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ELT in Higher Education in Asia: Trends, Challenges, and Innovations



# **Invited Papers**



## **ELT in Higher Education in Asia: Trends, Challenges, and Innovations**

Joo-Kyung Park

AsiaTEFL

### **Abstract**

This paper explores the diverse and dynamic landscape of English language teaching (ELT) in higher education across Asia, highlighting key trends, challenges, and innovations shaping the field. With English serving as a global lingua franca, its integration into Asian higher education systems is crucial for equipping students with the competencies necessary for international participation. Based on the results of a survey conducted with ELT experts in 20 countries and regions, first, the major characteristics of ELT across Asian universities are outlined, including the aim of ELT, English teachers, medium of instruction, the instructional approaches or methods and evaluation, and the integration of artificial intelligence (AI) and technology. Second, significant challenges that complicate the implementation of effective ELT programs are identified, such as resource constraints, systemic issues, cultural factors, and student and teacher-related issues. The main innovations in ELT in higher education are also discussed. The paper concludes by emphasizing the importance of adaptive strategies in ELT, calling for international collaborations and partnerships that enrich ELT practices and better prepare students for the demands of a globalized world.

*Keywords:* ELT, higher education, Asia, EMI, technological integration

Since the twentieth century, English has served as a global language—or a lingua franca—in many different regions and contexts. Spolsky (2017) claimed that the development of English as a global language lies in three factors: First, the bulk of scientific publications is in English so advanced university courses in many academic fields require their students to be able to read the language easily; Second, most universities expect their teachers to be conducting research and publishing their results in peer-reviewed English-language journals; Third, and most importantly, much skilled and advanced employment in many fields set English proficiency as basic or highly desirable qualifications. This sets the goals universities must aim to achieve, while at the same time facing many challenges and issues that emerge from different aspects of ELT in their countries and regions. This applies to the universities in Asia, in particular. English language teaching (ELT) in Asia has increased dramatically in the past three decades with the number of English learners in Asia being higher than it has ever been (Bolton & Bacon-Shone, 2020, cited in Brandon, 2023).

The purpose of this study is to explore the diverse and dynamic landscape of ELT in higher education across Asia, highlighting key trends, challenges, and innovations that are shaping the field. With English serving as a global lingua franca, its integration into Asian higher education systems is crucial for equipping students with the competencies necessary for global participation. Based on the results of a survey conducted with ELT experts in 20 Asian countries and regions, first, the major characteristics of ELT across Asian universities are outlined, including the aim of ELT, English teachers, medium of instruction, the instructional approaches or methods and evaluation, and the integration of artificial intelligence (AI) and technology. Second, significant challenges that complicate the implementation of effective ELT programs are identified such as resource constraints, systemic issues, cultural factors, and student and teacher-related issues. The main innovations in ELT in higher education are also discussed.

This study also aims to find out some strategies and action plans that can be provided for international and regional ELT organizations in Asia to continue to be successful and sustainable, catering to the needs and demands of the current and future members, enriching ELT practices, and better preparing students for the demands of a globalized world.

### **ELT across Asia**

In previous years, there was a lack of literature that covered ELT across Asia. Starting in 2006, the Asian Association of Teachers of English as a Foreign Language (AsiaTEFL) ([www.asiatefl.org](http://www.asiatefl.org)) has published the AsiaTEFL Book Series with the papers presented at its annual conferences by scholars representing their own countries and regions on a common topic in ELT: Choi and Spolsky (2006), a review of ELT history and policy in nine nations, including China, South Korea (Korea, henceforth), Bangladesh, Japan, India, Singapore, Vietnam, Sri Lanka, and Indonesia; Choi and Spolsky (2007), a collection of information on ELT curriculum innovations and their implementations in 10 distinct regions: Indonesia, China, Hong Kong, Korea, Malaysia, Israel, the Philippines, Vietnam, Iran, and Russia; Choi and Spolsky (2008), a discussion on the policy of English language teacher education in eight nations: Indonesia, China, Korea, Japan, Thailand, the Philippines, Singapore, and Malaysia; Moon and Spolsky (2010), a review on the development and practice of English assessment in six countries: China, Japan, Korea, Israel, Indonesia, and Bangladesh; Spolsky and Moon (2012), a collection of reports on primary English education in China, Japan, Singapore, Korea, India, Vietnam, and Taiwan; Spolsky and Sung (2014), a survey of the current status, practices, challenges, and future directions of secondary English education in 11 countries: Israel, Japan, Korea, Singapore, Bangladesh, India, Indonesia, Malaysia, Pakistan, Vietnam and China; and Park and Spolsky (2017), a critical review of the tertiary level English education in Asia, foregrounding the developments and trends, policies and implementation,

as well as research and practice in China, Hong Kong, India, Japan, Korea, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

Choi and Lee (2008) implemented a questionnaire survey on trends and issues in ELT at all levels from elementary to tertiary in Asia, focusing on 16 countries and two regions including Korea, China (including Hong Kong and Taiwan), Japan, Indonesia, Malaysia, Singapore, Thailand, the Philippines, Vietnam, Bangladesh, India, Pakistan, Sri Lanka, Iran, Israel, and the United Arab Emirates (UAE). The results of the survey revealed commonalities and diversity across Asian regions in the following aspects: the starting grade, class hours, national curriculum, textbooks, the medium of instruction, the use of computers, university entrance examination, teachers, tertiary English education, and problems and concerns. Choi and Lee claimed that ELT in each Asian nation/region seems to be an outcome of diverse factors including political environment, social and individual needs, and resources (e.g., teachers and computers). They suggested five key issues that need to be resolved, including the amount of time allotted for English language education, the use of English as the medium of instruction, centralization or decentralization, teachers, and the nationwide university entrance examination.

The present study updates the information on the topics and discussions in the above studies, providing different perspectives and insight into ELT in higher education in more diverse regions in Asia than those previously examined.

## **Method**

### **Materials and Procedure**

A questionnaire survey was conducted and then follow-up discussions and communications were done by email to clarify some responses. The questionnaire used in this

study consisted of 18 open-ended questions. Some of the questions were adopted from Choi and Lee (2008) and modified to suit the purpose of the present study. They were on the status of English (English as a foreign language (EFL), English as a second language (ESL) or English as a lingua franca (ELF)); the general description of the university; the aim of ELT; the number of required credits of English classes for non-English majors; English classes offered (General English (GE), English for Academic Purposes (EAP), English for Specific Purposes (ESP) or other); English textbooks used (National, commercial, teacher-made, or other); English teachers (Native English-speaking Teachers (NESTs) or Non-native English-speaking Teachers (NNESTs) or both); the eligibility of English teachers; the medium of instruction; the number of EMI courses required for graduation; the major characteristics of ELT in higher education; instructional approaches or methods; evaluation methods; the integration of technology or AI in ELT; the significant challenges that complicate the implementation of effective ELT programs or methods; the main innovations in ELT in higher education; and suggestions for AsiaTEFL and other professional ELT associations to meet the new demands of the globalized world, helping their members in higher education be prepared.

### **Participants**

A total of 33 ELT experts from 20 countries and regions in Asia participated in the questionnaire survey<sup>1</sup>: one each from Bangladesh, Hong Kong, India, Iran, Japan, Malaysia, Pakistan, Russia, Sri Lanka, Türkiye, Uzbekistan, and Vietnam; two from China, Indonesia, Israel, Philippines, and Singapore; four from Mongolia, and five from Korea. Thirty-two out of thirty-three had Ph.Ds and one had an M.A. The participants consisted of 24 full

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<sup>1</sup> The participants include twenty Regional Representatives of AsiaTEFL invited by the author and their colleagues whom they invited to provide more comprehensive answers to the survey questions. The survey participants mostly provided information on general trends in ELT in higher education in their country or region along with the cases of their universities. Some information might not apply to all the universities due to regional or school variations.

professors, four associate professors, two assistant professors, one lecturer, and two instructors. Twelve of them were affiliated with the Department of English, 12 with English Education, two with Applied Linguistics, one with Linguistics, one with a language institute, and one with administration. Their teaching experiences ranged from 21 to 44 years.

## **Results**

### **The Status of English**

The results of the survey on the status of English were revealed as the following: 1) EFL in China, Indonesia, Iran, Israel, Japan (ELF but EFL in the general perception), Korea, Mongolia, Russia, Taiwan (becoming ESL maybe), Türkiye, Uzbekistan, Vietnam; 2) ELF (English as a Lingua Franca) in Hong Kong; 3) ESL in Bangladesh (moving towards ELF), India (ESL, an associate official language, and the first language (L1) of a large number of speakers), Malaysia, (widely regards as ESL but EFL in many parts of the country), Pakistan (ESL at elite private schools and urban area but EFL at public sector schools and rural area), the Philippines (ESL but first language to the upper middle and the upper class with a combination of their mother tongue), and Sri Lanka (ESL/EMI); 4) EMI, L1, and an official language in Singapore.

