

Challenging Traditions in Maritime Education

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LEARNING OBJECTIVES

- Gain understanding of the changing maritime industry to which maritime academies are reacting
- Understand impact of increased regulations set by the Federal Government and International Maritime Organization on education and training
- Learn of the shortage of maritime workers
- View new simulation capabilities to teach mariners
- Learn of multiple online and blended learning systems which expand maritime institutions capabilities to train mariners

The NDTA Annual Forum in Nashville will see a large gathering of transportation and logistics professionals. True to its mission to provide education, the annual NDTA Forum will offer opportunities to learn the latest in all transport modes, intermodalism and information exchange. The nation's security relies not only on the expertise and courage of our warfighters but on the ability of our merchant mariners to support our warfighters and maintain the strength of our global supply chain. At the core of the merchant mariners are the young men and women who are coming into the industry.

This past summer saw the inaugural conference of maritime stakeholders challenging the traditions of maritime education. "The International Maritime E-learning" conference hosted by the Calhoun MEBA Engineering School on the idyllic shores of Maryland's Eastern Shore, brought maritime educators, regulators and vendors multiple and occasional contrasting perspectives on preparing the mariners of today and tomorrow.

The training of mariners has become critical for three major reasons: the Standards of Training Certification and Watchkeeping (STCW), www.stcw.org intended to improve the quality of seamen; International Maritime Organization, www.imo.org and Maritime Transportation

Security ACT (MTSA), www.homeport.uscg.mil efforts which are intended to mitigate threats to the international maritime trade; and the shortage of mariners.

STCW

The International Maritime Organization (IMO) held a convention to improve the worldwide standards for safety and training of professional mariners in 1978. The Standards of Training, Certification & Watchkeeping for Seafarers (STCW) Convention established a code adopted by many nations in 1978 and was named the Seafarers Training, Certification, & Watchkeeping (STCW) Code. Subsequent conventions were held in 1991, 1994, 1995 & 1997 to update & revise the code. (Coursey Maritime Professional Training)

The Code was established to set certain minimum international training standards for professional mariners. The level of certification and training required to have is based on the capacity to be served by the mariner and the type of vessel they will work on.

IMO/MTSA

The International Port Security Program (ISPS) has been implemented by the IMO and reinforced by the MTSA, under the supervision of the Maritime Administration. ISPS is a reaction to the events of 9/11 and the realization of the risks of the maritime trade to travelers and the global supply chain. Passed in 2002, it set an implementation schedule which emphasizes the creation of security officers and training of ship crews, port workers and other stakeholders in the maritime trade.

SHORTAGE OF MARITIME WORKERS

The unnamed person towing the massive fuel barge on the Mississippi River that collided with a 600-foot tanker July 23, 2008, resulting in the spill of 400,000 gallons of fuel oil, did not have the proper license to operate a tugboat. Their training may have also been inadequate.

As the oil settled into the muck of the Mississippi River, some in the maritime industry wondered if the accident is a

PROFESSIONAL DEVELOPMENT

symptom of an industry wide personnel shortage of qualified mariners to pilot boats. "Right now there is a lack of experience out there," said L.J. Falgout, vice president of United Tugs, a large towing company in Belle Chasse, LA. The watery world of tug operators has been transformed by new demand for river haulers and stricter rules for vessel operators.

MARITIME INSTITUTIONS

The Maritime Industry's training and educational institutions are close-knit, friendly competitors. These include degree granting four-year institutions such as SUNY Maritime at Ft. Schulyer, NY, Maine Maritime in Castine, ME, US Merchant Marine Academy in King Point, NY and others in California, Texas and Michigan. There are non-degree professional institutions focused on preparing mariners for maritime licenses including Meba Calhoun, Maritime Institute of Technology and Graduate Studies (MITAGS) and the Paul Hall Center for Maritime Training and Education, all of whom are located in Maryland. And there are private institutions such as Maritime Professional Training in Ft. Lauderdale.

Maritime training is of course long established in the nation, with a great tradition incorporating training from the US Navy and US Coast Guard. The demands on mariners from the 1990's through today have changed. Training and educating mariners has changed accordingly based on the pressure of costs, technology and the source of today's mariners.

