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Training on the Optimization of Ship Interior Repairs for Employees of PT. Enver Balian Marine

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Abstract:

Sektor maritim di Indonesia memiliki peranan yang sangat penting bagi perekonomian nasional maupun transportasi laut. Kapal, merupakan jantung dari sektor maritim berperan penting dalam menyediakan layanan bagi penumpang dan barang atau logistik. Perawatan kapal haruslah tetap terjaga agar tidak mengganggu kelancaran sistem operasionalnya. Di sebuah perusahaan kecil-menengah yang bergelut dalam bidang perkapalan, PT. Enver Balian Marine, membutuhkan pelatihan pekerja dalam bidang perbaikan interior kapal. Program pengabdian masyarakat ini bertujuan untuk meningkatkan kompetensi 10 pekerja inti melalui pelatihan tentang keselamatan dan kesehatan kerja (K3), penggunaan alat ukur, serta sistem modular dan desain ergonomis pada kapal. Program ini dilaksanakan pada Maret 2025 dengan tahapan; identifikasi masalah, penyusunan materi dan kegiatan, sosialisasi, pelatihan interaktif, dan evaluasi. Hasil dari pengabdian masyarakat ini menunjukkan bahwa peserta pelatihan memberikan umpan balik yang baik untuk ketiga hal yang dinilai yakni; isi dan penyampaian pelatihan, kinerja trainer/pelatih, serta organisasi pelatihan. Nilai tertinggi ada pada kinerja pelatih yang dapat menyampaikan materi dengan jelas (4.9). Sedangkan nilai terendah ada pada keilmuan baru yang didapat dari pelatihan (4.6) dan juga media dari materi pelatihan seperti PPT dan handout (4.6). Sehingga untuk kedepannya, sangat direkomendasikan untuk meningkatkan kualitas visual materi dan penambahan waktu praktek secara langsung. Program ini tidak hanya menjembatani peningkatan pengetahuan dan keterampilan pekerja, tetapi juga memperkuat kerjasama antara perguruan tinggi dan mitra industri.

Keywords: Desain Interior, Keselamatan dan Kesehatan Kerja, Perbaikan Kapal, PT. Enver Balian Marine

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Introduction

Indonesia is one of the largest archipelagic countries with 17,000 islands and two-thirds of its territory is water area. Referring to the results of the International Convention on the Law of the Sea (UNCLOS) of December 10, 1982, the area of Indonesia's sea is 3,257,357 km² and the land is around 1,919,440 km² (Setiawan, 2023). With a maritime area significantly larger than its land area, Indonesia holds enormous potential for marine wealth development. To benefit this potential, maritime transportation becomes a critical aspect. Compared to air

transportation, sea transportation offers a more cost-effective solution for inter-island connectivity, making it essential for national logistics and economic circulation.

Similar to land and air transportation systems, sea transportation also requires regular maintenance and repair to ensure continuity and safe operation. On 2023, data from the Coordinating Ministry of Maritime Affairs and Investment shows that there are more than 250 shipyards and dock industries spread throughout 29 provinces and over 70 cities/regencies with 127 supporting industries (Mahardi, 2023). One of these is PT. Enver Balian Marine, a ship repair company located in Surabaya, East Java. The company specializes in the various types of vessels maintenance, ranging from cargo ships to passenger ferries. With a strategic location near the busy shipping lanes of Tanjung Perak Port, PT. Enver Balian Marine plays a crucial role to support maritime activities. Their services are important for ensuring that ships operating in Indonesian waters remain seaworthy, efficient, and compliant with international safety standards.

Even though it already has many customers, PT. Enver Balian Marine, like many similar companies, faces operational challenges, especially in the area of human resources. Problems such as human error in time management, inaccurate measurements during work, improper material selection, and underdeveloped project concepts often hinder productivity. In fact, one of the key factors of project success is accuracy of work planning and scheduling (Beleiu, Crisan, & NISTOR, 2015). Moreover, work supervision plays an important role in ensuring project quality.

In the broader ship repair sector, interior maintenance and repair are often underestimated compared to hull or engine maintenance. It is because of the higher risk of damage hull such as corrosion that led to leaks, and also the deformation of hull that can affect the ship's stability (Zulkarami, Sulistiowati, & Lemantara, 2016). Yet, ship interiors directly affect crew welfare, safety, and functionality. Common problems include poor ventilation, low durability of installations, and substandard material use. All of those problems can compromise both comfort and safety. Neglecting interior maintenance may result in increased fire risks, Mold growth due to humidity, and injuries from improper installations. Consequently, serious attention to interior design is important to ensure the vessel can operate safely.

