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Crew Competence

A major survey into the competence of crews carried out by the Seafarer's International Research Centre (SIRC) between 1996 and 1998 points to a skills and training deficit. How has this come about and what are its remedies? Professor Tony Lane, Director of SIRC, brings Maritime Review readers up to date on the findings.

The two-year evaluation of the competence of 3700 crews carried out by The Seafarers International Research Centre (SIRC) is the first systematic global investigation of this important issue. The raw data was generated by the completion of standardised reports by harbour and river pilots of deck officers and ratings of ships (of all sizes and types) entering or leaving ports in Europe, Asia, Africa and Australasia. The 'headline' results found the highest scoring crews in ships flagged in W Europe, the Nordic countries and the international and second registers of Norway, Denmark, Germany, the Isle of Man and Bermuda. The lowest rated crews were found to be in the fleets of the Black Sea Rim countries, the Pacific Rim Countries and Eastern Europe. The study's sole reassuring finding was that the most highly-rated crews were running ships carrying the most dangerous cargoes, namely gas and chemical tankers.

The study was undertaken in response to the conventional wisdom that emerged in the industry during the late 1980s and early 1990s, that crew competence was, in general, a growing problem. Underwriters and surveyors, port and maritime regulatory agency officials, ships' masters and chief engineers from the traditional maritime nations of the N hemisphere were among the many contributors to what had become an established, collective view. Taken alone and lacking a base-year comparator, our results can neither confirm nor contradict the conventional view of declining standards. On the other hand, by coupling some of the detailed findings from our study with other evidence on labour supply and manning practices, we may reasonably infer that anxieties about crew competence have some basis in fact.

Mechanics of the study

Perhaps we can begin with the mechanics of the SIRC study and address the question of the reliability of the findings. After feasibility studies in a medium-sized NW European port in 1993 and a major Middle Eastern oil port in 1995, the 1996-98 study took in six world regions. 80% of the assessments were in six ports in NW and S Europe, 20% in ten ports in S & W Africa, S & SE Asia and in Australasia. Apart from requiring factual data on the ship, the pilot and the crew, the research instrument asked pilots to evaluate the crew on 26 criteria. The criteria were grouped in three categories: one provided for the pilot's impression of the ship's condition; the second asked the pilot to rate the respective performances of the master, the bridge team and the officer and rating teams at fore and aft stations; the third called for descriptions of

language communications, mainly between pilot and master. Only the second category was used to derive scores. The first category on ship condition was a device to check on whether pilots' visual perceptions of ship condition affected their assessments; overall, they did not. The third category, exploring language communication practices, required 'yes/no' answers and could not sensibly be given as numeric values.

Were pilots in any way biased? We found no persuasive evidence of national/ethnic bias - the mean scores among the pilots of eight different nationalities ranged between 73% and 79%. We did however find an age/experience bias - the more experienced pilots, regardless of nationality, gave higher scores than their younger colleagues! We have been able to disregard this bias since no nationality or flag group seems to have been disadvantaged by the more demanding standards of the relatively inexperienced!

How representative of the world fleet were the assessed ships' deck crews? The proportion of ships in the 'sample' using FOC was 48% compared with 49% of the world's fleet - but the average age of ships was 13 years compared with the world average of 18 years. The more specialised ship types were over-represented (gas and chemical tankers, container ships and ro-ros), oil tankers were under-represented (8% in the sample compared with 39% globally), bulkers and general cargo ships were represented in close to due proportion. At least, on the basis of age and ship type, it is probable that the world's better run ships are over-represented in the sample.

