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Classroom Management Strategies to Increase the Effectiveness and Efficiency of Physics Learning

Andariani Novit[1*], Linda Ayuningtiyas[2], Retno Enggar Kinarsih[3], Singgih Bektiarso[4]
[1,2,3,4]Department of Physics Education, Universitas Jember, Indonesia
Email: andarianinovit2003@gmail.com

ABSTRACT

Classroom management is one of the key elements in achieving effective and efficient learning goals, especially in physics subjects. The aim of this article is to analyze the impact of classroom management on student learning outcomes and the factors that influence its effectiveness. This research was conducted using a literature research method which involved analysis of various relevant literature. Analysis shows that good classroom management, including classroom layout, attention to individual student needs, and use of supporting equipment, significantly increases student motivation and achievement of learning outcomes. The biggest challenge in classroom management is the diversity of student characteristics and limited choices. Therefore, teachers need to develop adaptive and creative management skills to create a conducive learning environment. The conclusion of this article confirms that effective classroom management not only supports the physics learning process but also contributes to the overall quality of education.

Keywords: Classroom Management; Physics Learning; Learning Outcomes; Effectiveness, Education.

1. Introduction

Management is a series of activities designed to achieve organizational goals by using resources efficiently and effectively in an environment that continually changes from time to time [1].

Classroom management is a benchmark for whether effective and efficient learning objectives have been achieved in the educational process. Educational goals can be achieved if classroom management has been implemented well at the school [2-3]. The teacher's ability to manage activities in the classroom, especially arranging the classroom to support teaching and learning activities to run optimally and improve the quality and learning motivation of students, is classroom management. The challenge that often occurs in classroom management is that classroom management, especially the arrangement of the classrooms used, is not optimal for use in teaching and learning activities [4].

The teacher's skills in managing the class cause effective learning. The teacher's skills in managing the classroom are what challenges teachers to manage courses, various student personalities, needs, and different student learning styles. To achieve effective and efficient learning, a class must be managed. Teachers try to use the potential of the class, pay close attention to students, and get to know them one by one to prevent the emergence of student behavior that disrupts the smooth teaching and learning process. Learning as a process has a strategy with classroom management in an effort to make learning effective [5].

The formulation of the problem that will be discussed in this article is how classroom management influences student learning outcomes. Is there a significant influence of classroom management on student learning outcomes? The purpose of writing this article is to inform readers that teacher skills in managing the classroom are one of the keys to achieving learning objectives. Apart from that, it provides information to prospective teachers on how to manage a class well.

2. Method

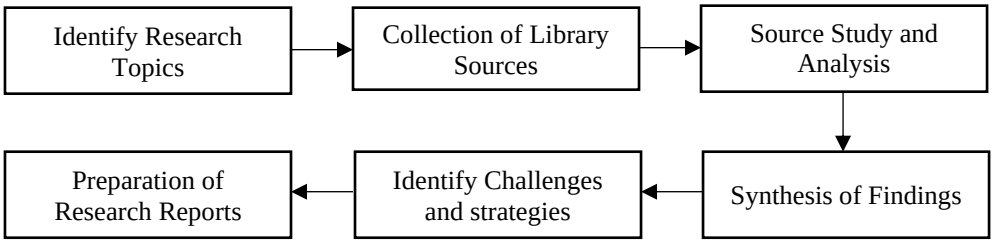

Figure 1. Literature Review Research Procedure

This research uses literature review techniques to analyze and synthesize research findings related to classroom management in physics education. A literature review is carried out by collecting, reviewing, and summarizing information from various sources such as books, journal articles, and previous related research. This method aims to identify key concepts, determine the relationship between effective classroom management and learning outcomes, and identify challenges and strategies in classroom management.

