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CES Test as a Decision-Making Support on Seafarers' Placement Planning on PT XYZ

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Abstract: The CES Test is an assessment tool that aims to evaluate seafarers' competence, knowledge, and skills required for seafarers on board. CES Test assesses various factors such as leadership abilities, technical proficiency, problem-solving skills, and communication capabilities in the English language. This study aims to research how the CES Test can be a decision-making support in PT XYZ seafarers' placement planning. Qualitative-descriptive method is used for this research. The CES test results of 200 seafarers on PT XYZ from August until October 2023 is used as the primary data for this research, and the data described by the researcher, who works as a manager who does the interview and gives education to the seafarers. The study found that 63 crews passed for shipowner grade A, 48 crews passed for grade B, 32 crews passed for grade C, and 57 crews were rejected. CES Test shows the objective result of seafarers' competency by showing the score of the test and the wrong answer summary from the test, which is very useful for seafarers' placement planning. The use of the CES Test as decision making support is expected to provide material for consideration in seafarers' placement planning and positive feedback on the human resource performance of seafarers from PT. XYZ.

Keywords: CES test, Decision-making support, Seafarers' placement planning

INTRODUCTION

In the current era of globalization, the shipping industry has become a sector that is increasingly developing and plays an important role in international trade. Seafarers themselves are one of the most important pillars in the shipping industry. Seafarers work on ships in accordance with applicable STCW (Standard of Training Certification and Watchkeeping for Seafarers) standards, which have been ratified by the government through Government Regulation No. 51 of 2012 concerning Seafarer Resource Development. Companies that focus on placing crew on ships (manning agencies) must ensure that the seafarers they choose have competence in the form of appropriate abilities and skills to face challenges at sea, both mentally and physically, and with knowledge that includes high leadership responsibilities, communication between different cultures, sudden ship movements, erratic movements, and temperatures in the ocean, as well as complete knowledge about ships and the cargo carried by ships, as stated by Oldenburg in An et al., (2020).

As stated in Ministry of Transportation Regulation No. 26 of 2022 concerning Ship Manning, shipping companies as ship crew providers are obliged to ensure that each ship's crew has been familiarized with the structure of the ship, equipment and procedures related to their duties and emergency procedures; and complete in detail the job description of each ship's crew in routine and emergency situations related to safety, prevention and control of pollution which is carried out in a coordinated manner. PT. XYZ as one of the manning agencies for seafarers and representatives of ship owners has the task of preparing seafarers to face the challenges above, including in knowledge, as well as managing and coordinating the complete process of changing crew members who have qualifications in accordance with the standards of the ship owner. PT. XYZ itself has several ship owner categories which are divided into 3 grades, namely grades A, B, and C. Grade A is a ship owner whose ship is consisting of various nationalities and has a trade area Ocean Going or international, grade B is the ship owner whose ship is consisting of Indonesian crews and has the Ocean Going trade area, and grade C is the ship owner whose ship is only consisting by Indonesian crews and has a domestic trade area.

During recruiting seafarers to work under the company, along with interviews, PT. XYZ is using the Crew Evaluation System (CES) Test as a decision-making tool before the ship's crew is placed. CES Test itself is a computer test system specifically designed to measure seafarers' abilities and skills in various aspects relevant to work on ships. The questions tested in the CES Test consist of thousands of questions which will be displayed randomly in each test session and are always updated following developments in knowledge in the shipping world. Based on recruitment results, there are still many gaps between the standards of ship owners and the knowledge possessed by seafarers themselves. PT. XYZ as a ship crew provider must find a solution to overcome the existing gap. So, the crew members who are recruited have knowledge in accordance with the standards of the ship owner where the crews are placed. Therefore, researchers want to examine more deeply how PT. XYZ can utilize the CES Test to objectively assess seafarers' abilities and fill the gap between the standards desired by the ship owner and the knowledge of the seafarers themselves so that seafarers recruited by PT. XYZ can be placed with a ship owner that suits the abilities of the crew and will provide good performance while working on the vessel.