### **ELT in Universities**

**The Aim of ELT.** First, English is taught to equip students with general English skills or good English communication competence in all four skills in Bangladesh and China. General English skills are required for graduation, evidenced by certain English test scores such as IELTS 7 in Hong Kong, B2 level of the Common European Framework of Reference for Languages (CEFR), or a minimum score of 525 on the ITP TOEFL, 69–70 on the iBT TOEFL, or 5.5 on the IELTS in Indonesia or high TOEIC and/or TOEFL scores in Korea and Japan. In Vietnam, CEFR B1 level is required for undergraduate and B2 for Advanced programs and Postgraduate programs. Second, ELT is aimed at developing skills for both

academic and professional purposes. In India, primarily fluency is to be developed for academic and professional purposes. Similarly, the necessary language skills to thrive in both academic and professional environments are to be developed in Mongolia, Singapore, Sri Lanka, and Taiwan. Third, skill development for academic purposes is emphasized in Pakistan, Iran, Israel, Korea, and Türkiye with a slightly different focus. In Iran and Israel, sufficient English proficiency is to be developed to access and engage with academic resources in their fields of study, with a focus often on developing reading and comprehension skills for academic texts, with less emphasis on spoken communication; Korean universities aim to develop four skills in an EAP context. This includes participating in discussions, giving presentations, listening to lectures, reading academic texts, and developing essay writing and study skills. Lastly, English for occupational purposes is emphasized in the Philippines, Russia, and Uzbekistan.

**The Number of Required Credits of English Classes for Non-English Majors.** The number of required credits of English classes for non-English majors varies in each country or region: zero in India but over 75% of non-English majors will opt for at least two, two to four credit English courses; two in either GE or ESP in Indonesia, Taiwan, and Türkiye; In Iran, two each in both GE and ESP courses; 0–20 in Israel; four to 16 depending on the majors in Japan; approximately six in Bangladesh and Singapore; six to eight in Sri Lanka; zero to eight in Korea; eight in Russia; nine in Malaysia and Pakistan; 9–15 in Mongolia; 16 (256 class hours) for foreign language majors, and 27 (448 class hours) for non-foreign language majors in China; 15 for standard programs and 30 for advanced programs in Vietnam; and 48 in Uzbekistan.

**English Classes.** In countries such as Israel, Malaysia, and Hong Kong, EAP and ESP courses are mainly offered along with some test preparation classes in Hong Kong, in particular. In China, however, GE is compulsory while EAP and ESP are optional. Similarly, in Türkiye, GE is the top priority, EAP and ESP are given second priority. All three GE, ESP,

and EAP courses are offered in India, Indonesia, Iran, Japan, Korea, Russia, and Uzbekistan, but EAP is provided for English majors or advanced students. More ESP courses than GE or EAP courses are offered in Pakistan, the Philippines, Singapore, Taiwan, and Vietnam, whereas more EAP and ESP courses than GE are offered in Sri Lanka.

**English textbooks.** Commercial books published by international publishers are used in all 20 countries and regions with teacher-made publications. International commercial books are mostly used in Taiwan, Japan, Korea, and Vietnam. In China, some of the textbooks are compiled by Chinese scholars in collaboration with international scholars. In Indonesia and Israel, materials are compiled from commercial books. In Iran, due to the access limit to the commercial books, locally-developed textbooks are used. In Russia, teacher-made textbooks and teaching materials are also very popular and the university authorities encourage faculty members to create them. In Singapore and Sri Lanka, teacher-developed materials are mostly used. In Sri Lanka, recently, under a World Bank Project, experts within the university system were hired to design ESP and EAP courses for the universities. As a result, most universities are now using these newly developed materials in their English courses.

**English Teachers.** Countries such as Bangladesh, China, India, Sri Lanka, Pakistan, Russia, and Malaysia do not employ NESTs. There are very few NESTS in Bangladesh, Malaysia, Indonesia, and the Philippines, and they are usually brought in through programs managed by the American Embassy. In Bangladesh and India, all English teachers are local people in public universities and a few NESTs may be in private universities. Both NESTs and NNESTs are involved in teaching English at universities in Hong Kong, Iran, Singapore, Mongolia, Taiwan, Türkiye, Uzbekistan, and Vietnam, but the majority of English instructors are NNESTs. In Japan, for schools, the majority of teachers are Japanese nationals with Japanese L1. This is mostly because of the process of obtaining the license (Oda, 2009). Universities, on the other hand, tend to emphasize ‘native speakers’ and ‘English only’ to attract students. In that respect, Korea is similar to Japan in that Korean nationals are the

majority and NESTs teach EMI courses offered to attract both Korean and international students (Park, 2019). In Israel, English is taught by a mix of NESTs, who have immigrated from an English-speaking country, and NNESTs, Israeli-born, or immigrants from other non-English speaking countries.

The eligibility of English teachers in most of the participating countries is the same or similar: A minimum of possessing an MA in English or English/language education-related fields is required in many countries and regions, most English teachers in China, some in Israel, Malaysia, Singapore, Türkiye, and Vietnam having PhDs. Hong Kong universities require a minimum MA with several years of teaching experience. In India, a post-graduate degree in English and the NET (National Eligibility Test) are required, although a PhD is desirable. In Indonesia, an MA in English is required at the Department of English, not in non-English departments, where high English proficiency, evidenced by TOEFL or IELTS score, and substantial teaching experience at the secondary or tertiary level are required. Professional development efforts are highly valued as well. Iranian universities require a minimum MA in TEFL/TESOL or a related field or a Bachelor's degree and extensive teaching experience for part-time or temporary positions as well as English proficiency demonstrated through standardized tests like IELTS or TOEFL. Japanese universities require a minimum MA, specifically an MA in TESOL/Applied Linguistics and a Ph.D. may be required for full-time tenure-track positions. Some universities still publicly say that they want 'native speakers only.' In the case of Tamagawa University, the requirements are: 1) MA/PhD (ended up getting lots of PhDs interested in both teaching and research); 2) Experience in learning a foreign language to an advanced level; and 3) Enough research experience. This second point is very unique, as they require NESTS to be highly proficient in another language (not necessarily in Japanese). In Korea, for NNESTs, a PhD degree is required, and for NESTs, an MA is required. In Russia, a minimum MA or PhD degree, or a specialist diploma (five years of university training) is required. International programs or

courses are optional, yet very welcome. In Uzbekistan, a Master's degree and a C1 teacher certificate are required.

Some countries and regions require a BA as a minimum qualification. In the Philippines, those with a bachelor's degree can teach at the university as instructors. However, they are required to finish their master's degree within three years. In Sri Lanka, a BA is for probationary teachers; Promotion for probationary lecturers is contingent upon obtaining postgraduate qualifications such as MA, MPhil, or PhD. Additionally, all probationary lecturers are required to complete a one-year course in teaching in higher education, accredited by CEDA in the United Kingdom. Mongolian universities require a combination of minimum BA in Linguistics, ELT, or a related field MA, with a PhD preferred, English teaching experience, and professional certifications, language proficiency for NNESTs often evidenced by standardized test scores such as IELTS, research and publications, professional development, and cultural competence.

**The Medium of Instruction.** English is the medium of instruction in Hong Kong and Singapore, and some universities in China (e.g., Beijing University of Foreign Studies), Malaysia (e.g., Universiti Teknologi MARA), where the students struggle with English proficiency. In Pakistan, English is used as the medium of instruction with varying degrees of use of Urdu—Pakistan's national language—and/or local/provincial languages found in classroom discourse. In the Philippines, English is dominantly used with conversational or minimal local languages. In Indonesia, Bahasa Indonesia is the primary medium of instruction in most universities in Indonesia, but some universities offer international or EMI programs.

In many countries, English and the local language(s) are used. In Iran, lectures are delivered in Persian with materials in English. In Israel, primarily Hebrew, but English is used extensively in certain courses, particularly in programs with international focus. In Korea, Japan, Mongolia, and Vietnam, mostly local languages are used but English is used in international or advanced programs in some universities. In Russia, Russian is used in the

majority of teaching contexts, but English is used for English majors as well as international students. The majority of courses across almost all universities in Sri Lanka are conducted in English; science, technology, engineering, and mathematics (STEM), in particular, whereas a minority of courses in the Arts and Social Sciences are conducted in Sinhala or Tamil. In Taiwan, English and mandarin Chinese are used. In Türkiye, Turkish is the main medium of instruction, but some universities run their classes only in English, for example, Boğazici University and Middle East Technical University. In Uzbekistan, Uzbek, Russian and English are used.

Among those countries and regions where English is not a medium of instruction, a certain number of EMI courses are required. In Japan, the number of universities that require EMI courses is increasing. In Korea, six to 15 credits of EMI courses are required in some universities (for a more detailed discussion, see Park (2019)). In Malaysia, nine credits are required but this may be higher depending on the major. In Mongolia and Vietnam, EMI requirements are increasingly recognized as beneficial for preparing students for global careers and academic opportunities, the implementation and specifics of these requirements vary significantly across universities. In Vietnam, some advanced programs require students to take at least 20 percent of EMI courses. On the other hand, no EMI courses are required in Indonesia, Iran, Israel, Taiwan, Türkiye, and Uzbekistan, although it is encouraged in many universities.