Preliminary observations at PT. Enver Balian Marine indicate that most employees acquire their skills informally through experience, with minimal structured training. A survey showed that over 65% of workers have never received formal training in ship interior repairs or work planning. Many were also unaware of advancements in modular installations, ergonomic designs, and the use of lightweight composite materials. This situation limits the company's ability to provide high-quality services, especially when customers demanding high quality of interior finishing that meets modern safety and comfort standards.

To address these challenges, a community service is proposed in the form of a structured training program entitled *"Training on the Optimization of Ship Interior Repairs for Employees of PT. Enver Balian Marine."* This training will focus not only on interior repair techniques but also on enhancing knowledge in project scheduling and work supervision. The program includes training on efficient and accurate work planning; material selection based on durability and safety; ergonomic and modern interior design principles; time management and measurement accuracy; and on-site simulations and troubleshooting common interior issues.

The objective is to improve employee competence, reduce human error, and foster a better understanding of workflow management. By empowering the workforce with these essential skills, the training is expected to increase productivity, improve service quality, and

enhance the company's competitive advantage in the maritime repair sector. Furthermore, this program is also fostering collaboration between academia and industry. The involvement of lecturers and students from the polytechnic institution will enable direct knowledge transfer, hands-on learning experiences, and meaningful contributions to industrial workforce development.

In conclusion, the proposed training program will serve as a catalyst to bridge the skills gap in the ship repair industry, particularly in the area of ship interiors and work scheduling. It will not only benefit PT. Enver Balian Marine but also support the long-term goal of strengthening Indonesia's maritime industry by optimizing human resources and promoting safer, more efficient ship repair practices.

Method

The training program was attended by the workers of PT. Enver Balian Marine, consisting of 10 people (Marine Engineer, Welder, Pipe fitter, Carpenter/interior, Painter/Blaster, Electrician, and Purchasing/logistic). The training involved 10 participants and was conducted at the office of PT. Enver Balian Marine, Perak, Surabaya on March 2025. The program was carried out in several stages: problem identification, planning, socialization, training implementation, and evaluation (Figure 1).

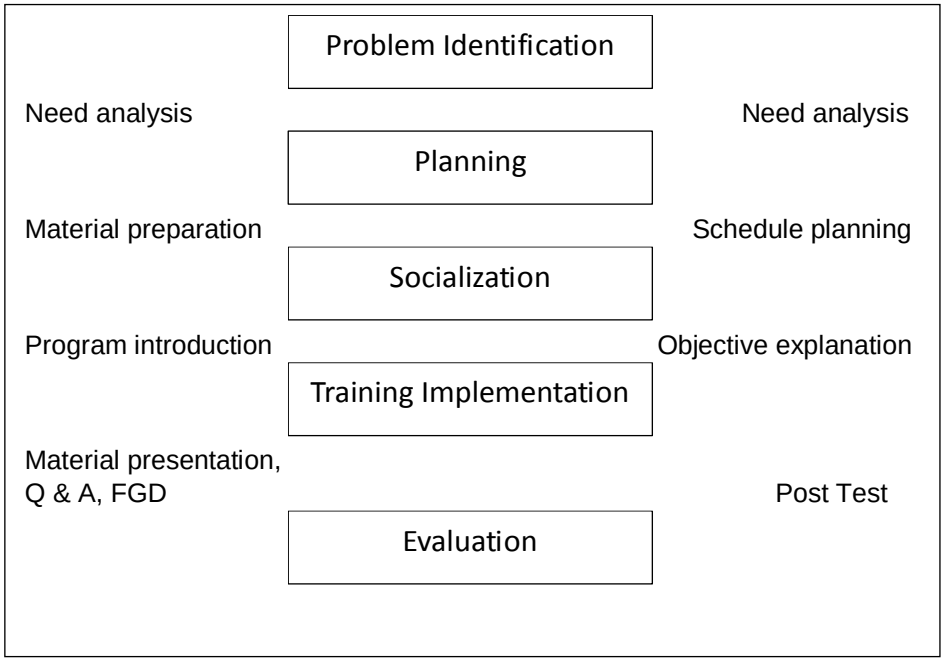

Figure 1. Workflow for the Training Program

The first step in community service is identifying the problem(s) especially related to the ship interior repair process faced by partner organization, on this case is PT. Enver Balian Marine. The team of community service conducted interviews with key staff, such as technicians, engineers, and managers, to understand the current challenges they face in their operations. The goal of this interview is to identify the root causes of any technical challenges that hinder optimal performance.

Once the problems have been identified, the next step is to design a program that addresses the needs of PT. Enver Balian Marine. This stage includes; defining the goals of the

program, designing activities, preparing a detailed implementation, and creating a framework for monitoring the effectiveness of the program and evaluating the success of the program.

The next step is socialization. During this session, the program is introduced to PT. Enver Balian Marine and all relevant stakeholders, including management, supervisors, and workers. Socialization activities include; presenting the goals, expected outcomes, and the schedule of the program. The goal of this session is to ensure that all involved parties understand the goals and benefits of the training program.

