

# Challenges in Positioning WAC/WID in International Contexts: Perspectives from a Japanese Engineering Undergraduate Program

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This chapter introduces a small-scale study that empirically investigated the perceived challenges of positioning WAC/WID approaches in an engineering program at a large public university in Japan through interviews with faculty members. By identifying the issues observed in the interviews, I discuss how translingual practice can enrich pedagogical resources in an EFL (English as Foreign Language) context and address the challenges that administrators and teaching practitioners might face as they try to meet the interests of the current government initiatives designed by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan. I first briefly touch on the backgrounds of WAC/WID programs and how translingual practice is being discussed in the teaching of writing, and then, I explain the government initiative, Top Global Universities Project in Japan to contextualize the present study and further discuss how various English writing programs have been developed for the purpose of internationalization of Japanese higher education.

The data reported in this chapter came from formally interviewing faculty members; however, the knowledge and information that supports my insights and arguments come from both formal and informal conversations with my colleagues and students, as well as my own ethnographic insights into a large public institution in a Japanese context. The insights gained from informally interacting with my colleagues and students in a Japanese institution helped me interpret the interviews with the engineering faculty members and discuss the future directions in pedagogical interventions and options in this chapter, specifically in a Japanese university adopting English Medium instruction (“EMI”) policies across departments and colleges.

One of the reasons I decided to explore the engineering department was because engineering students in particular did not seem to be strongly motivated in classroom discussions and conversations to learn EAP writing and speaking. I worked as a member of an academic writing curriculum committee to develop an academic writing program for all first-year students. While developing the curriculum and teaching academic writing, I observed that engineering students in particular seemed to lack

interest in learning academic writing entirely in English under EMI policies. For this reason, I wanted to know what engineering faculty members think about the recent changes in the institution and the dynamics between new policies, administrative decisions, and their own perceptions and thoughts on adopting EMI policies.

WAC/WID programs in the U.S. context have been implemented as a way to help facilitate the construction of knowledge and socialization into the discipline through writing (Bazerman, 1994). WAC/WID approaches are typically culturally embedded literacy scholarship and activities in primarily North American contexts (Russell, 1990, 1991; Thaiss & Porter, 2013), making it difficult to adopt in international settings. Moreover, building transnational partnerships between writing programs across national borders or importing WID/WAC approaches in an international settings have encountered several challenges, such as different institutional beliefs and constraints, first language and medium of instruction, personnel management, as well as different cultural assumptions and educational systems (Martins, 2015). The WAC approaches in higher education have taken the form of note-taking, short-answer responses, essay writing, reflections, and journal writing as a mode of learning. Many discipline-specific WAC approaches have been introduced in disciplines such as sociology, science, engineering, etc. (Bazerman et al., 2005; Dannels, 2002; Hanson & Williams, 2008). WAC approaches are a reflective process of learning through writing and identifying any ideas and concepts learned on the writer's own terms in order to reach a closer, clearer understanding of an application of a concept, and, largely, advancement of academic knowledge.

In an international context, while the concept of WAC/WID is not widely known, it is understood as an approach to teach content knowledge in a second language. Often in institutions adopting EMI policies in academic programs and in current discussions of teaching academic writing in EFL contexts in Japan and a few European countries such as Sweden, Finland, Sweden, and Norway, Content and Language Integrated Learning (CLIL) is becoming an area similar to WAC/WID (Pérez-Cañado, 2012). In the Japanese context, CLIL is actively being employed (mostly in bilingual modes), practiced, and researched in numerous institutions as a way to teach content knowledge through a second language. CLIL refers to an instructional approach that integrates content knowledge and an additional language, which is a “dual-focused” approach that is “content-driven” and focuses on both content knowledge and learning an additional language that is often a foreign or second language to learners (Coyle et al., 2010, p. 1). The language used in the CLIL approach is called “vehicular language,” a term that is employed in CLIL to reflect its “inclusive” meaning that is not necessarily English only but encompasses other languages that can be used to teach both content and language. There are two types of instructional models in CLIL that utilize vehicular language. One model is “extensive instruction through the vehicular language,” in which the focus is on both acquisition of high-level content knowledge and language

