

KOSEN Global Camp: Opportunities and Challenges for Global Education

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Japan's National Institute of Technology (KOSEN) has recently emphasized the development of global engineers capable of competing in the modern era. The KOSEN global camp was introduced as a key short-term program to promote the exchange of knowledge and skills with international counterparts. This study presents the outcomes of the current format, with a particular focus on the 2025-Tomakomai KOSEN Global Camp. The evaluated learning components include: English proficiency; teamwork; leadership; and cultural mindset. Evaluation was conducted through self-evaluation questionnaires administered before and after the camp.

Keywords: KOSEN, Global Camp, English, Learning tool

Introduction

Global education has emerged as critical path for preparing individuals to compete and collaborate in an increasingly interconnected and diverse world. It encompasses the development and application of knowledge, skills, attitudes, and values that empower learners to understand and propose solutions to global issues, and act responsibly as global citizens.¹

Global competency can be defined as a set of abilities that includes at least three key components: 1. A positive disposition toward cultural difference; 2. The ability to speak another language; and 3. Deep knowledge and understanding of global issues.² A positive disposition involves an appreciation of cultural diversity and a commitment to act with fairness and respect for human rights. The ability to speak, think, and communicate in a language other than the dominant language of one's home country can expand one's global perspective. Furthermore, deep knowledge of subjects such as world history and economics enhances critical thinking and helps individuals better understand current global challenges.

Japan's National Institute of Technology (KOSEN) launched a new program in 2023 aiming to bring internationalization to the students from the 51 KOSEN colleges nationwide at their Campus. KOSEN Global

Camp is a short period, usually over a week, English taught program hosted at one of the Kosen schools. This program aims to provide the students an opportunity for working together with international students in a group to become highly skilled engineers. Since its introduction on 2023, the program has been conducted at different KOSEN campuses with a variety of topics and different guest counterpart countries. Although the outcomes have been annually evaluated, the outcomes mostly remain for internal revision.

In this study, I have conducted an evaluation of the current stage, outcomes, and points that require attention for further improvement of the program. The results are taken from the 2025-Tomakomai KOSEN global camp, conducted on February-March 2025 at Tomakomai College. This study mainly focuses on the evaluation of participant's improvement on the following components: English proficiency, teamwork, leadership, and cultural mindset (Figure 1). The evaluation format was through self-evaluation questionnaires conducted at the beginning and at the end of the program.

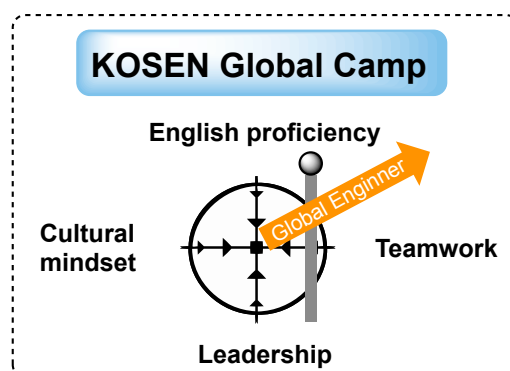


Figure 1: Evaluated components from the 2025-Tomakomai KOSEN global camp.

Program Description

The 2025-Tomakomai KOSEN global camp adopted the following title for the program: "Learning Manufacturing and Management with a Multinational Team of Kosen students from Mongolia, Thailand, and Japan". The program comprised two primary projects:

Manufacturing practice and Management practice (Figure 2).

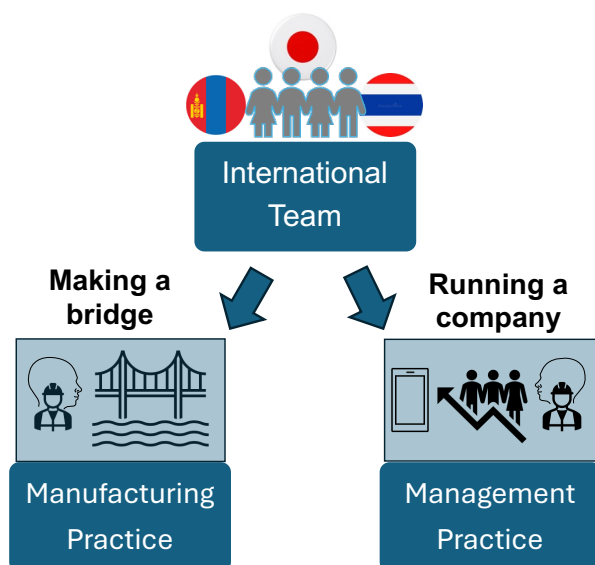
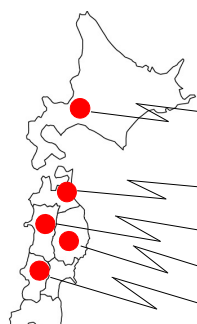


Figure 2: The 2025-Tomakomai KOSEN global camp project.