**The Instructional Approaches or Methods and Evaluation.** A mixture of traditional and more innovative instructional approaches and methods are used in Asian universities: lectures and off-line classes in India and Indonesia, moving to communicative language teaching (CLT); CLT and task-based language teaching (TBLT) in China, Israel, Korea/Vietnam (+ problem-based language teaching (PBLT)), Malaysia, Sri Lanka, and Uzbekistan; computer-based instruction (CBI) and computer-assisted language learning (CALL) in Iran, Korea, Malaysia, Philippines, Russia, and Taiwan; student-centric in Korea,

Singapore, and Uzbekistan; all assignments in English in Hong Kong; blended learning and digital learning skills in Israel, Türkiye, Korea, and Sri Lanka; a blend of traditional methods in Iran, Mongolia, and Pakistan, evolving trends and adaptations to the local context; and group project works in Japan.

Both formative and summative assessments are used in many countries including China, Hong Kong, India, Indonesia, Korea, Malaysia, Mongolia, Philippines, Sri Lanka, Taiwan, Vietnam, and Uzbekistan. Performance-based assessment is used in Korea, Malaysia, and Mongolia. A combination of traditional assessments and more communicative and authentic forms of assessments are used in Iran, Indonesia, and Pakistan. Short answers and multiple-choice tests are used in Israel, and rubrics, criteria-based assessments, and standardized tests are used in Japan, Mongolia, and Korea. In Russia, tests on five skills are administered: reading, speaking, writing, listening, and knowledge of culture translated by the language. Typical assessment of learning outcomes is implemented through oral presentations, written assignments, and tests. In Singapore, oral and written examinations are usually administered. For workplace oral communication courses, the assessment includes student presentations several times a semester. For writing, a research proposal of some sort may be required. In Türkiye, summative evaluation methods are usually used but formative assessment can be done through portfolio, project, or practice-based assignments.

**Technology or AI Integration in ELT.** Overall, while the integration of technology and AI in ELT in Asia is growing, the extent of implementation varies across institutions and programs. First, some countries are at an early stage of integration. China and Uzbekistan use technology limited to displaying PPT with the help of LCD projectors or TV. In Iran and India, technology and AI are additional rather than a primary resource for in-class teaching and learning. In Pakistan, technology is used mostly by younger teachers and in private universities. Technology and AI are increasingly integrated into ELT in Hong Kong, Indonesia, Mongolia, Israel, Japan, Malaysia, Taiwan, and Vietnam. However, in Indonesia,

they face a dilemma and have reverted to paper-and-pen tests and now score projects in stages rather than evaluating only the final product. In Japan, although it is generally encouraged, some prohibit the use of technology and AI. Technology and AI are highly integrated in ELT in higher education in Singapore, Korea, the Philippines, Türkiye, and Sri Lanka, with information technology being a compulsory course in Korea and Türkiye, but AI usage being restricted in English courses at some universities in Sri Lanka.

**The Significant Challenges.** The significant challenges that complicate the implementation of effective ELT programs or methods are categorized into the following six.

1) Resource constraints: Limited funding is one of the biggest challenges in Iran, India, Indonesia, Israel, Korea, and Sri Lanka; limited access to resources and technology, especially in rural and less-developed areas in Indonesia, Mongolia, and Pakistan; large class sizes with mixed level of students in India, Vietnam, Indonesia, Iran, Mongolia, Pakistan, Russia, and Taiwan. The number of students ranges from 25 to 50. 2) Systemic Issues: An emphasis on standardized testing and college entrance exam in Iran, Korea, and Mongolia; bureaucracy and resistance to change in Iran, Korea, and Indonesia where adjusting the curriculum to national or university policies is a big challenge; native speakerism and heavy reliance on high stake tests in Japan, Korea, and the Philippines where American English is glorified; policy-making initiated by government and non-experts in Malaysia and Korea (Park and Kim, 2014; Park & Sung, 2024). 3) Cultural Factors: limited exposure to English in Korea, Mongolia, and Iran; passive attitudes towards language learning and rote memorization in Iran and Korea; the linguistic and socio-cultural diversity of the classroom in India. 4) Student-related challenges: limited English Proficiency of Students in Mongolia; limited hours of English classes in Taiwan and Korea; lack of motivation in Pakistan and Türkiye; Irresponsible use of AI in Indonesia and the Philippines; and a heavy workload in Singapore, China, and Hong Kong to learn Putonghua and other. 5) Teacher-related Challenges: limited access to professional development in Iran, Mongolia, Uzbekistan, India, and Indonesia; Lack

of motivation and support in Iran; Shortage of qualified teachers in Mongolia and Sri Lanka; a heavy workload in Russia; and lack of digital literacy in Türkiye. 6) Research and evaluation: limited research on local context and lack of systematic evaluation of ELT programs in Iran.

**The Main Innovations.** The main innovations in ELT in higher education in Asia were found as follows: 1) the integration of AI and technology, blended learning, and CALL (during and after the COVID-19 outbreak) in Indonesia, Hong Kong, Israel, Korea, Mongolia, Philippines, Russia, Vietnam, Türkiye, and Sri Lanka; 2) shifting from traditional to emerging ELT methods such as CLT and TBLT in Iran, Mongolia, Korea, Pakistan, Uzbekistan, and Singapore, where shifts were made from standardized tests to individualized tests, few lectures and more tutorials, and no textbook but teacher-made material; 3) implementing EMI in Indonesia, Mongolia, Taiwan, and Korea; 4) curriculum and syllabi developed by experts in Sri Lanka, and syllabi frequently ungraded in India; 5) fostering students' moral character and introducing local culture to the world in China and Korea; 6) focus on ESP and needs analysis in Iran and Sri Lanka; 7) promoting learner autonomy, self-directed learning, developing critical thinking skills in Korea and Iran; 8) research on investigating local context in Iran and on ELT and applied linguistics in Mongolia; 9) international collaboration in Iran and Mongolia; 10) adherence to the internationally recognized European CEFR standard of language proficiency in Israel and Malaysia; 11) change in the perceptions of ELF, translanguaging, and English varieties (In Japan, an ELF program is offered at Tamagawa University; In the Philippines, translanguaging is acknowledged as a legitimate scaffold in teaching English; and Singapore is more open to accepting many varieties of English as "standard" and proper in their own right); 12) professional development for teachers in Mongolia and India; 13) language labs and multimedia resources in Mongolia; 14) quality assurance and accreditation in Mongolia; and 15) implementation of the university test of English language for assessing the general English language proficiency of all undergraduates in Sri Lankan universities.

**Suggestions for professional ELT associations.** Suggestions were made for ELT associations to empower their members to become agents of change, equipped to prepare students for the complexities and opportunities of a globalized world as follows: 1) focus on the core purpose of teaching, how to better our students' language proficiency; 2) promote professional development opportunities by, for example, hosting more frequent workshops and seminars, continuing webinars<sup>2</sup> promoting a variety of Asian presenters, and having regular affordable seminars and conferences; 3) facilitate networking and collaboration through, for example, providing teachers with opportunities for intercultural exchanges, and making greater efforts to reach out to English teacher associations in different countries to share their individual needs and the challenges they are facing and discuss possible training as well as practical solutions; 4) support research and publications; 5) develop resources and guidelines; 6) develop common Asian frameworks of reference to be used by its members and set standards of global ELT education; 7) advocate for policy and advocacy; 8) offer micro-credentialing and certification programs; 9) create online communities of practice; 10) establish Special Interest Groups (SIGs) to foster collaboration among educators and facilitate the sharing of best practices and research findings; 11) address diversity and inclusivity; 12) offer mentorship programs; 13) monitor and respond to emerging trends; and 14) initiate and sustain a targeted discussion on the benefits of AI in language education.

### **Discussion**

Regarding the status of English in each country and region in Asia, some differences were found between Choi and Lee (2008) and the present study. According to Choi and Lee (2008), ESL was used in Malaysia, the Philippines, and Sri Lanka, ESL and EFL in Hong Kong, Singapore, Bangladesh, India, Pakistan, and the UAE, and EFL in Korea, China,

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<sup>2</sup> Since 2021, AsiaTEFL has hosted the Webinar Series quarterly, in May, July, September, and November, attracting more than 500 participants each time. The Webinar Series has become a signature program of AsiaTEFL in addition to its annual conference and publications.

Taiwan, Japan, Indonesia, Thailand, Vietnam, Iran, and Israel. ELF was not used in any country or region. The present study reveals that both ESL and EFL are used in Malaysia, ELF in Hong Kong, and Bangladesh where English is moving to a lingua franca, and ESL and English as L1, not EFL, are used in India, the Philippines, and Singapore. This is in line with Park (2017), who classifies the role of English in Asia as follows: an official language in Hong Kong, India, and Singapore; an official medium of instruction in Hong Kong, the Philippines, and Singapore; a lingua franca for native speakers of different languages and dialects in India, Hong Kong, Malaysia, the Philippines, and Singapore; and a mandatory foreign language in China, Japan, Korea, Thailand, and Vietnam, among other countries. This shows that English is now a lingua franca in many Asian regions and contexts and is becoming so in some EFL contexts.

