastructure

In chemistry learning, infrastructure is needed in the form of a classroom, desks and chairs, white boards, an internet network, but the reality in the field is that there are still several broken desks and chairs and there is no internet network in the classroom.

4) The problem faced concerns costs.

In studying chemistry, examples of real chemicals and wifi in class are needed, but in reality, these chemicals do not yet exist and class wifi is not yet available.

f. TPS model learning solutions

1) Solutions to overcome problems faced by teachers are pformation of diverse group pairs, active mentoring, efficient use of time, increased student involvement and fair evaluation.
2) Solutions to overcome problems faced by students are pcreating an environment that supports students' self-confidence, fostering effective student communication skills, clear division of tasks, and structured discussion facilities.
3) Solutions to overcome infrastructure problems are to prepare infrastructure facilities in coordination with the vice principal for facilities at the school.
4) Solutions to overcome cost problems in procuring chemicals by coordinating with the head of the chemical laboratory and providing an internet network using their respective cellphones.

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LITERATURE REVIEW

a. Think-Pair-Share Model Learning Management

Management theory according to GR Terry states that the management components are POAC (planning, organizing, actuating and controlling). Learning management is the process of managing learning in a systematic and directed manner in order to achieve learning goals. Learning management consists of several components, namely: 1) Learning planning, 2) Learning organization, 3) Learning implementation, 4) Learning evaluation.(Bose, 2012)

Learning Managementis an activity that begins with planning, organizing, directing, evaluating and implementing learning to achieve effective learning outcomes. (Rukajat, 2018)

TPS learning is a cooperative learning model which consists of three stages, namely: 1) Think. At this stage, the teacher gives questions or assignments to students to think about individually. Students are given time to think independently and record their thoughts, 2) Pair. At this stage, students pair up with their classmates to discuss and share their thoughts. Students are encouraged to listen to each other and respect each other's opinions, 3) Share. At this stage, representatives from each group share the results of their discussion in front of the class. Other students can provide feedback or questions.

TPS learning has several advantages, including: a) Increasing student participation. TPS learning involves students actively in the learning process. Students are encouraged to think independently, discuss with their group friends, and share the results of their discussions in front of the class, b) Increase student understanding. TPS learning can help students to develop a better understanding of a concept or topic. Students are encouraged to think critically and creatively to process the information they receive, c) Improve students' social skills. TPS learning can help students to develop their social skills, such as communication, collaboration and problem solving skills, d) TPS learning can be applied in various subjects and grade levels. However, this learning is most effectively applied in subjects that require conceptual understanding, such as mathematics, science and languages(Ugwu, 2019)

b. Student learning outcomes

Constructivist learning theory according to Lev Vygotsky states that student learning outcomes are not only influenced by internal factors, such as students' abilities and interests, but also by external factors, such as the learning environment and social interactions. One example of a learning outcomes theory is constructivist learning theory. Constructivist learning theory states that students learn by building their own knowledge based on their experiences. In constructivist learning theory, teachers act as facilitators who provide guidance and support to students in the learning process.

CONCLUSION

1. General

Based on the research findings from interviews, observations and documentation, it can be concluded that the description and analysis of the implementation of the Think Pair Share

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model of learning management (case study at SMAN 1 Sukabumi and SMAN 5 Cimahi) can improve student learning outcomes in chemistry subjects and is in accordance with the principles Management principles according to GR Terry.

2. Special

a. The TPS Model Learning Planning at SMAN 1 Sukabumi and SMAN 5 Cimahi is in accordance with management principles according to GR Terry.

b. The organization of the TPS Learning Model at SMAN 1 Sukabumi and SMAN 5 Cimahi is in accordance with management principles according to GR Terry.

c. The implementation of the TPS Learning Model at SMAN 1 Sukabumi and SMAN 5 Cimahi is in accordance with management principles according to GR Terry.

d. Evaluation of the TPS Learning Model at SMAN 1 Sukabumi and SMAN 5 Cimahi is in accordance with management principles according to GR Terry.

e. The problems faced by teachers and students in the TPS Learning Model at SMAN 1 Sukabumi and SMAN 5 Cimahi have been found in chemistry learning.

f. A solution to overcome the problem of the TPS Learning Model at SMAN 1 Sukabumi and SMAN 5 Cimahi has been found.

RECOMMENDATION

1. **Recommendations for school principals**

   a. Using the results of this research as input for developing school policies that support the implementation of TPS model learning.

   b. Encourage chemistry teachers to collaborate and exchange experiences between teachers in implementing the TPS model of learning. Recommendations for Teachers:

2. Recommendations for teachers

   a. Use the results of this research as input for participating in training and professional development related to TPS model learning.

   b. Engage in collaboration and exchange of experiences with other teachers who apply the TPS model of learning. By sharing best practices, ideas and challenges, teachers can support each other and improve skills in organizing TPS learning.

2. Recommendations for Parents:

   a. Using the results of this research as input regarding the importance of TPS model learning and its benefits in student development.

   b. Communicate openly with teachers and schools to obtain information related to TPS model learning and regarding student progress in this Learning Model. By sharing information, parents can play an active role in supporting student development.

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3. Recommendations for Students:

a. Using the results of this research as inputto actively participate in every stage of TPS learning. They can enhance their learning experience by daring to think independently, having active discussions with group mates, and sharing ideas with the whole class.

b. Have an open attitude towards collaboration with classmates. Listening well, respecting other people's ideas, and contributing positively will enrich the shared learning experience.

4. Recommendations for further research:

Use the results of this research as input about the long-term impact and explore additional strategies and innovations in organizing and using TPS model learning, such as the use of technology, curriculum integration, or special approaches for students with special needs.

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