3. Result and Discussion

In classroom management, one of the things that needs to be considered is explanation skills. The skill of explaining is presenting information orally and organizing it systematically to show the relationship between one another [6]. Classroom management is a skill that teachers must have in deciding, understanding, diagnosing, and the ability to act towards improving the class atmosphere regarding aspects that need to be considered in class management, namely the nature of the class, the driving forces of the class, the class situation, selection, and creative actions. An educator's skills to organize, direct, and manage learning so that teaching and learning activities can run well is classroom management [7].

Teachers believe that a student feels happy coming to school because, in his mind, there is a picture of a comfortable classroom, good and competent teachers, good friends, and complete and supportive teaching facilities so that he is able to think productively, work together with his friends, and is able to absorb the information presented. This is an illustration of where a learning environment is able to encourage students to come to school. In contrast to a student who has a dirty learning environment, bad teachers, a messy classroom atmosphere, individualistic friends, and inappropriate teaching facilities, this will, of course, give the impression of being lazy and boring so that there is no enthusiasm during the teaching and learning process and has an impact on the failure of the teaching and learning process, because the learning environment is not conducive and effective [8].

Management is the process of planning, organizing, mobilizing, and monitoring the resources owned to achieve certain goals effectively and efficiently. It involves coordination between people, time, finances, and equipment so that all activities can run well and according to targets [9].

A class is a group of students who study under the guidance of an educator in a certain environment, both at school and outside school, with the aim of achieving learning goals. The classroom can also be interpreted as a space or place where the learning process takes place, which involves interaction between educators and students [10].

Classroom management is a series of efforts made by educators to create and maintain a conducive, productive, and well-organized learning environment so that the learning process can run smoothly and effectively. Classroom management includes planning, organizing, supervising, and controlling various activities in the classroom. This involves managing time, facilities, student behavior, and the learning methods used to create a learning atmosphere that is comfortable and orderly and supports the achievement of learning goals [11].

The aim of learning physics is to help students understand the basic concepts of physics, develop scientific thinking skills, and practice practical skills through scientific methods. In this way, students can connect theory with practice and understand the application of physics in everyday life. Good classroom management plays an important role in forming students' scientific attitudes, such as discipline, cooperation, honesty, and responsibility. By creating a comfortable and conducive learning atmosphere, classroom management supports students to think critically, creatively and innovatively in solving problems and encourages active participation in the learning process. Therefore, effective classroom management is the key to success in achieving physics learning objectives.

Physics learning has three main objectives, which include the cognitive, affective, and psychomotor domains.

a. Cognitive Domain (Understanding Concepts)

The cognitive domain in physics learning aims to equip students with an understanding of the principles, concepts, laws, and theories of physics. Hence, they are able to analyze, explain, and apply them in everyday life. Effective classroom management supports the achievement of this goal by creating an orderly and

conducive learning atmosphere so that material can be delivered and understood optimally.

b. Affective Domain (Formation of Scientific Attitudes)

The effective goal of learning physics is to form a scientific attitude in students, such as curiosity, critical attitude, objectivity, discipline, honesty, and respect for facts and data. Learning physics also instills students' awareness of the importance of science and its application for the common good. Good classroom management helps teachers build a learning environment that encourages the development of a scientific attitude. Teachers can control student behavior, instill discipline, and provide examples of professional scientific attitudes.

c. Psychomotor Domain (Practicum Skills)

In the psychomotor domain, physics learning aims to develop students' skills in carrying out practical activities, such as observing phenomena, conducting experiments, using laboratory equipment, analyzing data, and drawing conclusions from experimental results. Physics learning that involves practical activities requires effective classroom management to organize time, work groups, practical tools, and student activities in the laboratory. Good management ensures experiments run smoothly and efficiently and provide optimal learning outcomes.

