http://dx.doi.org/10.21622/MARLOG.2023.12.1.001
Vol. 12, Iss. 1, August 2023

# The Outcome Of Implementing Structured Softes Model As A Post Simulation Debriefing Strategy Among Marine Trainees

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***1. ABSTRACT:*** This research studies the impact of implementing the structured SOFTES model as a debriefing strategy after the simulation training on marine trainees. One hundred trainees were split to two groups, each group was fifty trainees and took a questionnaire that was used to collect data. The experimental group was trained on the SOFTES model with its simulation training and the control group took the normal training only. SOFTES model is examined through multiple factorial elements, which are; Student, Objectives, Facilitator, Time, Environment, and Skills competency. Descriptive analysis was used for variables and comparing analysis using the T-test was used to study the effect of SOFTES model on the self-analysing and self-evaluation of the trainees from two groups and indicate which group has better behaviour in analysing. The impact of implementing the SOFTES model on the trainees' self-analysing was showed as a positive and significant. Also the difference between means was showed which indicates the experimental group has less anxiety and increased self-confidence than the control group.

***Keywords:*** *SOFTES - Simulation Training - Self-Analysing - Self-Evaluation.*

## 2. INTRODUCTION

Human error is widely acknowledged as the most significant contributing element to accidents by maritime stakeholders. Dangerous acts, failure to act, behaviours, unsafe conditions, or a combination of these are examples of human error. 70% of accidents were happened by human errors as mentioned in reports from some countries. The International Maritime Organization (IMO) established the basic requirement that the instructors or facilitators must trained very well. To be qualified and competent to conduct such tasks, before each officer takes his tasks on navigational watch, the training must be complete ashore. As a result, the level of safety on board ships will rise (ELASHKAR, 2016).

The simulator provides a free environment from risks for learning how to treat hard scenarios or dangerous scenarios, the shipping industry is careful about training the officers on simulators because it is safe. The new technologies can provide modern simulators that can perfectly reproduce real-world events. So, the new technologies played an important role in developing training programs based on simulators, that depend on the trainee is keeping the information and is learning perfectly if he feels, looks, or acts like the real thing. The simulator refers to the representation of the truth (Wahl, 2018).

It is proven that training maritime officers using simulators on the shape of ships is successful in learning. While the simulation, it is important to care about the timing of each step, which means should be one second in simulation equals one second in reality. This refers to manoeuvre experiments taking a long time in training despite all advantages of simulation, for example, a berthing manoeuvre training session might spend an hour. So if the trainer needs a second try for sessions (if the first way failed or needs to try a different way), it will take an extra hour, which is not particularly effective (Benedict et al., 2017).

Implementing trainee centres that focus on trainees and changing the focus from technical accuracy to accuracy in analysing the complete training is the most important point. After analysing the simulator's social organization, it is shown that increasing awareness of the interactional aspects of simulator training is important to every trainer (Wahl, 2018).

SOFTES is the model used in this research. SOFTES model is defined as including self-evaluation, selfreflection, and self-analysing of the trainee after the simulation. Explain the word SOFTES in detail where S points to students and all things related to students including their interpersonal skills and characteristics of students. Then O points to the objective and if the objective of the simulation is achieved. F points to Facilitators or instructors and how instructors supervised the trainees.

T points to the time or duration of the simulation and if the duration of each step was enough or not enough. E points to the environment and whether it simulates reality or not. Finally, S points to skills competency and whether students gain the skill and the purpose of simulation or not. SOFTES helps trainees in self-evaluating and helps to improve the next scenario of simulation (Shalaby and Hassan, 2019).

The result of using a structured SOFTES model as a post Simulation debriefing strategy among marine trainees is the purpose of this research.

## 3. LITERATURE REVIEW

Bobrysheva et al. (2022) aimed to examine the efficiency of training using engine room simulators and to show how it relates to a trainee's time at sea, ownership of a maritime license, and prior experience with other simulator types. The many engine room simulator types have been assessed by several trainees who took graduate and postgraduate marine engineering courses. Various simulator types have been taken into consideration. Numerous inferences have been made after comparing the trainee perspective with the findings of the objective assessment. The findings indicated that because 2D simulators provided an understanding of the functioning principles of whole engine room systems and their interdependencies, they may be very useful teaching tools for students in the early stages of their education. This type of simulator may also be useful for planning the operational principles of all engine room systems and their interdependencies. Additionally, useful for preparing operational procedures during resource management courses and management-level education in general.

