

Indonesian Maritime E-Leadership Training Towards A Digital-Based Marine Transportation System

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Abstract.

In the era of digitalizing, a leader is needed who can provide clear direction and goals and understand digital development technology. The development of digital-based information systems in the transportation sector will have an impact on reducing logistics costs. For this reason, digital-based leadership is needed in all sectors, including the maritime sector. The purpose of this community service is to conduct Indonesian maritime e-leadership training toward a digital-based marine transportation system. The purpose of this e-leadership training is to increase knowledge of leadership ethos, increase leadership talents and interests, increase leadership creativity and reasoning power, and cultivate the spirit of community insight. Community service model in the form of training and service to the community. The training was carried out online and was attended by 531 students divided into 4 sessions, session I as many as 178 students, session II as many as 122 cadets, session 3 as many as 102 and session 4 as many as 129 cadets. The results of the service obtained that the benefits of Indonesia's maritime e-leadership training towards a digital-based marine transportation system are an increase in knowledge of leadership ethos, an increase in leadership talents and interests, an increase in leadership creativity and reasoning power, and fostering a spirit of community insight with an average answer of 73.04% agreeing by 22.79% and disagreeing by 4.17%

Keywords: E-Leadership, Maritime, and Training

I. INTRODUCTION

The understanding of leadership in the past is no longer adequate to be applied in the present, therefore it is very necessary for an effort to improve higher capabilities. The era of the industrial revolution 4.0 or what is called the digital era, has resulted in everything changing rapidly in various fields, both in the economic field to the education sector[1]. The era of the industrial revolution 4.0 is characterized by artificial intelligence, supercomputers, automatic cars, nanotechnology, genetic engineering, and innovation[2]. The relationship between digital 4.0 and leadership is very close in an era that has been touched by digitalizing. In the era of digitalizing, a leader is needed who can provide clear direction and goals and understand digital development technology [3]. Here a leader needs to be able to interact, make the team comfortable and safe, create an engagement and become a community that is in the same and the same direction. Leaders must build trust in one solid team. It will be better when the leader can also accept his threats to be able to get out of a comfortable condition by coaching and receiving feedback from outsiders of the organization. Leaders must also be able to master various latest technological media so that the organization can continue to run efficiently, creatively, innovatively and effectively. Leaders must not be anti to technological changes and survive with their old style as digitalizing continues to evolve[4].

Leadership in schools is about a leader who can inspire others to do a job to something new and advance the school organization[5]. A school is an institution in which there is a learning activity. School is also a living environment for learning activities after home, where part of the time children live as a means for the development and growth of children, as an educational institution and a place that has a function in preparing children to be able to face daily life[6]. The school is where leaders are born and made[7]. A leader can't be born out of thin air without him going to school. In school, the seeds of a leader who is already in himself, begin to be honed and formed[8]. After the development of the times, school stars were born who were able to control emotions, and harmonize between thoughts, hearts and behaviours supported by the

ability of young leaders to follow the development of communication media. As a crater for students in advance, the campus is a base as well as a source of young intellectual potential that will later determine where this nation is going. Students from all corners of Indonesia are assets that need to be fostered and developed[9]. As a young generation, the continuity of a nation for the future is very dependent on the students who exist today. Therefore, students need to be equipped with various knowledge and abilities in the fields of Organization, Management and Leadership[10]. In the maritime field, future maritime leaders must be flexible, innovative, and ready to compete with world-class terminals[11].

Senate Battalion Taruna abbreviated is a forum for youth development at Yogyakarta Maritime College as a forum for organization and in charge of units that require development and implementation with other university student organizations so that they are more communicative and sharing according to the field of knowledge learned on their respective campuses – each by the main function of leadership is to lead, the ability to influence people is important and have six competencies, namely the ability to solve problems, work under pressure, dare to be responsible, able to manage time, able to plan and organize, and have good communication skills. This Leadership Training is an effort to realize the transfer of these six competencies by improving the quality of the learning process applied to leadership courses[12]. In reality, the value of soft skills dominates the ability of Cadets at 80% compared to hard skills at 20%, so it is necessary to carry out e-Leadership training for students in the maritime sector. The objectives of this E-Leadership Training are 1) Providing provisions and opportunities to expand ethos knowledge about leadership in the field of Digital-Based Marine Transportation Systems, 2) Increasing the talents, interests and knowledge as well as skills of students/cadets, especially in the maritime community, 3) Increasing creativity and reasoning power, interests and talents and distribution, 4) Fostering the spirit of community insight.

