

THE UTILIZATION OF PHYSICS LABORATORY IN SMA NEGERI 1 ENDE

Maria Fatima End Kedang¹⁾, Aloisius Harso²⁾, Ana Silfiani Rahmawati³⁾

^{1,2,3}Fakultas Keguruan dan Ilmu Pendidikan, Universitas Flores Ende

Email: fatkedang.nd@gmail.com

Abstract

This study was conducted with the aim of describing the use of physics laboratory facilities in terms of the availability of facilities and the use of physics laboratories in learning. The type of research used in this research is qualitative descriptive analysis. The data analysis techniques used were documentation, interviews, and questionnaires. The data collected was then analyzed using 3 activity lines, namely: (1) data reduction, (2) data presentation, and (3) drawing conclusions. Based on the results of the data analysis, the following conclusions were found. First, the availability of physical laboratory facilities is sufficient. Second, the use of physics laboratories in physics learning is currently effective.

Keywords: *Condition of Facilities, Physics Laboratory, and Use of Facilities.*

1. INTRODUCTION

The implementation of education or teaching is teaching and learning activities that occur in the classroom. The function of National Education is in accordance with Law No. 20 of 2003 on the National Education System, article 3, namely developing the ability to form a dignified national character and civilization in order to educate the nation's life, so that students are able to develop their potential to become human beings who fear God Almighty One, has a noble character, is healthy, knowledgeable, capable, creative, independent, and becomes the color of a democratic and responsible country.

In the world of education, facilities have a very important role. For this reason, the school must be able to make the best use of, manage and manage the facilities (Awaludin & Saputra, 2016: 2).

Physics is a subject that applies theory and practice. Therefore, in the learning process in physics, the teacher does not only convey material to students, but also requires a practicum method (Usman, 2011: 3). The purpose of doing the practicum is to provide opportunities for students to see, experiment, and observe directly so that students are able to understand physics concepts.

The laboratory is a place for experiments and investigations. In a narrow sense, namely a room that is bordered by a wall and a roof, and has a number of

practical tools (Nuryani, 2005: 137). The National Education Standards Agency (BSNP, 2006) states that schools are required to have laboratory facilities and infrastructure in the form of furniture and other educational equipment.

To support the success of the physics teaching and learning process, laboratories must meet the requirements, namely having complete equipment in accordance with the standards of educational facilities and infrastructure. Laboratory equipment and use have a significant contribution to student learning outcomes in physics (Katili & Ketut, 2013: 23-31).

From the research results, SMAN 1 Ende is a high school that has 3 laboratories, one of which is a physics laboratory. However, this laboratory still has problems related to the use of facilities or tools. The effectiveness of the use of facilities / tools in the physics laboratory can be seen from several things, including the condition of the facilities or tools and the use of the physics laboratory in learning.

To find out how the conditions of the facilities or tools in the physics laboratory and the use of the physics laboratory in learning, researchers were interested in conducting research with the title "Utilization of Physics Laboratory Facilities at SMA Negeri 1 Ende". Researchers used qualitative research methods, with a descriptive approach.

2. RESEARCH METHOD

This type of research is descriptive qualitative. This research was conducted at SMA Negeri 1 Ende with a sampling system using simple random sampling technique. The subjects in this study were 35 students of SMA Negeri 1 Ende class XI majoring in Science 3, a physics subject teacher and head of the physics laboratory. The object of this research is the physics laboratory. The instruments used were interviews, questionnaires and documentation as supporting data. The data analysis technique used is an interactive analysis model.

3. RESULT AND DISCUSSION

Based on the data that has been obtained from the results of interviews, questionnaires, and documentation, each aspect can be described as follows:

1. The availability of facilities or practicum in the physics laboratory room, researchers conducted observations of the facilities or practicum tools in the physics laboratory room using the regulation of the Minister of National Education of the Republic of Indonesia No. 24 of 2007 concerning Laboratory Room Facilities and Infrastructure as a minimum standard, it was found that: or the equipment in the physics laboratory at SMAN 1 Ende is quite adequate.
2. The Use of the Physics Laboratory in Learning at SMA Negeri 1 Ende. From the results of the interview, the following information was obtained: the use of the laboratory was quite effective.

To do a practicum in a physics laboratory, the availability of suggestions or tools for practicum is very important in supporting the practical process. Based on data from observations made in the physics laboratory of SMAN 1 Ende and the results of interviews with the head of the physics laboratory and physics subject teachers, the availability of facilities or physics laboratory tools can be seen that, the availability of facilities or tools in the physics laboratory of

SMAN 1 Ende is quite adequate. Where the number of existing practical facilities or equipment almost fulfills a part of the Regulation of the Minister of National Education concerning Laboratory Facilities and Infrastructure for SD / SMP / SMA / MA. Even though the number is still less than the proper regulation and some of the existing facilities or tools cannot be used because the practicum at SMAN 1 Ende is damaged, it continues to run as expected. SMAN 1 Ende is a state school so there is no special budget from the school plus the school only accepts finished buildings or tools from the Provincial Government of East Nusa Tenggara through the Education and Culture office. So that the efforts made by the school in the procurement of physical laboratory facilities or equipment to improve the quality and quantity of damaged equipment, namely by submitting a proposal for goods and submitting it to the East Nusa Tenggara Provincial government, through the relevant Office, namely the Education and Culture Office.

In laboratory standards it can be said to be effective if it has several indicators, namely; the frequency of laboratory use, the completeness of equipment in the laboratory, the suitability of the material with the tools in the laboratory, and sufficient time allocation for practicum activities (Yamarwasyah, 2011). The use of laboratory facilities or equipment in physics learning at SMA Negeri 1 Ende has been effective, where each teacher is given ample opportunity to do practicum.

4. CONCLUSION

From the results of the research that has been carried out, it can be concluded that the conditions of the facilities or equipment in the physics laboratory of SMA Negeri 1 Ende are quite adequate, the use of laboratories in learning at SMA Negeri 1 Ende is quite effective.

5. REFERENCE

- Awaludin & Saputra. (2016). Sistem Informasi Manajemen Sarana Prasarana Sekolah: Studi kasus Dinas Pendidikan dan Kebudayaan Kabupaten Siak. Pekanbaru-Riau.

Jurnal Rekaya & Manajemen Sistem
Informasi, Vol 1.

Usman. (2011). Pembelajaran IPA di Sekolah Dasar. Jakarta: Indeks permata Puri Media

Nuryani. (2005). Strategi Belajar Mengajar Biologi. Universitas Negeri Malang Pers BSNP (Badan Standar Nasional Pendidikan).2006. Standar Sarana dan Prasarana Sekolah/Madrasah Pendidikan Umum. Jakarta.

Katili & Ketut. (2013). Analisis Sarana dan Intensitas Penggunaan Laboratorium Fisika Serta Kontribusinya Terhadap Hasil Belajar Siswa. E-Journal Program Pascasarjana Universitas Pendidikan Ganesha. Tersedia di www.physics.mun.ca/.../publication/1ab_survey.p (diakses pada tanggal 9 Februari 2020 pada pukul 16.70 wita).

Yamarwansyah. Efektifitas Penggunaan Laboratorium Fisika Dalam Menunjang Kegiatan Praktikum di SMAN se-Kabupaten Lombok Tengah, 2011