A virtual reality ship command bridge was compared to maritime training simulator needs by Luimila et al. (2020). A VR experience centered on the STCW competency for ship steering was developed as the technique. We were able to pinpoint a number of problems with our VR teaching environment thanks to the test, which was conducted with 16 seasoned sea captains. A threat to the trainees' physical safety was present, along with unnatural controls, inadequate HMD resolution, ship behavior limits, a lack of engagement with the trainer, a lack of documentation for insightful debriefing sessions, and ship behavior restrictions. The findings showed that our training application was not up to par with all simulator criteria, but they also made it evident that each issue could be resolved with more advanced hardware and reliable virtual reality programming. In light of these conclusions, it can be said that virtual reality is a reliable, affordable, and efficient training medium for command bridge simulators.

The goal of Shalaby and Hassan's (2019) study was to examine the results of applying the SOFTIES model to the debriefing process used by nursing students. An evaluation of the SOFETS model's efficiency was carried out after holding an orientation day for the students. The results demonstrated that using the SOFTIES model with trainees improved their perception of their value as people and their level of satisfaction with their education, which was discovered in the earlier study when using simulation. There is no difference between using and not using the SOFTIES Model as a result.

Zhang et al. (2019) intended to ameliorate the training program for marine trainees in maritime operations. Three methods were adopted for analysis which is a questionnaire analysis was used, then a measuring scale to ensure the significance of visual focus in training, and finally similarity metric was adopted for estimating between saliency and optical transmission. The population was separated trainees into two groups, one of the two groups obtained less information than the other group. The result exposed that the group with more information achieved higher scores than the other group. Thus, the more information the group has, the higher performance is accomplished.

Jia et al. (2019) aimed to enhance the efficiency of the trainees in virtual reality training. There were two approaches to achieve the main aim of the study, an offline questionnaire was collected from 60 persons who answered the 10 short answer questions. The questionnaire was gathered two times one of them before the test and the other after the test to compare the efficiency of the training. The second method used was the 60 persons who answered the questionnaire spilled into 10 groups and did the virtual training ship. The result investigated the trainees' effectiveness convinced in virtual training which helped them use navigation.

Linnervuo et al. (2019)'s investigation attempted to find out how simulators may make navigation and tactical training more professional. They also looked at how simulators could be used in maritime training to benefit from cost-effectiveness, repeatability, and security. Survey responses were gathered from both sailors and sea cadets. The results showed that efficiency plays a big part in putting simulation training with marine trainees into practice.

Maung (2019) aimed to investigate the dissertation and critically evaluate the adoption of a required simulatorbased training and evaluation program for seafarers' competency certifications in Myanmar's MET system and how it can help produce quality seafarers quickly. A feedback survey from different students and universities was used. The result revealed simulators were not the ideal training and evaluation tools. However, simulators could be used as a tester for justifications that the anticipated outcomes of marine education and training (MET).

Haavardtun et al. (2019) sought to advance our understanding of how simulator fidelity affects training efficacy in marine education and training. The study looked into the effects of two different simulator models on how students participating in engine room simulation training assessed their skill growth. The self-efficacy levels and perceived skill advancement of eleven second-year marine engineering students were examined on two fidelity engine room simulators. The results demonstrated that when employing immersive training simulators as opposed to traditional education, students were more motivated to learn.

Simulator use in current marine research was examined by Ostens and Zghyer (2019), who also outlined the benefits and drawbacks of doing so in the maritime sector. After doing a literature review of relevant studies using simulators, the next step was to interview experts and researchers in the field. The results suggested that employing simulators in the maritime sector might be secure, practical, and at the cutting edge of modern technology.

Myhrvold et al. (2018) purposed to define the types of training for the sake of preparing the complex tasks in marine training, the study adopted objective performance measures to analyze the trainees' performance. The study spilled the trainees into groups: the first group with symmetric current and the other group with non-symmetric. The result revealed that complex tasks shouldn't include in early training. Another finding detected that functional fidelity simulation raised the level of trainees' performance, especially during complex tasks.

Wnag et al. (2018) sought to investigate the prevalence of seafarers' emotions and how these affected their performance using a bridge simulator. The two key elements of the technique were test recognition and emotion calibration. Seafarers' feelings during maritime operations, related to events uncovered, have an impact on their behavior and decision-making, according to officers' emotional responses during a test on a bridge simulator. A negative mood was also more likely to contribute to mistakes than a happy feeling. Lower degrees of negativity are the most perilous emotional state for navigation, followed by high levels of positivity.

