

## THE FEATURE OF EDUCATIONAL PROGRAMS OF TRAINING MARITIME CADETS AT FIVE MARITIME KOSENS

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### Abstract

**The collaboration of training international cadets and developing a global internship program was implemented by Japanese maritime KOSEN. There are many international exchange programs: the Singapore Maritime Academy program, the Kaua'i Community College program, and the international exchanges with Maritime Academy in the Philippines. In this work, we are going to report the international exchange programs prepared in collaboration with five maritime KOSENS and Japanese international organizations of shipping.**

**Keywords:** *Collaboration, Maritime English, Maritime cadet, Maritime KOSEN, STCW*

### Introduction

As for international maritime officers, a deep knowledge of theory, operating skill and maintenance for the ship are a very important requirement for them. Aside from that, they need keen English communication skills for internal or external communication between ship to ship or ship to shore. Most of Japanese international shipping company hires many foreigners as a ship crew. It is necessary for international maritime officer to have daily communication with each other who have different nationalities. They need to communicate with SMCP (*Standard Marine Communication Phrases*) based on STCW (*Standards of Training, Certification and Watchkeeping for seafarers*).

Five maritime departments under the National Institute of Technology (KOSEN) in Japan namely Toyama, Toba, Hiroshima, Yuge and Oshima College have been working together to nurture the maritime officers and to enhance the professional English communication ability without any trouble (2013). "All maritime college study method improvement project" in 2006 - 2011, "Maritime Human Resources Development

project" in 2012 – 2017 and "2nd phase of Maritime Human Resources Development project" in 2017 – 2019 supported by Japanese government have been carried out to achieve this goal.

There are two international internship programs for five Japanese maritime KOSENS: Singapore Maritime Academy (SMA) program and Kaua'i Community College (KCC) program. The international internship program in SMA and KCC will be encouraging that the maritime KOSEN students can put in practice the English training from now on.

Over the last decade or so, the international exchange with the Maritime Academy in the Philippines has become increasingly active. Firstly, Maritime Academy of Asia and the Pacific (MAAP) has developed the global educational programs since 2012. We have invited English instructors and requested them to conduct the Maritime English Seminar in Japan. Recently, MAAP's students have visited Japan on their training ship M/V KGO (Kapitan Gregorio Oca) supported by International Mariners Management Association of Japan. Secondly, between 2015 and 2019, the English study and training program have been performed at NYK (Nippon Yusen Kaisha) - TDG (Transnational Diversified Group) Maritime Academy (NTMA) in the Philippines. We have been joining the program with Japanese students and instructors every year. And, NTMA members have visited Japanese maritime KOSENS every year. Thirdly, Mol Magsaysay Maritime Academy (MMA) was established in 2018 and is one of the maritime higher education institutions accredited by the Philippine Higher Education Authority. The first international internship from the Oshima college, which is one of the five maritime KOSENS, to the MMA took place in March 2024. We conducted the maritime educational program in English based on STCW. A survey questionnaire was conducted when the program was over amongst the students. This paper reviewed how the international exchange programs worked for training maritime cadets.

### Training at SMA through MEL Camp

This international internship program will take place at the MEL (Maritime Experiential Learning) camp organized by SMA. In particular, by embarking on a cruise ship departing from or arriving in Singapore, students are trained in a situation where English is the only language available for communication. The purpose of the program is to give students the opportunity to realize that the intercultural understanding and English communication skills are necessary for their future. This internship also aims to develop the meaningful reciprocal relationships through interaction with SMA students and staff.

When implementing the MEL Camp, first, as soon as the program schedule is finalized, the application guidelines for participants is posted on campus. At the same time, we announce the recruitment to the five maritime KOSENs. The prospective participants should submit an essay in Japanese which contains their motivation for participating in the program, and in English with personal eagerness. Then, interviews will be conducted in both Japanese and English, and participants will be prioritized.

At SMA, the students are given an orientation including a field trip and campus tour with the help of SMA students and faculty members to understand Singapore, before participating in the MEL camp. In addition, the introduction of short-term intensive language courses provides students with the opportunity to become familiar with English as it is spoken in Singapore (See Figure 1). We also have coordinated a way to increase the effectiveness of the internship by incorporating visits to Japanese companies in the area, and the entire program is set to last 11 to 12 days to ensure a full training program.

The onboard training is a 4-day/3-night program in which all students from different countries attend lectures and participate in workshops in the same program (See Figure 2 and 3). Japanese students will be assigned to separate groups as much as possible to encourage communication in English. They meet daily under the guidance of the faculty members who lead the meeting to monitor their physical condition and check their level of understanding.