Training is the core session of this program. PT. Enver Balian Marine employees would be trained in more efficient and safe ship interior repair techniques. The training includes basic theory, technique demonstrations, and hands-on practice sessions. The training also introduces any new equipment or software that will improve repair quality and efficiency. Employees will be trained on how to use these tools. The objective of the training is to enhance employees' technical competence and reduce the potential human errors that could affect the quality of their work.

After the training sessions, an evaluation was conducted to gain the feedback of the program. The evaluation session was conducted by spreading the google form to evaluate some aspects; such as training content and delivery, trainer performance, and training organization. Participants applied their knowledge under the guidance of the community service team during the mentoring session to ensure they could effectively master the ship repair and scheduling in practice. Continuous monitoring and evaluation were conducted to assess participants' understanding and application of repairing skills, with feedback collected to inform ongoing program improvements.

Results and discussions

The training on the optimization of ship interior repairs was conducted by the community service team of Politeknik Perkapalan Negeri Surabaya. The training was purposely conducted for PT. Enver Balian Marine, a small-medium scale company which focusing on ship repair and maintenance that operates on Surabaya and Sidoarjo. This small-medium scale company is located in Perak, Surabaya. The training was conducted on March, 2025. The training was attended by 10 participants that positioning as the core workforce of the company, including the Marine Engineer, Welder & Fitter, Pipe fitter, Carpenter (interior), Painter/Blaster, Electrician (Marine), and Purchasing/Logistik.

At the beginning, observation was conducted to meet the company's need. The community service team did the interview with the company's employee to find out the problems faced by the company. Figure 2 shows the interview between the team of community service and one of the employees of PT. Enver Balian Marine.

Figure 2. Interview with the Employee

Based on the interview, it was found that most of workers did not apply work safety protocols, especially the use of safety helmets. In addition, workers do not carry simple measuring tools that support ship interior work, such as rulers and spirit level. This will increase the risk of material loss and hamper man hours. Moreover, the employee stated that most employees acquire their skills informally through experience, with minimal structured training. Many were also unaware of advancements in modular installations, ergonomic designs, and the use of lightweight composite materials.

Based on the problem identifications above, the community service team planned to provide three topics to be shared with the participants of the training. The three core topics were; 1. Occupational Health and safety (OHS), 2. Measuring Tools and Techniques, and 3. Introduction to Modular System and Ergonomics. OHS was important topic to share since it could increase awareness and compliance with safety protocols. It focused on the use of Personal Protective Equipment (PPE) such as safety helmet, gloves, shoes, goggles and etc. Simulation and videos also showed to make participants understand the impact of neglecting PPE on working site. Work time management and efficiency (Man Hours) was also explained by the team to improve the time management awareness to support project productivity. To avoid the time loss, reduce the material waste, and improve accuracy, the topic on the use of simple measuring tools for precision in interior word was needed to explained. Furthermore, to broaden participants' understanding of modern interior construction methods, the 3rd topic need to introduced.

After the topics have been arranged, the implementation of the training was carried out. The training was started by the opening speech from the chairman of the community service team, to introduce the purpose and also the flow of the training session. The second session was about delivering the topics by the expert. The three topics were presented through Power Point Presentation (PPT). Besides presentation slides, the topics also delivered through video and handout. During the explanation, the participants fully pay attention to the expert as we can see on Figure 3.

Figure 3. Materials' Presentation

After the topics were presented, the next session was about Question-and-Answer Session. Participants could ask the any questions related to the topics. Then, Focus Group Discussion (FGD) was conducted to facilitate every job position to discuss their problems

related to the topics given and then discuss about the solution together with the expert. During the Focus Group Discussion, the participants were arranged to sit within the same job position to ease the discussion as in Figure 4. After having Focus Group Discussion, hands-on practice session was carried out to introduces any new equipment or software that could improve repair quality and efficiency, such as Microsoft Project.

After the implementation of the training sessions, a post-training evaluation was conducted to gain the feedback from the participants. The evaluation session was conducted by spreading the google form to evaluate some aspects; such as training content and delivery, trainer performance, and training organization. The feedback from participants, as summarized in Table 1, highlights the overall training implementation organized by community service team. Based on the participants' responses, the training content and delivery received high score. The statement of "*The training topics were relevant to my daily work"*, got a high average score of 4.8. It indicates that almost all participants stated that the training topics provided by the team were in line with participants' actual job and responsibilities at the company. However, on statement 2 which was about the new knowledge on occupational safety (PPE, OHS) that gained by participants showed a little bit lower than any other statements (4.6). It reminded the team to reflect on that point (PPE, OHS) to provide the updated knowledge and technologies on the next occasion. While the statement "*I understand better how to use measuring tools like rulers and levels"* received 4.7, indicating that even basic tools like rulers and level need proper instruction to ensure the precision in doing the working task. Furthermore, the statement on modular systems and new materials, "*The session on modular systems and new materials was useful*." got the average score of 4.8. It showed that participants appreciated innovation and modern technique in ship interior work. This is aligned with the trend in maritime industry that emphasize modular construction for efficiency and flexibility (Stopford, 2011). The use of various methods, both presentation and practice also got high score (4.8), showing that the delivery technique was suitable for most participants.

