

# The Supervision System for the Implementation of Maritime Science Education and Training

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**Abstract:-** Supervision has an important role and position in management, considering the supervisory function to test whether the work is carried out regularly, orderly, directed, and controlled. Good supervision can find problems that exist in a job and can solve problems before they get bigger and develop so that in carrying out the supervision process clear goals are needed. This type of supervision provides better and guaranteed results because it has a close relationship between one part and another. The purpose of this study was to determine the supervision system for the implementation of shipping science education and training carried out by the Malahayati Shipping Polytechnic in empowering educators, education staff, and the entire academic community so that shipping education and training activities can run smoothly. This research uses approach qualitative. Data collection techniques are interviews, observations, and documentation studies. Data analysis techniques with data reduction, display data, conclude, and verification. The subjects of this study were the Director of the Malahayati Shipping Polytechnic, Deputy Director I, Head of the Academic Administration and Youth Department, Head of the Nautical Study Program, Head of Subdivision of Academic Administration, Lecturer of the Nautical Study Program, totaling 6 people. The results showed that there was a change in the supervision system for the implementation of shipping science education and training carried out by the Malahayati Shipping Polytechnic from less than optimal to more optimal so that it could be declared good.

**Keywords:-** Supervision, Education, Training, Maritime Science.

## I. INTRODUCTION

Education is a sector that greatly determines the quality of a nation. The failure of education has implications for the failure of a nation, the success of education also automatically brings the success of a nation (Chaves, 2013; Hyder *et al.*, 2021). In the world of education, should pay attention to the elements of education, including students, educators, management, facilities, including infrastructure, and stakeholders. The assets needed in education are quality human resources (Oljira and Hailu, 2021). Quality resources can be from students, the community, or educators.

The implementation of education has functions, including initiation, innovation, and conservation. Initiation is the function of education to initiate a change. Innovation is a vehicle for achieving change (Yapici and Koldemir, 2015). Conservation functions to maintain basic values, therefore, to improve the life of a nation, structuring must begin from all aspects of education. One aspect in question is education management. Law Number 20 of 2003 concerning the National Education System, especially as stated in article 3, it aims to develop the potential of students to become human beings who believe and fear God Almighty, have a noble character, are healthy, knowledgeable, capable, creative, be independent and become a democratic and responsible citizen.

It is also described in Law Number 20 of 2003 concerning the National Education System section five on non-formal education which aims to develop the potential of students with an emphasis on mastery of knowledge and functional skills as well as the development of professional attitudes and personalities. Malahayati Shipping Polytechnic is a marine training institution of the Ministry of Transportation, Transportation Human Resources Development Agency which aims to provide excellent, professional, and ethical sea transportation human resources.

Malahayati Shipping Polytechnic began carrying out shipping education and training activities in 2013 by opening the Level IV Seafarers Training program and in its development, Malahayati Shipping Polytechnic experienced very rapid development wherein 2018 Malahayati Shipping Polytechnic was able to carry out education and training Diploma III program with the Study Program of Nautics, Ship Machinery and Ship Electrical Systems (Kiplimo and Ikua, 2017). Education in Indonesia, both formal and non-formal education, is expected to produce quality graduates who are recognized at the national, regional, and international levels and whose graduates have reliable knowledge, skills, and personal and character traits. Without producing quality graduates, education programs are not an investment in human resources, but only a waste of money, energy, time, and will cause various social problems. The purpose of education is expected to create quality educational outcomes by the expectations of various parties. In this case, education management has a very important role in realizing educational goals (Yapici and Koldemir, 2015).

Good management in the world of education in Indonesia is highly expected by all Indonesian citizens through the supervision system (Safitri, Yusrizal and AR, 2015). Supervision is a process aimed at finding out whether the results of the work carried out are by the plans, orders, objectives, or policies that have been determined. The purpose of supervision is to prevent and correct errors, irregularities, and others that are not by the assigned duties and authorities. Meanwhile, the purpose of supervision is to obtain the results of the work's implementation efficiently and effectively by the predetermined plan (Zoulikha, 2014).