The mean performance score for the whole sample was 77%. This figure does not in itself tell us very much, except that on a five-point scale ranging from 'very good' to 'very bad' pilots rated most ships as being closer to the top of the scale and very few way down at the bottom. It might be said, though, that if the world's merchant fleet was largely composed of well-run ships with properly trained and suitably experienced crews, the average score should have been in the range 80-100%. This may sound excessively demanding - except that the capacities and qualities called for the evaluation of routine activities which could only be regarded by any self-respecting officer, petty officer and rating as basic to his/her craft. In short, the assessment measured the performance of duties that any experienced and well-trained crew would do instinctively and do well. Looked at from this perspective, a mean score of 77% should be a cause for concern and scores of less than 60% a matter for anxiety.

Crews and competence

Crew activity and language competence was not uniformly spread over the range of flag administrations. These facts are made amply clear in the tables shown here. One table lists the performance scores of the major flags or flag groups, the other deals with language communication. Although there is no simple way of showing any relationship between performance scores and communication between pilots and crews, it is nevertheless interesting to note a rough correspondence between the ranking of flag performance scores and

the ranking of flags according to the frequency with which pilots used sign language with the key members of the bridge team. The use of sign language was most common in two sets of circumstances, a) among single nationality crews where English language proficiency was relatively low and, b) among multi-nationality crews where the *via media* was English but of an inadequate standard.

The first thing that has to be said about the data in these tables is that they cannot be legitimately read as showing a relationship between nationality *per se* and seafaring skills. If, for example, crews from the Black Sea Rim countries, the PRC and Eastern Europe achieved the lowest mean scores (between 68% and 70%), despite having up to one quarter of crews scoring below 60%, then plainly some of the crews from these countries actually got very respectable ratings. What we are seeing here is arithmetically elementary. While every flag and every nationality is capable of providing highly competent crews, flags and nations are not all equally capable of providing crews of consistently high quality. This may be a trite observation, but in a world too often disfigured by absurd generalisations about nationality and ethnicity (from which the shipping industry is not immune), it will bear repetition.

What the wide variation in score ranges points to is that crew competence is a product, firstly, of a state's ability to regulate to a uniform standard the provision of high quality training and education opportunities. Secondly, and arguably, this is at least as important as formal training. That is, the ability of shipowners/shipmanagers to operate fleets where the everyday experience of customary practice reinforces, enlarges and goes beyond what has been taught and learned in shore-based institutions. The 'going beyond' is especially important because it entails learning, through shipboard living, the behaviours, the unwritten rules and the professional attitudes of seafaring culture. This kind of experiential learning amounts to much more than merely filling out through technical experience what has been learned theoretically in college.

Competence in all things is a blend of technical skill and sufficient mastery of the social structures which inevitably embrace all human activity. In the case of seafaring, shipboard society needs to be a place where the values of pride in craft and occupation are spontaneously asserted in informal rules, phraseology and vocabulary, taken-for-granted rituals, and so on. It was precisely the prevalence of this culture that made the reputation of the ships' crews of such companies as Blue Funnel, Lauritzen, Wilhelmsen, Hamburg Sud, Messageries Maritimes, NYK. These and other directly comparable companies self-consciously set out to establish and sustain both procedures and a style designed to approach the highest standards of professional seamanship among all crew members regardless of rank and nationality.

The shipping industry at the end of the twentieth century has moved a long way from the practice and style of the cargo liner company of the 1960s and 1970s (even if many of today's managers and a diminishing rump of masters and chiefs were products of those firms in that era). Commercial pressures,

the associated rush to regulatory avoidance enabled by flags of convenience and second and international registers, as well as the parallel creation of a global labour market have together displaced the relatively orderly system of technical training and shipboard socialisation in Europe and Japan. Similar consequences flowed from the political and economic disintegration of the USSR and Yugoslavia and economic liberalisation in Poland, Romania and Bulgaria. Although seafarer training of nationals has been maintained in Eastern Europe it is no longer closely tied to national fleets. Seafarers from Russia, the Ukraine, Poland, Bulgaria, Romania, the Baltic states and Croatia have in large numbers joined the global labour market. The PRC is now the only nation with a large, globally trading fleet that is wholly manned by nationals trained in nationally regulated institutions. China, and this is the critical point here, may be a relative newcomer to world shipping and therefore still on a learning curve when it comes to building and consolidating a powerful occupational culture amongst its seafarers. It is, nevertheless, the only nation still obviously capable of steadily improving the competence of all its seafarers because it alone is able to synthesise formal and experiential learning. Many other nations undoubtedly provide excellent technical training, but their colleges are no longer (and in some cases never were) organically linked to shipboard societies sustaining an occupational culture saturated with the mundane rituals and symbols of pride in craft.