Physics learning faces several main challenges, including:

a. Abstract Concept

Students have difficulty understanding complex physics concepts such as relativity theory and quantum mechanics. Using creative methods such as simulations and props can help.

b. Limited Practicum Facilities

A lack of tools and practical space hinders learning. Teachers need to utilize alternative strategies, such as simple practicums and simulation technology.

c. Diverse Student Abilities

Differences in students' ability to understand material require adaptive learning approaches, including group learning and special guidance.

d. Lack of Motivation to Learn

Physics is often considered difficult and boring. Creating an interesting learning atmosphere through active methods can increase student motivation and involvement [12]

Effective classroom management in physics learning depends on several key factors:

a. Learning Planning: Careful preparation of materials, methods, media, and assessments, including structured lesson plans, ensures efficient learning and meets student needs.
b. Time Management: Appropriate time allocation for each activity (theory, practicum, discussion, reflection) ensures a smooth learning process.
c. Class Control: Clear class rules and enforcement of discipline create an orderly and conducive learning atmosphere, especially during practicum.
d. Teacher-Student Interaction: Effective communication and positive relationships between teachers and students promote a better understanding of the material and increase student participation.
e. Student Learning Motivation: Arousing student interest through creative approaches, active methods, and rewards increases engagement and learning success.
f. Use of Technology: Computer simulations, videos, and interactive applications visualize abstract concepts and make learning more engaging [13].

In its implementation, the teacher divides students into small groups to work together and complete the experiment according to the guidelines that have been prepared. The teacher acts as a facilitator who supervises the practicum, ensures tools and materials are available, and guides students in analyzing the results of experiments. Good classroom management is needed to organize practicum time, maintain student safety, and ensure all groups work orderly and productively. With this strategy, students not only understand physics concepts but also develop critical thinking, problem-solving, and teamwork skills [14].

Ineffective classroom management can have various negative impacts that hinder the physics learning process. One of the main impacts is a learning atmosphere that is not conducive to learning, where classes become disorderly, noisy, and uncontrolled. Situations like this disrupt student focus and reduce the quality of interaction between teachers and students. As a result, the learning material is not delivered well. Furthermore, poor classroom management causes a low understanding of physics concepts. Physics learning often involves abstract concepts and practical activities that require full attention and good time management. If classroom management is not effective, students tend to have difficulty understanding the material and fail to develop critical thinking and problem-solving skills, which are the main goals of learning physics [15].

Low student motivation to learn is also a significant impact. When the learning environment is disorganized, students tend to lose interest and enthusiasm for studying physics. Low motivation results in decreased student involvement in learning activities, both in discussions, practical work, and completing assignments. In addition, poor classroom management encourages student indiscipline, such as frequent tardiness, disruption during learning, or non-compliance with class rules. This indiscipline not only harms the individual but also disrupts the learning process of other students and creates an unprofessional environment [16].

The overall impact of ineffective classroom management is that student learning outcomes are not optimal. Students fail to achieve learning goals, both cognitively, affectively, and psychomotorically. Low understanding of physics concepts, lack of practical skills, and lack of scientific attitude are indications of failure in achieving the expected learning outcomes. Therefore, good classroom management is very necessary to create a learning atmosphere that is

effective, disciplined, and supports the achievement of physics learning goals [17].

4. Conclusion

Effective classroom management is the key to successful physics learning. This includes conceptual understanding, development of practical skills, and formation of students' scientific attitudes. You can achieve your physics learning goals by creating an organized, informative, and productive learning environment. Good classroom management strategies include careful lesson planning, efficient time management, strict classroom management, and positive interactions between teachers and students. In addition, the use of learning technology and creative methods can help students understand abstract physics concepts, increase learning motivation, and overcome limited opportunities for direct practice.

On the other hand, ineffective classroom management can hinder the learning process, create a hostile atmosphere, and reduce student learning outcomes. Therefore, developing teachers' classroom management skills is very important to create a learning environment that balances and supports the achievement of learning outcomes in the cognitive, affective, and psychomotor domains. This approach makes physics learning more relevant, interesting, and meaningful for students.