Monitoring in every organizational activity is very important because organizational activities must be based on the expected goals so that monitoring is very important so that what is done is by a predetermined work plan (Altunay *et al.*, 2013). Monitoring is very necessary, it gives better and guaranteed results because it has a close relationship between one part and another (Beckman *et al.*, 2021). All of them are very demanding of competence and professionalism to enable the creation of dynamic quality interactions. From this explanation, Malahayati Shipping Polytechnic led by the Director must be able to empower educators and education staff as well as the entire academic community of Malahayati Shipping Polytechnic to be able to realize a quality, smooth and productive learning process (Andersson, Gunnarsson and Rosèn, 2015). This is part of the implementation of supervision. Having a good and regular supervision system, Malahayati Shipping Polytechnic will be able to carry out its duties more professionally (Ghonim and Eweda, 2018). Professional work will be able to face the challenges faced and can achieve its goals.

In the implementation of shipping science education and training at the Malahayati Shipping Polytechnic, in practice, there are several problems that occur, especially in the implementation of learning activities such as, Lecturers do not teach in class so many classes are empty, the monitoring team does not check the class every time so that lecturer recapitulation is not appropriate, laboratories and simulators are rarely used properly for learning activities, attendance and proof of teaching instructors in class are never filled in for each course so they are considered not teaching so that it becomes an obstacle in the learning process for the cadets of the Malahayati Shipping Polytechnic and it is feared that the cadets will not be able to understand shipping science properly so that the competence of the Malahayati Shipping Polytechnic cadet graduates is not by what is expected (Basak, 2017).

Based on the description above, the authors would like to conduct a research entitled "Supervision System for the Implementation of Education and Training at the Malahayati Shipping Polytechnic". The purpose of this study was to determine the supervision system for the implementation of shipping science education and training carried out by the Malahayati Shipping Polytechnic in empowering educators, education staff, and the entire academic community so that shipping education and training activities at the Malahayati Shipping Polytechnic can run smoothly and are expected to

graduate graduates. Excellent, professional, and ethical shipping Commerce officers.

## II. METHODS

This study uses approach qualitative descriptive. In connection with this problem, (Surakhmad, 2014) said that in general the form of descriptive investigation is to tell and interpret the existing data, about the situation experienced, the view of the attitude that appears, or about an ongoing process. As for the characteristics of descriptive research, namely (1) Focusing on solving problems that exist in the present, on actual problems, and (2) The data collected is first compiled, explained, and then analyzed. Descriptive research does not intend to test the hypothesis. Qualitative research is not just a data collection technique but is an approach to empirical data.

According to (Arikunto, 2014), qualitative research is research that does not use numbers in collecting data and in providing an interpretation of the results. Research, especially in the sciences empirical, generally aims to find, develop or test the truth of knowledge. According to (Hadi, 2016), finding means trying to get something to fill a void or deficiency, developing means expanding and digging deeper into what already exists or is still in doubt, so that research results are scientific works that can be accounted for. This research was conducted at the Malahayati Shipping Polytechnic school. This research was carried out in September 2021 at the Malahayati Shipping Polytechnic. According to (Sukardi, 2014) what is meant by the place (location) of research is: "a place where the study process used to obtain research problem solving takes place".

A research instrument is a tool used to collect research data. The goal is to make it easier for researchers to collect data. The instrument in this research is the researcher himself. According to (Sugiyono, 2013), "in qualitative research, the research instrument or tool is the researcher himself". Therefore, the researcher as an instrument must also be validated to what extent qualitative researchers are ready to conduct research which then goes into the field. Validation of the researcher as an instrument validates the understanding of qualitative research methods, mastery of insight into the field being studied, the readiness of researchers to enter the object of research, both academically and logistically. The instruments in this study were interview guidelines, observation guidelines, and documentation studies.

The data collection technique that will be used in carrying out this research is using observation techniques by making observations or observations, namely observing and recording social phenomena in the right and appropriate categories. This means that the author conducts an observation made directly to the intended research object. (Sugiyono, 2013) stated that: "observation is a process to obtain first-hand data by observing people and places at the time of research". Furthermore, the data collection technique used is the interview technique.

The interview technique is a tool that will be used in researching the form of several oral questions posed by information seekers and answered verbally by respondents in the form of responses, opinions, beliefs, thoughts, and knowledge of a person about everything that is being questioned regarding the problem to be developed. According to (Sugiyono, 2013) suggests that: "interviews are used as a data collection technique if researchers want to conduct a preliminary study to find problems that must be investigated, and also if researchers want to know things more deeply and the number of respondents is small./small". The last technique in collecting data in this study is the documentation technique. Documentation that can be used as research materials/tools such as report cards, magazines, bulletins and other forms of information produced by an institution. Documentation comes from the word document which means written goods. The documentation method in this study is used to obtain accurate data as a mirror of the actual situation or condition.

