Press Release

Radical Changes Required to Ensure Future-Proof Training and Education for Maritime Professionals

Radical changes are required to ensure that seafarer training and education does not fall behind the rapidly accelerating pace of technological advance in shipping, an important new report has concluded.

Research conducted as part of the EU-funded SkillSea project found that more than 50% of seafarers believe that important topics are missing from the international Standards of Training, Certification & Watchkeeping (STCW) Convention and one-third consider that current training is ‘overburdened with obsolete knowledge’.

The four-year SkillSea project, launched in January 2019, is investigating ways to ‘future-proof’ seafarer training to take account of new environmental regulations and rapid advances in technology, digitilisation and automation. It is working on a blueprint for cooperation in creating a strategy to equip EU maritime professionals with the necessary skills to meet the evolving demands of the industry – including key digital, green and ‘soft’ management expertise, and thereby also enhancing their employability.

The report, detailing research conducted as part of the project, analyses the gaps between current maritime training and the actual skills required at sea. Researchers surveyed more than 1,600 maritime professionals – 1,149 seafarers and 474 shore-based personnel - to get their views on the adequacy of current maritime training and education and what they consider to be the most important skills needs.

Damir Zec, a SkillSea project member who coordinated this research, noted that ‘New environmental regulations for the maritime sector, as well as the impact of technology and digitalisation, are changing the skill sets required for jobs at sea and in the maritime sector ashore.’ He added that ‘It is clear that soft and leadership skills, together with a set of new skills, will be a must if European maritime professionals and the EU maritime industry as a whole are to retain their competitive position.’

The biggest gaps between current training and actual functional needs are with maintenance (reported by 47% of all respondents) and electrical, electronic and control engineering (40%).

Importantly, around 30% of seafarers said current STCW competencies for marine engineering and controlling the operation of the ship are not adequate for onboard duties. 24% said they fell short for navigation and 20% said competencies for radiocommunications are not in line with actual onboard needs. The survey also showed that the areas where seafarers consider the most serious skill deficiencies currently lie are: subjects requiring creative thinking and problem-solving (62%); familiarity with digital technologies, including cyber-security (61%); teamwork and inter-personal relations (55%); and subjects related to maritime law, insurance and P&I coverage (54%).

The survey of 474 shore-based staff also showed concerns about STCW not addressing competences for shore-based staff training and also identified some of the skills that will be increasingly important over the next decade, including teamworking, software use, and communications.

In addition, the report notes that STCW Convention makes no reference to digital skills and contains only general references to pollution prevention and ‘minimal’ requirements for management-level functions. It does not consider increasingly important concepts such as problem-solving, creative thinking, analysis and evaluation and does not specify competencies needed to manage increasingly sophisticated ships. The report warns that ‘an effective transfer of knowledge of shipboard operations and expertise needs to be assured if the present position of EU maritime industry is to be maintained’.

The findings coincide with calls from both social partners, as well as the Ministerial Declaration agreed in Opatija last week, that the STCW Convention requires a comprehensive and ambitious review to ensure that it is fit for purpose and responsive to the evolving requirements of shipowners and regulators. The report – and the SkillSea project more generally – can inform the anticipated IMO discussions on the review of STCW.
The report is available at the SkillSea website:

Note for the editor

For more information you can contact Esther Ouwens Nagell, project member of SkillSea, e.g.t.ouwens.nagell@stc-r.nl, 0031 622 47 48 06. There are two pictures available to use for publication. You can find them attached to this e-mail and are also available by request.

About SkillSea

Technology and digitalisation are transforming the shipping industry. ‘Ships are coming into service that require a new generation of competent, highly-skilled maritime professionals. Europe is a traditional source of maritime expertise and the four-year SkillSea project is fostering cooperation between industry, education and training providers and authorities in drawing up a sectoral skills strategy to make the education and training for maritime professionals future proof, adaptable and attractive, to provide maritime professionals with the correct skills (digital, green and soft management skills) for the rapidly changing maritime labour market and to ensure sustainability of the European maritime industry.

By enhancing the skills of European maritime professionals, the project contributes to enhancing their competitiveness and employment opportunities. The future-proofing project is developed by the industry’s social partners, the European Community Shipowners’ Associations (ECSA) and the European Transport Workers’ Federation (ETF) and is comprised of a consortium from national maritime authorities, shipping companies, shipowners’ associations, maritime trade unions and maritime education providers from 16 countries in Europe.

SkillSea is co-funded by the Erasmus+ Programme of the European Union.

Visit www.skillsea.eu for more information about the project.