proficiency. In this model, there would be “limited switches” to the mother tongue to explain the subject in class (Coyle et al., 2010, p. 18) and would be supported by one content teacher in collaboration with a language teacher who can teach linguistic structures and vocabulary about the subject before students learn the content knowledge. The other model is “partial instruction through the vehicular language,” in which code-switching between first and second language can be more clearly implemented by a bilingual teacher through a bilingual mode of instruction. This model uses both CLIL language and first language as a medium of instruction. The type of code-switching used in this model can be called “translanguaging” that employs “systematic switches” between students’ first and second (foreign) language in order to reduce the burden of learning content and additional language at the same time (Coyle et al., 2010, p. 19).

As the definitions and practices of “translanguaging” develop further, current discussion of “translanguaging” goes beyond code-switching and code-meshing as natural phenomena. Instead, “translanguaging” is becoming a conscious decision informed by the awareness of language hierarchy and power dynamics in various educational contexts and classroom contexts (Lewis et al., 2012). According to A. Suresh Canagarajah (2018), the prefix “trans” connotes the transformation of existing norms and relationships of a language, meaning that “translingual” makes it possible to use linguistic resources available to create new meanings, even if the linguistic resources have multiple languages. In a way, “translingual” goes beyond the traditional meaning of a medium of communication that only one form and structure of language can be a means of communication in a communicative context. Using mother tongue together with the target language in the classroom is not only a natural phenomenon but also an ideologically-aware decision. Canagarajah (2018) also defines “transnational” as a space in which one’s identities are not bound by one’s nationality; instead, it transcends the physical locations of where people are and extends their relationships and experiences (p. 42).

Given these definitions and descriptions of “translingual” and “transnational” and the term “translingualism” in the context of teaching writing, English classrooms in current Japanese higher education should be considered transnational spaces where issues beyond national borders can be discussed and more than one form of language can be considered as a means of communication. Both learners’ and teachers’ linguistic repertoires consist of multiple languages including English, Japanese, along with other languages such as Chinese, Hindi, Korean, Malay, and Portuguese, which can be used as a way to negotiate their own identities in order to create and produce new meanings in spoken or written words. Unlike what has generally been understood in the public sphere, Japan is increasingly a multilingual and multicultural context due to history and immigration (Gottlieb, 2012). Together with this particular context, as an additional layer, I chose an undergraduate engineering program as a context of the study because it presents a unique challenge

in integrating academic content and English as a Medium of Instruction (EMI) in a classroom context in an EFL context. With the Top Global University Project of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in Japan, selected universities are building global partnerships and innovative teaching environments that promote internationalization (Top Global University Project & MEXT, 2014). Many of the selected universities are actively adopting courses that use English as Medium of Instruction in order to create opportunities for students to learn and engage in an English-speaking environment to foster their English language skills and global leadership (Bradford & Brown, 2018). Study abroad programs for Japanese students, culture exchange programs for non-Japanese students, and degree programs offered in English only or English and Japanese are part of this initiative. Based on the Top Global University Project by MEXT in Japan, various academic programs in Japanese higher education are actively adopting EMI courses and programs to internationalize the universities to attract more students and faculty members from outside Japan by creating more Western academic environments that take more active learning approaches and use students' productive skills in language by learning academic contents in academic English.

Although there is a push for globalization and building academic English programs from the administrative sector, since English is not a medium of instruction in Japanese high schools, teachers and students face many challenges in managing EMI classes in higher education settings, as many students have never been exposed to EMI environments. Communicating the needs of students and untrained teachers becomes a difficult task as the Japanese government and administration sectors tend to assume that English-speaking staff are already prepared to teaching academic writing and that, therefore, students will perform well as long as teachers are teaching them "how to" write an academic paper in English. For this reason, teaching academic writing through EMI courses in Japanese universities is becoming one of the major topics of discussion in teaching and researching Teaching English to Speakers of Other Languages (TESOL) in Japan.

Various studies have demonstrated the potential and value of translingual approaches in teaching and learning writing in the field. In regards to cultural differences and ideologies in teaching writing to second language learners, scholars have addressed challenges in negotiating these ideologies, particularly in understanding the different structures and modes of argumentation and rhetorical strategies (Mao, 2018; Qu, 2014; You, 2005). For example, LuMing Mao (2018) argued that insights from comparative rhetoric and translingual practices can inform the field of teaching writing in a way that can create a space for discussing underrepresented modes of argumentation and empower writers' voice and agency.