ELT in Asian universities shows commonality and diversity in all the aspects questioned in the survey. First, a few countries such as Bangladesh and China have a common aim of ELT, i.e., developing students' general English communication competence, and a larger number of countries aim at developing skills for academic and/or professional purposes. The number of required credits for English classes for non-English majors ranged from zero (Israel) to 48 (Uzbekistan). The type of English classes offered also varied following the aim of ELT. In China, where general English proficiency is emphasized, GE class is compulsory, whereas EAP or ESP courses are offered more than GE in those countries where skills for EAP and/or ESP are emphasized, including Pakistan, the Philippines, Singapore, Taiwan, and Vietnam. It is a significant change from the result found in Choi and Lee (2008) that tertiary English courses were GE courses in most of the Asian countries/regions.

It was found that commercial books published by international publishers are used in all 20 countries and regions with teacher-made materials written by local university professors and published by local publishers. There are some variations in terms of textbook writers,

publishers, and resources. In China, some textbooks are compiled by Chinese scholars in collaboration with international scholars. In Iran, due to the access limit to commercial books, locally-developed textbooks are used. In Sri Lanka, national textbooks are used, the recent one being developed under a World Bank Project. English teachers also show commonalities and differences. In all the countries, the majority of English teachers are locals. No NESTs are employed in countries such as Bangladesh, China, India, Indonesia, the Philippines, Sri Lanka, Pakistan, Russia, and Malaysia, where the very few NESTS are usually brought in through programs managed by the American Embassy. Both NESTs and NNESTs teach English at universities in Hong Kong, Iran, Singapore, Mongolia, Taiwan, Türkiye, Uzbekistan, and Vietnam, but the majority of English instructors are NNESTs. In Korea and Japan, NESTs teach EMI classes. In Israel, English is taught by a mix of NESTs, who have immigrated from an English-speaking country, and NNESTs, Israeli-born, or immigrants from other non-English speaking countries. The eligibility of English teachers is the same or similar in all the participating countries and regions: A minimum MA in English or ELT-related fields is required, with/without teaching experience. A minimum BA is required for probational teachers in the Philippines and Sri Lanka.

English is the medium of instruction in Hong Kong, Singapore, and some universities in China, Korea, Malaysia, Russia, and Türkiye. In many countries and regions, English is dominantly used along with the local languages and EMI courses are required in some universities in Korea, Japan, Mongolia, and Vietnam and encouraged in Indonesia, Iran, Israel, Taiwan, Türkiye, and Uzbekistan. EMI requirements are increasingly recognized as beneficial for preparing students for global careers and academic opportunities. However, some students in Korea and Malaysia struggle with the EMI courses due to their lack of high English proficiency, which raises an issue of how to teach EMI courses effectively.

It was found that a mixture of traditional and innovative instructional approaches and methods is used in Asian universities with some variations in frequency and resources. Innovative approaches and methods used include CLT, TBLT, PBLT, CBI, CALL, student-centric, blended learning, and digital learning. Evaluation methods vary, with both formative and summative assessments being used in many countries. Common evaluation methods include midterm and final exams, quizzes, in-class assessments, and writing assignments. The emerging trends are portfolio assessment, project-based assessment, oral presentations, and discussions. Overall, while the integration of technology and AI in ELT in Asia is growing, the extent of implementation varies across institutions and programs: at an early stage of integration in China, Uzbekistan, Iran, India, and Pakistan; increasingly integrated in Hong Kong, Indonesia, Mongolia, Israel, Japan, Malaysia, Taiwan, and Vietnam; and highly integrated in Singapore, Korea, the Philippines, Türkiye, and Sri Lanka. At all levels of technology and AI integration, the same or similar issues and problems emerged concerning students' misconduct or misuse of AI and/or technology, which should be resolved by international collaboration.

The significant challenges that complicate the implementation of effective ELT programs or methods are categorized into the following six: 1) Resource Constraints: limited funding, limited access to resources and technology, and large class sizes with mixed levels of students; 2) Systemic Issues: an emphasis on standardized testing and college entrance exams, bureaucracy and resistance to change, native speakerism and heavy reliance on high stake tests, and policy-making initiated by government and non-experts; 3) Cultural Factors: limited exposure to English, passive attitudes towards language learning and rote memorization, and the linguistic and socio-cultural diversity of the classroom; 4) Student-Related Challenges: limited English proficiency of students, limited hours of English classes, lack of motivation, irresponsible use of AI, and a heavy workload; 5) Teacher-Related Challenges: limited access

to professional development, lack of motivation and support, shortage of qualified teachers, a heavy workload, and lack of digital literacy; and 6) Research and Evaluation: limited research on local context and lack of systematic evaluation of ELT programs. The main innovations in ELT in higher education in Asia were found as follows: 1) the integration of AI and technology, blended learning, and CALL (during and after the COVID-19 outbreak); 2) shifting from traditional to emerging ELT methods; 3) implementing EMI; 4) developing and updating curriculum and syllabi; 5) fostering students' moral character and introducing local culture to the world; 6) focus on ESP and needs analysis; 7) promoting learner autonomy, self-directed learning, developing critical thinking skills; 8) research on investigating local context and on ELT and applied linguistics; 9) international collaboration; 10) adherence to the internationally recognized European CEFR standard of language proficiency; 11) change in the perceptions of ELF, translanguaging, and English varieties; 12) professional development for teachers; 13) language labs and multimedia resources; 14) quality assurance and accreditation; and 15) implementation of the university test of English language for assessing the general English language proficiency of all undergraduates.

Suggestions were made for ELT associations to empower their members to become agents of change, equipped to prepare students for the complexities and opportunities of a globalized world: 1) Focus on the core purpose of teaching, how to better our students' English proficiency; 2) Promote professional development opportunities; 3) Facilitate networking and collaboration; 4) Support research and publications; 5) Develop resources and guidelines; 6) Develop common Asian frameworks of reference to be used by its members; 7) Advocate for policy and advocacy; 8) Offer micro-credentialing and certification programs; 9) Create online communities of practice; 10) Establish Special Interest Groups (SIGs); 11) Address diversity and inclusivity; 12) Offer mentorship programs; 13) Monitor and respond to

emerging trends; and 14) Initiate and sustain a targeted discussion on the benefits of AI in language education.

### **Conclusion**

ELT in higher education was examined through a questionnaire survey across 20 Asian countries and regions. ‘Unity within diversity’ and ‘diversity within unity’ have been revealed in all the aspects questioned in the survey. The commonalities and variations among the participating countries and regions seem to lie in diverse factors including political environment, social and individual needs, and resources (Choi and Lee, 2008) as well as global issues and challenges shared by all.

The findings from the present study provide general characteristics and trends of ELT in Asian universities. Further research is needed to examine more focused topics with a diverse and larger group of participants. More international collaborations and partnerships are inevitable to conduct such studies and achieve our common goals, enriching ELT practices and better preparing our students for the demands of a globalized world.

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# **Selected Papers**

## **Research Articles**





## **The Impact of Online Specific Teaching Modalities on Technology-Mediated EFL Speaking Instruction**

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### **Abstract**

Despite the increasing use of technology-mediated instruction in EFL teaching, there is a lack of empirical studies on how specific teaching modalities of online platforms affect learning outcomes. This paper investigates the impact of utilizing text-audio and text-video online modalities on technology-mediated EFL speaking instruction at a Japanese university. A quasi-experimental between-subjects design was utilized with two groups of Japanese participants that were taught by the same instructor over a 15-week semester. A group of 25 participants used online text-audio materials, whereas another group of 25 participants used online text-video materials. Data were collected through two oral examinations, a questionnaire on learning attitudes, and semi-structured interviews. This approach enabled the integration of both quantitative and qualitative data through triangulation. The quantitative results demonstrated that the speaking abilities and learning attitudes of the learners were enhanced by the utilization of both text-audio and text-video learning modalities. Nevertheless, there were no notable differences observed between the two groups regarding both their speaking proficiency and their attitudes towards learning. The qualitative findings about learning experiences indicated that students in both groups showed a favorable disposition towards participating in technology mediated EFL speaking instruction in order to improve their EFL speaking abilities.

*Keywords:* technology-mediated instruction, bimodal and multimodal learning, speaking proficiency, Japan

Technology-mediated instruction provides an educational methodology that integrates both face-to-face and online teaching. Multiple studies have demonstrated that technology-mediated instruction is advantageous for students learning English as a foreign language (EFL). Students engaged in research on technology-mediated instruction exhibit improvements in speaking (Hsu, 2016), reading (Yang, 2012), and total language competency (Wang et al., 2021), as well as experiencing enhanced language exposure outside the classroom (Moradimokhles & Hwang, 2022). Additionally, students can participate more actively in activities both in and outside the classroom (Xu et al., 2017) and retain asynchronous language input for prolonged durations (Horn & Staker, 2014). Technology-mediated instruction has shown benefits that surpass the educational domain. Studies indicate that it can enhance the motivation of EFL students and diminish their anxiety regarding public speaking (Min et al., 2019). Chang (2023) argued that technology-mediated instruction creates conditions conducive to learning, accommodating the majority of students, and producing compelling educational projects (Huang, 2015). Considering that this help is available outside of school hours (Chen & Chang, 2011), students who are highly motivated and engaged are likely to perceive it as beneficial.