II. METHODS

Community service model in the form of training to the community and service to the community. This type of devotion uses quantitative description. Descriptive aims to present the facts systematically so that they can be easier to understand and infer[13]. Quantitative analysis to support this study used a Likert scale[14]. The data sources in this service use primary data and secondary data[15]. Primary data is a source of data obtained directly by making direct observations, while secondary data is a source of data obtained by reading, understanding, and studying through other media, such as books, documents, and literature[16]. In this service, primary data is collected by creating questionnaires through Google Forms and will be distributed to respondents online. The respondents who will fill out the questionnaire are trainees. Secondary data is obtained from previous research, journals, books, and news on the internet with reliable sources. This study will use a 5-point Likert scale that has been modified into a 4-point Likert scale. The scale to be used is as follows. 1: Strongly Disagree; 2: Disagree; 3: Agree; 4: Strongly Agree.

III. RESULT AND DISCUSSION

Indonesia's maritime e-leadership training toward a digital-based marine transportation system was held online at the Yogyakarta Maritime College Campus (STIMARYO). This e-leadership training is open to Maritime Cadets spread throughout Indonesia. In session 1, it was explained about digital leadership at the Port. All business lines inevitably have to transform in this era of digitalization. One of them is a port in Indonesia which is now entering a new era. Many digital mechanisms will be adopted ranging from services at sea, and terminals to land. The echo of the sea toll triggered the port to get the public's attention because the port is half part of the shipping industry. Ports play a dominant role in sea transportation. The port is viewed as physically a place consisting of land and/or water as a place for government activities and company activities. The port can also be viewed as an arrangement since at the port there are government arrangements and business arrangements. As a port government arrangement, its dimension is given which must be accepted as it is. As a business entity emphasizes service / services. Ship movements and cargo movements are located inside the port as shown in Figure 1 below.

