UTILIZING MARINE TRAFFIC APPLICATIONS FOR ELECTRONIC NAVIGATION SYSTEMS AND MONITORING COURSES ON CADET REPORTING WHEN IMPLEMENTING MARINE PRACTICE AT MALAHAYATI MERCHANT MARINE POLYTECHNIC

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Abstract

It is undeniable that one of the main causes of the globalization era, which is coming faster than all parties expected, is the rapid development of information technology. The implementation of the internet, electronic commerce, electronic data interchange, virtual office, telemedicine, intranet, and so on has broken through the physical boundaries between countries. The combination of computer technology with telecommunications has produced a revolution in the field of information systems. Data or information that in ancient times had to take days to be processed before being sent to the other side of the world, can now be done in seconds. It is no exaggeration if an IBM expert draws an analogy with automotive developments as follows: "If only the automotive world had progressed as fast as information technology, at this time a car with diesel fuel could be produced, which could be driven up to a maximum speed of 10,000 km/hour, with a purchase price of only about 1 American dollar. On a micro level, there are pretty interesting things to study, namely how the evolution of existing information technology developments significantly influences competition between companies in the world, especially those engaged in the service sector. Broadly speaking, there are four periods or eras of information system development, starting from the discovery of the first computer to the present.

Keywords: *Testing, Education, Training*

INTRODUCTION

The combination of computer technology with telecommunications has produced a revolution in the field of information systems. Data or information that in ancient times had to take days to be processed before being sent to the other side of the world, can now be done in seconds. It is no exaggeration if one IBM expert draws an analogy with automotive developments as follows: "If only the automotive world had progressed as fast as information technology, at this time a car with diesel fuel could be produced, which could be driven up to a maximum speed of 10,000 km/h, with a purchase price of only about 1 American dollar. On a micro level, there are interesting things to study, namely how the evolution of existing information technology developments significantly influences competition between companies in the world, especially those engaged in the service sector.

Broadly speaking, there are four periods or eras of information system development, starting from the discovery of the first computer to the present. These four eras occurred not only because they were triggered by the rapid development of computer technology, but also supported by new theories regarding modern corporate management.

These four eras (Cash et.al., 1992) occurred not only because they were triggered by the rapid development of computer technology, but also supported by new theories regarding modern corporate management.

The Malahayati Merchant Marine Polytechnic began carrying out shipping science education and training activities in 2013 by opening the Level IV Seamanship Training (DP-IV) program and in its development, the Malahayati Merchant Marine Polytechnic experienced very rapid development where in 2018 the Malahayati Merchant Marine Polytechnic was able to carry out education and training Diploma III program with the Nautical Study Program, Ship Engineering, and Ship Electrical Systems.

Management and organizational experts such as Peter Drucker, Michael Hammer, and Porter, greatly color management's view of information technology in the modern era. It is therefore understandable that there are still many companies, especially in developing countries (third world), which still find it difficult to adopt new theories regarding management, organization, and information technology because local or local cultural factors are still attached that influence human resource behavior. the human.

So it is not surprising that companies with the most sophisticated computer equipment are still often found, but are still used as administrative tools which incidentally was the era of the use of the first computers in the world in the early 1960s around the 1960s when minicomputers and mainframes were introduced by companies such as IBM to the industrial world. The ability to calculate so fast causes a lot of companies to use it for data processing purposes (data processing).

The Malahayati Merchant Marine Polytechnic is one of the Vocational Colleges under the Ministry of Transportation, the Transportation HR Development Agency which is under the auspices of the Sea Transportation HR Development Center which has the task of organizing Vocational Education, Research and Community Service in the field of shipping according to the Regulation of the Minister of Transportation Number PM. 27 of 2019 concerning the Organization and Working Procedures of the Malahayati Merchant Marine Polytechnic has organized Diploma III Education for students / I or at the Malahayati Merchant Marine Polytechnic often called Taruna / I, The influence of the Industrial Revolution 4.0 for Higher Education is unavoidable. The use of computers at this time is aimed at increasing efficiency, because it is proven that for certain jobs, using a computer is far more efficient (in terms of time and cost) compared to employing dozens of human resources for similar things. In that era, there was no such tight competition. The number of companies is still relatively small.

Most of the big companies indirectly "monopolize" certain markets, because there are no significant competitors. At that time, almost all large companies operating in the infrastructure (electricity and telecommunications) and mining sectors purchased computer equipment to assist their daily administrative activities.

The organization's need that consumed the most computer time at that time was for back-office administration, especially those related to accounting and finance. On the other hand, the mainframe's ability to perform complex calculations is also used by companies to help solve operational technical problems, such as calculation simulations in the mining and manufacturing industries. Advances in digital technology combined with

telecommunications have brought computers into their "revolution" times. In the early 1970s, PC or Personal Computer technology was introduced as an alternative to minicomputers. With a set of computers that can be placed on a worktable (desktop), a manager or technician can obtain data or information that has been processed by a computer (with a speed that is almost the same as the speed of a mini-computer, even a mainframe).