SIMULATION

Simulation has advanced rapidly. Major players include Transys, and Integrated Marine Simulator. The bridge of a ship is recreated with panoramas up to 360 degrees. It is a video system similar to IMAX allowing a complete view in front, on the sides and in back of the ship's bridge. Controls are life-like. Different conditions in different ports are created by the touch of a button or a finger on the screen. This saves tremendously on the cost of training and reduction of accidents when training on real vessels.

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Humanitarian Logistics

Humanitarian Logistics, by Rolando Tomasini and Luk van Wassenhove, ISBN-10 0230205755, Published by Palgrave Macmillan, March 2009, \$45.00, hardcover, 256pp.

While the benefits of viewing the firm's logistics activities as a system that must be managed as a whole are well known, applying those principles to multiple organizations such that each integrates their logistics system into a cohesive supply chain is extremely challenging. For those able to do it, supply chain management practices offers significant benefits in the form of better customer service and lower logistics costs. Indeed, these same principles are now being applied to the non-profit sector as well. For example, imagine planning an event like the Olympics. Now

imagine planning the same event but not knowing when or where it will take place, or how many will attend. This is what humanitarian logisticians are up against. Oversights result in serious consequences for the victims of disasters, so planners have to get it right, fast. Despite this urgency of need, implementing these principles in practice is incredibly difficult, especially in remote parts of the world as evidenced by recent natural disasters in China and southern Asia. However, one only needs to recall the suffering in New Orleans after Hurricane Katrina to appreciate that these challenges exist in the United States as well. This book comprehensively covers the problems of humanitarian logistics and raises some interesting issues regarding the importance of, and difficulties associated with, planning for the unthinkable. *DTJ*

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year that I have now been retired longer than I served on active duty, so being kept abreast of the latest developments overseas has become increasingly important to me as a way of keeping current and connected to my roots as it were.

In addition, learning about the latest technological advances is always an important take-away from the Forum. This year, sessions on Web2.0 and Security Best Practices, and Technology for Global Transportation and Logistics will provide attendees with the latest developments in logistics technology. Similarly, this issue of the *DTJ* contains a special article on developments

in RFID, which should provide the basis for much discussion both within these meetings and informally among attendees.

Finally, while the "business" portion of the Forum is so valuable, so is the social side. Greeting old friends (many of whom I only see at the Forum), making new ones, and generally spending almost a week with folks who "talk" defense transportation and logistics is a heck of a lot of fun. Factor in the golf tournament, the vendor exhibits and the facility tours, and you have a gathering that is both personally and professionally rewarding. I guess that's why so many of us come back year after year! I hope you all enjoy your time in Nashville; I know I will! *DTJ*

E-LEARNING

There are multiple models used as the academies and other maritime institutions seek to better prepare mariners with greater quality of preparation and at lower costs. Dan Noonan, Arclight Technologies and a retired 20 year merchant marine captain notes the advantages of virtual learning systems. These involved the application of technical standards, privacy of learning, uniform quality of training and sustainability of training into the future. Noonan also points to the qualification and training of instructors as a key to insuring quality of training. E-learning models include:

- **Web-based systems** – Self-contained modules available on a host site, generally without instructors or follow up
- **Distance learning, video based systems** – Offered in real time, with a lecture and interactivity with students.
- **Asynchronous web based systems** – Course content available at host institution's website, with non-real time interaction between instructor and among students. Systems are enhanced with video and internet links.
- **Blended systems** – Combining traditional in class learning with one or more online models, allowing self learning where appropriate and group exchange where beneficial.

SUMMARY

The changing conditions for maritime security and safety are emphasizing formal training to a greater degree than in past decades. The impact of technology has been significant during the past decade and will continue to be so when training mariners. As the maritime industry competes with other industries for young men and women, education and training will need to address how best these students learn. Mariners' conditions are difficult at sea but their importance in supporting our warfighters and our nation is critical, thus the imperative to sell young people on a maritime career. Student expectations for training utilize technology such as simulations and e-learning. The unique requirements of the industry favors blended learning with hands on experience at the maritime institutions and online learning. *DTJ*

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