

Flexible ‘On Country’ Training for Indigenous Seafarers

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This paper presents the concept, challenges and results of Certificate II Coxswain and Certificate II Marine Engine Driver (MED3) training that was tailored for a specific cohort of indigenous candidates within a unique set of training parameters. The challenge presented to the Vocational Education and Training (VET) area of the Australian Maritime College (AMC) was to integrate with an existing maritime training program in the Torres Strait region of Far North Queensland and then take the program forward with student pathways into higher level vocational maritime qualifications. With relatively short notice, assessments were completely redesigned to minimise written components and to maximise workplace demonstrations of competence, learning material was re-written to be language-neutral, and presentations and diagrams were converted to functioning physical training aids.

The training commenced with a pilot course in November 2013. It was shown that the benefits of this training were that the students remained ‘on country’ (that is, in their traditional geographic region) and that on board the training vessel they were not just trained and assessed; they lived the lives of Coxswains and Marine Engine Drivers for a full four weeks. The feedback from students on completion of the course was overwhelmingly positive, and there was very high course completion rate. The governing partner agencies, AMSA and the TSRA, were entirely satisfied with the innovative and tailored training that delivered nationally recognised qualification outcomes to each of the participants. The innovative approach to maritime training and the successful results to date have caught the interest of the Great Barrier Reef Marine Park Authority, and a similar approach will be used to tailor maritime training for that authority’s indigenous marine rangers in remote communities on Cape York. AMC’s flexibility and innovation has also set the precedent for this style of delivery across all remote indigenous areas of northern Australia.

1. Introduction

Despite the technology and techniques available to the 21st century educator, the style of classroom delivery aimed at well-educated students doesn’t work for every cohort. Indigenous Australians, some with low Language-Literacy-Numeracy (LLN) levels, and with English as a second or third language, are even more challenged by the traditional educational model which includes theory lectures and written assessment instruments. VET is specifically designed for delivering practical hands-on skills for direct transfer to a particular vocation, and this method lends itself to a more flexible delivery of training and assessment by practical demonstration.

This paper presents the concept, challenges and results of Certificate II courses (Coxswain Grade 1 Near Coastal, and Marine Engine Driver Grade 3 Near Coastal (MED3)) delivered to students in the Torres Strait region of Far North Queensland. The training was tailored for a specific cohort of indigenous candidates within a unique set of training parameters. With a very short lead time, staff from the Australian Maritime College’s (AMC’s) VET area developed and delivered an innovative program of training and assessment, based on the existing programs, which produced highly satisfactory outcomes for the funding organisation and the individual students.