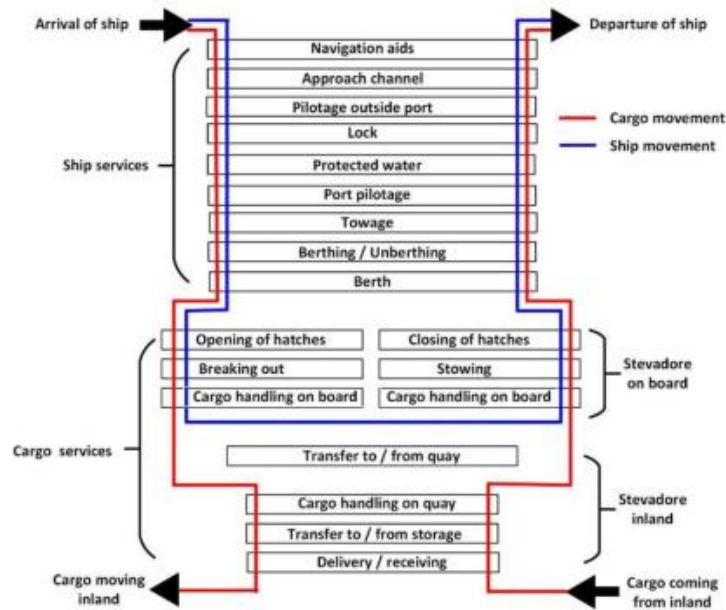


Fig 1.Cargo dan Ship Movement

In terms of transportation, the port is one part of the total transportation chain (transportation system). The total transportation chain is a series of transportation transfer processes from the sender to the recipient of goods involving various points of the movement process and modes of transportation. Currently, port logistics costs in Indonesia reach 17% of the overall business operating costs. This figure is very high when compared to regional countries, for example, Malaysia at only 8%, the Philippines at 7%, and Singapore at 6%. The obstacles range from roads, telecommunications, and incomplete or damaged port facilities, to the low supply of heavy equipment and vehicles. To be able to handle the above problems, proper regulations are needed to regulate logistics transportation equipment, especially ships. Without this regulation, there is a lack of optimal role of the port, which is indicated, among others, by the relatively long waiting time for goods at the port. With this regulation, digital leadership at the port is needed so that the problem is resolved. Digital leadership at ports is indispensable to support digitalization and positive trends in port performance in Indonesia.

Furthermore, session II was delivered related to e-leadership in the younger generation. In this session, it was conveyed that in the age of rapid development of technology and the rapid dissemination of information as it is today, it greatly affects the patterns and lifestyles and leadership styles of almost all world people. Of course, this interesting fact must be utilized properly by the younger generation with a new pattern like now, it must be used as a driving force for self-motivation and mentality to become future leaders. The new generation has a very important role as the helm holder for the future of the world. The new generation has innovations that are not outdated and easily adapt to the rapid development of technology, because of the things above, as a young generation, they need to be sensitive to the opportunities that exist by making various innovations through technological sophistication to become future leaders. The leadership characteristics required today are:

1. Fast, responsive and responsive

With the existence of sophisticated digital technology, future leaders must be able to do everything quickly because millennial society needs leaders who can serve quickly, responsively and responsively to problems that arise under their leadership.

2. Together with the community

Although digital technology is developing rapidly, a good leader in the future, the leader must have the character to easily blend into the community to advance his leadership area together with the community.

3. External Synergy (working together)

A leader who is able to inspire is a leader who is able to work well together, and consider others, not as subordinates or others, but rather make him a partner to do better things to build by working well.

4. Systemic

This is a character that must be possessed by a leader in the future, namely the systemic, ability to do things effectively and efficiently by making all decisions, policies and actions with a clear system with digital technology so that the leadership process can run clearly and visibly.

In session 3 of this training, it was explained about the ISPS Code and the ISM Code on the voyage. The International Safety Management Code (ISM Code) is an international standard for safety management in ship operations and efforts to prevent/control environmental pollution. The ISM Code is one example of a standardized safety, health, well-being and environmental management system. The ISM Code is not a management system standard that is carried out on a voluntary basis but is a safety, health, welfare and environmental management standard required through laws and regulations and other requirements[17]. In the Republic of Indonesia, the safety, health, and welfare management system that is clearly an obligation under laws and regulations is the occupational safety and health management system that has been mandated through Government Regulation No. 50 of 2012. The ISM Code was born from the need for safety management on ships caused by the high number of work accidents in the maritime and shipping fields. Based on IMO resolution A.741(18) passed on November 4, 1993, the International Management Code for Safe Operation and for Pollution Prevention was born.

This code or provision was later adopted by SOLAS (Safety of Life At Sea) in one chapter itself, namely in chapter IX. SOLAS is one of the international conventions for safety in the maritime world. While the International Ship and Port Facility Security Code (ISPS Code) is an international regulation on the security of ships and port facilities, consisting of two parts, part A and part B. Part A contains mandatory requirements for governments, ships/companies, and port facilities, while part B contains guidelines. The implementation of the ISPS Code began on July 1, 2004, in accordance with the provisions of the diplomatic conference held by the IMO, covering the types of ships that carry out international shipping activities, passenger ships which include high-speed passenger ships, freighters including high-speed ships measuring 500 gross tonnages (GT) and above and mobile offshore drilling units, and port facilities that serve ships that carry out shipping activities International. It is necessary for prospective leaders to know the ISM Code and ISPS Code to understand and understand international standards for the safe management and operation of ships and for pollution prevention and also to be familiar with the comprehensive rules regarding measures to improve the security of ships and port facilities. As explained by the speaker in the following figure 2.