As a specific example of using a writer's linguistic repertoire that involves two languages in English-medium higher education settings, Guillaume Gentil's (2018) case study situated a translanguaging approach in a Canadian academic context

in which English and French are used. By observing a case where a graduate student who is proficient in both English and French works on a dissertation project on gender studies at an English-medium university in Quebec, the study showed unique challenges the student experienced in the process of translating her ways of perceiving and using lexical resources in English and French, negotiating the gap between the academic terms created in English and French, and issues with finding equivalents in French, while trying to produce new knowledge and arguments for her study. The study indicated that the current lexical resources that are translated from French to English or from English to French by translators are quite limited for discussing the subject in depth, which requires the student in this study to be creative in making meaning across languages. Based on the study, Gentil (2018) noted that translanguaging and biliteracy can “help bilingual writers learn to write in their disciplines in and across two languages, but also harness the potential of bilingual and crosslingual writing for learning (in) the disciplines” (p. 126).

The present study situates engineering faculty members’ perceptions and attitudes of implementing WAC approaches in a Japanese undergraduate engineering program. Through interviews with faculty members at a Japanese undergraduate engineering program, I identified possible challenges writing faculty might experience in the process of introducing and localizing WAC approaches in content-area disciplines such as engineering in an international context.

## Context and Method

With the support of Top Global Universities Project by the Japanese government, the target institution is currently on a 10-year internationalization plan to increase the number of international students from outside Japan and create more courses that are taught in an English-only environment. Five faculty members in an engineering undergraduate program at a Japanese university were interviewed, who were assistant or associate-level professors, in various disciplines: bio-mechanical engineering (1), chemical engineering (1), and electrical engineering (3). The researcher contacted faculty members at this university via email based on the faculty profile pages of the engineering department and asked for an interview regarding the project. The email explained the purpose of the research and the nature of the project. Five faculty members responded back and agreed to participate in the interview. At the time, using English as a medium of instruction was strongly encouraged in class because the university was aiming to adopt EMI within the next five years. Faculty members were informed by the university about the goals and globalization prospect and were supposed to prepare for teaching content-based EMI courses. Upon interviews, I introduced myself to my participants and the purpose of this small-scale study, and showed a list of questions that would be asked first, and they were also asked if they

would feel comfortable providing their insights on this topic. A verbal agreement was obtained, and the interviewees were allowed to stop the interview at any point of the interview. All participants were given pseudonyms.

## Findings

Due to the extent of the participants' unfamiliarity with the concept of WAC or writing studies and approaches from North American contexts, the researcher explained this in both English and Japanese, and helped them understand the purposes of this type of approach, typical goals and outcomes expected in writing programs and undergraduate programs in American contexts. In addition to this, I explained ways students learn content knowledge from their early years from primary school to college in the US. The interviews were transcribed and coded based on the themes developed through an open coding method that identifies emerging themes in the process of data analysis. The preliminary findings indicated that professors believed that disciplinary knowledge in their mother tongue was more valuable for engineering students, primarily in order to understand the theories and concepts which they needed in advanced-level courses and individual research projects in their program. Interviewees stated that students would benefit from writing in the engineering discipline in the long run; however, the current infrastructure of the institution and different needs and demands of the industry in Japan make it difficult to embed writing activities in English in their current undergraduate curriculum.

## Faculty Member's Own Literacy Activities and Perceived Importance of Literacy Skills

Participating faculty members were asked what literacy activities they engage in in their professional lives. As the participants were faculty members in engineering, their literacy activities involved reading and writing in English mostly for research publications; however, they also use documents written in Japanese if they are available to them. The following are the excerpts from the interviews with the five faculty members in the engineering department. The names of the faculty members are pseudonyms given by the researcher.

Ohashi: Most documents I use are English journal paper, more than 90%, Japanese ones are very few.

Yamada: Reading skill is most important. We use it when I read papers, books, and manuals.