2. Background

2.1 Torres Strait Islanders and their Communities

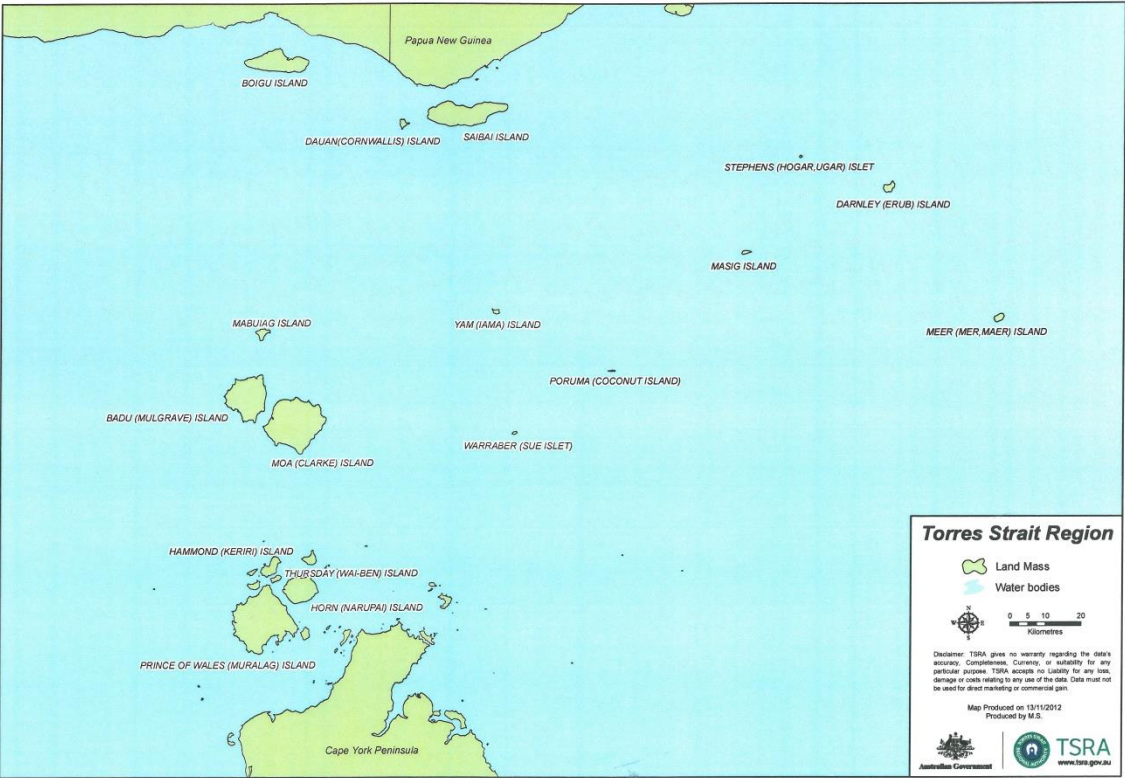


Figure 1 Map of the Torres Strait region [1]

As seen in Figure 1, the Torres Strait comprises the relatively small sea area that lies between the northern tip of Australia's Cape York, and the southern extremities of Papua New Guinea and adjoining part of Indonesia. The Torres Strait Islander (TSI) people live in twenty distinct communities spread across eighteen island and two Northern Peninsula Area communities, in a geographic area of 48,000 square kilometres. Throughout the TSI communities there are two main languages with a number of sub dialects [2].

Evidence of human settlement has been found in the Torres Strait dating back 2,500 years [3]. Life in the TSI communities has by necessity involved close interaction with the maritime environment. The TSI people have travelled on the sea and harvested marine resources throughout their history, and as a result they have very strong and highly robust traditional seafaring skills.

2.2 Government Funding for Greater Maritime Safety

For several years an Australian Commonwealth and Queensland State government initiative has been in place with the aim of increasing the safety and survival of people operating small boats in the Torres Strait. The Torres Strait Marine Safety Program (TSMSP) is a joint initiative of organisations including the Australian Maritime Safety Authority (AMSA), Maritime Safety Queensland (MSQ), the Torres Strait Regional Authority (TSRA), Queensland Police Service and National Maritime Safety Authority Papua New Guinea. The program was put in place to help address the unique geographical challenges facing residents of the Torres Strait, primarily the reliance by many of these people on seaborne transport over long distances across open ocean in small open boats. Through consultation and strong community relationships, the program has delivered increased boating safety education

3. Future Steps

The authors and other faculty at the Marine Institute currently deliver distance/e-learning courses as part of the degree programs offered at their university as well as preparatory courses for mariners to write challenge examinations at the national certifying authority. Participants in these courses come from all over the world and frequently move across borders while participating in the course.

Many of the challenges inherent in offering learning opportunities of this nature have been encountered by the authors. Although the demographic from which the courses have been offered as well as the particular national certifying authority have been restricted to Canada, the authors have developed a roadmap for the creation of an international or multi-national standard that could be used by maritime regulating authorities around the world to certify maritime training institutions for the delivery of online/e-learning MET.

In describing the efforts of several Asian universities to develop a quality assurance program for distance education and learning, Jun et. al [10] emphasize the importance of benchmarking one's training institution against others. Benchmarking provides a relative comparison of performance indicators which can be used to develop a realistic set of cross-national standards that may then be used to track and ensure quality of MET training.

