

# Abstract

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## **Heuristic Evaluation Of ECDIS Usability on Board Vessels**

The dissertation is a study of ECDIS usability using heuristic evaluation techniques to highlight major drawbacks the ECDIS user interfaces. Heuristic evaluation was used to evaluate the software using usability main factors including sub factors. In addition, the research aims to measure the usability of TRANSAS ECDIS under study by introducing experts who know the software in particular and also ECDIS in general. ECDIS is now installed on most of SOLAS vessels, in addition to the traditional paper chart even on board several ships, solely “paperless vessels” according to flag state requirements. IMO minimum requirements for performance standards for ECDIS mentioned the needed options and characteristics to be included and gave the marine companies the way to design their own software’s with no specific standardized interface, the marine market includes more than thirty approved ECDIS software which are all different in their interfaces and sure in their usability. The navigator deals with the ECDIS to perform particular and specific tasks whom he knows it well when using paper chart but the ECDIS is different as the operator must know how to extract the information which the ECDIS displays. Training and familiarization are essential to be familiar with navigation equipment used while performing your tasks. STCW convention states the training needs the navigator should be trained on to be competent in using ECDIS software in general and for the specific options for every software STCW did not require extra training courses but it required knowledge, proficiency and competency and that’s cannot be achieved unless the navigator get familiar to the interface and trained on how he can get the information. The current research will be presented in five main chapters. First chapter is an Introduction, including the research objectives, research questions and research problem. Second chapter will represent a review of the literature done on ECDIS usability and the usage of the Heuristic approach used to measure ECDIS TRANSAS usability. The Third chapter is designed to provide the research methodology, including the research variables, population and sampling, data collection processes, and statistical techniques used in the research. The fourth chapter will include the empirical study with the results and findings found through data analysis. Finally, the fifth chapter will include the discussion, conclusion and recommendations.