LITERATURE REVIEW

According to Rahma (2022), CES (Crew Evaluation System) Test is a test that contains a series of special questions in Maritime English which is prepared to assess seafarers' competence in terms of maritime knowledge. The CES Test contains questions that function as an online seafarer ability assessment tool, prepared according to the standard of 1978 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) guidelines for seafarers. The CES Test is designed to evaluate the crew's background knowledge and has function to analyze specific training requirement for the knowledge sectors specified in the STCW. As quoted on the OCEAN Technologies Group page, as the official institution that provides the CES Test, the test reveals the strengths and weaknesses of each ship crew that carries out the test, and helps selecting the crew based on the skills and experience they have. The CES Test can also be used to plan remedial training and development opportunities to overcome weaknesses and maximize potential. There are three types of CES tests that are usually implemented, namely, STCW tests based on position, ship department and type of ship, detailed tests based on 10 functions, and tests in accordance with the standards desired by shipping companies.

In the guidebook published by OCEAN Technologies Group (2021), CES consists of a shipping knowledge database with more than 6,500 multiple choice questions, specific to the knowledge areas defined in the STCW. CES Test is structured with a built-in question randomization feature to avoid users remembering certain tests or patterns. There are three levels of randomization, namely the selection of different questions from various topic areas, the order in which the questions are presented and the arrangement of alternative answers. CES Test is important to carry out because there is an urgent need for well-educated and qualified ship crews in the shipping industry. Furthermore, as disclosed by Marine Insight (2019), the CES Test is a customizable seafarer test that permits various manning organizations to tailor the inquiry to their own requirements. This aids in determining a candidate's suitability for the position at hand. Every seafarer will undergo testing in a consistent manner using the same STCW-approved standards. As a result, the crew assessment system's overall effectiveness is significantly increased. An automated random testing tool called CES Test keeps testing processes as efficient as possible. There is no way to manipulate this crew testing procedure, so it always provides the best results that match the existing reality.

According to Sola (2018), decision making is a very important component in the life of every individual, including in an organization. Decision making can also influence a person's success or failure in life, including the success or failure of an organization. Likewise, in organizations or educational institutions, decision making is a necessity which is almost always carried out by the decision maker. He also stated that decision making involves a series of structured processes starting from understanding or recognizing the problem being faced, sorting and weighing and/or assessing which alternatives can answer the problem, deciding, implementing the decision that has been taken, and finally assessing the results of the decision that has been made. This series of activities requires a high level of rationality from a decision maker as well as the "power" he has to convince and guarantee that the decisions that have been taken are intended to achieve the goals that have been targeted to be achieved.

Usman (2022) stated that decision making is not only done randomly, but there are certain methods that must be used. Decision making methods also characterize the character and nature of decision making inherent in an organization. Of the many existing decision-making methods, there are at least six decision methods used in decision making, namely:

- a. Decision that lack response, are decision that are taken without paying attention to other ideas or suggestions. This method tends to be authoritarian.
- b. Decisions with Authority. After the leader hears several members' opinions, the leader issues a decision through his authority as a leader.
- c. Minority Decision, is the decision of one or two members who are considered capable of overcoming other group members. This could indicate a lack of ideas from other members, so that they are forced to use the ideas of a small number of members because they are considered relevant to the problem at hand.
- d. Majority decision, is a decision made by majority vote.
- e. Consensus decision, is a decision made by giving all group members the opportunity to reach a consensus. The decision is not always unanimous because it is possible that some groups will disagree.
- f. Unanimous Decision, is a decision that occurs when all group members agree on the decision to be taken. This decision-making method is the most ideal method, but difficult to realize.

According to Regulation of the Minister of Transportation of the Republic of Indonesia Number 84 of 2013, a Ship Crew Agency Business or Ship Crew Placement Company (Ship Manning Agency) is a ship crew agency services business in the form of a legal entity which operates in the field of recruiting and placing crew members on ships according to their qualifications. In addition, according to the Republic of Indonesia Government Regulation no. 22 of 2022 concerning the Placement and Protection of Migrant Commercial Ship Crews and Migrant Fishing Ship Crews, the Placement of Migrant Commercial Ship Crews and Migrant Fishing Ship Crews is a service activity to bring together ship crew according to competency or expertise and skills with Employer or principal or ship owner.