To this end a significant first step in the creation of an international standard to be applied to distance and e-learning MET is that of benchmarking a representative set of institutions to determine a realistic and reasonable set of performance indicators. The performance indicators and the benchmark results could then be analysed and considered by an international committee of IAMU who can then structure this set of performance indicators into a quality assurance standard for consideration and submission to external bodies.

4. Conclusion

The unique circumstances surrounding maritime education and training require that great care and consideration be given to not only the course content and pedagogy of maritime certification programmes delivered by distance learning and e-learning, but also to the technologies employed and the methods in which they are employed. The fact remains that if a mariner is to be able to take a course by distance using electronic means, then it should be assumed that they would have reasonable access at any time from almost any location.

The standard as discussed in this paper and presented to Transport Canada members for consideration is detailed and customized for the Canadian cultural, legal, technological and demographic environment. It is a work in progress and one that will be continue to be revised iteratively following consultations with stakeholders as we proceed down this path of this effort.

It is worthy to note that standards of this type are necessary for regulated environments such as the maritime or aviation industry where stakes are high and a high degree of regulation of training is a necessity to ensure the safety and well-being of all persons involved.

Although this is the case, it can also be noted that credit for most programmes delivered at higher learning institutions is exclusively granted by the institution. In the case of MET, at least a portion of the credit is granted by the external certifying authority, resulting in the assumption of a goodly portion of the responsibility for the quality of the programmes and their delivery. With the responsibility shared between the maritime training institution as well as the national certifying authority (in our case, Transport Canada), there will always be a necessity for teaching and learning

across the region, an integrated safety campaign and various boating safety sub-projects [4]. The sub-projects have included the production and distribution of loan ‘grab bags’ of safety equipment, and the development of training and commercial licencing regulations for the outboard powered dinghies used as everyday transport between communities.

The Torres Strait Marine Pathway Program (TSMPP) has evolved from the TSMSP, and aims to provide islanders with maritime and maritime-related vocational career pathways. These pathways lead into careers through diverse and higher level qualifications, and literal pathways into maritime employment beyond the Torres Strait. Both AMSA and MSQ provide operational support and additional funding to the TSMPP, and AMSA’s Thursday Island community liaison officer acts as a project manager for the program.

2.3 AMC’s Engagement by the TSMPP

The challenge presented to the VET organisation at AMC was to integrate with the existing maritime training initiatives in the Torres Strait and then take the program forward with student pathways into the next level of vocational qualifications. The criterion set for the training project by AMSA and the TSRA was, in essence, to train and assess fifteen indigenous TSI students using as little language-specific material as practicable whilst underway in a chartered training vessel in the Torres Strait seaway. Whilst this was in many ways a simple continuance of AMC’s core business, the specific needs and unique context of the project required renewed perspective on the college’s training and assessment methods and resources.

3. Tailoring the Delivery of Training and Assessment

3.1 Culture and Language

Through a range of circumstances, the lead time given to AMC to tailor our Coxswain and MED3 course, and prepare to deliver it was approximately two weeks. This required our staff to rapidly gain an understanding of the TSI culture, research the geography of the proposed training area and obtain specific details of the training vessel.

The TRSA Cultural Protocols Guide [5] was the primary source of information regarding the cultural requirements of teaching TSI students and was used as a reference against which to benchmark AMC’s standard course delivery and resources. There were many cultural differences to take into account within the training environment, such as the way in which to initiate discussions and conversation, and the manner in which to conduct a discussion with an individual without raising concerns or offending other group members. Very importantly the trainers needed to appreciate the traditional land and sea rights the students hold over the Torres Strait islands and waters, and the long campaign undertaken to obtain these rights. Whereas navigation or vessel handling training in Tasmania simply takes place in the local river or coastal areas, the Torres Strait is considered to be the ‘country’ of the TSI people. This required the respect of the academic staff but it also gave much greater meaning and applicability to the skills obtained from the course; the course outcomes relate directly to the lives of the students and how they live and work on their country.