Figure 1. Language Training at SMA



Figure 2. Group work on board



Figure 3. Onboard Lectures

After returning to Japan, they should make a presentation on the program and its results to other students and faculty members at an international exchange debriefing session on campus. Through participating the program, some students are interested in other overseas training programs. We take this as an indication that the program has fostered an awareness of the need to look overseas. In this way, this internship program has steadily produced effective results.

### Training at KCC

Students of five maritime KOSENs study modern navigation techniques in the colleges and the training ships. They learn how to navigate the open seas using a variety of modern navigational instruments (e.g., magnetic compass, sextant, chronometer, RADAR, GPS, etc.). It is considered that these instruments are essential for voyaging today, yet it is also known that in ancient times there were people who voyage the Pacific Ocean without such instruments.

In 1975, a small vessel was built in Hawaii and named “Hokulea”. The “Hokulea” is a reconstruction of an ancient style of double-hulled sailing vessel. This style of vessel (called “voyaging canoe”) had been used by ancient peoples to travel throughout Polynesia (a large area of the Pacific Ocean that includes the Hawaiian Islands, New Zealand, and Easter Island). Along with this vessel, the ancient style of navigation was also revived. The Polynesian traditional navigation techniques (called “wayfinding”) consists of special skills to recognize one's position and course in the open seas, by integrating



information directly sensed from the nature, such as the movement of stars, birds, and waves. The “Hokulea” sailed 4,000 kilometers from Hawaii to Tahiti with the traditional navigation techniques in 1976, to demonstrate that it is possible to navigate the ocean without any modern navigational instruments.

In 2007, the “Hokulea” sailed from Hawaii to Japan. At that time, educators at Japan and Hawaii initiated a plan to give Japanese maritime KOSEN students an opportunity to learn the Polynesian traditional navigation. For this purpose, the international exchange program “Ikena Kahua” (this program name means “to seek one's foundation” in Hawaiian language) was launched in 2010. And a comprehensive exchange agreement was concluded between five Japanese maritime KOSENs and University of Hawaii - Kauai Community College (KCC).

This “Ikena Kahua” is a three-week program in Hawaii. During the first and second weeks, Japanese students stay together in an accommodation and commute to the KCC campus by public bus. In the mornings, students attend classroom lectures and group works on the Polynesian traditional navigation. They discuss with local students in English and plan voyages on a chart together. Japanese share their knowledge of modern navigation with locals while locals share their knowledge of traditional navigation with Japanese. They can compare the traditional one with the modern one and rediscover the most common and fundamental elements of the navigation. In the afternoons, students work outdoors. They work on building a voyaging canoe (Figure 4), practice survival skills at sea, and experience traditional Hawaiian agriculture.

Evening times in the accommodation are also special experiences. They cook and eat dinner together, present to each other what they have learned in the day, and work on homework together.

During the third week, students participate in a training camp of traditional navigation for students from various colleges and universities in the Hawaiian Islands. They work together in each group consisted of few Japanese students and many local students. In the days, they engage in practical training that apply what they have learned in the previous two weeks, on a voyaging canoe. In the evenings, they learn traditional Hawaiian songs, chants, and dances, and listen to stories told by elders who have worked to revive the traditional navigation. At nights, they sleep outdoors under the stars.

This program with travel to Hawaii was offered every spring from 2010 to 2019. 110 students in total have participated in the program. Then, due to the COVID-19 pandemic, it was cancelled in 2020 and an online exchange program without travel was started in 2021. The online program was held for three times from 2021 to 2023, and 49 students in total have joined (2022). After that, in the summer of 2023, the “Ikena Kahua” program with travel was resumed and 14 students have participated in the program.

Many of the KOSEN students who have participated in this program in the past have gone on to work for global maritime shipping companies or study at universities after graduation. It is considered that their experience in this program has motivated the students to

learn more practical English and to become global maritime professionals who operate merchant ships with foreign crews.



Figure 4. A “voyaging canoe”, one of the reconstructions of ancient Polynesian double-hulled sailing vessels.

### MAAP's Maritime English Seminar

Of the approximately 1.2 million seafarers working on the world's merchant ships, Filipinos account for the largest number at approximately 230,000. The same is true in Japan's commercial shipping industry, where Filipinos account for more than 70% of the approximately 56,000 crew members employed by Japanese merchant shipping companies. Due to this situation, there are many schools in the Philippines where you can study merchant marine.