Data analysis techniques in this study by using the procedure that has been proposed by (Sugiyono, 2014) namely: "the first stage of data reduction, then display data, and the third draw conclusions and verify data". Data reduction is an initial step in analyzing data, where the data that has been obtained summarizes it, selects the main things, and focuses on the important things, data from observations, interviews, questionnaires, and documentation studies, this activity aims to facilitate understanding of the data that has been collected, making it easier for researchers to carry out the next steps of analysis. Furthermore, the display stage is the stage of systematically compiling research data with narrative text. This stage can be done by making temporary conclusions or summaries of the meaning of the process of Supervision System for the Implementation of Shipping Science Education and Training at the Malahayati Shipping Polytechnic. In addition, the summary also implies that the appropriate assessment material is carried out using the main indicators of the themes discussed.

The verification stage is an in-depth assessment stage as well as concluding. The decisions taken to make a standard conclusion are the result of a systematic analysis using relevant methods. This test is intended to make a comparison between the theoretical truth and the conditions that occur in the field, therefore the verification stage is very decisive in giving birth to significant conclusions.

### III. RESULTS

The implementation of supervision of shipping science education and training at the Malahayati Shipping Polytechnic shows a change from less than optimal to more optimal and each related unit has carried out its duties and responsibilities to the maximum (Ghonim and Eweda, 2018). In the results of the Interview with the Director of the Malahayati Shipping Polytechnic, it was found that the Malahayati Shipping Polytechnic is currently preparing a semester learning plan using the curriculum that has been set by the Head of the Transportation Human Resources Development Agency (Andersson, Gunnarsson and Rosèn,

2015; Safitri, Yusrizal and AR, 2015). The readiness of the document for the completeness of learning equipment at the Malahayati Shipping Polytechnic is currently adequate and the delivery of learning materials to be delivered by the Malahayati Shipping Polytechnic Lecturer has been adjusted to the semester learning plan that has been prepared previously and the Director of the Malahayati Sailing Polytechnic has assigned the Head of Academic Administration and Youth and The Head of the Academic Administration Sub-Section in compiling academic administration as the basis for implementing shipping science education and training at the Malahayati Shipping Polytechnic and has also assigned Deputy Director I and Head of the Study Program to be able to make a learning monitoring device such as lecturer attendance list, cadet attendance list, evidence of lecturers' teaching and monitoring forms for the attendance and learning progress of cadets.

The results of the answers with the Head of the Academic Administration and Youth and the Head of the Sub-Division of Academic Administration obtained an answer that the academic and cadet administration division has carried out the preparation of academic administration as a basis for providing education and training in shipping science at the Malahayati Shipping Polytechnic such as: can take part in learning in the semester and the Semester Academic Calendar from the beginning of the semester until the semester increases (Andersson, Gunnarsson and Rosèn, 2015).

The results of the answers with the Deputy Director I obtained an answer that the Deputy Director I had carried out routine coordination with the Heads of the Study Programs regarding the learning implementation plan, weekly monitoring evaluations that had been carried out by the Head of the Study Program and their staff and coordination meetings were to hold semester-end exams and promotion sessions Semester (Andersson, Gunnarsson and Rosèn, 2015).

Answer Results Interviews with the Head of the Study Program obtained an answer that the study program had arranged learning administration to organize education and training in shipping science at the Malahayati Shipping Polytechnic such as a learning implementation plan that contained a breakdown of curriculum load and semester credit system burdens in the semester that must be completed by the cadets, the plotting list of the teaching lecturers and the courses that will be taught by the lecturers, the monitoring form for the attendance of the cadets and lecturers, the teaching evidence form for the implementation of learning that has been carried out by the lecturers and form recapitulation of attendance and monitoring the progress of learning outcomes that have been carried out in the semester (Ghonim and Eweda, 2018; Beckman *et al.*, 2021). To oversee the course of teaching and learning activities, the study program always re-informs the teaching schedule of the lecturers in that semester and every day the study program through the study program secretary informs the recapitulation of monitoring the attendance of lecturers who

enter and do not on that day so that the program The study can ensure lecturers who have carried out learning and have fulfilled their teaching load and can recapitulate lecturers who do not carry out teaching and learning activities and will be used as evaluation material in the middle and end of the semester.