The use of computers in companies is not only to increase efficiency but also to support more effective work processes.

The purpose of this study is to observe its relation to the learning outcomes of students and the activeness of lecturers in carrying out the Final Semester Examination remotely by using the application, Master. so that shipping science education and training activities at the Malahayati Merchant Marine Polytechnic can run smoothly and are expected to produce excellent, professional, and ethical Sailing Officer graduates.

METHODS

In this study using the approach qualitative descriptive. In connection with this problem, Surachmad (2014) said that in general the form of descriptive investigation is to tell and interpret existing data, about the situation experienced, the views or attitudes that appear, or about an ongoing process. The characteristics of descriptive research, namely (1) Focusing on solving current problems, on actual problems, and (2) The data collected were first compiled, explained, and then analyzed. Descriptive research is not meant to test hypotheses. Qualitative research is not just a data collection technique but a way of approaching empirical data.

Qualitative research according to Arikunto (2014) is research that uses less than numbers in collecting data and in providing an interpretation of the results. Something research especially in the sciences empirical, generally aims to discover, develop or test the truth of knowledge. According to Hadi (2016), finding means trying to find something to fill a void or deficiency, and developing means expanding and digging deeper into what already exists or is still in doubt so that the results of the research are works of science that can be accounted for.

This research was conducted at the Malahayati Merchant Marine Polytechnic School. This research was carried out in July 2020 at the Malahayati Merchant Marine Polytechnic. According to Sukardi (Nirwana, Murniati, and Yusrizal, 2015: 40) what is meant by a place (location) of research is: "a place where the study process used to obtain solutions to research problems 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: 305): "in qualitative research, the research instrument or tool is the researcher himself". Therefore, researchers as instruments must also be validated to what extent qualitative researchers are ready to carry out research that will then go into the field. Validation of researchers as instruments becomes a validation of understanding of

qualitative research methods, mastery of insight into the field studied, and readiness of researchers to enter research objects, both academically and logistically. The instruments in this study were interview guides, 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 held an observation made directly to the intended research object. Sugiyono (2013: 197) argues that: "observation is a process for obtaining first-hand data by observing people and places when research is carried out." Furthermore, the data collection technique used is the interview technique. The interview technique is a tool that will be used in conducting research in the form of several oral questions posed by information seekers and answered verbally by respondents in the form of responses, opinions, and beliefs resulting from one's thoughts and knowledge about everything questioned in connection with the problem to be developed. Sugiyono (2013: 188) suggests that: "Interviews are used as a data collection technique if the researcher wants to conduct a preliminary study to find problems that must be studied, and also if the researcher wants to know more in-depth things and the number of respondents is small/small." The last technique in collecting data in this study is the documentation technique. Documentation 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 items. The documentation method in this study is used to obtain accurate data as a reflection of the actual situation or condition.

The data analysis technique in this study by using the procedure proposed by Sugiyono (2014: 92), namely: "The first stage is data reduction, then data display and the third is drawing conclusions and data verification". Data reduction is an initial step in analyzing data, where the data that has been obtained summarizes it, chooses the main things, and focuses on important things. Data from observations, interviews, questionnaires, and documentation studies, this activity aims to facilitate understanding of data that has been collected, making it easier for researchers to carry out the next steps of analysis. Furthermore, regarding the display stage, it is the stage of systematically compiling research data, namely with narrative text. This stage can be done by making temporary conclusions or summarizing the meaning of the process of the Monitoring System for the Implementation of Shipping Science Education and Training at the Malahayati Merchant Marine Polytechnic. In addition, the summary also implies that the assessment material is appropriate, which is carried out using the main indicators of the themes discussed. The last is the verification stage which is the stage of in-depth study and conclusion. The decision taken to make a standard conclusion result from a systematic analysis using the appropriate method. This test is intended to make comparisons between theoretical truths and conditions that occur in the field, therefore the verification stage is very decisive in producing significant conclusions.

RESULTS AND DISCUSSION

The Implementation of the Evaluation of Learning Education and training in shipping science at the Malahayati Merchant Marine Polytechnic shows a change from less than optimal to more optimal and each related unit has carried out its duties and responsibilities to the fullest.

From the results of an interview with the Director of the Malahayati Merchant Marine Polytechnic, the answer was that the Malahayati Merchant Marine Polytechnic is currently preparing a semester evaluation plan using the online policy that has been set by the Head of the Transportation HR Development Agency. The readiness for the completeness of the learning evaluation tools at the Malahayati Pelayaran Polytechnic is currently adequate. The testing methods that will be delivered by the Lecturers of the Pelayaran Malahayati Polytechnic have been adjusted to the semester learning plans that have been prepared previously and the Director of the Pelayaran Malahayati Polytechnic has assigned the Head of Academic Administration and Youth and Head of Sub The Academic Administration Section is in compiling academic administration as a basis for implementing evaluation of shipping education and training at the Malahayati Merchant Marine Polytechnic and has also assigned the Deputy Director I and the Head of the Study Program to be able to create a learning evaluation monitoring tool such as lecturer attendance list, cadets attendance list, proof of teaching from lecturers and forms for monitoring attendance and learning progress of cadets.