A significant consideration in relation to the training development was that English is the second or third language for many TSI people [6]. The TSRA recommend using basic English and not complicated jargon that may cause confusion [7]. However in a discipline such as navigation the exclusion of jargon could in many ways be considered to be counterproductive. Technical terms and descriptions also form an integral part of the MED3 training material and are important to ensure that

the training and qualifications are transportable. With these challenges in mind the review of training and assessment material was undertaken to eliminate unnecessarily complicated language and jargon, and to ensure as much language neutrality as possible with technical terms and descriptions. During the process there was thought given to providing simple translations within the training material to accompany the English terms, however the range of languages and dialects spoken within the student cohort would render such a process unmanageable.

A support mechanism provided by the TSMPP partners was the employment of an indigenous mentor onboard the training vessel. The mentor was an employee of AMSA and had a level of experience in the subject matter being delivered. This innovative measure proved very effective, from basic translation functions through to providing moral support to students and cultural advice to the academic staff. As the training progressed and students gained the desired knowledge and levels of familiarity, the language difficulties gradually reduced, and the licencing requirement to communicate in English was ensured via the final summative assessments.

3.2 Training and Assessment Materials

In a heavily paper-based society, where legislation, regulations, codes of practice and training packages are available in either printed or electronic form, the natural format for training material and assessment instruments a written format. Notwithstanding the practical elements such as vessel handling, mechanical maintenance, chartwork and simulation, much of the existing Coxswain and MED3 material was printed in learner guides. The assessment of knowledge also tended towards written format. Given the language issues discussed above, such assessments would probably not provide the students with a fair opportunity to demonstrate their competence using their second or third language.

With these considerations in mind, a different style of learner guide was developed for the cohort. Rather than relying on reading a text and committing it to memory, the students were provided work books to complete. The workbooks led the students through the theory but provided simple aids to learning, such as labelling diagrams. The complexity of these tasks increased over the duration of the training and progressed, for example, through the basic steps of simple navigational tasks right through to the planning of a navigational passage through the coral waters of the Torres Strait.

On a very simplistic level, the students were presented with an innovative way to review buoyage symbols and markers on one particular morning. One of the staff went to the effort of sculpting a range of navigation marks and top marks from butter, and arranged these on the counter in preparation for breakfast. Whilst the educational benefits of the exercise may have been marginal, the gesture was taken with great pleasure and aided in increasing the motivation of the group throughout that day.

3.3 Packaging of Qualifications

AMSA's initial request for AMC to deliver the Coxswain training sought to create a pathway from the previous training for commercial dinghy (Traditional Inhabitant Boat) licences to the qualification needed to be master of a vessel up to 12 metres in length. The Coxswain qualification includes the mandated minimum level of engineering skills and knowledge, but is predominantly a deck or navigational qualification. With the release of Australia's new VET Maritime Training package in 2013, AMC's staff saw an efficient way to combine both the training and assessment of the Coxswain qualification with the MED3 course. This was a new approach for AMC, but with minimal impact on either course fees or duration of training this innovative approach has broadened the qualifications and licences of our Torres Strait graduates, and has provided an engineering branch to the seafaring pathways available to them.

4. AMC Staff Set Sail On Country

The training commenced with the four week pilot course in November 2013 (which excluded some course components previously completed by the candidates). AMSA, on behalf of the TSMPP, arranged the charter of a 32m vessel for the duration of the course, and this served as the training platform and the accommodation. The voyage set out from Thursday Island and slowly progressed through the waters of the Torres Strait, passing the islands and communities to which a number of the students belonged. The significance of conducting the training on country became apparent to the trainers very early in the course; the TSI people hold an extremely strong connection to their land and sea country. The students were very much at ease by virtue of being at or near their homes, and the familiarity they had with the waters meant they could tackle their training with an increased foundation of confidence. Clearly these are not advantages that would be realised if the training was conducted even a short distance from the Torres Strait. The negative impacts of isolating indigenous students from their country have been informally observed to some extent in the past when students have travelled from the Torres Strait or Cape York to undertake other courses in Tasmania.

