

I am pleased to share my academic journey and the significant research conducted during my Master of Science in Marine Technology (Naval Architecture Stream) at Newcastle University. This degree, which I pursued part-time over four to five years, was a transformative experience, both professionally and personally.

My research focused on a crucial and timely topic: the feasibility of hybridizing the Gozo Channel Line Ferries by incorporating Energy Storage Systems. Titled "Feasibility Study for the Hybridization of the Gozo Channel Line Ferries through the Incorporation of Energy Storage Systems," my thesis aimed to explore the potential for converting existing diesel-powered ferries to partial or fully electric propulsion systems. This project is significant as it addresses the urgent need for sustainable and environmentally friendly solutions in the maritime industry, particularly for short-distance applications.

The key findings of my research indicated that hybridization is indeed feasible for short-distance ferry operations. By replacing traditional diesel generators with batteries, the ferries could significantly reduce their carbon emissions and operational costs. This transition to hybrid propulsion systems not only promises environmental benefits but also economic advantages, making it a viable option for maritime operators.

Throughout my research, I encountered several challenges. One of the most interesting was the technical complexity involved in integrating energy storage systems with existing maritime infrastructure. This required a deep understanding of both naval architecture and advanced energy technologies. However, these challenges were also opportunities for learning and growth, pushing me to develop innovative solutions and expand my technical expertise.

My academic journey would not have been possible without the support of the Tertiary Education Scholarship Scheme. The scholarship provided invaluable financial assistance, allowing me to focus on my studies and research without the burden of financial stress. I am profoundly grateful for this support, which played a crucial role in my academic achievements.

Completing this degree has significantly broadened my knowledge of the marine industry and its vast opportunities. As a Marine Engineering Officer with the Armed Forces of Malta, the insights and skills I gained are directly applicable to my current role and future endeavours. I plan to use this degree as a stepping stone to obtain my Euro Engineer warrant, further advancing my career and contributing to the maritime sector.

My overall experience during the master's course was immensely rewarding. Academically, the topics covered were highly engaging and relevant, providing a comprehensive understanding of marine technology and its applications. On a personal level, the course offered fantastic networking opportunities, allowing me to connect with professionals and peers who share my passion for maritime innovation. Many of these connections have blossomed into lasting friendships.

In conclusion, I would like to publicly acknowledge that my degree was carried out following the award of the Tertiary Education Scholarship Scheme. This scholarship

was instrumental in my academic journey, and I am committed to using the knowledge and skills gained to contribute positively to the maritime industry. My experience at Newcastle University has been a defining chapter in my professional life, equipping me with the tools and insights to drive sustainable advancements in marine technology.

I look forward to applying what I have learned to real-world challenges and continuing to explore innovative solutions in the maritime sector. Thank you for the support and opportunities provided by the Tertiary Education Scholarship Scheme, which have been pivotal in my academic and professional growth.