

25 YEARS OF TRAINING COMMERCIAL FISHERMEN
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HISTORY OF TRAINING REQUIREMENTS

Until the mid 1980's, there was a scarcity of training regimes that focused on training commercial fishermen. Maritime academies focused on licensed personnel the maritime academy curriculum was lengthy, expensive and not focused on unlicensed mariners such as commercial fishing and thus did not attract many fishermen. Academies also did not outreach to fishermen. There are also a number of private companies that offered training to help mariners pass Operator of Uninspected Passenger Vessel (OUPV) license classes, that focus on rules of the road, navigation and some safety topics. This attracted some fishermen since the courses were shorter, less expensive in time and money than an Academy, and the issuance of an OUPV license would qualify them for work in the passenger for hire industry. But these programs do not target the safety issues in commercial fishing. The few programs that existed strictly for fishermen were local efforts with a short life span.

The Coast Guard's voluntary safety initiative in the mid 1980's lead to the development of safety training programs targeting commercial fishermen in several regions of the U.S. including Seattle, Alaska, Texas, Rhode Island, New Jersey and other areas. The Coast Guard recognized that just having the minimum safety equipment that was required was not enough: fishermen had to know how to use it effectively. Private training companies, universities and non-profit organizations participated in delivering training. But participation in training was limited. The training sector estimated that at best only 10% of active fishermen had attended some type of program (Fishing Vessel Safety: Blueprint for a National Program, National Research Council).

The regulations adopted implementing the Commercial Fishing Safety Act of 1988 gave a much-needed push to safety training effort, requiring monthly emergency drills and trained Drill Conductors to lead these drills. By the time Drill Conductors were required in 1994, thousands of fishermen had been trained. However when problems dealing with enforcement issues regarding Drill Conductors surfaced, the numbers of trainees dropped. To this date there are still regions of the nation that have not had a sustained mechanism to deliver training to fishermen. The only regions with a sustained level of training available to them have been Alaska, Pacific Northwest down to Northern California, Texas, parts of Maine and more recently, the New Bedford area and mid-Atlantic. To date, it is largely nonprofit organizations and a few private trainers that have continued the most sustained efforts in training fishermen.

TRAINING BENEFITS

Scores of anecdotal reports of the benefits of safety training and how it has helped fishermen avoid or survive a casualty can be documented by organizations who have been training fishermen.

Undocumented are the number of casualties that have been avoided due to the raising of awareness of risk which has led to the voluntary purchase of additional survival equipment and addition of new safety procedures due to training. Post course evaluations supply ample written evidence of how fishermen plan to lessen risk due to what they learned in the training.

Several peer reviewed scientific studies have also been published that document the effectiveness of safety training specifically in commercial fishing. The Perkins study (1995) demonstrated that fishermen with training were statistically less likely to be involved in a fatality. The Lincoln study (2006) demonstrated that fishermen trained by AMSEA and the North Pacific Fishing Vessel Owners Assn (NPFVOA) were 1.5 times more likely to survive a casualty than those not trained.

It has also been well documented by survival psychologist John Leach, and others, that those workers who have had formal training in survival procedures to take in case of a casualty, have a better chance of surviving a casualty. Additionally, raising awareness of the risks through training and education, has been demonstrated to show less risk taking behavior in many other areas of public health and safety.

Training has been an important factor in the decline in fatalities in Alaska from the over 40 fatalities a year that occurred before 1988, down to the most recent 5 year average of 10 fatalities a year.

LESSON'S LEARNED IN TRAINING FISHERMEN OVER 25 YEARS

During the last 25 years of training fishermen, a number of lessons have been learned that are applicable to more expanded regimes for training. Successful training programs for fishermen that have managed to survive and continue to be well known resources, have similar characteristics which should be noted. Some of the needs for training ideally would include the following points.

1. One of the first characteristics of a successful training program for fishermen, is the ability to bring training to fishermen's ports. Training must be accessible. There are over 100 different fisheries in the U.S. They are spread along thousands of miles of coast. Fishermen are located in some concentrated ports around urban areas, but also up bayous in the South and many miles from the ocean up rivers in western Alaska. Fishermen are located in several thousand communities across the U.S. Programs that have brought training to fishing communities, have been more successful than centralized training institutions such as maritime academies, that have expected fishermen to travel hundreds of miles to attend workshops. However academies can have a role in their region if they outreach more effectively to the fleet and are able to relate to the unique problems in fishing safety.

2. Also, it is necessary for training organizations to truly outreach and promote training to the fleet. This means walking the docks, attending fishermen's meetings, working through fish buying houses, fishermen's wives organizations, church groups and gatherings where fishermen meet, to make them aware of the availability and need for training. Promotion and marketing needs to be focused on in the venues that fishermen see and attend. AMSEA's experience in developing training infrastructure around the U.S. , is that those regional programs that have the greatest community support and involvement have been the most successful and long lived.

3. Third, for credibility it is a great advantage if the instructors delivering training, actually have a background in fisheries. Commercial fishing is a very culturally specific occupation. The language and procedures of fishermen are very distinct from most land-based occupations, and even from other maritime industries. If instructors cannot relate to life and work on a fishing vessel, then training will not be well accepted. To this end AMSEA Marine Safety Instructor-Training (MSIT) workshops have been useful to a number of non-fishing background training institutions to help them bridge this problem.