The results of Interview Answers with Lecturers of the Malahayati Shipping Polytechnic obtained an answer that lecturers have duties and responsibilities in carrying out teaching and learning activities in each semester, at the beginning of each semester, the lecturers attend the initial learning coordination meeting as well as get information related to the courses that will be taught during the next semester (Andersson, Gunnarsson and Rosèn, 2015; Ghonim and Eweda, 2018). After that, the lecturer is also in charge of preparing a semester learning plan of the courses taught by the lecturer from the first meeting to the end of the meeting, along with practical learning scenarios that will be carried out during the semester. When teaching and learning activities are running, each lecturer has the task of filling out learning administration such as: checking the attendance of cadets and filling in teaching evidence that has been prepared by the study program.

#### IV. DISCUSSION

From the results of interviews that have been carried out by the author, it can be seen that the learning supervision process has been running in the implementation of shipping education and training at the Malahayati Shipping Polytechnic. The supervision process is a feedback meeting stage. The feedback meeting is held immediately after carrying out teaching observations, with an analysis of the results of supervision first. The main purpose of this feedback meeting is to follow up on what the supervisor, as an observer, sees on the teaching and learning process. This is a highly expected part of good management at the Malahayati Shipping Polytechnic. The existing management has adopted it by applicable regulations, as well as the control carried out is very effective and efficient so that it can be a benchmark for better learning evaluations in the future that will be carried out by the Malahayati Shipping Polytechnic.

As a Malahayati Shipping Polytechnic Lecturer, it is mandatory to have a semester learning plan which from the beginning has committed to carry out their respective duties, so that the control carried out will be as expected (Kiplimo and Ikuu, 2017). From the results of the monitoring carried out, it will be evaluated from lecturers who do not teach, if there are lecturers who do not carry out learning according to the learning schedule, a warning letter will be given and sanctions will be given. It is running effectively and these policies will provide a deterrent effect and the effect will control the instructors to become more disciplined.

Supervision activities can take the form of inspections, checks, and efforts to prevent errors that may occur so that if there is a deviation or deviation, corrective efforts can be taken (Zoulikha, 2014; Ghonim and Eweda, 2018). This can be seen in the activities of the lecturers in carrying out their

duties and responsibilities in providing lecture material to the cadets in the semester, although some of the controls faced by the lecturers are the interest of the cadets in exploring maritime subjects which still must be encouraged by often carrying out practical learning. on the ship, this happens because the materials provided in general will be useful when the cadets undergo sea practice and work on ships, although the lecturers have tried to carry out their management functions well with the planning and targets to be obtained, there are still obstacles in carrying out management functions properly, but if the supervisory system can be carried out optimally, the lecturers will be able to identify the results of the achievements and learning progress that the cadets have so that with the supervision system the target can be achieved. of the material provided can be achieved.

Although the supervisory system is a control tool for the implementation of shipping science education and training, good management cannot be separated from the organizational component. According to (Terry, 2013) the notion of management is: "A process or framework, which involves the guidance or direction of a group of people towards organizational goals or real purposes". Organizing carried out by lecturers in improving the quality of the Polytechnic Malahayati sailing in carrying out teaching and learning activities is very necessary because with the organization it will create good class management. A lecturer must be able to manage to learn well so that he can achieve learning goals such as setting a good example to the cadets in terms of harmonious cooperation such as: mutual respect for friends and lecturers when learning takes place, how to speak politely with other lecturers and cadets, being responsible to achieve the goals that have been set, directing each cadet to a group and organize and divide learning tasks well and efficiently.

#### V. CONCLUSION AND SUGGESTIONS

##### A. Conclusion

Based on the results of this study, it can be concluded that the results of the supervision system in the implementation of education and training at the Malahayati Shipping Polytechnic resulted in: 1) The management coordination meeting of the Malahayati Shipping Polytechnic to monitor and evaluate the implementation of shipping science education and training has been carried out routinely and maximally; 2) The form of monitoring the attendance of cadets and lecturers has been carried out properly and maximally by the Study Program; 3) The form for monitoring the progress of the cadets' learning outcomes has been made and evaluated properly through the management coordination meeting of the Malahayati Shipping Polytechnic.