Participants. The selection of Japanese participants was limited to Kosen students from the Hokkaido-Tohoku region, Block 1 (Figure 3). A total of 11 students -7 males and 4 females- were selected through a lottery system. Participants were enrolled in the regular KOSEN program, ranging from first- to fifth-year students. Despite the proximity of dates with other Kosen Global programs scheduled in February-March 2025, Tomakomai Kosen received a high number of applications, with some applicants ultimately not selected. International participants from Thailand Kosen and Mongolia Kosen were nominated by their respective school administrators. There were 5 students from Mongolia and 6 from Thailand, making a total of 11 international students.



| Kosen | Students | Grade |
|------------|----------|-------|
| Tomakomai | 5 (1) | 1-2 |
| Asahikawa | 1 (1) | 2 |
| Hakodate | 1 (1) | 2 |
| Hachinohe | 1 (0) | 3 |
| Akita | 1 (0) | 4 |
| Ichinoseki | 1 (1) | 5 |
| Tsurugaoka | 1 (0) | 3 |

Figure 3: Number and affiliation of Japanese participants. Parenthesis numbers are for female students.

Program. An integral and well-rounded 8-days program was organized to provide both Japanese and international students the opportunity to develop

technical and entrepreneur skills while learning about culture and traditions from all the participants. All the event was conducted in English as the common language. Detailed description of the contents is provided on Table 1. The participants were conveniently accommodated at the same hotel in downtown Tomakomai, and a shuttle bus was provided to transport them between the hotel, the campus, and other destinations.

Table 1: Program details.

| Date | Activity | Place |
|-------------------|---|-------------------------|
| Day 0. Feb. 4 | Pre-camp guidance | Online |
| Day 1. Feb. 22 | Overseas-Tomakomai travel | |
| Day 2. Feb. 23 | AM: Orientation PM: Visit to ESCON Field | Campus Kitahiroshima |
| Day 3. Feb. 24 | AM: Manufacturing practice PM: Innovation base (iBase) | Campus Campus |
| Day 4. Feb. 25 | AM: Manufacturing practice PM: Management practice | Campus Campus |
| Day 5. Feb. 26 | AM: Visit Toyota Motor PM: Visit Upopoy | Tomakomai Shiraoi |
| Day 6. Feb. 27 | Management practice | Campus |
| Day 7. Feb. 28 | AM: Results presentation (poster) PM: Closing event & Farewell Party | Campus |
| Day 8. Mar. 1 | Departure from Tomakomai | |

Methods

Questionnaire. The evaluation methodology was based on the application of a questionnaire at the beginning and at the end of the camp. Questions were carefully designed to quantitatively or quasi-quantitatively reveal the learning improvement. The evaluation was conducted electronically (survey platform), and it was done by a self-evaluation format. Multiple-choice questions with five rating options, were divided into four main different subjects: English proficiency, Teamwork ability, Leadership ability, and Cultural mindset (Table 2). To assess improvement in English ability, the questionnaire included items on reading, listening, and speaking skills. The average of these components was combined into a single overall score.

Table 2: Utilized questions in the survey.

| Subject | Questions |
|--------------------|---|
| English ability | 1. How would you rate your reading ability of basic sentences in English? 2. How would you rate your ability in conversations about daily things in English? 3. How would you rate your listening ability in a conversation with a friend in English? 4. How would you rate your skills in presentations in English (ppt or poster)? |
| Team-work ability | How would you rate your team-work ability? |
| Leadership ability | As a leader, how would you rate yourself on a scale 6-10? |
| Cultural mindset | Awareness about cultural mindset |