4. One of the barriers to training is cost. The cash flow in commercial fishing is not steady. Fish prices, fish stocks, can go down and fisheries may be severely or completely restricted. The price of fuel, supplies, maintenance and gear tends to rise. In some areas like Western Alaska, travel costs are very high and at the same time these remote ports do not have many sources to additional revenue outside of fishing. Fishermen should not be excluded from safety training due to the ability to pay. We have seen how reduced costs to fishermen for training has resulted in barriers being removed and increased numbers of fishermen taking training and in turn benefitting from reduced fatalities.

5. There needs to be refresher training to keep skills renewed and current with changes in technology. Studies in training have demonstrated a decrease in marine safety skills from 100% to 86% just a month after training. Other reports have demonstrated that only 17% of fishermen conduct monthly drills as required. It is during monthly drills that these skills are supposed to be renewed. Knowing that the majority of the fleet does not conduct complete and thorough monthly drills to keep skills fresh, a refresher regime should be institutionalized as it is for safety training in other occupational fields, especially those with such high risk.

6. Training regimes should be required at entry and professional levels. In terms of preventing fatalities, it is inefficient to train fishermen who already have decades of fishing experience. They will have decades of exposure without the protection effect of safety training. It is much more effective to teach fishermen as they enter fisheries and the protective effect can exist throughout their period of risk. Standardized training and certification program build professionalism and pride in accomplishment. For this reason, communities where fishing is a traditional activity, should have programs for youth who are likely to enter fisheries. In Alaska, there

are a number of high schools that offer fishing vessel safety training that leads to a Drill Conductor certificate. This engages them while they are still young and at a point in their lives where it is easier to change attitudes and behavior and at a time when it is at the start of their careers. These school programs could be expanded to include training included in the new commercial fishing safety legislation.

7. Training and education efforts need to be culturally and linguistically appropriate. Many fishermen are Vietnamese and Spanish speakers. Risk toleration differs from culture to culture and should be addressed. Since English is the official language of mariners and for communication to the Coast Guard, efforts to teach English as a second language are basic to survival equipment and procedure comprehension. Marine safety instructors need to be trained using people from the culture being taught whenever possible.

The use of performance based training objectives and skills, with a de-emphasis on written language skills and test taking abilities, would be a more effective way to training these fishermen as well as others with poor written test taking skills. In an emergency at sea it is more effective for a mariner to have practiced launching a liferaft, than to know the diameter of his fuel port.

8. It needs to be recognized that all decisions on safety happen in the minds of those in the wheelhouse and the deck of the vessel. To encourage better decision making, training should address and teach risk assessment. The highest goal in training is to positively change safety attitudes and behaviors so that fishermen do not get themselves into a situation that is dependent on their survival gear and skills. Training should therefore address not only general risks in fisheries such as flooding, capsizing and man overboard, but also risks specific to the fisheries students are employed in, since many types of risk are also fishery specific. Important to this effort is data that demonstrates risks to specific fisheries, as well as credible instructors with familiarity in those fisheries.

Tools used in other occupations to assess risk, such as Green-Amber-Red (GAR assessment models), Go/No Go checklists have been adapted by the Commercial Fishing Safety Advisory Committee to be useful in helping fishermen assess risk. In general a culture that looks at the risk potential of all activities needs to be developed and during training is the venue where this culture can be developed.

9. Training needs to be meaningful to fishermen. Hands on, performance skills-based and experiential methods are more educationally valid. People learn more effectively through self-discovery than by being told. Internet classes are good for accessibility but only teach knowledge and are expensive to develop for teaching skills, and are less likely therefore to change behavior. Retention rates for knowledge learned tends to be low due to the lack of experiential opportunities and the fact that few psycho-motor skills are employed by the learner.

The educational maxim is that a skill you actually perform under the supervision of an instructor, has a 90% retention rate, compared to a 20% retention rate of something you just hear, and 10% retention rate for something you only read. When teaching safety and survival skills, it is important that teaching methods with the most effective retention rates be used.

The importance of hands on training is especially important to fishermen who are practical people that are good with their hands and in mechanical problem solving, but who may not be used to formal classroom training and taking written tests. This is especially true for the thousands of Vietnamese and Spanish speakers who increasingly make up a larger percentage of the fishing fleet in the last 25 years.

Training for the commercial fishing industry needs to meet five tests, which can be summed up by the acronym **SMART**. First it needs to be **specific** to the needs of fishermen, the causes of fatalities and relevant to their fishery. Second it needs to be **measureable**- there needs to be a way to demonstrate that the training is making a difference and that the skills taught can be demonstrated by fishermen during the training. Thirdly the training and objectives must be **active**. Training should be student centered activities and not passive teacher centered lectures. Fourth, the training needs to be **reasonable** as to costs, accessibility, length and content. Fifth, **time** is an important component of training. Training must be available at times convenient to fishermen that do not conflict with the fishing season or other periods when fishermen are not available. Also the length of the training must work into fishermen's schedules, so that training can be broken into multiple one-day segments that a fisherman can accommodate.