The focus in second-language (L2) speaking research and instruction has shifted from achieving naturalness to the quality of being understandable. Derwing et al. (2008) pointed out that improving students' comprehension, namely their capacity to perceive auditory input, should be a goal of pronunciation and speaking teaching in second language education. This transformation has compelled instructors in predominantly English-speaking institutions to adopt their teaching strategies and highlighted the importance of using clear language to

enhance communication. Zhang and Yuan (2020), Shabani and Jabbari (2023), and Saito (2017) have all stressed the increasing significance of style and meaning in the teaching of EFL. These English-speaking programs prioritize students' proficiency in understanding the language in both academic and everyday contexts. Crowther et al. (2015) argued that interlocutors primarily seek to communicate information efficiently rather than attain native-like fluency.

Studies demonstrate that students learning English as a second language do not have adequate classroom time for speaking practice. Moreover, instructors who are not native English speakers often experience anxiety when speaking English, primarily due to concerns about potential misinterpretations. Graham and Halverson (2023) suggested that technology-mediated instruction, which intentionally combines in-person teaching with autonomous study on a designated online learning platform, could address these complex challenges. The application of diverse pedagogical techniques has increased in EFL instruction. There is a lack of research on how technology-enhanced teaching methods, especially the delivery of instructional materials, affect how well people learn on online platforms, especially when it comes to speaking English as a foreign language in a blended learning environment. This study investigates the effects of several input modalities, particularly bimodal and multimodal, on technology-mediated EFL speaking training. This paper quantitatively assesses learners' speaking abilities, attitudes toward learning, and impressions of different input modalities. The identified research gap necessitated the adoption of this approach. This objective has guided the development of the following three research questions:

1. How do the speaking performances of EFL students vary between two input forms of technology-mediated instruction?
2. How do EFL students' learning attitudes vary across two input forms of technology-mediated instruction?

3. What are the learning experiences of EFL students when they participate in two different input forms of technology-mediated instruction?

### **Literature Review**

Technology-enhanced instruction enhances students' confidence and drive. There is limited research on how information affects students' emotions. Studies indicate that integrated learning enhances academic achievement. Wang et al. (2021) conducted a preliminary investigation. This strategy facilitated the development of positive attitudes toward motivation, engagement, learning autonomy, and enjoyment among EFL students. Chang (2023) discovered that mixed-method approaches enhanced motivation and self-efficacy among low-proficiency EFL learners, particularly in flipped learning environments. This accomplishment may result from the completion of assignments online via technology-mediated education. Technology establishes a "conducive learning community" (Chen, 2021, p. 17) that assists EFL students in adhering to the teacher's meticulously designed curriculum. Technology-mediated training, encompassing internet resources, may influence the academic performance of ESL students. This necessitates additional empirical investigation.

Research on English as a Foreign Language has contrasted integrated learning with conventional methods. Zhang and Zou's 2022 study is among the limited research that investigates online modalities and technology-mediated EFL training. Each study illustrates the manner in which online platforms disseminate educational content and resources. Graham and Halverson (2023) argued that technology-mediated instruction provides various pedagogical alternatives. Technology-enhanced instruction in EFL for non-native speakers requires assessment. Technology-mediated instruction extends beyond online education. Li (2022) asserted that technology-mediated instruction ought to include both in-person and virtual learning modalities. The challenges of technology-mediated training (Anthony et al.,

2022; Graham & Halverson, 2023) are associated with Bax's (2011) assertion that language education should incorporate technology. Instructors should provide seamless technology-mediated learning for students to prevent classroom technological difficulties. Technology must adhere to specific requirements prior to implementation in the classroom. The fundamental part of education pedagogy must align with each student's capability and motivation. Anthony et al. (2022) recommended the expansion of online studies to enhance technology-mediated training in higher education. Chang (2023) emphasized the necessity of catering to learners' attention spans across varying skill levels while developing online tools.

Yang (2012) pointed out that EFL students in a technology-mediated instructional group using online text-based resources had greater enhancements in reading skills compared to a control group after a 12-week intervention. Chen and Chang (2011) found that recipients of audiotext performed better on listening assessments. The results are consistent with those of Yang (2012). Hsu (2016) found that 16 weeks of instruction via text, audio, and video mediums enhanced the speaking abilities of EFL students.

Most technology-mediated English as a Foreign Language (EFL) lesson plans for speaking classes include at least two strategies for material presentation and feedback provision (Xu et al., 2017; Yang et al., 2013). Xu et al. (2017) provided insights on teaching speaking through both in-person and online feedback. They presented written and auditory data. Participants completed surveys and interviews over a 12-week period. Participants expressed a preference for integrated learning and communicated with assurance. Yang et al. (2013) employed a hybrid design incorporating textual, visual, and auditory elements. Following one term, EFL students demonstrated enhancement in their speaking and listening skills.

The split-attention theory (Ayres & Sweller, 2014) and the redundancy principle (Kalyuga & Sweller, 2014) asserted that processing identical information from distinct

sources or presenting it redundantly within a single modality hinders learning. This entails the development of multimedia educational tools. According to Kalyuga and Sweller (2014), the accumulation of excessive unrelated information from multiple sources can constrain human working memory and hinder learning. Consequently, further research is required to examine the impact of bimodal and multimodal contents on technology-mediated English as a Foreign Language instruction on online platforms. Furthermore, understanding the impact of various methods of information comprehension on improving learning is crucial.

## **Methodology**

### **Participants and Data Collection**

This study investigates the impact of utilising text-audio and text-video online modalities for technology-mediated EFL speaking instruction at a Japanese university. Data were collected for analysis using three primary instruments: two speaking assessments, a learning attitudes questionnaire, and semi-structured interviews, which facilitated the triangulation of quantitative and qualitative data.

The same instructor used a quasi-experimental between-subjects design to teach two groups of Japanese participants over a 15-week semester. A group of 25 participants used online text-audio materials, whereas another group of 25 participants used online text-video materials. The participants of this study were EFL students enrolled in freshman English courses, all of whom were between the ages of 18 and 20. The participants had studied English in Japan for at least 10 years. The average TOEIC test score of the participants ranged from 200 to 400 points. The purpose of the English-speaking course was to equip students with the necessary skills to effectively engage in English oral communications.

The text-audio and text-video groups underwent a 15-week instructional intervention with identical unit structures and the same instructor. The only distinction was the input modality: the bimodal group received instruction through bimodal input (text and audio),

while the multimodal group used multimodal input (text and video) throughout the investigation. For instance, educators uploaded lesson materials to the Learning Management System (LMS) platform, a university-developed website that assists educators in facilitating online learning in their classes. The instructor sent two audio files featuring sample pronunciations of long vowels, instructions, and examples of greetings and introductions to the bimodal group in addition to textual materials. The instructor provided the multimodal group with two video files that contained identical material to that of the bimodal group. The subtitles in the videos were congruent with the words in the audio. Both groups exhibited analogous course content and weekly schedules within the technology-mediated learning environment. Initially, the university supplied a textbook for them to use during their weekly 90-minute in-person teaching sessions, which followed the academic schedule. The course sought to enhance students' listening and speaking abilities while fostering their cross-cultural communication skills. Each instructional unit of in-person teaching comprised two components: listening comprehension and integrated speaking skills. The initial segment included two auditory resources, vocabulary and structural exercises, and practical drills, whereas the subsequent segment featured an array of speaking assignments with multiple activities. Secondly, we provided identical provisions for 60 minutes of online self-directed study to all groups each week. The students adhered to a weekly framework of learning directives and accomplished online assignments, which included reviewing the weekly materials, practicing pronunciation, and preparing brief presentations. Every two weeks, pronunciation instruction emphasises various phonetic characteristics. Subsequently, the students initiated many everyday subjects for speaking practice, encompassing vocabulary, sentence structures, and sample dialogues.

The university's learning portal now hosts all materials. Prior to the commencement of the study, the students received instructions on downloading educational materials and

recording assignments for submission on the platform. The research site mandated the completion of the online self-learning module, despite the students' non-participation in the study. The instructor evaluated the participants' online self-directed learning performance weekly, which constituted 20% of their final grade. The objective of the marking was to assess the thoroughness with which the students executed the assignments; hence, the evaluation emphasized completeness, pronunciation accuracy, and speaking fluency. In this context, the majority of participants fulfilled all online self-learning assignments at the time of data collection.

### **Speaking Assessment**

Two speaking assessments were conducted for each group: one prior to the treatment and one subsequent to it. Piske et al. (2001) argued that one of the effective assessment methods was a reading-aloud evaluation. This type of assessment is commonly regarded as a conventional method for evaluating students' proficiency in a second language. The additional assessment evaluated participants' understanding and communication abilities in their second language with a brief subject description examination (Spada & Tomita, 2010). Responses of students to two distinct tests were recorded for separate evaluations. Sixty English words and collocations were incorporated into the reading-aloud assessment. Each student received instructions focused on a distinct sort of phonetic notation. All students were instructed to repeat every sentence. The subsequent component of the test consisted of a timed description of the subject. The test gave participants two minutes to discuss a topic that influenced their daily lives. The participants were asked to randomly select from five distinct themes after a two-minute preparation period for the exam. This was carried out to ensure that all participants were at ease with the organisation of the task. After the planning process concluded, they had one to two minutes to discuss the topics.