Results and Discussion

The results from the questionnaires showed an intriguing improvement in all the four subjects evaluated for both Japanese and international students. For Japanese students, there was a notably improvement delivering a combined 10% increase value. Among those subjects, teamwork (increase 10.8), leadership (increase 10.5), and English proficiency (increase 10.4) showed the highest improvement. Japanese students were making use of English language to help coordinating activities and explaining details from the assigned activities, hence somehow forcing the Japanese students to make use of their skills (Figure 4, top). Leadership improvement was particularly remarkable, especially considering that Japanese students are generally known to take a passive role in learning and team-based activities. I believe that the success in enhancing leadership skills may be attributed to the thoughtful arrangement of the program components. The program was structured progressively, starting with cultural exchange, followed by manufacturing practice and management activities, and concluding with a poster presentation session. Japanese students became increasingly comfortable after guiding international students at local facilities. Steady improvement was observed throughout the 7-day period.

International students, on the other hand, showed a slightly improvement with a combined 3.5% increase value. Teamwork (increase 4.5) ranked highest, while cultural mindset (increase 1.1) was the subject with lowest improvement (Figure 4, bottom). Thailand and Mongolian are geographically, and historically, more exposed to cultural exchange, therefore participating in the global camp showed little improvement in this subject.

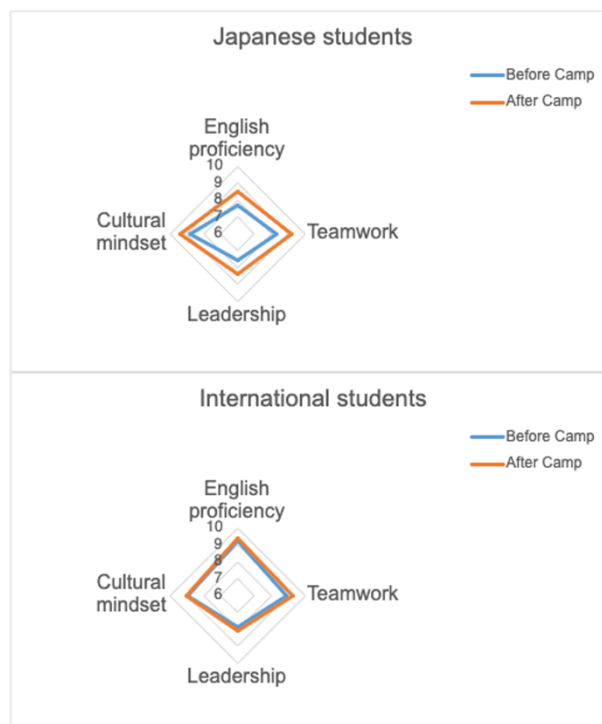


Figure 4: Comparative improvement performance between Japanese students (top) and international students (bottom).

Results from the current format of the program showed indeed a very positive impact on improvement of the participants. However, there are still some aspects that require attention to further optimize the program. Enlisted below are some points I have encountered relevant.

- Japanese students low English proficiency
- Tight schedule
- Poor understanding of entrepreneurial practices

Japanese students were committed to the entire program; however, there were clear limitations in their communication with international students. At Tomakomai College, we are currently considering incorporating English practice into a pre-camp course. Programs such as DMM English conversation platform are being considered as potential options for this purpose.

We also conducted a post-camp questionnaire to evaluate the overall program. While the feedback was generally positive, some participants suggested that although they enjoyed the program, they felt somewhat exhausted and wished for a designated “free time” section on the program.

A particular observation from the Tomakomai Global camp was the difficulty participants faced in following the section of entrepreneurial practices, which is not a common topic for all the Kosen students. It is therefore recommended to offer a pre-camp training on this subject to support better understanding.

Conclusions

The KOSEN global Camp has established a distinctive platform that facilitates the development of student's technical expertise, the enhancement of global competencies, and the formation of international academic and professional networks. The program provides participants with a valuable opportunity to engage in short-term collaborative projects and intercultural exchange. Findings from this study indicate a marked improvement among Japanese students, particularly in areas such as English communication proficiency, leadership, teamwork, and intercultural awareness, competencies that are essential for engineers in an increasingly globalized professional landscape.

The current format of the program provides Japanese students with valuable exposure to international experiences. However, limited English proficiency remains a significant barrier. Integrating the KOSEN Global Camp with a pre-camp English conversation course could help further enhance the program's effectiveness.

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References

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