The Maritime Academy of Asia and the Pacific (MAAP) was founded by the Associated Marine Officers' and Seamen's Union of the Philippines (AMOSUP) in 1998. The following year saw the establishment of a new campus (JSU-IMMAJ Campus), which is affiliated with the All Japan Seafarers' Union (JSU), the International Mariners Management Association of Japan (IMMAJ) and AMOSUP.

JSU, which is one of the stakeholders in our maritime human resources development project, advised us to visit MAAP, which produces world-class seafarers and provides global education. As a result, starting in 2013, MAAP dispatched teachers to hold maritime English seminars at five maritime colleges (KOSENs).

Japanese-registered ships are not only manned by Japanese people. On board the ship are not only Japanese people, but also Filipinos, Koreans, Croats, Indonesians, Indians, and other people whose native languages are various. The common language is, of course, English. You must communicate with all ships overseas in English. However, as mentioned above, not all sailors from all countries are fluent in English. And, communication between ships is essential for safe navigation. If each other's English is unclear, there is a risk of mistakes and confusion. So it is important for them to eliminate this language barrier as much as possible. In other words, standard maritime communication terminology called SMCP is used.

We conducted English program based on verbal communication using the SMCP (Figure 5 and 6). The SMCP, which is a set of key phrases in English, is supported by the international maritime community for use at sea and developed by the International Maritime Organization (IMO) in 2001.



Figure 5. The Maritime English Seminar

The SMCP constituted by the Maritime English is accepted as a common working language for safety operation at sea and in port in order to avoid misunderstandings on verbal communication caused by English locality of each seafarer coming from various non-English speaking world. It consists of a set of terms, phrases used on board ships. And it is a standardized safety language, precise, concise, simple and unambiguous so as to avoid confusion and error.



Figure 6. The training ship with MAAP students

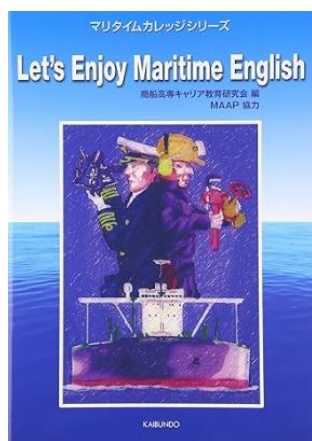


Figure 7. Textbook based on the SMCP

MAAP and teachers from the five schools have created a textbook containing the content of this seminar so that each school can continue to provide this type of English education. It was created mainly by teachers from each school who attended these seminars for teachers (Figure 7). Based on this SMCP, we created a textbook that complies with the International Convention on STCW. These are still used so far.

### Training on MAAP's training ship KGO

Students and professors from five maritime KOSNs in Japan participated in a cultural exchange program with students of the Maritime Academy of Asia and the Pacific (hereinafter, MAAP). The program was held on board a MAAP training ship, M/V Kapitan Gregorio Oca (hereinafter, KGO). The International Mariners Management Association of Japan provided and operated the program.

MAAP is located in the Philippines, and the MAAP students aim to become ocean-going seafarers working in Japanese merchant ships. This was a program in which the maritime KOSN students got on board a training ship with MAAP students, trained and spent shipboard life together, and deepened mutual understanding, including differences in culture and ways of thinking.

A similar project was held in 2019 when KGO was newly built; this program was the second time. This program was held to coincide with KGO's docking in Shimizu.

22 students (1st and 2nd year) and five professors from five maritime KOSNs. 38 MAAP students (19 deck cadets and 19 engine cadets) and four MAAP faculty members (not including the seafarers for operation) participated. In addition, two people from the International Mariners Management Association of Japan were on board and took care of us. Originally, the plan was to board the ship at Kobe Port at 13:00 on March 8, 2024, and disembark at Shimizu at noon on March 11, but due to bad weather during the KGO's voyage from the Philippines to Japan, the embarkation at Kobe Port was on the 10<sup>th</sup> and the disembarkation at Shimizu was on the 12<sup>th</sup>. The schedule was changed to 2 nights and 3 days.

An opening ceremony was held at the beginning of the program on the first day. After that, "A buddy system was used to pair the students for the three-day activities". In this program, Japanese students and MAAP students worked as partners on a one-to-one (sometimes one-on-two) basis, and all programs were conducted on a partner-by-partner basis. Buddy shared the room and ate meals together. As the Japanese students who participated were 16 or 17 years old, whereas the MAAP students were 21 years old, the MAAP students had built good relationships with the Japanese students as good seniors.

The participants observed the training ship facilities with their buddies. Afterward, an evacuation drill was held for all the passengers on board before leaving the port. Japanese students also participated by asking the buddy questions about things they didn't understand. Japanese students were gradually finding ways to communicate through various efforts. They were divided

into two groups and given a lecture after the evacuation drill. During that time, the ship departed from the Kobe Port.