In a determined effort to address some of the language-specific concerns of the course delivery, formative and summative assessments had been changed to a model in which students were immersed in the daily routines on board the vessel. The students spent much of their time putting newly acquired skills into practice in the workplace at sea. They also had the opportunity to do this in small teams alongside the vessel's crew, across subjects such as navigation, deck work and engine room duties. O'Callaghan recognises the benefits of teamwork in reinforcing learning outcomes and providing the opportunity to orally explain concepts [8]. Through this team-orientated approach, the crew, the academic staff, the indigenous mentor, and indeed emerging leaders with the student cohort could all model the behaviours and practices required for shipboard life and course-related duties. Australian indigenous culture typically relies very heavily on the spoken word, so the students responded very well to practical demonstrations of their training and assessment activities. An exemplar watershed moment in one student's training followed a visit to the engineering spaces on board the vessel. After struggling with the theoretical description of the vessel's steering system, the trainer took the student below to trace and examine the physical layout and system operation in situ. This practical approach gave the student a rapid and thorough understanding of the topic, and with a wide smile he exclaimed to his lecturer that, "It all makes sense Bro!"

An interesting comparison was made during the voyage between the modern navigational techniques and practices being taught by the staff, and the traditional navigational skills that had been acquired over time by the students. The visual use of landmarks and natural transits are mainstays of the traditional techniques. As the course progressed through the Torres Strait, various students shared the methods they used to safely navigate from one specific island to another. These resultant routes were plotted on the chart, along with the route determined by modern practice and the use of compasses, radars and GPS. In these instances the students were able to gain a better understanding of the modern techniques and rationale by building on their own experience, rather than learning the concepts without reference to their former practices.

5. Outcomes of the Training Innovation

5.1 Student outcomes

The initial Coxswain/MED3 pilot course demonstrated that the main benefits of this innovative training were that the students remained on country, and that on board the training vessel they were

not just trained and assessed but lived the lives of Coxswains and Marine Engine Drivers for a full four weeks. Despite a small number of minor lapses, the motivation and morale of the students remained very high throughout the course. The student feedback received on completion of the course (both formal and informal feedback) was overwhelmingly positive, and as pseudo observers the training vessel's crew cast a very positive light on the activities and the program that was conducted. Unlike general figures for VET completion rates across all disciplines in Australia, this course enjoyed a very high completion rate of 93%. Perhaps even more satisfying for the students is the licensing outcome whereby all students who completed the Coxswain/MED3 course successfully passed the Regulator's oral examinations and now hold the corresponding commercial licences.

The licensing outcomes yielded immediate results in the local communities. After graduating, two of the students took up positions as masters with the local ferry service linking two of the main islands. Two others have procured their own fishing vessels and have commenced operations within the Torres Strait, with the added economic benefit of having hired their crews from the local population. There are also two students showing great interest, and potential, in the next level of qualification (Master Class 5).

5.2 Client Satisfaction and National Recognition

The governing partner agencies, AMSA and the TSRA, were entirely satisfied with the innovative and tailored training that delivered nationally recognised qualification outcomes to each of the participants. The successful pilot course of study has results in the delivery of three further courses by AMC in the Torres Strait and has paved the way for pathways into higher levels of marine qualifications. Through involvement with these Commonwealth Government agencies, the training has gained national attention and is viewed as a preferred model for training in other coastal indigenous communities in the north of Australia. With the support of the TSMPP partner organisations, AMC was recognised for 'Excellence in Industry Promotion' in the Australian Transport and Logistics Industry Skills Council's 2014 awards for excellence.

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