According to Basurko (2016), Crew Placement Companies have obligations related to crew management as follows:

- a. Selecting, contracting and managing crew members, including, where possible, salary negotiations, pension negotiations, and other mandatory items related to their employment.
- b. Ensure that the requirements of flag state law are fulfilled with required ranks, qualifications and certificates of crew members in accordance with the requirements of STCW95 as well as employment regulations.
- c. Ensure that all crew members have passed a medical examination by a doctor according to the requirement (flag state requirements or other higher medical standards approved with the ship owner).
- d. Ensure that crew members work with a common language (in accordance with the ISM Code and ISG Code), along with enough English skill to carry out their job safely between multi-cultural crews.
- e. Ensure that the crew receives training on the ISM Code.
- f. Order the ship's crew to obey all logical orders from the ship owner or company, including safety, navigation, pollution prevention and environmental protection orders.

- g. Guarantee that no one sails without prior permission from the ship owner and/or company.
- h. Arranging transportation of the ship's crew, including their return to home country.
- i. Crew training.
- j. Conduct trade union negotiations.
- k. If the company have policy related to medical, like alcohol and drugs test, they will instruct the crews to carry the test.

METHODS

This research was carried out using descriptive qualitative methods to describe and explain the analysis of the resulting data. Sugiyono (2019) stated that since the study is conducted in natural settings, qualitative methods are sometimes referred to as naturalistic research methods. In addition, descriptive research merely depicts a state as it is; it does not offer any tabulation, manipulate, or alter the factors under study. The research itself is conducted through observation, interviews, and recording. The source of the research data includes primary and secondary data sources. The primary data source was obtained from data from the CES Test assessment of 200 ship crew at PT. XYZ in the research period from August to October 2023. Meanwhile, secondary data was gathered based on the author's experience as a manager working at PT. XYZ. The framework for the recruitment and placement plan of ship crew in this research is as follows:

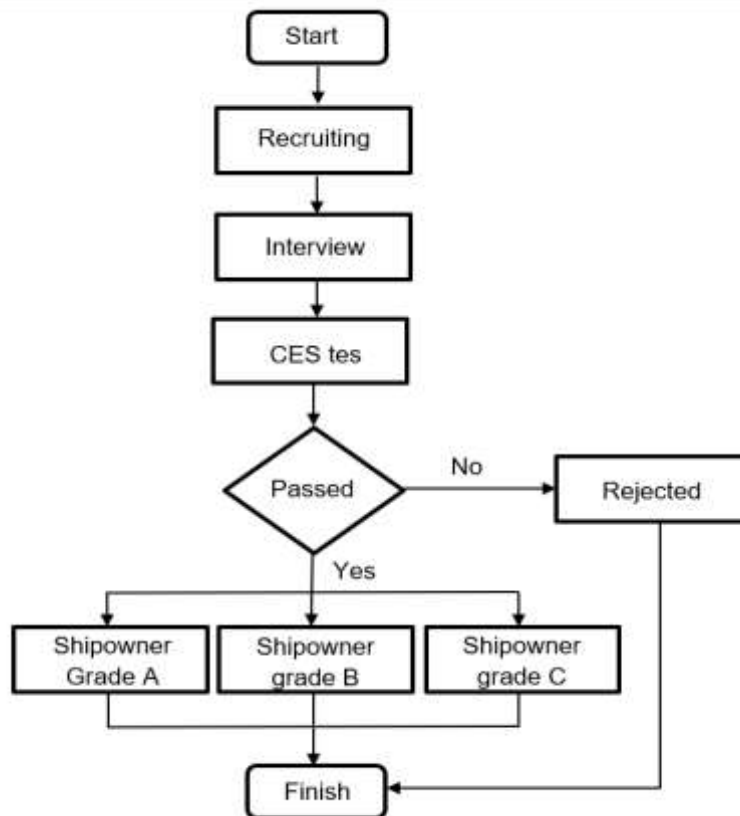


Figure 1. Flowchart of recruitment and placement of ship crew

RESULT AND DISCUSSION

PT. XYZ has 1,500 crews that work on several ship owners, both international and domestic trade area according to their grade. The ship owner grade divided into 3 grade, which are grade A, B and C. The criteria of each grade shown in the below table:

Table 1. Crew Qualification Criteria According to Ship Owner Grade in PT. XYZ

No	Criteria	Grade		
		A	B	C
1.	English skill			
	a. Very good	√	-	-
	b. Good	-	√	-
	c. Average	-	-	√
2.	Ocean Going Trade Area	√	√	-
3.	Mix Crew Experience	√	√	-
4.	Meet The Minimum Knowledge and Standard	√	√	√
5.	Experience minimum 2 years in the same type of vessel	√	-	-
6.	Minimum CES Test Score			
	a. 75	√	-	-
	b. 70	-	√	-
	c. 60	-	-	√

Referring to Table 1, which shows that to be able to work for a company with international shipping trade area, the ship's crew must be able to meet the qualification standards according to the ship owner grade A or B category. Meanwhile, if these qualification standards are not met, the ship's crew can only work for the company category C ships with domestic trade area. If the three qualification standards are not met, it will be rejected by PT. XYZ. Meanwhile, the classification of ship crews owned by PT. XYZ can be expressed in the following table:

Table 2. Percentage of seafarers at PT. XYZ based on ship owner grade

No	Shipowner Grade	Number	
		Total Crew (person)	Percentage (%)
1.	A	946	63.1
2.	B	428	28.5
3.	C	126	8.4

Table 2 shows that the percentage of ship crew working on overseas service routes is greater (grades A and B) compared to domestic shipping routes (grade C). This indicates that PT. XYZ is a multilateral company that has ship crews with good skills and can compete globally in working in the world of shipping.

As a ship crew agency company, PT. XYZ continues to strive in order to maintain and improve the quality of its seafarer human resources, including by tightening entry filters through ship crew recruitment and interviews. These requirements are stated in the Crew Recruitment Standard Operational Procedure at PT. XYZ. The stages of recruiting ship crew are considered insufficient to guarantee the quality of seafarer human resources, considering that in the interview process there are sometimes still subjective elements. Therefore, it is necessary to add objective measuring tools to assess the depth of knowledge, experience and skills possessed by seafarers. Apart from being carried out on new ship crew applicants, the CES test also applies to old crew who receive a promotion to a higher position or change to a higher grade shipowner. The CES test itself consists of several functions that are tested, these functions can be shown in table 3 as follows:

Table 3. Function Area of CES Test

o	Function Area	Department	
		Deck	Engine
1.	Controlling the operation of the ship	√	√
2.	Cargo Handling	√	-
3.	Navigation	√	-
4.	Radio communication	√	-

Maintenance and Repair	-	√
Electrical, Electronic and Control	-	√
Marine Engineering	-	√

From table 3, the function area tested in the CES test are very comprehensive and cover all the functions required of a seafarer. The results of this test also contain a wrong answer summary which provides information on the question asked, the answer chosen by the crew and the correct answer to answer the question. This will be very useful both for the crew itself and for the interviewer as a reference.

In the research carried out from August to October 2023, there were 200 new applicant ship crew who carried out interviews with PT. XYZ and proceed to the CES Test stage. Based on the results obtained from 200 new applicant sailors in the period August to October 2023, data was generated according to the following diagram:

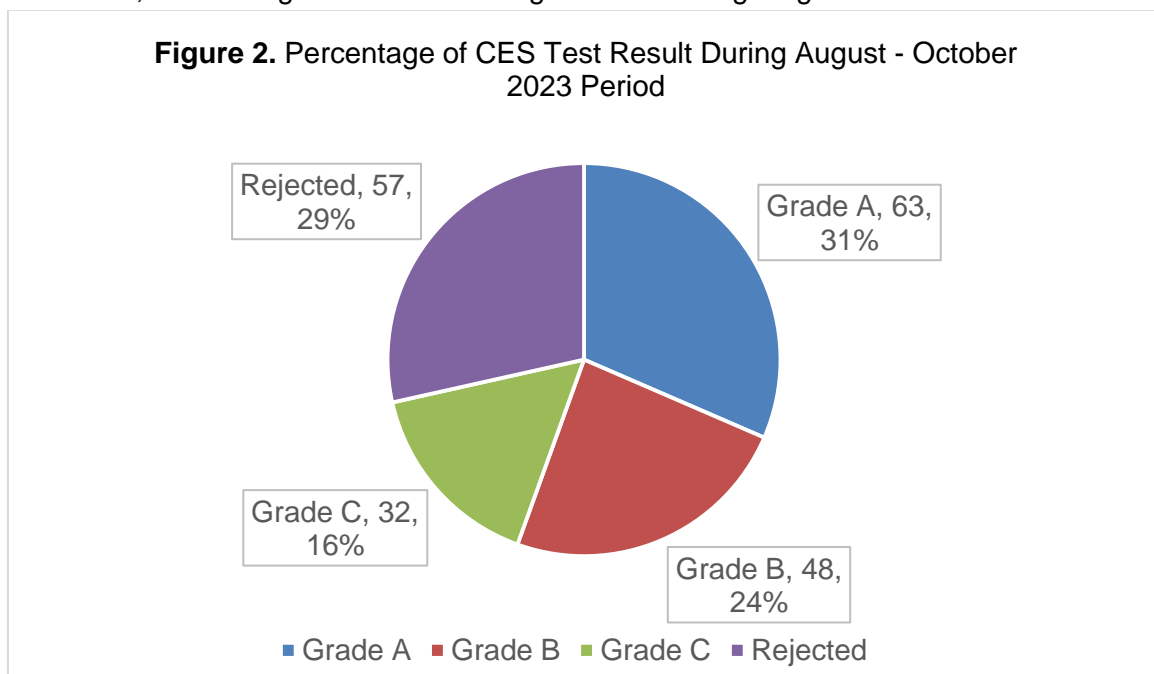


Figure 2 indicates that, of the 200 applicants for new ship crew in the period from August to October 2023, there were 63 seafarers who met the minimum results for ship owner grade A, 48 seafarers were grade B and 32 seafarers were grade C and 57 seafarers were rejected because they did not meet the minimum standards which has been set. From the results obtained, there were still 57 people who were rejected, while the crew had already passed the interview test. This shows that the results of the interview alone are still not enough to make a decision whether the new applicant crew will be accepted or not. However, with the CES test, objective decisions can be taken and can be accounted for.

During carrying out the placement of ship crew, interviewers and management crew staff will refer to the results of interviews and CES Test which are carried out objectively. The placement of the ship's crew will adjust to the standards of each ship owner.

Even though the overall CES Test results meet the minimum standards set, there are still many wrong answers found in each function area. Therefore, a wrong answer summary which contains a summary of the wrong answers is very helpful for interviewers and management crew staff to help determine the qualification level of the new applicant crew. The wrong answer summary itself will be used by the manager to provide education to the crew so that they know their shortcomings and so that they can learn more deeply about function areas where the results are still lacking so that the crew's knowledge will increase and they can be placed with a ship owner that suits their competencies.

The results of the overall review will be used by the manning agency to assign crew to ship owners, whether the crew will be assigned to ship owner grade A, B or C. This method is carried out with the aim of helping to place seafarers so they are able to work well in accordance with their competencies. It is hoped that the use of the CES test can be implemented well in the shipping industry as decision making support so that the ship crew sent by the manning agency will be comparable to the quality of performance provided by the seafarers.

CONCLUSIONS

The use of the CES test as decision making support in seafarers' placement planning is an effective step in implementing HR management at PT. XYZ. The results of the CES test are able to objectively describe the competency of seafarer human resources in accordance with the parameter set by the ship owner company. Of the 200 research samples tested based on the results of the CES test, 63 seafarers (31%) were able to be placed on ship owners with grade A (31%), grade B with 48 seafarers (24%), grade C with 32 seafarers (16%), and another 57 seafarers (29%) were rejected. The use of the CES test as decision making support is expected to be able to provide material for consideration in seafarers' placement planning and at the same time provide positive feedback on the human resource performance of seafarers from PT. XYZ to be able to work well in the company according to their respective competency levels.

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