Yaguchi: I often read technical documents to understand a new technology. They are mostly in English, but I read if there is the Japanese edition.

Tanaka: Writing skill was the most important in my field, especially, in publication of journal papers.

Kimura: I have to write ronbun [articles for journals] in English, so I read and write in English for my research. I need to practice and get better (laugh) too.

Their own literacy activities in English seem to be mostly related to their research in the engineering discipline. It is, however, unclear how much of their work is in English, or if there are any other tasks they do on a regular basis in English. Below are excerpts from the interview in which each faculty member expressed their thoughts on what types of communication skills their students might need.

Ohashi: Critical thinking skill must be included. However, students should learn it in Japanese before learning English.

Yaguchi: I think that skill for accurate communication is necessary.

Tanaka: Enthusiasm and activeness to learn what they need from other people are essential communication skill (if they already have basic knowledge about the field).

Yaguchi: Required time. I will need time to prepare for the course in English.

It can be seen that different ideologies and perceptions work together in thinking about communication skills and attitudes that are perceived to be needed in such classes. These perceived differences in what English and Japanese might bring into class seems to make the faculty members not only resistant to changing their class formats and styles but also anxious about teaching disciplinary knowledge to students in English either partly or as a main medium of instruction. Some faculty members seem to associate values such as “critical thinking,” “enthusiasm,” and “active” with English communication skills, which are often contrasted with the values considered important in the way students learn in Japanese contexts, for example, listening without interrupting the teachers (Harumi, 2010; Samimy & Kobayashi, 2004). As Weiguo Qu (2014) rightly noted in his study, different power structures within a given society may “prioritize some items or modes of argumentation” in writing, rather than cultural differences (p. 71). The ways faculty members in the present study see the classroom in English and Japanese may be coming from their perceived cultural differences that seem to give a clear distinction between how classes should be conducted in English and Japanese. And these perceived differences can prevent them from understanding how the actual English-medium content-based classes can be taught. As shown in the interview, one faculty member (Yaguchi) mentioned that preparing the engineering course taught in English using English literacy activities will simply require too much time for faculty members.

## Opinions on English as Medium of Instruction Policy and WAC Approaches

Engineering faculty members were asked how they feel about implementing English as Medium of Instruction and WAC approaches in engineering courses. The WAC approaches and how they have originated in the Western educational contexts were explained, as well as how they are used in some university engineering programs in the US. We asked the faculty members how those approaches could work in the engineering program in Japan. Many of them suggested a form of bilingual class as a better way, although it is not clear how exactly both languages can be used in writing tasks for students.

Tanaka: Yes, of course. This is very good opportunity to obtain theoretical thinking ability, which is useful in all kinds of work. But both the languages should be used in the learning.

Yamada: I think that students should be taught in both. Japanese and English. For example, we use a language suitable to learning purpose.

A faculty member (Yamada) mentions “using a language suitable to learning purpose” by using both Japanese and English, which seems to mean that they are familiar with the instructional language of Japanese; however, they might not be familiar with the style and convention of instructional language in English. Another faculty member (Tanaka) is positive towards the idea of implementing WAC approaches and thinks it can help students’ ability to understand theoretical thinking; however, this faculty member thinks that both Japanese and English should be used in this type of learning environment.

I asked them to explain why both languages should be used in the engineering courses, if WAC approaches were to be used in class. A faculty member (Tanaka) explains that using both languages in writing will help students understand differences, which can help them better understand international communication. He also noted that students who are not familiar with critical thinking, especially those who might lack experiences in writing practices with critical thinking, may not benefit from WAC approaches. This is worth noting as it is possible to see that faculty members link English writing practices with critical thinking, acknowledging that it is not widely practiced in Japanese secondary school settings, and at the same time, seeing the benefits of literacy activities that WAC approaches might bring to the students.

Tanaka: They can understand differences in thinking way and culture between these two different languages, English and Japanese. This experience promotes their ability of international communication? Most Japanese, maybe, and Asian people are



not good at, or do not like critical thinking. The lack of this ability affects all the aspects of Japanese, including writing and communication.

Some faculty members, however, are hesitant about both using English as medium of instruction and implementing various writing tasks from WAC approaches, because they believe it might only benefit non-Japanese students who are more competent in English literacy skills.