This study aimed to ensure the validity and reliability of the tests. The initial step involved a language teaching professor and two associate professors reviewing the materials for the two speech examinations to ensure the validity of the assessments. Secondly, the two native academics who administered the assessments assigned a distinct score to each of the two speaking tasks. This study used a nine-point rating system, in line with Isaacs and Thomson's (2013) grading method, to assess the participants' communication skills. A score of nine points indicated that the pronunciation was either clear or accurate. One point was given for an answer that is exceedingly difficult to comprehend in the problem-description job, whereas nine points were awarded for a description that effectively conveyed the speaker's intended messages. Saito and Akiyama (2017) asserted that raters' initial perceptions of the recorded audio result in more precise evaluations when comprehension is required. Consequently, during the grading process, each audio file was played only once. The clarity of the pronunciation and the precision of the description determined the rating. The evaluators of the two speaking assessments administered to 50 students, either before or during the study, had a substantial degree of agreement, as shown by Cohen's kappa, which was finally calculated to be .90 (standard error =.02).

### **Questionnaire on Learning Attitudes**

This study utilised the Learning Attitudes Towards Speaking English Questionnaire (Appendix A) developed by Chen et al. (2021), comprising 20 high-quality five-point Likert scale items. Chen et al. (2021) conducted a questionnaire examining the opinions of East Asian EFL university students toward English speaking and their specific perceptions regarding particular pronunciations. They conducted a similar empirical study, in which their participants learned English pronunciation and speaking skills through an online platform. Furthermore, they conducted a pilot study at the research location with an additional 100 students to evaluate the validity and reliability of the modified questionnaire. Confirmatory factor analysis

demonstrated adequate reliability (Cronbach's  $\alpha = .88$ ). and constructive validity (61.382% of variation explained) was established for both the entire questionnaire and the three underlying components (Table 1). Two groups completed the final questionnaire as an entry behavior before and subsequently as an exit behavior after the treatment.

**Table 1**

*Reliability and Validity of the Revised Learning Attitudes Questionnaire*

Factors	Questions	Cronbach's alpha	Variance
Factor 1: self-efficacy in speaking English	1–12	.87	36.50
Factor 2: self-efficacy in applying course content	13–16	.85	17.28
Factor 3: motivation to learn English speaking	17–20	.74	7.59
Questionnaire as a whole	1–20	.88	61.38

### **Semi-Structured Interviews**

The author invited students using various online material modalities, including bimodal and multimodal, to participate in one-on-one, semi-structured interviews to explore their feelings, ideas, and perspectives. A total of 22 students, comprising 11 from the bimodal group and 11 from the multimodal group, consented to participate in the interview. Two

associate professors of applied linguistics examined and made changes to the interview questions to ensure their validity. Appendix B contains the final six interview prompts. All interviews adhered to these six prompts, with follow-up questions posed for clarity and illustration as required. Each interview lasted roughly 30 minutes and was digitally audio-recorded. The interviews were conducted in Japanese for the sake of clarity.

### **Data Analysis**

Both quantitative and qualitative analytical methodologies were utilised to achieve the study's aims. An independent samples t-test was employed to quantitatively assess whether the two groups exhibited comparable speaking performance and attitudes towards learning speaking prior to the commencement of the treatment. A paired samples t-test was conducted to assess whether the two groups exhibited significant improvements in speaking skills and learning attitudes following the end of the speaking course. Third, according to the quasi-experimental design, Analysis of Covariance (ANCOVA) and Multivariate Analysis of Covariance (MANCOVA) were selected to assess differences in the post-tests between the two groups. Rather than doing multiple independent t-tests, ANCOVA and MANCOVA could more precisely evaluate the impact of grouping on outcome variables (speaking performance and learning attitudes) by statistically controlling for covariates (Field, 2013). The pre-test scores were utilised as covariates in the primary analysis. L2 field-specific benchmarks were employed to present the effect sizes in this study: Cohen's *d* of .40 signifies a minor effect, .70 a medium effect, and 1.00 a big effect (Plonsky & Oswald, 2014). In order to qualitatively examine the characteristics of blended speaking learning experiences across various online delivery modes in an EFL environment, interview data were subjected to inductive thematic analysis. A six-step analysis process (Braun & Clarke, 2006) was subsequently implemented: (1) repeatedly and meticulously reviewing the complete data set; (2) emphasising and summarising sentences pertinent to initial codes; (3) identifying potential

themes by comparing and amalgamating coded data; (4) evaluating and verifying themes to ensure coherence and consistency; (5) delineating and designating themes to formulate the comprehensive blended speaking learning experience of EFL participants; and (6) documenting the findings. The primary author and one invited collaborator independently coded the data. Cohen’s kappa ( $\kappa = .89, SE = .03$ ) indicated a substantial level of agreement between the two coders for the categorical data.

## Results

### **Research question 1: How do the speaking performances of EFL students vary between two input forms of technology-mediated instruction?**

#### *Comparative analysis of entry performances among the groups*

Independent t-tests were conducted on two speaking assessments comparing the Bimodal Group and Multimodal Group (Table 2). The results indicated no statistical differences between the two tests (reading-aloud:  $t = -0.55; p = .58$ ; description:  $t = .39; p = .69$ ) across the groups, confirming that both groups possessed equivalent levels prior to the treatment.

**Table 2**

#### *The Speaking Performance Entries Among the Groups*

pre-test	group	N	M	SD	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
Reading-aloud	Bimodal Group	25	4.74	0.79	-0.55	48	0.58	0.14
	Multimodal Group	25	4.86	0.92				
Description	Bimodal Group	25	4.16	1.05	0.39	48	0.69	0.10

	Multimodal	25	4.06	0.98				
	Group							

**Post-treatment speaking performances of the Bimodal Group and Multimodal Group**

Paired sample t-tests were conducted to assess speaking performances in reading-aloud and description exams within the group post-treatment. Table 3 indicates that both the Bimodal Group (reading-aloud:  $t = -14.16$ ;  $p < .001$ ;  $d = 2.58$ ; description:  $t = -6.18$ ;  $p < .001$ ;  $d = 1.12$ ) and Multimodal Group (reading-aloud:  $t = -14.18$ ;  $p < .001$ ;  $d = 2.58$ ; description:  $t = -6.76$ ;  $p < .001$ ;  $d = 1.23$ ) exhibited considerable improvement in the two speaking assessments, demonstrating large effect sizes. This outcome demonstrates that both bimodal and multimodal input modalities significantly influenced EFL speaking instruction.

**Table 3**

*Paired Sample T-test Analysis of Speaking Pre-tests and Post-tests*

Group	Test	Time	N	M	SD	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
Bimodal Group	Reading-aloud	pre	25	4.74	0.79	-14.16	24	<.001	2.58
		post	25	7.62	0.72				
	Description	pre	25	4.16	1.05	-6.18	24	<.001	1.12
		post	25	5.55	1.29				
Multimodal Group	Reading-aloud	pre	25	4.86	0.92	-14.18	24	<.001	2.58
		post	25	7.85	0.68				
	Description	pre	25	4.06	0.98	-6.76	24	<.001	1.23
		post	25	5.62	0.90				

***Variations in speaking performances between the Bimodal Group and Multimodal Group***

***post-treatment***

ANCOVA analysed overall speaking performances (aggregate scores from reading-aloud and description assessments) by comparing the bimodal and multimodal groups, controlling for pre-test total scores as a covariate. The assumptions of ANCOVA were initially verified. We observed no significant differences regarding the covariate ( $p > .05$ ), and the tailored ANCOVA revealed no interaction between the groups and the covariate,  $F(1, 56) = .017, p = .89$ . The two prerequisites were met to apply the modified mean scores, facilitating the subsequent main ANCOVA.

After the pre-test scores were adjusted, Table 4 shows that there were no significant differences in the adjusted mean scores between the bimodal group ( $M = 13.17, SE = .23$ ) and the multimodal group ( $M = 13.47, SE = .23$ ). When using the pre-test scores as a covariate, the results in Table 5 demonstrate that there was no discernible difference in the total speaking scores on the post-test between the Bimodal Group and the Multimodal Group.

**Table 4**

*Corrected Mean Scores and Standard Errors for the Overall Mean Scores of the Post-test*

			Unadjusted	Adjusted	
Group	N	Mean	SD	Mean	SE
Bimodal Group	25	13.17	1.33	13.17	.23
Multimodal Group	25	13.47	1.23	13.47	.23

**Table 5**

*ANCOVA for Post-test Total Scores*

Source	Type III Sum of Squares	df	Mean Square	F	p	Partial eta squared ( $\eta^2$ )
Pre-test Total	1.743	1	1.743	1.056	0.30	0.018
Group	1.350	1	1.350	0.818	0.37	0.014
Error	64.123	47	1.651			

**Research question 2: How do EFL students’ learning attitudes vary across two input forms of technology-mediated instruction?**

*Comparative analysis of entry behaviors among the groups*

Table 6 demonstrates that an independent t-test on the learning attitudes questionnaire scores reveals no significant differences ( $t = -0.08$ ;  $p = .932$ ) between the Bimodal Group and Multimodal Group. This result confirmed that before the treatment, the two groups had comparable learning attitudes, assuring the validity of the analysis.