##### B. Suggestions

For further researchers, several suggestions need to be considered, including 1) Future researchers are expected to examine more deeply in the managerial side which has an important role in providing policies in the monitoring system that will be implemented; 2) Further researchers are better prepared in the research process so that they can produce

maximum research related to the Supervision System for the Implementation of Shipping Science Education and Training.

## REFERENCES

- [1]. Altunay, E. *et al.* (2013) 'Continuity in Educational Supervision: A Case Study', *Procedia - Social and Behavioral Sciences*, 106, pp. 723–729. doi: 10.1016/j.sbspro.2013.12.083.
- [2]. Andersson, I. M., Gunnarsson, K. and Rosèn, G. (2015) 'Role of headmasters, teachers, and supervisors in knowledge transfer about occupational health and safety to pupils in vocational education', *Safety and Health at Work*, 6(4), pp. 317–323. doi: 10.1016/j.shaw.2015.07.012.
- [3]. Arikunto, S. (2014) *Educational Evaluation Fundamental*. Jakarta: Earth Literacy.
- [4]. Basak, S. K. (2017) 'A framework on the factors affecting to implement maritime education and training system in educational institutions: A review of the literature', *Procedia Engineering*, 194, pp. 345–350. doi: 10.1016/j.proeng.2017.08.155.
- [5]. Beckman, M. *et al.* (2021) 'Ongoing supervision as a method to implement Motivational interviewing: Results of a randomized controlled trial', *Patient Education and Counseling*, 104(8), pp. 2037–2044. doi: 10.1016/j.pec.2021.01.014.
- [6]. Chaves, V. F. (2013) 'Higher Education and Development: The Role of Private Higher Education Institutions to Accomplish Fundamental Purposes of the Republic', *Procedia - Social and Behavioral Sciences*, 106, pp. 1292–1305. doi: 10.1016/j.sbspro.2013.12.145.
- [7]. Ghonim, M. and Eweda, N. (2018) 'Best practices in managing, supervising, and assessing architectural graduation projects: A quantitative study', *Frontiers of Architectural Research*, 7(3), pp. 424–439. doi: 10.1016/j.foar.2018.06.002.
- [8]. Hadi, S. (2016) *Basic Research Methodology Field Study Consistency Problem Experimental Design and Analysis*. Surabaya: Airlangga University.
- [9]. Hyder, K. M. *et al.* (2021) 'Impact of prediabetes education program on Knowledge, attitude and practice among prediabetic population of south India', *Preventive Medicine Reports*, 23, p. 101395. doi: 10.1016/j.pmedr.2021.101395.
- [10]. Kiplimo, R. and Ikua, B. W. (2017) 'Maritime education training in east Africa region: Current status', *Procedia Engineering*, 194, pp. 351–355. doi: 10.1016/j.proeng.2017.08.156.
- [11]. Oljira, T. and Hailu, M. (2021) 'Integrated functional adult education program and its contributions for livelihoods in Ethiopia', *Heliyon*, 7(8), p. e07718. doi: 10.1016/j.heliyon.2021.e07718.
- [12]. Safitri, E., Yusrizal and AR, D. (2015) 'Kemampuan Manajerial Kepala Sekolah Dalam Meningkatkan Kinerja Guru Di Min Rukoh Banda Aceh', *Jurnal Administrasi Pendidikan: Program Pascasarjana Unsyiah*, 3(4), pp. 24–33.
- [13]. Sugiyono (2013) *Statistics for Research*. Bandung: CV Alfabeta.
- [14]. Sugiyono (2014) *Statistics for Research Revised Edition*. Bandung: CV Alfabeta.
- [15]. Sukardi (2014) *Evaluation of Theoretical and Operational Education*. Jakarta: Earth Literacy.
- [16]. Surakhmad, W. (2014) *Introduction to Basic Scientific Research*. Bandung: PT. Tarsito.
- [17]. Terry, R. G. (2013) *Management Fundamentals*. Jakarta: Bumi Aksara.
- [18]. Yapici, M. and Koldemir, B. (2015) 'Developing Innovative Applications of Technical Drawing Course at the Maritime Education', *Procedia - Social and Behavioral Sciences*, 195, pp. 2813–2821. doi: 10.1016/j.sbspro.2015.06.399.
- [19]. Zoulikha, T.-M. (2014) 'Supervision of Primary School Teachers an Analytical Field Study', *Procedia - Social and Behavioral Sciences*, 112(Icepsy 2013), pp. 17–23. doi: 10.1016/j.sbspro.2014.01.1135.