Al Shahin (2017) examined how marine simulators affected training. A comparison of training technologies is presented to shed light on potential technological substitutes for simulators. A few pieces of literature were found when searching for the effects of marine simulators on training. Simulated training regularly produced significant training results, according to research from service and training institutes.

Sellberg and Lundin (2017) examined the use of simulators in maritime education, paying particular attention to how navigation teaching was carried out in virtual settings. The first episode provided a bizarre case in which a decision was made and then evaluated, whereas the second episode displayed characteristics common to the other episodes in this group in which decisions were made and then analyzed. This decision was made in light of the outcomes of the study on collaborative interaction. The small sample consisted of one instructor and four Master Mariner trainees. The results showed that instruction in simulations was a constant interactional success based on the ability to determine whether the evaluation criteria were appropriate for the specifics of the scenario and the tasks being carried out at the time. Temporality was a topic for education during the simulations, both in terms of figuring out how to increase the students' knowledge and as a stand-alone subject. Strong correlations between tasks, instruction, and technology were found.

During various phases of simulator-based training, Sellberg (2017) sought to investigate the possibilities and instructional challenges for transferring generic learning lessons to real-world scenarios. The research included both ethnographic fieldwork and video recordings of classroom practices from a marine navigation course. During scenarios and exercises, the nautical students worked in two-person teams, taking turns learning the many duties of the officer-of-the-watch and keeping an eye out while carrying out the commands of the bridge crew aboard a ship with cutting-edge equipment. The results highlighted the importance of pre-simulation evaluation and postsimulation assistance to improve learning toward a specialty. The results also showed how technology in the simulated setting gives teachers the option to continuously monitor, correct, and evaluate students' progress toward learning goals.

A thorough analysis of the usage of simulators in MET was undertaken by Sellberg (2016), and the focus was directed on bridge operations during navigation training. A global field of research combining three significant disciplines was revealed by the review's identification of 34 papers that appeared in a variety of scholarly

periodicals. Human factors, education, and marine careers. The results demonstrated that, despite the clear advantages of using simulators for training and evaluation, it is unknown if teaching strategies can ensure accurate and reliable outcomes for simulator-based education.

## 4. RESEARCH GAP AND CONTRIBUTION

The main gap identified from previous literature is that most of prior studies did not use the SOFTES model to evaluate the benefits of training simulations. On the other hand, only one study has been mentioned to test the SOFTES model, which is (Shalaby and Hassan, 2019), where this study has evaluated SOFTES model but in another sector differ from the current study, which is nursing sector.

Accordingly, the current study has two contributions. First contribution is applying a study that aims to investigate the outcome of implementing structured SOFTES model as a post simulation debriefing strategy inside the sector of Maritime Training. Second contribution is applying a multiple factorial elements of SOFTES model (Student, Objectives, Facilitator, Time, Environment, and Skills competency) that allows reaching a wider understanding of this model and its importance.

## 5. RESEARCH METHODOLOGY

The research studied the impact of implementing the SOFTES model as a debriefing strategy after the practical experience of the ship handling course on marine trainees' outcomes. The flow of current methodology is applied as follows:

1. A quantitative self-administered questionnaire was used to collect the data.

2. The questionnaire was answered by one hundred marine trainees. Two groups, each group is fifty trainees, were the result of splitting. Group (1) called the control group received the questionnaire without taking a structured debriefing after finishing the simulation is called the control group. Group (2) called the experimental group trained on the SOFTES model after the simulation training.

3. SOFTES model was created to help the experimental group trainees self-analyze and selfevaluate after the training. The experimental group received an orientation training workshop to practice SOFTES model. Six terms represent the meaning of the term (SOFTES) which are Student, Objectives, Facilitator, Time, Environment, and Skills competency. The questionnaire included questions about each term. SOFTES model helped to increase trainees' self-confidence and self-evaluation. So, it was expected SOFTES model helped to decrease trainee's anxiety and it was expected that there is a relationship between SOFTES model and skill competency.

4. The researcher used descriptive analysis for variables and comparing analysis using the T-test was used to study the effect of SOFTES model on the self-analysing and self-evaluation of the trainees after the simulation training.

5. The analysis was done by comparing the two groups using the T-test. For comparing the means of two experimental and control groups, a T-test was used. According to (Shalaby and Hassan, 2017).

