



THE VALUE OF MARITIME SIMULATORS



A MUCH NEEDED NEW APPROACH

Erik Hietbrink MSc, Technical Director,
Simwave, Barendrecht, Netherlands

Does the international community accept the risks of human failure to lives, ships and the very vulnerable marine environment? Does the international community accept the already enormous pollution the ships are causing to the environment: sea and air?

The international community will over the coming years expect and demand a change in the safety at sea. This goal can be reached by diminishing (almost) 100% of human failure by demanding better educated and better trained seafarers and assignment on board based on clear assessments.

Now is the time for action. A new thrust for the future of simulator training, applied research, and assessment should entail:

- Enhancing applied research with innovative simulators and complex environments
- Having a place for each person who wants to have a prominent role in the maritime industry

- Enhancing social responsibility and care for the environment in the maritime field
- Assessing the impact of new technologies in maritime education and assessment
- Ensuring safe, secure and efficient shipping by employing more competent crew and better technics
- Applying research in complex operational circumstances such as tug/cruise/offshore/wind energy/heavy lifts/float overs/port design/ice passage/ship-to-ship transfer

HUMAN INVOLVEMENT

The human factor is key in all developments. With a better use of modern interactive maritime simulators, human error can be diminished. Based on the creativity and the knowledge of specialists in didactics, specialised in human error, in the causes of near misses or accidents, in simulator

technics, in blended learning and in formulating the right objectives of training, with simulators this goal can be achieved. Every Euro spent on the right simulator training is a great investment in people, ship (sea and inland), machinery and the environment.

A new innovative approach with the available high-end simulator capacity means a better crew, a happier crew, and leads to economically feasible shipping, the protection of environment and people. Modern educated and trained, competent and assessed officers and other crew members from all nationalities will guarantee a safe, financially sound, environmentally acceptable and healthy future for the maritime sector. But that goal will not easy to be reached. However, we can succeed by using the best integrated and intense simulator training and assessment with the best simulators available.

MARITIME SIMULATORS

For over five decades maritime simulators have been used in maritime education and (re) training of mariners for specific but limited competences like radar training, ECDIS-training, bridge/engine room resource management, ice navigation and so on. Only rarely simulators were used for assessments but most of the time simulator capacity was used to be compliant in line with the minimal requirements of the STCW '78 as Amended and requirements from other rules and regulations. Many governments and ship operators seem to forget that the STCW and other rules only give minimal requirements.

During the last 50 years the capacities of the maritime simulators have developed but they could have developed much faster. The conservative maritime training requirements and the human resource approach, almost entirely directed by wages, overtime, leave discussions and the hunt for cheap labour indifferent the nationality of the flag, have delayed the introduction of many new possibilities in maritime simulators and training outside the minimal requirements of the international agreed 'model course' levels. Crewing agents and manning agents sometimes just "deliver" in accordance with STCW-78 as Amended even with COC's and/or certificates sometimes "bought" on the corner of the street.

Of course, there are positive examples within the HRD approach of some international ship owners.

The wrong structure with ship management companies, outsourcing the crewing and manning to others somewhere in the world minimizes worldwide safe shipping. Too often the crewing managers have a bad reputation and a track record of misconduct, as well as a record of unfair treatment of sometimes poorly educated, poorly trained and seldom assessed seafarers. The many reports of the different governments, flag-states and the International Transport Workers Federation (ITF) and national seafarers unions are clear about this.

Many disasters over recent years show the lack of dedicated and advanced training, communication techniques and experiences gained in circumstances on a simulator. The training and assessments can be done so much better with the right scenarios, the best teachers and the best simulators. The fear of what can go wrong on the landside of the ports and coasts is not experienced because most people ashore have no idea about disasters which could take place if near their city or coast a catastrophic human error is made. The public opinion even in old seafaring countries is not aware and is silenced by



promises done by the industry and too small steps by new treaties.

The crew on board vessels has already been dramatically reduced over the years. In general, ships have become faster and bigger, cargoes more valuable and many times more dangerous. Modern cruise vessels will carry up to 8000 people and more the coming years.

OTHER INDUSTRIES

Any passenger on an airplane expects that the captain/first officer will be trained on simulators in any possible scenario. An airplane pilot is even trained and assessed on a type specific flight-simulator. Any passenger expects that the persons in the cockpit will bring the airplane safely back on earth. In the maritime sector we should expect the same.

High-end maritime simulators should be employed much more for training, experiencing, assessment, team work, resource management but also for familiarization for the captain and officers for new ships, new ports and new areas to sail. The simulator capacity to handle with all these challenges and expectations is available in only a few places in the world but that capacity is growing the coming years. They are available for the requests and interests of ship-owners, crewing agents, port and terminal operators, tug companies, offshore companies and ship management companies.

The approach of concentric simulator training, embedded learning with integration of simulators and virtual reality technics, the tailor made scenarios, ship-to-

ship transfer, LNG-bunkering and LNG-fuel, own ships and the right sailing areas for the navigation officers and captain and the fault finding capacities of the most modern engine room simulator are better learning tools than anything else.

ABOUT THE AUTHOR

Erik Hietbrink received his master all ships in 1981. After becoming a teacher and graduating with a Master of Science in mathematics and seamanship, he became Director of the Rotterdam Maritime Academy in 1987. From 1990 onwards he was the Chairman of the Board of Directors of the STC-Group. He founded many schools around the world and many simulator centres.

ABOUT THE ORGANIZATION

With SimWay® achieving change in the industry is possible. With the specific use of the most modern simulators and the best scenarios and specific contents we give the industry a competitive edge. We create happier people on board and ashore. Human failure will reduce, insurance costs will be lower, people and planet will be protected much better. SimWay® will lower costs and will reduce near misses, damages and loss of lives.

ENQUIRIES

Email: welcome@simwave.nl