

Abstract

The Impact of Digitalization on Seafaring Personnel

This master's thesis examines how digitalization affects job content, functioning, and wellbeing of seafarers, with particular attention to physical, mental, professional, and social dimensions.

To address the central research question, a mixed-methods approach was applied: eight semi-structured in-depth interviews with nine respondents from various sectors, complemented by a survey ($n = 78$) among predominantly Belgian respondents in bridge functions. All interviews were transcribed and thematically analyzed using both deductive and inductive coding. Triangulation was then conducted between the qualitative insights and the quantitative results. This resulted in 34 empirical findings that were systematically connected to the literature review.

The results show that digitalization in the maritime sector enhances efficiency and safety but also increases workload and mental strain. Increased screen time correlates with physical complaints and sleep disruption. Tasks increasingly shift towards system monitoring, which entails risks of reduced situational awareness and decline of traditional seamanship skills.

These outcomes call for an integrated approach that strengthens digital competences, safeguards workload, and preserves professional expertise. Attention to ergonomics, healthy screen use, and digital notifications should be structurally embedded through targeted training, clear agreements between ship and shore, and a shared cybersecurity culture. This thesis develops these insights into recommendations for future research.