Fig 2. Speakers in training

In the 4th session of this training, it was explained about the leadership of a skipper. The leadership of a ship skipper is often the ideal leadership philosophy/role model used for professional leaders as well as family leaders, we often hear the leader is likened to a ship skipper who leads a fleet sailing the vast ocean to the dock, in the hands of the skipper is the control of the rudder. The leadership model that happens on the boat is the team leadership model. A team is a special type of group whose members are interdependent, have common goals, and must coordinate their activities to achieve those goals. The team has a special role for its members with the knowledge and skills necessary to carry out its role. The components that a sailor should have in addition to knowledge and skills among them are the character. The characteristics that a sailor must have are discipline, toughness, commitment, responsibility, creativity, integrity, self-confidence, cooperation, courage, tenacity, work ethic, fortitude, adaptability, independence, problem-solving, a sense of humour and vigilance[18]. The skipper is one of the crew members who become the highest leader on the ship and has

certain powers and responsibilities by the provisions of the laws and regulations. Based on the understanding of the skipper above, it can be seen that the skipper is the official who holds the highest power on board the ship as a whole, so anyone who is on board the ship must submit to the command of the skipper for the benefit of safety, security, and order during the voyage, including if the ship's businessman of the ship is on board the ship is no exception. The skipper after signing a sea work agreement becomes the main labourer of the ship's businessman, this is with the understanding that the skipper has bound himself to be able to work under the orders of the ship's entrepreneur (shipping company) and be rewarded by the ship's entrepreneur.

The above organizational structure is in principle the same as that of other organizations. The organizational structure on board the ship is divided into two (2) namely the deck department and the engine department. Each department is subdivided into officers and subordinates/ ratings. In this case, the researcher focuses on the officer/ officer. The officers can be distinguished between the manager level and supervisor level. The manager level includes the position of nakhoda, machinist 1, and Mualim 1 while those included in the supervisor level include the position of machinist 2, machinist 3, Mualim 2, and Mualim 3. Connected with the job description of each officer's position within each department, the deck department includes: (1) the skipper/captain is the leader on board the ship and the person in charge during the voyage; (2) the chief officer shall be in charge of regulating cargo (goods and passengers), freshwater supplies, and as a navigation direction regulator; (3) the second officer is in charge of creating the route path of the cruise map to be carried out and the navigation directional regulator; (4) the third officer shall serve as a regulator, inspect, maintain all means of ship safety equipment and also serve as a navigation direction regulator. The engine department includes (1) the Head of the engine room) / chief engineer, leader and person in charge of all the machines on the ship be it the main engine, auxiliary machine, steering machine, crane engine, lifeboat machine, pump machine, and anchor machine; (2) the first engineer is responsible for the mother machine; (3) the second engineer is responsible for all auxiliary machines; and (4) the third engineer is responsible for all pumping machines. The training was carried out online using zoom meeting media as shown in figure 3 below.

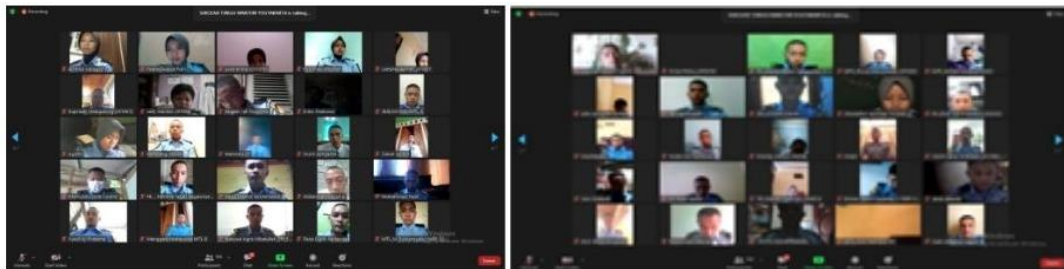


Fig 3. Trainees

The number of participants who participated was 531 students divided into 4 sessions, session I with as many as 178 students, session II with as many as 122 cadets, session 3 with as many as 102 and session 4 with as many as 129 cadets. The sample taken in filling out the questionnaire was 102 students. At the end of the next session, an online questionnaire was distributed with questions about the purpose of this e-Leadership training. From some of the questions obtained a graph as in figure 4 below.