The second day was the main part of this program. In the morning, the students were divided into three groups. Then they had training on the bridge, engine room, safety equipment, and a lecture on the importance of communication and reporting on board. All programs were held in partnership with the buddy, so anything that the Japanese students could not understand from the instructor's explanations was supported and re-explained by the MAAP students as the buddy. The MAAP students actively communicated with the Japanese students and explained things over and over until the Japanese students correctly understood. We felt it was such a good point in this program. After the day-long practical training was completed, a game competition called "Cultural Night" was held. The students played the *message games* in Tagalog and Japanese to transfer the message each other. The event was a great success. It was such a fun time, in contrast to the atmosphere during the day training. After the game, the students deepened their friendships at karaoke until late at night.

On the third day, after breakfast, they observed the entrance of the ship dock. Afterward, they disembarked and toured the dock. After lunch, a closing ceremony was held, and the group dispersed, regretting a farewell to the buddy.

One week later, we took a questionnaire survey to the participating students. The participating students responded positively to all questions. In the comments section, participants included comments about the ships such as "Participating in this program has greatly changed the way I recognize the world of ships." Most of them stated about English such as "I found that the partner can understand what I said, if I try to actively communicate with others, even if I am not good at English," "I found that MAAP teachers' English accents and difficult words were difficult to understand, so I was able to understand them by rephrasing things with the buddy." Some of them mentioned their cultural exchange such as "Through these exchanges, we not only talked about hobbies and friends, but also deepened our understanding of each other's cultural backgrounds, including the social situation, religion, and history of our hometowns."

One of the noteworthy student's comments was, "This program was a memory that I will never forget for the rest of my life." The program was a positively influenced experience for all the students' consciousness. We believe most of the participating students will become deck officers and engineers of ocean-going vessels. We would like to express our deep gratitude to the International Mariners Management Association of Japan for providing this great opportunity.

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### Training at NTMA

The English training and international internship programs were performed at NYK-TDG Maritime Academy (NTMA) in the Philippines as "NYK MIRAI Project". An official agreement between KOSEN and NYK (Nippon Yusen Kaisya) for this program entered into force in November 2015. Number of participant of students and schools for this program were gradually increased until 2019. Then, due to the COVID-19, it was cancelled in 2020, and the NTMA program is scheduled to start again in 2024.

Buddy system which makes a pair between KOSEN and NTMA student was employed to take care these students. Students engage in an immersive communal experience where they attend classes together, share meals in the canteen, reside in quadruple dormitory rooms, and participate in morning exercises as a group. Table 1 shows the time schedule of program in NTMA. And the statistical results about buddy system is shown in Figure 8.

Just choose one number from listed below for each question.

1. very disagreeable, 2. disagreeable, 3. neither disagreeable nor agreeable, 4. agreeable, 5. very agreeable.

#### About buddy

Q. 1 Can you understand your buddy's English?

Q. 2 Can you ask a question to your buddy in English?

Q. 3 Can you perform the program in harmony with buddy?

Q. 4 Can you enhance your understanding for your buddy?

Q. 5 what kind of topic is easy to communicate?

1:Hobby 2:Dayly dormitory routine 3:Maritime technical

4:General subject 5:Social system 6:Culture

Q. 6 what kind of topic is difficult to communicate? 1:Hobby

2:Dayly dormitory routine 3:Maritime technical 4:General

subject 5:Social system 6:Culture

Table 1. Time schedule of program in NTMA

0500H	Reveille (fellow Cadet's daily) Routine
0800H	Attend classes of 3 <sup>rd</sup> year cadets
1200H	Lunch with NTMA Cadets at Cafeteria
1300H	Attend classes of 3 <sup>rd</sup> year cadets
1700H	Attend English oral communication activities
2100H	Administrative time
2200H	TAPS (sleeping time)

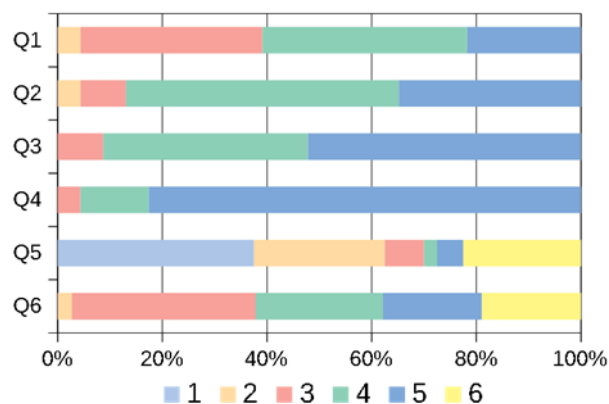


Figure 8. Statistical results about buddy system in percentage of the questionnaire survey by KOSEN students for the program at NTMA

Figure 8 shows the statistical results in percentage of the questionnaire survey for KOSEN students for the



program at NTMA. KOSEN students can communicate with NTMA buddy even though their poor English. KOSEN students have difficulty to understand English at the class. However, the new teaching styles help to understand English thought giving additional environmental information. All sector shows remarkable motivation enhancement.