Ohashi: Students from foreign countries will benefit, but not Japanese students.

Yamada: Benefit is foreign students will be able to understand it more easily. Problem is Japanese students cannot understand it much.

The above two faculty members seem to contrast Japanese students with foreign students in their abilities to engage in English literacy activities. As the engineering program at this institution tends to have international students who come from outside Japan, faculty members teach engineering courses that have a somewhat more diverse demographic than in the Department of Humanities and Social Sciences. The international students enrolled in the undergraduate engineering program at this institution range from south Asian countries such as India, Indonesia, and Malaysia to East Asian countries such as China and South Korea, and more rarely, there are some students from Europe. The above two faculty members (Ohashi, Yamada) consider that foreign students are more competent in English language skills, which makes them think that Japanese students might not benefit from learning disciplinary knowledge in English that implements various writing tasks.

## Practicalism of Learning English Skills

As with many higher education settings, one of the important goals of the engineering program at this institution is to help students find career opportunities at engineering-related companies or research centers. For this reason, much of their focus is on helping students reach their end goals through credit-bearing engineering courses that could teach them necessary disciplinary knowledge and provide practical training in the field. We asked the faculty members whether implementing writing activities for the purpose of learning the disciplinary knowledge would be helpful in acquiring the knowledge and advancing their writing skills in English for the future workplace. Faculty members seem to think that “conversation skills” are more important than writing skills when engaging in international collaboration or business, and that this skill can be learned in focused training sessions after they enter the workplace. The companies in Japan will provide employees with training needed to improve their conversation skills.

Yamada: It is difficult to learn practical writing skills related to workplace in their college, because, which so differ depending on type of workplace. This skill should be learned after entering a company.

A faculty member (Yamada) notes that it is hard to say that English writing skills learned in college will help students in their workplace because workplaces vary and the companies will offer additional training opportunities. Another faculty member (Kimura) also mentioned that English skills can be learned more after students graduate and enter workplaces. He also noted that many companies train their employees to communicate better with international workers in international branches for businesses and research. For this reason, engineering students often seem to have a pre-decided idea of which skill areas in English to improve, and whether they would like to spend more time on learning English language skills or furthering their disciplinary training.

Kimura: Intercultural communication, critical thinking and writing skills are important, but these skills can be learned after they are employed. Companies train employees for international branches and international businesses and projects. Mostly focused on conversation skills. I once worked as a researcher at a company and they gave me one-on-one conversation class with a native speaker. I learned speaking quite a lot in that class. I think conversation skills is important when you want to work for international business at that company.

Interestingly, the above faculty member (Kimura) mentioned that this English skill the companies provide training in is mostly conversation skills. Due to the demands of the professional environments in Japan that put more emphasis on employees' ability to orally communicate with non-Japanese in international businesses than on written communication, writing skills receive little attention in the undergraduate engineering program. As noted in the earlier interview excerpts, "active learning" and "enthusiasm" seem to be more associated with talking and speaking in class, which may influence the way faculty members think about English communication skills as well. This part of the interviews shows us that adopting EMIL policies together with writing-intensive approaches might require a shift in the current learning paradigm in the engineering program. The current learning paradigm in the engineering department seems to focus heavily on the learning of necessary content knowledge to prepare graduates for the job market mostly in Japan. It is more practical to learn English literacy skills after learning and understanding the content knowledge, and preferably after students enter the workplaces of their choice, if they wish to work for international sectors. This is due to a difference in the culture of the Japanese corporations and job market, and the influence of these on the current engineering programs in Japanese universities.

## Discussion

From the interviews with faculty members at a Japanese undergraduate engineering program, it is possible to see challenges in introducing WAC approaches in the Japanese context due to different understanding of literacy skills and demands of the current job market in Japan. Faculty members of the engineering department seemed to agree with the general direction of the globalization of Japanese higher education, such as increasing the number of courses that implement English skills; however, teaching of disciplinary knowledge should be in both Japanese and English for effective instruction and students' preparation for careers in Japan. In this section, I will present a few points in furthering the interpretation and discussion of the interviews. In this section, I discuss how WAC programs can be negotiated and localized in an international context where the use of native language is unavoidable in learning disciplinary knowledge. In addition, I discuss how writing programs can be localized with sustainable infrastructure at higher education in international contexts.