Table 1 shows the questionnaire that was used to get the data for this research.

*Table 1- The used questionnaire*

| Variable | Statement | Reference |
|---|---|---|
| Student | - Encouraged me to consider my own ideas and emotions regarding a particular experience<br>- Being sensitive to my advantages and limitations.<br>- Being aware of my own emotions and senti-ments so that I could deal with both myself and others.<br>- Helped me to increase my confidence. | (Mahlanze and Sibiya, 2017) |

| Variable | Statement | Reference |
|---|---|---|
| Objective | - Helped me understand and advance my comprehension of learning objectives<br>- Increased my level of participation.<br>- Improved my skill of reflection and thinking<br>- Helped me develop my observational<br>- abilities<br>- encouraged me to seek out more information in order to be prepared for key experiences and events in the future | (Mahlanze and Sibiya, 2017) |
| Facilitator | - I had the chance to practice at the simulation<br>- I had the chance to view high-fidelity simulators.<br>- I am pleased with the instructor's performance and level of expertise during the simulation.<br>- The instructor provided all facilities | (Agha et al., 2015) |
| Timing | - The time for each step is suitable<br>- There is some distribution wasted my time<br>- can continue work as planned if I'm interrupted | (Agha et al., 2015) |
| Environment | - The simulated environment was comfortable<br>- I had a hard time treating the simulator as a real ship<br>- A good method of learning is the simulator<br>- A realistic experience was offered using the simulator<br>- The subject was more interesting thanks to the simulator | (Agha et al., 2015) |
| Skills competency | - I can link theory to the actual experience<br>- Helped me increase my problem solving<br>- Helped me increase my ability to make proactive decisions<br>- I have the capacity to reinterpret situations and issues<br>- I can learn from my mistakes and avoid them in future | (Mahlanze and Sibiya, 2017) |

# 6. RESULTS AND FINDINGS

After running the data analysis, the experimental studies and then the results will be presented in this chapter.

## *6.1 Descriptive analysis*

Table two presents the mean, standard deviation, and frequency for the trainees' age, gender, income, and marital status. The age is represented by (1) between 18 and 25 years, (2) between 26 and 40 years, and (3) bigger than 40 years. The gender is represented by (1) males, and (2) females.

The Income is represented by (1) for between 0 and 5000 EGP, (2) for between 5000 and 10000 EGP, (3) for between 10000 and 20000 EGP, and (4) for more than 20000 EGP. The marital status is represented by (1) single, (2) married, and (3) divorced. It was observed no big difference between trainees' means. So, the is no influential effect for these variables in the results.

*Table 2- Descriptive analysis of trainees' profiles*

| Variable | N | Mean | Std. Deviation | Frequency | | | |
|---|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 | 4 |
| With SOFTES | | | | | | | |
| Age | 50 | 1 | .19795 | 48 | 2 | 0 | - |
| Gender | 50 | 1 | .00000 | 50 | 0 | - | - |
| Income | 50 | 2 | .00000 | 0 | 50 | 0 | 0 |
| Marital status | 50 | 1 | .23990 | 47 | 3 | 0 | - |
| Without SOFTES | | | | | | | |
| Age | 50 | 1 | .00000 | 50 | 0 | 0 | 0 |
| Gender | 50 | 1 | .00000 | 50 | 0 | - | - |
| Income | 50 | 2 | .00000 | 0 | 50 | 0 | 0 |
| Marital status | 50 | 1 | .27405 | 47 | 3 | 0 | - |

The mean, standard deviation, and frequency for the research variables are shown in table 3. It was shown that the frequency was unstable and (2) is the most repeated rating for the control group, and

(4) is the most repeated rating for the experimental group, also the values of means for variables

(student, objective, facilitator, timing, environment,

http://dx.doi.org/10.21622/MARLOG.2023.12.1.001

skill competency) for the control group are (1.86, 1.78, 1.86, 1.68, 1.52, 1.68) and the values of means for variables (student, objective, facilitator, timing, environment, skill competency) for the experimental group are (4.54, 3.88, 4.04, 3.74, 3.76, 3.74). It was observed the difference between means that show the impact of SOFTES model.