English training and internship program in NTMA in the Philippines which is affordable for all students was developed. Host NTMA give a chance to many KOSEN students to study English without any extra personal cost. It is very important to learn maritime English and to understand inter-cultural background to be able to communicate with international colleagues in future work on ships. Maritime English classes on board the training ships are very effective. We conclude the program is successful to enhance student's motivation to be seaman.

### Teaching in English on technical subjects at MMMA

An international internship program was conducted for five Japanese students from Oshima college to promote student and faculty research exchange with the MMMA (Mol Magsaysay Maritime Academy) in the Philippines. MMMA is one of the maritime higher education institutions recognized by the Philippine Higher Education Authority (CHED), established in 2018.

During the students' maritime training, a non-native English speaker from KOSEN gave lectures in maritime technical subject such as Marine Auxiliary Machinery engineering in English at regular class for the Japanese students and Filipino students. Also, a KOSEN instructor gave a presentation of Japanese culture and geography in English for MMMA students. They listened intently to the class discussion, and there was an exchange of ideas. They raised questions and participated in the class discussion.

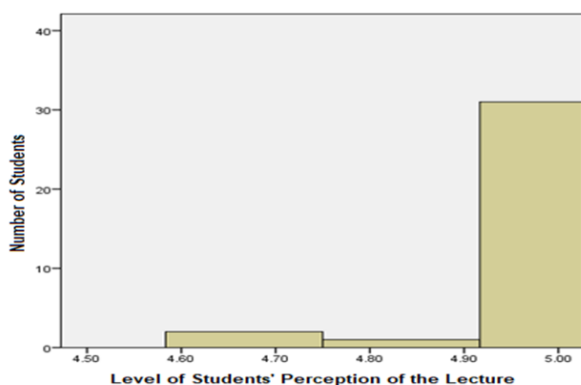


Figure 9. Non-normal Distribution of the Level of Students' Perception of the Lecture

The result spoke the learnings of students from the lecture (2017): Out of 34 students including Japanese and Filipinos, 22 (64.71%) learned auxiliary machinery. Also, 20 (58.82%) and 12 (35.29%) students learned the types of pumps, and force and pressure, respectively. The overall mean of 4.98 (/5.00) indicates a very high level of students' perception of the lecture. The standard

deviation implies that the levels of perception are close to the mean. Some are as high as 5, while some are as low as 4. As shown in Figure 9, the level of students' perception of the lecture concentrated on 5.00, showing a non-normal distribution.

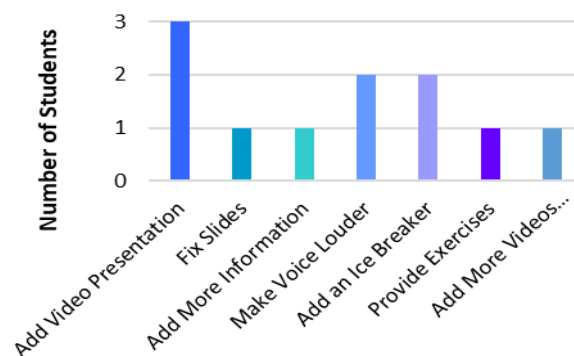


Figure 10. Students' Suggestion for Lecture Improvement

Figure 10 shows students' suggestions for the improvement of lecture. Out of 34 students, 3 (8.82%) suggested the addition of video in the lecture. While few students suggested making the voice louder (5.88%), including ice breaker (5.88%), fixing the slides (2.94%), adding more information (2.94%), providing exercises (2.94%) and adding more videos about the Japanese culture (2.94%). For the purpose of variation, the teacher should use different teaching methods so that students will not get bored in the class.

### Conclusions

The collaboration of training international cadets and developing a global internship program have clearly showed improvement in both of students' English proficiency and communication skills in English.

We concluded that the collaboration programs to train international cadets for maritime English education was successful to enhance Japanese students' motivation and professional English communication ability for the future seafarer.

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