### Contextualizing WAC/WID and Medium of Instruction

In order to localize an academic writing program that adopts a writing-intensive approaches like WAC/WID, it seems necessary to adjust our expectations of English usage in the classroom, as well as the extent to which a medium of instruction can benefit students to learn disciplinary knowledge. When it comes to engineering disciplines in Japan, use of mother tongue in delivering disciplinary knowledge seems inevitable because faculty members in engineering prefer to use Japanese, for which they already know the forms of language that are “suitable for learning purposes.” Deeper consideration should be given on the way to define and apply medium of instruction in the local curriculum and content-based academic programs. The current EMI policies are generating a lot of pushback from faculty members and students, which seems to pose challenges in actually implementing the use of English as a medium of instruction with writing-intensive approaches for content-based academic degree programs in Japan, unless there is specific support for pedagogical approaches and resources available for both faculty members and students. Although engineering faculty members may be capable of teaching content knowledge to students in English, they seem to feel pressure to re-conceptualize and re-purpose their classroom, as well as their teaching approaches and philosophies.

Translingual approaches can potentially have a place in this junction of medium of instruction and content knowledge in degree-based programs in Japan. I have introduced CLIL as one of the instructional approaches being used in the Japanese context earlier in this chapter. The current CLIL approaches do not clearly explain how “translanguaging” can be used specifically, and whether it should be used. However, it is understood that bilingual teachers would systematically switch

between students' mother tongue and a second language while teaching content knowledge. In order to fully understand the content and engage in class activities, students may need to have acquired some content knowledge and necessary vocabulary in a second language in advance. In other words, as is often the case that the majority of the students do not already have the content knowledge or content-specific vocabulary in a second language, there will be many gaps to fill. The process of filling these gaps will require time and additional labor from both students and faculty members, which calls for a specific pedagogical intervention specifically designed for this particular academic context. This process may be facilitated by understanding translanguaging modes and bilingual thinking, and accepting that learning new content knowledge in a second language requires forming knowledge in the first language as well, at least at the beginning. If faculty members and students can understand this process of knowledge acquisition in the first and second language, and if students are allowed to use their first language in their collaborative activities or writing tasks, it can be more efficient to achieve learning goals and objectives.

Despite the current debate in the US (Canagarajah, 2011a, 2012b, 2013; Lu & Horner, 2013), translanguaging practices seem to be important resources for both teachers and students to learn content knowledge and second language, at least in non-U.S. contexts. It is my belief that use of translanguaging practices can help students' initial adjustment to the courses that are taught in English and employ WAC principles. The notion of translanguaging provides insights in reconceptualizing communicative competence from another angle. A translanguaging writing program model can allow students and teachers in international contexts to ease their way into "more English" in general. When students' first language is allowed for resources, this further enriches their understanding of the discipline and advances their academic language repertoire, especially in an EFL context when English is not actively used on a daily basis or for education in general.

Translanguaging is a conscious decision accepting it as a natural process for second language learners and for how multilingual learners understand and think (Lewis et al., 2012). Translanguaging classroom practices may facilitate more meaningful interactions among learners that share a first language and getting access to the second language and content together collaboratively. In his research in a Malaysian primary school, Shakina Rajendram (2021) posits that translanguaging is a naturally occurring phenomenon (Canagarajah, 2011) that occurs in the learning process. His research showed that students used their first language "agentively" and effectively in the collaborative learning process (Rajendram, 2021, p. 189).

Writing studies scholars in other contexts in this book provide insights into the way writing programs can be localized and how the teaching of writing becomes an ideological process in international contexts (Hodges, this volume; Li, this volume). The findings and discussion of this chapter echo those in Li's chapter on building a writing-intensive program in a science and engineering department at a

Chinese university. L1-oriented WAC/WID approaches are generally understood as a category of EAP, and this understanding may differ from the way WAC/WID programs are constructed in the US; however, administrators and faculty members will continue to seek ways to teach academic writing. This process can sometimes take the form of collaboration by fostering a community of scholars working on writing program administration and teaching and assessment in the international context (Sharma & Hammond, this volume).