From the results with the Head of Academic Administration and Youth and the Head of the Academic Administration Subdivision, it was answered that the academic administration and cadet divisions had made arrangements for academic administration as a basis for evaluating seafaring education and training at the Malahayati Merchant Marine Polytechnic, such as Director's Decree on the Appointment of Cadets who can follow the learning in that semester and the Semester Academic Calendar from the beginning of the semester until the semester increase.

From the results of the interview with the Head of the Study Program, the answer was that the study program had prepared a learning evaluation administration in the framework of organizing seafaring education and training at the Malahayati Merchant Marine Polytechnic, such as a list of lecturers examining semester final exams and the burden of the assessment system in the semester that must be completed by cadets, a list of plotting lecturers along with the courses that will be taught by the lecturers, forms for monitoring the presence of cadets and lecturers, forms of proof of teaching implementation of learning that have been carried out by lecturers and forms of attendance recapitulation and monitoring of the progress of learning outcomes that have been carried out in that semester.

From the results of interviews that have been carried out by the author, it can be seen that the learning evaluation process has been running in the implementation of shipping science education and training at the Malahayati Merchant Marine Polytechnic. The learning evaluation process is the final evaluation stage of the learning process. Learning evaluation

is the process of obtaining data and information needed to determine how far and how learning has taken place to be able to make the necessary judgments and improvements to maximize results. This is a very expected part of good management at the Malahayati Merchant Marine Polytechnic. The existing management has adopted it by the applicable provisions, as well as the control that is carried out which is very effective and efficient so that it can become a benchmark for better learning evaluations in the future which will be carried out by the Malahayati Pelayaran Polytechnic. As a Lecturer at the Malahayati Pelayaran Polytechnic, it is mandatory to have a semester learning plan up to learning evaluation which from the start has been committed to carrying out their respective duties, so that the control carried out will be as expected. From the results of the monitoring carried out, it was found that there were several obstacles in the field in the implementation of the final semester exam for this Meteorology course, including the availability of unstable signals from each provider. Weather conditions that have entered the rainy season will certainly be enough to affect the stability of the internet signal. Especially if you add a power outage due to heavy rain, of course, this will further add to the problem because if your cellphone or laptop battery is weak, it's difficult to charge it. Busy Internet traffic If many students are doing PTS Online simultaneously in an area, it will result in the internet network being busy will slow down the connecting process and even connection failure. This can be seen in the activities of the cadets in carrying out the final semester exams, although some of the controls faced by the cadets are their difficulty in accessing the exams, this occurs due to the location of the Malahayati Merchant Marine Polytechnic which is quite far from the city center and the many hills within the shipping Polytechnic Malahayati, Even though 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 the learning evaluation functions properly, but if the learning evaluation system can be carried out optimally then the lecturers will be able to identify the results and progress of learning that has been owned by the cadets so that with this monitoring system the objectives of the material provided can be achieved. The term test is then used in the field of psychology and is further limited to psychological methods, namely methods of investigating a person. One of the assessment teachers in the form of projects is Pak Arwahyu who agrees with Gabel in Ulan (2007:2) that tangible assessment is divided into two broad categories, traditional assessment, and alternative assessment. According to Hasan Hermawan (2017: 30), the next step in developing the concept of this assessment adheres to the basic understanding that the assessment exists. A lecturer must be able to carry out learning evaluations properly to be able to achieve learning objectives such as setting a good example for cadets in terms of harmonious cooperation such as mutual respect for friends and lecturers during learning, how to speak politely with other lecturers and cadets, be responsibly responsible for achieving the goals set, directing each cadet to the group and organize and share good and efficient learning tasks.

This consideration determines the value (value/merit) of the thing being evaluated. No consideration is not a judgment activity. According to Mardapi in Widoyoko (2009:2), optimizing the evaluation system has two meanings, the first is an evaluation system that provides optimal information. Initially, the principle of evaluation was heavily influenced by the concept of measurement. One of them is the concept presented by Raplan W. Tyler in Hermawan (2017:30).

CONCLUSION

From the results of this study it can be concluded that the Development of Semester Final Examination Technology for Meteorology Courses with Master Applications during the Covid-19 pandemic at the Malahayati Merchant Marine Polytechnic resulted in the following results:

a) Coordination meetings related to the implementation of marine practices at the Malahayati Merchant Marine Polytechnic to monitor and evaluate the implementation of marine practices have been carried out routinely and maximally.

b) The exam schedule and implementation of the Electronic Navigation System course using the Marine Traffic Application have been carried out properly and optimally by lecturers or cadets.

c) A monitoring form for the progress of cadet sea practice has been prepared and properly evaluated through the management coordination meeting of the Malahayati Merchant Marine Polytechnic.

For future researchers, several suggestions need to be considered, including: Further researchers are expected to study more deeply the aspect of adding internet networks which have an important role in the implementation of the final semester test of the Meteorology course that will be implemented.

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