**Table 6**

*The Initial Practices of Learning Attitudes Among the Groups*

Group	N	M	SD	t	df	p	d
Bimodal Group	25	56.16	13.78	-0.08	48	0.932	0.02
Multimodal Group	25	56.43	10.21				

The Bimodal Group and Multimodal Group exhibited post-treatment learning attitudes. Table 7 provides detailed comparisons of the learning attitudes of the bimodal group and multimodal group prior to and during the treatment. The Bimodal Group ( $t = -6.43$ ;  $p < .001$ ;  $d = 1.17$ ) and Multimodal Group ( $t = -9.35$ ;  $p < .001$ ;  $d = 1.70$ ) exhibited significantly improved learning attitudes with substantial effect sizes following their respective interventions. Moreover, the two groups experienced substantial enhancements in the three underlying components, resulting in nearly enormous effect sizes. In the Bimodal Group, the standard deviations of the total questionnaire scores and each factor went down, but they went up for Factor 1 (pre- $SD = 8.82$ ; post- $SD = 9.22$ ) and Factor 2 (pre- $SD = 1.72$ ; post- $SD = 2.37$ ) in the Multimodal Group. This outcome indicates that both Bimodal Group and Multimodal Group enhanced the students' learning attitudes. Nonetheless, it is important to acknowledge that the Multimodal Group treatment may exacerbate the disparity in self-efficacy levels related to English speaking and course content application among Multimodal Group students, whose self-efficacy grew increasingly diverse post-treatment.

**Table 7**

*Paired Sample T-test for the Learning Attitudes of Pre-test and Post-test within the Bimodal Group and Multimodal Group.*

Group	Item	Test	N	M	SD	$t$	$df$	$p$	$d$
Bimodal Group	Overall Questionnaire	pre	25	56.16	13.78	-6.43	24	<0.001	1.17
		post	25	76.63	12.83				
	Factor 1	pre	25	33.70	8.45	-6.13	24	<0.001	1.12
		post	25	45.46	7.87				
	Factor 2	pre	25	11.36	3.01	-5.02	24	<0.001	0.91
		post	25	14.86	2.96				

	Factor 3	pre	25	11.10	3.91	-5.92	24	<0.001	1.08
		post	25	16.30	3.18				
Multimodal	Overall	pre	25	56.43	10.21	-9.35	24	<0.001	1.70
Group	Questionnaire	post	25	79.16	9.88				
	Factor 1	pre	25	34.83	8.82	-4.43	24	<0.001	0.81
		post	25	45.33	9.22				
	Factor 2	pre	25	10.70	1.72	-12.13	24	<0.001	2.21
		post	25	16.50	2.37				
	Factor 3	pre	25	10.90	3.03	-11.07	24	<.001	2.02
		post	25	17.33	2.26				

***Variations in learning attitudes between the Bimodal Group and Multimodal Group post-treatment.***

MANCOVA was performed to assess if the Bimodal Group and Multimodal Group exhibited significant differences in their learning attitudes post-treatment. The study initially verified the assumptions of MANCOVA. The hypothesis of independence between the covariate (pre-test scores) and treatment effect was deemed valid, Hotelling's Trace = .001,  $F(3, 54) = .02, p = .99$ . Moreover, there were no notable variations between the covariance matrices (Box's  $M = 5.25, p = .55$ ). The preliminary analysis confirmed the assumption of covariance homogeneity among groups, allowing for the computation of the primary MANCOVA. Table 8 displays the adjusted mean scores on the post-test for each factor in the learning attitudes questionnaire, with pre-test scores on the learning attitudes questionnaire controlled as a covariate. The primary MANCOVA revealed no significant differences between the Bimodal Group and Multimodal Group (Hotelling's Trace = .130,  $F(3, 55) = 2.39, p = .07$ ). This indicates that the two groups had comparable performance across the

three categories in their post-test results. Nonetheless, the study opted to further examine the univariate  $F$ s of each factor. A statistically significant  $F$  value was noted for Factor 2 ( $p = .022$ ,  $\eta^2 = .088$ ), indicating a medium effect, while Factors 1 and 3 exhibited insignificant  $F$  values (Table 9). Additional analysis of each item indicated that self-efficacy in utilising course content could be a distinguishing characteristic among the groups. The results of learning attitudes indicate that the Multimodal Group exhibited significantly greater self-efficacy in applying course knowledge than the Bimodal Group following the treatment, although a little degree of variability observed in the Multimodal Group.

**Table 8**

*Modified Mean Scores and Standard Errors for Each Factor*

Post-test	Group	N	Unadjusted		Adjusted	
			Mean	SD	Mean	SE
Factor 1	Bimodal Group	25	45.46	7.87	45.47	1.57
	Multimodal Group	25	45.33	9.22	45.32	1.57
Factor 2	Bimodal Group	25	14.86	2.96	14.87	0.48
	Multimodal Group	25	16.50	2.37	16.49	0.48
Factor 3	Bimodal Group	25	16.30	3.18	16.30	0.50
	Multimodal Group	25	17.33	2.26	17.33	0.50

**Table 9**

*Univariate  $F$  Statistics for Bimodal Group and Multimodal Group Across Three Covariates*

Source	Dependent Variable	Type III sum of squares	$df$	Mean Square	$F$	$p$	Partial eta squared( $\eta^2$ )
Group	post-test Factor 1	0.346	1	0.346	0.005	0.946	0.001

	post-test Factor 2	39.572	1	39.572	5.512	0.022	0.088
	post-test Factor 3	15.799	1	15.799	2.060	0.157	0.035
Error	post-test Factor 1	4222.750	47	74.083			
	post-test Factor 2	409.238	47	7.180			
	post-test Factor 3	437.132	47	7.669			

**Research question 3: What are the learning experiences of EFL students when they participate in two different input forms of technology-mediated instruction?**

The thematic analysis yielded four principal themes. Overall, both Bimodal Group and Multimodal Group had positive attitudes towards their technology-mediated learning experience, demonstrated a strong willingness to participate in both in-person and online activities, and advancements in their speaking abilities.

***Theme 1: Varied Perspectives on Input Modes: Facilitative and Distractive***

Eleven students engaged in the Multimodal Group program, with ten expressing their preferences for the assorted materials and resources provided after class.

***Extract 1***

Online tools were effective to facilitate my previewing and reviewing. (interview with multimodal group, student 1).

***Extract 2***

The fact that the online platform had both class notes and videos made it much easier for me to understand and go over everything. (interview with multimodal group, student 3).

***Extract 2***

There are both visual and written online learning tools that help me with speaking tasks. (interview with multimodal group, student 7).

Ten students out of 11 recognised that online textual and speaking materials positively influenced their learning in the bimodal Group.

***Extract 3***

Because I can download audio recordings to my phone and listen to them over and over again whenever I have time, they are very helpful and comforting. (interview with bimodal group, student 2).

Conversely, one student from each group indicated a preference for an alternative learning input than what was originally provided.

***Extract 4***

Additional pictures and videos would be useful because those resources may capture my attention and enhance my engagement with the subject matter being discussed in class. (interview with bimodal group, student 5).

***Extract 5***

Videos can occasionally be distracting because of their captions that communicate essential information. (interview with multimodal group, student 8).

***Theme 2: Self-assessed enhancement of speaking abilities through online resources and instructor feedback***

The majority of interviewees self-reported that they had made progress in speaking, and they pointed out that technology-mediated learning helped them integrate the information that they had studied in class by providing them with speaking tools and practices both before and after class.

***Extract 6***

I believe that online materials appeared to optimally complement teacher's feedback. (interview with multimodal group, student 5)

***Extract 7***

It is always possible for me to make use of the materials that are available online. On occasion, when I forgot a particular pronunciation, I used the online materials and then practiced by following the instructions (interview with multimodal group, student 11)

***Extract 8***

The voice recordings were saved on my phone, and until I could say things correctly on my own, I copied the right ones. (interview with multimodal group, student 6)

The majority of students from both groups collectively praised the teacher's recommendations and guidance.:

***Extract 9***

These helpful words from the teacher about how I record them are really helpful. The teacher regularly pointed out my mistakes, which helped me improve and grow as a speaker. (interview with bimodal group, student 10).

***Extract 10***

Both in a regular classroom setting and through the online platform, I can get feedback from the teacher. I turned in a project, and the online audio feedback fixed every single pronunciation mistake that was found. (interview with bimodal group, student 3).

***Extract 11***

Along with teaching English pronunciation, the teacher spends some time talking about common speaking mistakes, which helps me understand them better. (interview with multimodal group, student 4).

***Theme 3: heightened willingness and less anxiety in speaking tasks***

Throughout the treatment, a substantial proportion of interviewees from both groups conveyed their enjoyment with the opportunity to engage in speaking activities. Based on their assessments, this educational experience was characterised as “flexible” (Bimodal Group

student 1, 4, 7; Multimodal Group students 2, 6, 9, 11), “engaging” (Bimodal Group students 2, 4; Multimodal Group students 2, 10, 11), and “less stressful” (Bimodal Group students 7, 10; Multimodal Group students 2, 4, 6, 9). The students from both groups then engaged in deeper reflection on their learning experiences in this context:

***Extract 12***

I was in charge of all of my own learning online. I am able to set up my preview job in a way that works for me. (interview with bimodal group, student 7).