Regarding to trainer performance, participants gave a score of 4.9 for the clarity of the material explained by trainer or community service team. Other aspects, such as trainer preparation, trainer professionalism, trainer responsiveness to participants' question during the training, and the relevance of examples were score 4.8. It was indicating that the trainer was not only expert in the field of interior design reparation but also having capability to engage the participants during the training. It is in line with the research of (H.S, B.R, & KiranA., 2017) that found out the crucial role of trainer in the engineering field; as navigators and guide to boost students' participations by both providing suitable teaching methods and ensuring effective teaching and learning to improve the understanding of concept, especially through experiential workshops and innovative teaching techniques.

In term of training organization, this training also performed well. Overall satisfaction of the training organization scored 4.8. It meant that the participants received great experience, starting from the registration until the end of the training. For the communication built by the community service team with the company scored lower than participants' satisfaction, which was 4.7. It indicated that the transfer information run well before and during the training, however, it still needed improvement to avoid miscommunication. The training materials received the lowest score among four aspects of training organization, which was 4.6. Even though it positioned the lowest score, it still portrayed good satisfaction from participants. However, suggestion was needed to improve the quality of training materials, such as using multimodal media. While for the training schedule, participants gave a score of 4.7, showing

that they appreciate the flow of each session which already planned well by the community service team and the company.

Aspect	Statement	Scale
Training Content and Delivery	The training topics were relevant to my daily work.	4.8
	I gained new knowledge about occupational safety (PPE, OHS).	4.6
	I understand better how to use measuring tools like rulers and levels.	4.7
	The session on modular systems and new materials was useful.	4.8
	The training methods (presentation, practice) were easy to follow.	4.8
Trainer Performance	The trainer explained the material clearly.	4.9
	The trainer was well-prepared and professional.	4.8
	The trainer responded well to questions and discussions.	4.8
	The trainer gave practical and relevant examples.	4.8
Training Organization	I satisfied with the overall organization of the training	4.8
	The committee have done a good communication before and during the training	4.7
	The training materials were effective (PPT, handout, tools)	4.6
	The overall training schedule were well planned.	4.7

Table 1. The Feedback from Participants

After the evaluation session was conducted, the chairman of the community service team closed the training session. During the closing, participants also stated their opinion and suggestions for the next training. One of them said that "*This training is really good for them to increase their knowledge and competence related to the updated science on ship interior reparation. Hopefully there will be another training on different topics next time"*. It showed the positive feedback from the participant to continue the collaboration between the community service team and the company. At the end there was a photo session just like what we can see on Figure 5.

Figure 5. Community Service Team with the Participants

Conclusion

The results suggest that the training successfully met its objectives in term of training content and delivery, trainer performance, and training organization. The positive feedback reflects good connection between training topics and participants' work in the fields of ship interior repair. The training also has great opportunity to continue the collaboration between the community service team and the company. However, some minor improvements should be

made such as; enhancing visual and instructional materials and adding more time for hands-on practice session, especially for tool usage.

References

Beleiu, I., Crisan, E., & NISTOR, R. (2015). MAIN FACTORS INFLUENCING PROJECT SUCCESS. (January 2021), 59–72. Retrieved from https://www.researchgate.net/publication/348488881%0AMAIN

H.S, C., B.R, N., & KiranA., G. (2017). Train the Trainer - an Experiential way to Effective Teaching. Journal of Engineering Education Transformation, 30(3), 278–283.

Mahardi, J. (2023). Laporan Kinerja Deputi Bidang Koordinasi Kedaulatan Maritim dan Energi Tahun 2023. Jakarta.

Setiawan, A. (2023). Menyiapkan Tata Kelola Laut Berkelanjutan. Indonesia.Go.Id. Retrieved from https://indonesia.go.id/kategori/ragam-ais-forum-2023/7295/menyiapkan-tata-kelola-laut-berkelanjutan?lang=1

Stopford, M. (2011). Maritime Economics.

Zulkarami, R., Sulistiowati, & Lemantara, J. (2016). RANCANG BANGUN PENJADWALAN DAN MONITORING PERBAIKAN LAMBUNG KAPAL PADA PT TAMBANGAN RAYA PERMAI Refi. JSIKA, 5(1), 1–6.