

Computer Laboratorium Management To Increase The Information And Communication Technology Skills (ICT) Student Vocation High School In The Whole Province Of Jambi

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Abstract: Computer labs are one of the most urgent facilities which cannot be ignored in Vocational High School because vocational education is a form of education that integrates theory and practice learning. This study aims to find the cause of lack optimal management of computer laboratory in Vocation High School in the Province of Jambi. This study is used descriptive qualitative approach. Meanwhile, the method of collecting data that writer used is observation techniques, interviews, and documentation. Data analysis is using Miles and Huberman model while the technique of data validity is using data triangulation. The results show that the management of computer laboratory at Vocational High School in the Province of Jambi includes planning, organizing, implementation, and supervision activities. In the principal's planning activities is to identify the needs of computer labs, either about facilities, schedule of use, and budgeting. Furthermore, organizing activities include the division of labor of computer laboratory managers that includes the head of computer labs, laboratory labs, and technicians. Implementation activities include an inventory of computer laboratory facilities, learning process, and computer lab maintenance. On the other hand, the supervision of computer laboratory includes direct and indirect supervision. be photographed and printed as it is received. Readability of copy is of paramount importance.

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I. Introduction

In the Vocational High School, educational tools that cannot be ignored is computer laboratory. This is due to vocational education is a form of secondary education that integrates theory and practice learning. According to Veithzal Riva'i, vocational education as one of the subsystems of national education is an education that prepares students to be able to work in a particular subject [1].

In general, the laboratory is defined as a place of work, i.e buildings, structures, or rooms equipped with instruments to perform scientific work such as researches, demonstrations, and discussions. According to Government Regulation no. 5 of 1980 Article 27 states that the laboratory is means of supporting the majors in one or more specific science, technology or arts in accordance with the purposes of the field of study concerned.

According to A S Hornby, a laboratory is a room or building used scientific research, experiments, testing, and other activities. Laboratories are rooms or buildings used for scientific research, experimentation, testing, and others. According to its usefulness, the laboratory is divided into two types: classroom laboratory and research laboratory [2].

According to The Regulation of the Minister of National Education. No 24 of 2007, the standard computer laboratory room should be able to accommodate a minimum of one group of student who works in groups. The minimum ratio of laboratory computer space is 2m/student. For group study with less than 15 students, minimum computer laboratory space 30m. Minimum laboratory computer space width is 5 m. The main and supporting equipment that should be in the computer lab, include computer unit, desk, and chair where to put the computer and user seat, instructor/teacher desk, whiteboard/whiteboard. While in the supporting of equipment that is, network system, LCD screen, LCD projector, cabinet/cabinet, AC/fan [2].

In addition, computer labs must also be handled by skilled and experienced personnel. Based on the regulation of the Minister of National Education of the Republic of Indonesia No. 26 of 2008 on Standard Laboratory Labor decided that the standard of the laboratory of the school includes the head of the laboratory, laboratory technician, and laboratory.

Grand tour that the writers did in State of Vocational High School 4 Jambi city, State of Vocational High School 1 Batanghari, State of Vocational High School 2 Batanghari, and State of Vocational High School 1 Muara Bungo can be seen that computer lab management has not been well managed to improve the skills of Information and Communication Technology (ICT), this can be seen from: 1) minimal number of computers, 2) lack of computer laboratory support equipment, 3) organizing has not done well, 4) allocation of labor funds is inadequate, 5) schools have not done maintenance and upkeep of laboratory facilities regularly, 6) the absence of specialized laboratory technicians. Based on the above study, the writers are interested to examine more about computer lab management.

II. Literature Review

Gareth R. Jones and Jennifer M. George point out that: management is the planning, organizing, leading, and controlling of human and other resources to achieve organizational goals efficiently and effectively [3]. In accordance with George R. Terry, management includes activities to achieve the goals, carried out by individuals who contribute their best efforts to the predetermined actions [4].

One area of education management is the management of education facilities and infrastructure. Etymologically, educational tools are a direct tool for achieving educational goals, for example space, books, libraries, and laboratories, whereas educational infrastructure means indirect tools to achieve goals such as location or place, school buildings, sports fields, and so on [5].

J. Kowalski Theodore [6], said: the scope of knowledge and skills in school facilities and facilities management can be seen from 6 practical frames:

1. A professional domain; administrators are expected to incorporate educational knowledge into decisions about the size and nature of the areas which are available for education.
2. An economic domain; administrators are expected to prepare for rare resource allocation and efficient maintenance for investment.
3. A political domain; administrators are expected to prepare leadership and conflict management skills related to competition in scarce resources.
4. A culture domain; administrators are expected to provide leadership that expresses the values and beliefs of communities and professions.
5. A social domain; administrators are expected to make decisions that benefit the community and student development, issues such as the location of schools and community access to schools are related to these frames. Knowledge of social attitudes, community, and social development is essential.
6. A legal domain; administrators are expected to make decisions related to law and government policy on the construction of public buildings. Knowledge relating to law, policy, and regulation is essential.

Special in Vocational High School education, facilities and infrastructure that cannot be ignored are a laboratory or a place of practice. This is because vocational schools are an advanced education that integrates learning theory and practice. According to Big Indonesian Dictionary, the laboratory is where to experiment or investigate something [7].

According to Mardjan the laboratory is a building equipped with props to perform scientific work such as conducting experiments, researches, demonstrations, and so on. In accordance with Kertiasa the laboratory is the place of work to conduct experiments or investigations in certain fields such as physics, biology, and so on [8].