Fractured links and global labour

Fracturing the link between national training and employment in national fleets was essential for the construction of a global labour market. And fracturing the link brought with it the desired aim of multicultural manning and the possibility of constantly varying at will the nationality mix of crews. It is not for nothing that shipmanagers' personnel directors constantly monitor tried and untried sources of labour supply. Although at any one moment in time there is some stability in the global labour market, the last decade has seen substantial change. Korea, for example, has come and gone as an important source of seafarers; Russia, the Ukraine and Poland have come from nowhere to become extremely important suppliers. This sort of labour market fluidity may make life easier for personnel managers desperate to find enough people to keep ships trading. But it makes no contribution whatever to building a labour force with the levels of competence to be expected from proud and committed seafarers.

The process of globalising the shipping industry's labour market was what produced anxieties about levels of seafarers' competence. The evidence from the SIRC study when taken together with the argument developed here, supports the pessimistic views of those shipping industry professionals who have been raising the alarm. However, there are grounds for hope for the future.

The growing interest at the IMO in the capacities of the labour force; the possibility of a stronger role for the ILO now that unions and shipowners are seriously exploring establishing global tripartism; the development of an increasingly effective global network of Port State Control organisations; the

growing influence of shipping's various international associations. All of these variously well-developed tendencies bode well for workable global regulation of seafaring labour. And this has to be the way forward.

Significant changes in patterns of ship ownership are also likely to be of great importance. Especially in the liner and tanker trades, concentration of ownership is growing apace and this can only be welcomed from the point of view of getting a rational and organised approach to the training and retention of a thoroughly professional labour force of all ranks and nationalities. It will be some time yet before the link between training and acculturation is reforged and this time on a global basis. Still, the tide is running in the right direction. All that is needed is a fine-grained understanding, a strong sense of what needs to be done and by what means. At the core of this has to be the acceptance of the inevitability of multicultural crewing.

Selected Flag Scores

Flag	Mean Score	%Low Scores
Black Sea Rim	68	25
Pacific Rim	69	22
E Europe	70	18
Africa+M East	72	22
Malta	72	17
Panama	73	13
Other FOC*	73	17
Bahamas	74	13
Cyprus	74	11
Asian LDC**	75	8
S Europe***	77	11
Japan	77	18
S America	77	14
Liberia	78	7
Antigua	78	7
Asian NIC****	78	8
2nd+Int.Reg	80	7
W Europe	82	5
German 2nd	83	1
N Europe	83	4
Australasia	88	1

* Mainly St. Vincent but also Vanuatu, Honduras, Belize

** India, Pakistan, Sri Lanka, Philippines

*** Spain, Portugal, Italy, Greece

**** Korea, Taiwan, Singapore, Malaysia

Pilot Communications with Bridge Team (Selected Flags)

Sign language used with Master/Sign language used with Officer on watch/Sign language used with Helmsman

Flag Groups	(%)	(%)	(%)
China	46	52	39
Japan	25	21	10
Eastern Europe	15	17	20
Asian NIC	12	10	10
Black Sea Countries	12	14	24
Malta	12	10	10
Panama	9	9	11
Other FOCs	9	8	10
Cyprus	8	10	13
Liberia	7	8	14
2nd and Int'l Registers	7	6	7
Bahamas	6	9	13
Antigua	6	10	7
Western Europe	5	5	5
Northern Europe	3	4	4