Looking at the trend in the global sphere, it seems that teaching academic writing will continue to be an important step to include in the internationalization of higher education, not only in Japan but in any other contexts in which English is not the first language. Learning academic literacy in international contexts is increasingly becoming unavoidable for both undergraduate and graduate students. While this trend will continue, the discussion on the specific pedagogical approaches under EMI policies in individual classrooms will become more specific and important. The discussion will generate questions such as “How much are we going to allow translanguaging in the classroom?”, “How do we inform policies and administrators about the value of first language?”, “How do we help students achieve literacy both content and the second language in a different educational and cultural context?”, and “What level of academic literacy do we expect students to achieve?”

In the course of preparing for further globalization of Japanese higher education, teaching academic writing will continue to be a means in the globalization process and enhancing the quality of academic programs. It seems necessary to explore various options in teaching and learning content knowledge in English. Many of these decisions will be made based on practical reasons, but it will be difficult to avoid in-depth discussion on whether to use mother tongue in EMI classrooms. More research on current EMI policies needs to be conducted to find more insights from faculty members and students teaching and learning in content-based academic programs under EMI policies in Japan. And in this process, it is important for policy makers and institutions to collaborate to support “multilingualism as a norm” to create better resources and infrastructure for teaching academic writing in an international context (Rajendram, 2021, p. 196).

## Sustainable Infrastructure

Adopting WAC approaches will require much more sustainable infrastructure that can support both faculty members and students. Writing centers, for example, can be one of the ways to help build connections between English writing programs and engineering departments, as well as give individual or group support for the students in need. There can also be additional resources such as instructors specializing in science writing or courses that can foster an understanding of what writing does and how writing can facilitate the knowledge-building process. The

internationalization movement towards globalization in Japan is actively encouraging more use of English and more productive skills in English in a way that could promote the global visions that meet the national interests. However, as can be seen in the interviews, there is some resistance toward adopting Westernized methods of teaching in English in the content area courses, and more importantly, there is misinterpretation and disagreement on what literacy can do in the process of acquiring, learning, and using knowledge for advancing scientific knowledge. English literacy, for now in Japanese contexts, seems to be perceived as another barrier to teaching disciplinary knowledge, rather than a means to facilitate teaching and learning of disciplinary knowledge. In order to effectively build and implement an academic writing program for other disciplines such as engineering, there needs to be sustainable infrastructure such as instructors knowledgeable in EFL contexts, writing specialists in second language writing, effective use of translanguaging, and instructors who can demonstrate an in-depth understanding of cultural and national identity in the context they teach. Understanding the motivation and backgrounds of national and institutional globalization initiatives and how certain academic writing programs are established in an institution can extend the knowledge of ways to develop pedagogical approaches for the students, set more realistic goals, and help students reach their full potential.

## Conclusion

Writing program localization does not come with manuals for each country and context. The local context significantly informs practice, as each context has a distinctive language policy agenda based on different motivations. Japan is a unique context in which national agendas and global standards are co-dependent. Understanding the context can benefit the way to think about steps to take in writing program localization. Although it seems highly challenging for WAC/WID approaches to be used in a context of Japanese engineering programs, interviewees shared a general agreement that productive language skills are important for participating in globalization and internationalization movement in order for the discipline and industry to grow.

To better localize WAC/WID approaches in international contexts, there needs to be negotiation of the goals and outcomes that take into account students' mother tongue as well as the knowledge and skills required in the Japanese engineering industry. When localizing a writing program, or teaching EAP in a global context, we as writing practitioners need to first discuss what teaching and writing academic English means, why we do it, how we do it, what we expect from the students, and what level we want to achieve and accomplish. Although it might be a challenge, I believe that the discussion on "writing to learn" can benefit the

university programs and policies in Japan that are actively adopting EAP, EMI, CLIL as research in EAP in the global context advances further. Research in WAC/WID can inform the practices of EAP in a way that can foster the idea of learning English not as a product but as a process. This process can involve teaching in bilingual modes, making use of students' biliteracy, and translingual approaches as students attempt to make sense of meaning making process in academic language.

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