*Table 3- Descriptive analysis of variables*

| Variable | N | Mean | Std. Deviation | Frequency | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 | 4 | 5 |
| With SOFTES | | | | | | | | |
| Student | 50 | 4.5400 | .50346 | 0 | 0 | 0 | 23 | 27 |
| Objective | 50 | 3.8800 | .38545 | 0 | 0 | 7 | 42 | 1 |
| Facilitator | 50 | 4.0400 | .40204 | 0 | 0 | 3 | 42 | 5 |
| Timing | 50 | 3.7400 | .44309 | 0 | 0 | 13 | 37 | 0 |
| Environment | 50 | 3.7600 | .59109 | 1 | 0 | 10 | 38 | 1 |
| Skill competency | 50 | 3.7400 | .59966 | 1 | 0 | 11 | 38 | 1 |
| Without SOFTES | | | | | | | | |
| Student | 50 | 1.8600 | .35051 | 7 | 43 | 0 | 0 | 0 |
| Objective | 50 | 1.7800 | .46467 | 12 | 37 | 1 | 0 | 0 |
| Facilitator | 50 | 1.8600 | .35051 | 7 | 43 | 0 | 0 | 0 |
| Timing | 50 | 1.6800 | .47121 | 16 | 34 | 0 | 0 | 0 |
| Environment | 50 | 1.5200 | .50467 | 24 | 26 | 0 | 0 | 0 |
| Skill competency | 50 | 1.6800 | .47121 | 16 | 34 | 0 | 0 | 0 |

## 6.2 Validity and reliability

Validity is known as the range that measures the meaning or concept accurately in a quantitative study. For example, a poll intended to study depression but instead measuring anxiety, would not be seen as valid. On the other hand, reliability refers to the accuracy and consistency of the measures (Heale and Twycross, 2015).

If a test has high validity, it was concluded objectives have a high connection with items. On the opposite, it was concluded objectives have a low connection with items if a test has low validity. The validity was measured by two main factors (Average Variance Extracted (AVE), and Factor Loading (FL)). AVE should be greater than 0.5. The FL of each item should be greater than 0.4.

The consistency of measures was known as reliability. The test should be better if having high reliability. The value of Cronbach's Alpha is used to measure the reliability. The value of Cronbach's Alpha is between 0 and 1. The reliability is increased when Cronbach's Alpha increases. If Cronbach's Alpha exceeds 0.7, it refers to being reliable enough. The results are shown in Table 4.

*Table 4- Validity and Reliability for each variable*

| Variable | Statement | Factor loading | AVE | Cronbach's Alpha |
|---|---|---|---|---|
| Student | Encouraged me to consider my own ideas and emotions regarding a particular experience | 0.871 | 89.429 | 0.960 |
| | Being sensitive to my advantages and limitations | 0.895 | | |
| | Being aware of my own emotions and sentiments so that I could deal with both myself and others. | 0.896 | | |
| | Helped me to increase my confidence. | 0.916 | | |
| Objective | Helped me understand and advance my comprehension of learning objectives | 0.867 | 86.064 | 0.959 |
| | Increased my level of participation. | 0.825 | | |
| | Improved my skill of reflection and thinking | 0.855 | | |
| | Helped me develop my observational abilities | 0.876 | | |
| | encouraged me to seek out more information in order to be prepared for key experiences and events in the future | 0.881 | | |
| Facilitator | I had the chance to practice at the simulation | 0.838 | 85.177 | 0.942 |
| | I had the chance to view high-fidelity simulators. | 0.871 | | |
| | I am pleased with the instructor's performance and level of expertise during the simulation. | 0.847 | | |
| | The instructor provided all facilities | 0.851 | | |

| Variable | Statement | Factor loading | AVE | Cronbach's Alpha |
|---|---|---|---|---|
| Timing | The time for each step is suitable | 0.845 | 85.399 | 0.914 |
| | There is some distribution wasted my time | 0.858 | | |
| | can continue work as planned if I'm interrupted | 0.859 | | |
| Environment | The simulated environment was comfortable | 0.844 | 85.846 | 0.959 |
| | I had a hard time treating the simulator as a real ship | 0.857 | | |
| | A good method of learning is the simulator | 0.849 | | |
| | A realistic experience was offered using the simulator | 0.871 | | |
| | The subject was more interesting thanks to the simulator | 0.872 | | |
| | I can link theory to the actual experience | 0.840 | 85.126 | 0.956 |
| Skill Competency | Helped me increase my problem solving | 0.819 | | |
| | Helped me increase my ability to make proactive decisions | 0.859 | | |
| | I have the capacity to reinterpret situations and issues | 0.869 | | |
| | I can learn from my mistakes and avoid them in future | 0.869 | | |

## *6.3 Comparing two groups*

The difference between the two groups was shown in Table 5. It was observed that the mean for the group that was trained with SOFTES is greater than the mean for the group that was trained without SOFTES in each variable. Also, the significance is smaller than 0.001. This means the SOFTES model has a positive impact on the behaviors of groups.