From the above opinion, it can be seen that a laboratory is a place or tool used to develop and prove certain concepts or theories. The laboratory is also used for practice and testing and experiments. The laboratory can also be interpreted as a place for scientific research, experimentation, measurement or scientific training. In school, there are several kinds of laboratories. The various laboratories depend on the number of departments available and the ability of the school to provide the equipment. Schools that have many majors require a lot of laboratories as well. Some types of laboratories in schools are computer labs, science laboratories, social labs, and language laboratories. Of the several types of laboratories, the writers are more focused on computer labs, because computer labs are indispensable for the implementation of learning, especially simulation and digital communications learning in all vocational high schools.

The computer laboratory is a room in which there is various electronic communication equipment to support the learning process. Regulation of National Education Metrics of the Republic of Indonesia Number 24 of 2007 on school facilities and infrastructure standard mentions that computer laboratory is a space that serves as a place to develop skills in the field of information and communication technology. Based on the theory that has been mentioned above, the purpose of computer lab management in this research is planning activities, organizing, implementation and supervision conducted by the principal in order to set the computer laboratory.

III. Methodology

This research uses qualitative research approach because data about computer lab management need more qualitative data. There are two reasons for using this approach. First, the data to be revealed is in the form of opinions, views, comments, criticism, reasons and so forth. Second, this study should understand and interpret the meaning of an event of behavioral interaction in certain situations. Besides, this study is a case study. Therefore, this study according to Sukmadinata is not intended to make generalizations, but to broaden findings that allow readers or other researchers to understand the same situation and use the results of this study in practice [9].

The invention of research subjects using purposive sampling technique. While the data collection techniques are observation, interview, and documentation. The analytical model that the writers use is the Miles and Huberman models [10].

IV. Results And Discussion

1. Computer lab planning to improve Information Technology and Communication Skills in Jambi Province (State of Vocational High School Number 4 in Jambi city, State of Vocational High School Number 1 Batanghari, State of Vocational High School Number 1 Muara Bungo, State of Vocational High School Number 2 Batanghari) is quite effective. The principal involves many parties in the planning, namely the deputy head of Infrastructure and curriculum, the head of the laboratory, and also the digital simulation teachers. Computer lab planning begins by discussing the needs of computer labs, such as computers, other equipment, usage schedules, activity schedules, as well as funds. Funds for the procurement and maintenance of computer laboratories are budgeted from the School Operational Fund.
2. The aspect of organizing computer lab management in Vocational High School of Jambi Province (State of Vocational High School Number 4 in Jambi city, State of Vocational High School Number 1 Batanghari, State of Vocational High School Number 1 Muara Bungo, State of Vocational High School Number 2 Batanghari) to improve students' information and communication technology skills is less effective. Fourth State of Vocational High School in Jambi Province that the writers thoroughly do not have a clear organizational structure. The organizational structure is not made together with the laboratory head, vice chairman of Facilities and Infrastructure, laborer/teacher digital simulation and technician. In addition, the head of the laboratory in the four vocational schools in the province of Jambi has a double duty so that less focus in work. The head of the laboratory besides having to teach is also responsible as a technician. Principals are also very rare to develop human resources and rarely sent to follow the training related to his duties as a laboratory manager.
3. Aspects of the implementation of computer lab management at State of Vocational High School in Jambi Province (State of Vocational High School Number 4 in Jambi City, State of Vocational High School Number 1 Batanghari, State of Vocational High School Number 1 Muara Bungo, State of Vocational High School Number 2 Batanghari), to improve the skills of information and communication technology students are also less effective because the principal did not do inventory well. Lots of laboratory equipment not in inventory. Computer laboratory equipment infrastructure is still very minimal. The average number of computers is only 20 units of computers. This resulted in the learning process not being done properly and takes a long time because students have to take turns using it. In addition, maintenance and upkeep are not done regularly, some damaged facilities are not directly repaired due to the absence of laboratory technicians.
4. The supervision aspect of laboratory management of State of Vocational High School in Jambi Province (Vocational High School Number 4 in Jambi city, Vocational High School Number 1 Batanghari, Vocational High School Number 1 Muara Bungo, Vocational High School Number 2 Batanghari) is quite effective. The principal conducts direct and indirect supervision. Computer laboratories are also equipped with rules and instructions for use so that the cleanliness of the laboratory is maintained and provide clear instructions

V. Conclusion

Computer lab management has not been done optimally to improve information and communication technology skills in State of Vocational High School in Jambi province. This can be seen in terms of organizing and implementation. Some obstacles encountered are lack of human resources and also fund management, because schools relying only on the School Operational Funds.

VI. Recommendation

The writers recommend the results of this special writing to each principal who is used as research subjects to pay more attention to the standard means of infrastructure established by the government. Besides, the principal should better organize human resources in accordance with the needs of the laboratory and uphold the management of computer laboratories in order to support the process of digital and other simulation

learning. In addition, the required laboratory computer management, and also the cleanliness of computer labs for students comfortable in using the laboratory. Facilities and Infrastructure such as digital simulation lesson facilities, computer laboratory facilities, and other practical workshops because vocational high schools are practice-based schools. In relation to the relevant Officials in the regional and regional sectors, a full support is required and shall contribute to the availability of funding sources, information resources, and supporting facilities for the implementation of the program. Further research can be added to a quantitative approach and can modify the research topic to include comprehensive information.

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