10. a- In terms of practical matters, the training for fishermen should be made available as **ACCEPTED** rather than **APPROVED** courses. Approved courses by the Coast Guard have numerous audit requirements that make it very difficult to deliver training to rural and distant fishing ports and do not add quality to the training, offer great obstacles in delivering training in a timely manner and add greatly to cost. The recent decision by the Coast Guard to change "approved" Drill Conductor courses into "accepted" courses is a very positive step and should be a model for other required training for fishermen.

b- There will be a need for classes to stand alone and for fishermen to be able to take subject matter classes such as first aid, survival, stability etc in different stand alone components that can be taken from different groups at different time of the year, for those that cannot take a week or two or more away at a time.

c- There is a need to have a standard national curriculum for fishing vessel training with common minimum learning objectives, skills and time minimums, **BEFORE** any clock starts ticking down a certain number of years to get any new training certified. Otherwise the shortest course offerings and teaching methodologies will have an undue advantage, and training from region to region will differ and there will be no

national standard. Regional and individual fishery risks should be addressed but only after general and universal objectives are decided upon for everyone.

11. Fishing experience combined with required training should lead to a Certificate of Competence. This would avoid the onerous features of licensing such as “teach to the test” courses, criminal background checks etc. Yet if a marine incident was the fault of a Certificate holder, the certificate could be suspended or revoked as appropriate. This would achieve one of the values of a license.

12. The curriculum for fishermen should be designed for the fishing industry. Training organizations that have years of experience and who know the industry, should have a role in helping determining the length, performance objectives and minimum time of such a training program. The proposed outline for training fishermen that was proposed to the Coast Guard in 1991 by the training subcommittee of the Commercial Fishing Vessel Safety Advisory Committee should be considered as a model training program outline.

There will be a temptation to take an off the shelf, preexisting course such as STCW Basic Safety Training (BST) and use that to meet training requirements for the fishing industry.; although, some of the material in STCW would be relevant, some of it will be not specific to the actual risks in commercial fishing, which are more in the areas of flooding, stability and damage control, as opposed to collision avoidance. In addition the nomenclature and case studies will be different. The need for expensive fire fighting facilities and the inability to take them “on the road” for training would also be an obstacle for delivering training to fishermen and not relevant to the vast majority of fishermen who operate small boats that do not have fire hoses, fire nozzles, breathing apparatus and firemen’s outfits. For the training to be accepted it must be applicable and relevant for fisheries.

13. Enforcement of training requirements needs to be a priority that is applied equally across the nation. In the early 1990’s when Drill Conductor training was thought to be required for each operator, there was a rush of fishermen who sought training. Schools started programs and new training businesses were started. Within a few years when Drill Conductor requirement was not or could not be enforced, fishermen stopped seeking training. These resulted in training resources closing, which perpetuated a cycle of non-enforcement because the training was not available. To prevent this downward cycle of supply (in trainers) and demand (for training), the need and requirement for training should be very clear and equally enforced across the nation.

LICENSING BENEFITS AND DRAWBACKS.

A traditional licensing program has the benefits of a formal education program that exposes the mariner to knowledge regarding rules of the road, navigation and a host of other safety related knowledge. There is also the benefit of being issued a license which brings in pride of accomplishment, professionalism and pride in having a nationally recognized license which can lead to a pathway for working in other

maritime jobs . For regulators, a license is desired also as something that can be suspended or taken away if the holder of the license is found culpable in a marine incident.

However, the drawbacks to a traditional licensing program for commercial fishermen are many. The basic problem being the nature of the methodology used, which is a lecture or computer based delivery system which relies on passive listening and study skills and the use of multiple choice tests which are culturally biased, and rely on good English language skills as well as good test taking skills. Since the fastest growing segment of the fishing fleet in the U.S. is Vietnamese and Spanish speakers, this will be difficult to implement in a meaningful way. In many ports, any intensive English as a Second Language program many months long, would be needed to allow fishermen from these groups to pass the exam, or the school would have to “teach the test” even more intensely.

The goal in any education regime for mariners should be competency. The perpetuation of “license mills” turning out “paper captains” who can pass a written test but have little or no skills is a well-known problem in other maritime fleets.

A traditional licensing program does not address most of the considerations above. However a Certificate of Competence, such as that used in the U.K. for fishermen, would be issued. A certificate that is earned using educationally valid methods of instruction including active student centered competency based skills, rather than passive verbal and reading activities is more likely to change behavior

In summary, if training does not result in a loss of lives because a reduction in fatalities is not achieved due to the inability of a fisherman to pass a written, multiple-choice, culturally biased test, then the opportunity for training to play a meaningful role will be lost. Training and education for the fishing fleet administered by the Coast Guard and National Maritime Center would do well to note the unique needs of fishermen. However an acceptable, meaningful, affordable and relevant training regime will not only improve training effectiveness and its acceptance in the commercial fishing industry, but it will help play a positive role in continuing to change the safety culture and led to better decision making regarding risk in commercial fishing.