*Table 5- Comparing between two groups in mean*

| Variable | SOFTES | N | Mean | Std. Deviation |
|---|---|---|---|---|
| Student | With SOFTES | 50 | 4.5400 | .50346 |
| | Without SOFTES | 50 | 1.8600 | .35051 |
| Objective | With SOFTES | 50 | 3.8800 | .38545 |
| | Without SOFTES | 50 | 1.7800 | .46467 |
| Facilitator | With SOFTES | 50 | 4.0400 | .40204 |
| | Without SOFTES | 50 | 1.8600 | .35051 |
| Timing | With SOFTES | 50 | 3.7400 | .44309 |
| | Without SOFTES | 50 | 1.6800 | .47121 |
| Environment | With SOFTES | 50 | 3.7600 | .59109 |
| | Without SOFTES | 50 | 1.5200 | .50467 |
| Skill competency | With SOFTES | 50 | 3.7400 | .59966 |
| | Without SOFTES | 50 | 1.6800 | .47121 |

## 7. RESEARCH DISCUSSION

This section discusses if the objectives of the research are achieved or not. The researcher used a questionnaire to collect the data, this questionnaire was answered by one hundred marine trainees. One hundred marine trainees were split into two groups (the experimental group, the control group). The experimental group was trained on SOFTES model besides the normal training. In opposite, the control group took the normal training only.

SOFTES model was established to guide the self-reflection and self-analysis of the trainees. The result showed that there is a positive and significant impact of the SOFTES model on the marine trainees, as a result of (Shalaby and Hassan, 2017) showed also the same impact. Also, the result showed that SOFTES model helps in reducing the trainees' anxiety level, increases their ability to analyze themselves, and increases their self-confidence.

## 8. RESEARCH CONCLUSIONS

This research is done on one hundred trainees divided into two groups. This research suggested an initial hypothesis which is a new framework called SOFTES model used in training has a significant relationship with the trainees' behaviors. This research results showed that SOFTES model has a positive relationship on trainees' behaviors. SOFTES model was associated with decreasing the anxiety of trainees and helped in increasing self-confidence. The results appeared in the difference between the answers of the two groups on the questionnaire.

## 9. RESEARCH RECOMMENDATIONS

Some recommendations that may benefit the decision maker is provided in this section;

1- Implementing SOFTES model in every training in all sectors, because SOFTES model increased self-analysis and self-evaluation which helps in increasing self-confidence and reflects improving the performance and outcome of the organizations.

2- Facilitators should be trained on SOFTES MODEL to know its importance and t know how to train the student to gain more ability in self-analysis.

3- Continuously, should be making a questionnaire to the trainees and taking their suggestions to improve the simulations and the implementation of SOFTES model in how it helped them in improving self-analysis.

Other recommendations are also mentioned, which could help in the improvement of SOFTES model, are represented as follows:

1. Instructors and trainers should give a debriefing about SOFTES model during the training simulators in order to make trainees more aware about this model and by that they will be able to give wiser opinion and evaluations.

2. Apply SOFTES model in different types of simulations, in which allows different ways of understanding to this model and its effectiveness on different simulations.

3. It is recommended to make more studies on SOFTES model and collect both quantitative and qualitative data from experts to evaluate this model and concluded new effective ways of developing this model.

## 10. RESEARCH LIMITATIONS

Every scientific study has a limitation that could prevent the conclusions from being applied generally. The limitation faced by this research is the rareness of the previous research that discussed the SOFTES model and its impact on self-analysis and self-evaluation. The researcher suggested for future researcher focus on implementing SOFTES model and comparing the trainees' self-analysis and self-evaluation before implementing SOFTES model and after. Another suggestion to decisionmakers is to implement and train all students on the SOFTES model over all the sectors because the result showed its impact on self-analysis and increasing self-confidence. Another limitation is the smallness of the sample size, the researcher suggests to future researchers take a bigger sample size, which helps in getting more accurate results.

## 11. ACKNOWLEDGMENTS

To complete this work, I am greatly thankful from the core of my heart to maritime officers and experts staff inside a simulation training in the Arab Academy for Science, Technology and Maritime Transport (AASTMT), who had helped me to collect valuable information that support my research.

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