Reference

[1] Yanto, M., & Fathurrochman, I. (2019). Manajemen kebijakan kepala madrasah dalam meningkatkan mutu pendidikan. *Jurnal Konseling dan Pendidikan*, *7*(3), 123–130. https://doi.org/10.29210/138700

[2] Asmara, Y., & Nindianti, D. S. (2019). Urgensi Manajemen Kelas untuk mencapai tujuan pembelajaran. *Sindang: Jurnal Pendidikan Sejarah dan Kajian Sejarah*, *1*(1), 12-24.

[3] Hidayatullah, N., Marsidin, S., & Sulastri, S. (2022). Studi Literatur: Manajemen Kelas untuk Meningkatkan Motivasi Belajar Siswa. *Jurnal Pendidikan Dan Konseling (JPDK)*, *4*(6), 10980-10986.

[4] Rosya, U. N. (2021). Manajemen Kelas dalam Penataan Ruang Belajar di SMAN 12 Banda Aceh (Doctoral dissertation, UIN AR-RANIRY).

[5] Masfufah, E., Pengelolaan, S., Dalam, K., Proses, M., Pembelajaran, D. H., Efektif, Y., Efisien, D., Sari, E., & Kusmawati, H. (2023). Asshofarul Munafi'ah STAIP, Indonesia. Dalam *Journal of Student Research (JSR)* (Vol. 1, Nomor 1).

[6] Fitriani, R., Maryani, S., Chen, D., Aldila, F. T., Br.Ginting, A. A., Sehab, N. H., & Wulandari, M. (2021). Mendeskripsikan Keterampilan Proses Sains Siswa melalui Kegiatan Praktikum Viskositas di SMAN 1 Muaro Jambi. *PENDIPA Journal of Science Education*, *5*(2), 173–179. https://doi.org/10.33369/pendipa.5.2.173-179

[7] Oci, M. (2019). Manajemen kelas. *Jurnal Teruna Bhakti*, *1*(1), 49-58.

[8] Aito, A., Rohiat, R., dan Anwar, S. (2018). Pengelolaan Kelas dalam Pembelajaran Fisika. *Manajer Pendidikan: Jurnal Ilmiah Manajemen Pendidikan Program Pascasarjana*, *12*(3).

[9] Indrawan, I. Jauhari. (2022). Manajemen Kelas, Yogyakarta: Qiara Media. Pengertian manajemen

[10] Andrias, S. P., Saputra, A., Rais, R., Abdurrahman, S. K., Purnomo, A. C., Efrida Ita, S. S., ... dan Fitriani, M. 2023. Manajemen Pendidikan. Yogyakarta : Penerbit Selat Media.

[11] Darmawan, J., Saragih, A. H., dan Sani, R. A. 2024. Model Pembelajaran Merdeka Belajar. CV Jejak (Jejak Publisher).

[12] Djabba, R. 2019. Implementasi Manajemen Kelas di Sekolah Dasar.

[13] Efendi, R., dan Gustriani, D. 2022. Manajemen kelas di sekolah dasar. Jawa Timur: Penerbit Qiara Media.

[14] Musfah, J. (2015). Manajemen Pendidikan Teori, kebijakan, dan praktik. Kencana.

[15] Muktamar, A., Iswahyudi, M. S., Salong, A., Wote, A. Y. V., Rahmatiyah, R., Riyadi, S., ... & Leuwol, F. S. (2023). MANAJEMEN PENDIDIKAN: Konsep, Tantangan, dan Strategi di Era Digital. PT. Sonpedia Publishing Indonesia.

[16] Elfrianto, H., Nasrun, M. S., & Arifin, M. (2023). Buku Ajar Manajemen Pendidikan. umsu press.

[17] Mayasari, N., Jusriati, J., Prayogo, P., Hajeni, H., Yati, Y., Ulpi, W., ... & Pajarianto, H. (2023). Manajemen Pendidikan. Penerbit Widina.