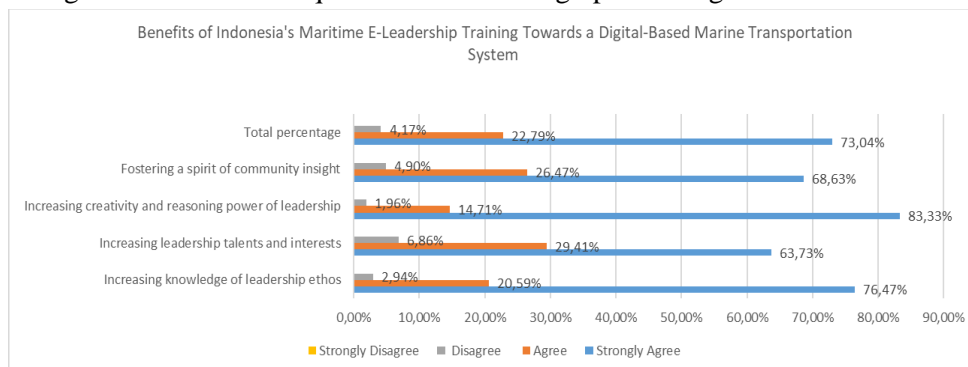


Fig 4. Graph of Benefits of Indonesia's Maritime E-Leadership Training Towards a Digital-Based Marine Transportation System

From the Figure 4, it is obtained that the benefits of Indonesia's maritime e-leadership training towards a digital-based marine transportation system include providing provisions and opportunities to expand ethos knowledge about leadership in the field of Digital-Based Marine Transportation Systems, answering strongly agreed by 76.47%, agreed by 20.59% and disagreed by 2.94%. The benefits of training in terms of increasing the talents, interests and knowledge and skills of students, especially in the maritime community, answered strongly agreed by 63.73%, agreed by 29.41% and disagreed by 6.86%. The benefits of training in improving creativity and reasoning power, interests and talents and their distribution answered strongly agreed by 83.33%, agreed by 14.71% and disagreed by 1.96%. The benefits of training in fostering a spirit of community insight answered strongly agreed by 68.63%, agreed by 26.47% and disagreed by 4.90%. Meanwhile, the benefits of Indonesia's maritime e-leadership training toward a digital-based marine transportation system on average answered strongly agreed by 73.04%, agreed by 22.79% and disagreed by 4.17%. So with this e-Leadership training, participants get additional insights related to leadership in the field of Digital-Based Marine Transportation Systems so that they can grow their leadership spirit and the trainees can have a good and directed leadership concept, especially in leading the maritime sector.

IV. CONCLUSION

Indonesia's maritime e-leadership training toward a digital-based marine transportation system was held online at the Yogyakarta Maritime College Campus (STIMARYO). the benefits of Indonesia's maritime e-leadership training towards a digital-based marine transportation system include providing provisions and opportunities to expand the ethos knowledge of leadership in the field of Digital-Based Marine Transportation Systems replied strongly agreed by 76.47%, agreed by 20.59% and disagreed by 2.94%. The benefits of training in terms of increasing the talents, interests and knowledge and skills of students, especially in the maritime community, answered strongly agreed by 63.73%, agreed by 29.41% and disagreed by 6.86%. The benefits of training in improving creativity and reasoning power, interests and talents and their distribution answered strongly agreed by 83.33%, agreed by 14.71% and disagreed by 1.96%. The benefits of training in fostering a spirit of community insight answered strongly agreed by 68.63%, agreed by 26.47% and disagreed by 4.90%. Meanwhile, the benefits of Indonesia's maritime e-leadership training toward a digital-based marine transportation system on average answered strongly agreed by 73.04%, agreed by 22.79% and disagreed by 4.17%.

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