***Extract 13***

There is less stress for me when I do my homework online. (interview with multimodal group, student 6)

***Extract 14***

I could repeatedly practice the speaking task again if I wasn’t happy with how I did the first time. (interview with multimodal group, student 10)

***Theme 4: elevated demand for self-autonomy and self-discipline***

Around half of the participants in both the Multimodal Group, and Bimodal Group groups expressed concern regarding their inability to learn independently.

***Extract 15***

I was worried that I wouldn’t be able to keep making progress because I couldn’t study on my own anyway. After that, though, I found that I could enjoy class and study on my own again once I regained control of myself. (interview with multimodal group, student 4)

***Extract 16***

I was really slow at the start of the class and didn’t want to finish the tasks. I started to enjoy this lesson more because I feel like I am now so focused that I can choose how I learn. (interview with bimodal group, student 6).

***Extract 17***

I used to be a passive student who only looked at teachers for guidance. On the other hand, I'm learning English on my own right now by using different online tools at least once every two days. (interview with multimodal group, student 1)

***Extract 18***

The teacher kept an eye on my growth at first. On the other hand, I'm keeping an eye on things on my own because I check my daily lessons every day. I'm really excited to check out the activities that are offered. (interview with bimodal group, student 8).

**Discussion**

This study provides empirical data supporting the utilisation of multimedia resources in technology-mediated EFL-speaking education in Japan. Two speaking assessments objectively evaluated the speaking performance of two groups, while a questionnaire investigated alterations in learning attitudes within the groups. Semi-structured interviews qualitatively gathered the perceptions and experiences of both groups regarding technology-mediated EFL English speaking. Both the bimodal group and multimodal group demonstrated statistically significant progress in the speaking assessments (i.e., reading aloud and topic descriptions) and in learning attitudes following the intervention. The study identified no significant differences in spoken learning achievement and attitudes between the groups; nonetheless, it indicated that participants in both groups experienced pleasant technology-mediated EFL learning, albeit with varying emphases. The diverse array of mixed outcomes necessitates additional discourse. Initially, technology-mediated EFL-speaking instruction, utilizing either bimodal or multimodal online input, positively impacted the enhancement of EFL learners' speaking abilities. The current findings corroborate previous studies on EFL learning (Xu et al., 2017; Yang et al., 2013) and are consistent with two information processing methodologies in Mayer's (2020) multimedia learning. One refers to a

presentation mode encompassing visual, audio, and textual input, whereas the other denotes a sensory modality that differentiates between auditory and visual channels.

These results may provide real-world evidence for using bimodal (audio and textual) and multimodal (audio, text, visual, and visual) information in online resources for technology-enhanced English as a foreign language (EFL) classroom. Moreover, the results corroborate the findings of other researchers who identified that substantial textual input accompanied by audio accompaniment (Webb & Chang, 2022) and captioned watching (Dang et al., 2022) can augment the acquisition of L2 vocabulary. The current findings from reading-aloud assessments indicate that form-focused explicit phonetic teaching, especially when administered online, can improve learners' ability to achieve accurate, specific pronunciation. This result seems to support and expand upon Saito and Lyster's (2012) effective application of form-focused education for Japanese EFL learners, notwithstanding their in-person classroom teaching. Therefore, it is reasonable to posit that online instruction in form-focused pronunciations possesses pedagogical promise. The present findings, however, contradict the split attention and redundancy principles (Ayres & Sweller, 2014; Kalyuga & Sweller, 2014), which propose that processing information through a single channel reduces cognitive strain and enhances learning.

A principal reason for this mismatch is that the primary learning objective of the EFL learners in this study was to improve their speaking skills. This prompted the learners in the current study to address the challenges presented by the pronunciation characteristics of spoken English, engaging in repeated practice to attain correctness and fluency. The incorporation of diverse sources (verbal, nonverbal, auditory, visual, and video) in language input captivates learners' attention, hence augmenting their comprehension of the course material presented. This scenario exemplifies technology-mediated EFL learning, wherein the online platform enables students to study the uploaded content at their own speed through

recurrent engagement. On the other hand, one empirical study confirmed that technology-mediated EFL learning works well in flipped contexts, which is a strength of language learning output.

The interactive assignments, personalized feedback, and adaptive management shown in this study facilitated learners' active participation in class activities and enhanced their speaking abilities. The findings of the speaking test, coupled with favorable shifts in the participants' learning attitudes in the current study, substantiate this assertion. Furthermore, the bimodal group and multimodal group in the current study exhibited enhanced learning attitudes following the intervention. This finding fits with other studies on blended learning environments (Chang, 2023; Chen, 2021; Wang et al., 2021). These studies showed that using technology to help with English as a foreign language (EFL) learning can make students feel better about their ability to learn, including their motivation, autonomy, and self-efficacy. Nevertheless, the current investigation did not reveal any significant variations in learning attitudes across the groups post-treatment.

This suggests that both bimodal and multimodal online materials might enhance participants' learning motivation and self-efficacy in instructional circumstances. It is noteworthy that the instructor of both groups exhibited impartiality throughout the therapy, providing similar attention to each group in both online and classroom environments. Another compelling aspect warrants consideration. The self-efficacy of multimodal Group and bimodal Group students exhibited substantial differences in the application of course knowledge, while the self-efficacy of Multimodal Group students became increasingly heterogeneous. A probable explanation for this is the participants' distinct preferences for various input modalities. The multimodal resources distracted one Multimodal Group student, possibly affecting her disposition toward that learning environment. The cognitive theory of multimedia learning ascribes this particular deficiency in adaptation to multimodal learning

modalities to the coherence principle (Mayer, 2020). Zhang and Zou (2022) pointed out that “extraneous, irrelevant, or unnecessary multimedia input” (p. 2793) is one bad thing that could happen with multimodal presentation. This can distract some students and make them less good at learning. Although both sets of participants benefited from each learning environment, some showed reduced affective engagement, possibly as a result of numerous sources of information diverting their attention from the learning process. Ultimately, the qualitative findings of this study indicate that, overall, the participants in both groups exhibited favorable attitudes and perceptions toward their involvement in integrated speaking learning. This outcome corroborates the findings of Wang et al. (2021), who established that a mixed design fostered an effective EFL learning environment and elicited favorable learners’ perceptions.

The synergistic advantages of technology-mediated EFL learning, diverse online resources, and the educator’s tailored feedback are responsible for these favourable sentiments. Previous research (Horn & Staker, 2014; Moradimokhles & Hwang, 2022; Xu et al., 2017) has shown that using technology to teach English as a foreign language (EFL) increases language use outside of school hours and allows for flexible asynchronous language input, which makes students more interested in activities both inside and outside of school. A significant proportion of interviewees reported reduced anxiety regarding participation in speaking activities and public speaking following the technology-mediated EFL speaking intervention, corroborating the findings of Chang (2023) and Min et al. (2019) on the effects of incorporating an e-learning environment into classroom instruction on student learning outcomes and attitudes. The majority of participants experienced an enhancement in their speaking performance, eagerness to learn, and self-autonomy. Notwithstanding this endorsement, a minority of students preferred receiving verbal input through visual means, whereas others contended that dynamic pictures might have diverted their attention.

## Conclusion

The internal consistency of the current quantitative and qualitative data underscores the issue of individual diverse preferences for different input modalities. This warrants future consideration regarding course design and research methodology. When technology is used to help with English as a foreign language (EFL) learning, it's important to take into account the different types of EFL learners, such as their skill levels (Chang, 2023) and their preferred input modes, as this study shows. While the quantitative findings indicated no significant differences in learning outcomes across various combinations of input channels in material delivery, the qualitative results revealed diverse perspectives from the interviewees. Practitioners can leverage these findings to discern appropriate material presentation modalities and make educated decisions while executing blended language learning for speaking proficiency. The impacts and interrelations of form- and meaning-focused speaking instruction may explain the substantial enhancement in both read-aloud and topic-description speaking tasks. It is advisable for tertiary-level educators in broader EFL contexts to incorporate pronunciation forms inside technology-mediated EFL learning environments.

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## Appendices

### Appendix A

*Learning Attitudes Towards Speaking English Questionnaire Developed by Chen et al. (2021)*

Item	Scores
1	When speaking English, I am able to clearly state my thoughts. 5 4 3 2 1
2	When speaking English, I am able to fully express my thoughts. 5 4 3 2 1
3	When speaking English, I am able to precisely express my thoughts. 5 4 3 2 1
4	When speaking English, I am able to thoroughly assert my comprehension according to a certain subject. 5 4 3 2 1
5	When speaking English, I am able to properly use words or phrases to express my ideas. 5 4 3 2 1
6	When speaking English, I am able to use proper words to express my ideas according to different situations. 5 4 3 2 1

7	When speaking English, I am able to link words appropriately.	5	4	3	2	1
8	When speaking English, I am able to detect the correctness of my pronunciation.	5	4	3	2	1
9	When speaking English, I am able to articulate the difference between short and long vowels.	5	4	3	2	1
10	When speaking English, I am able to correctly articulate sound changes in verb tenses.	5	4	3	2	1
11	When speaking English, I am able to use different intonations accommodated to different sentences.	5	4	3	2	1
12	When speaking English, I am able to use intonations to express my feelings.	5	4	3	2	1
13	I like speaking English.	5	4	3	2	1
14	I like learning oral English.	5	4	3	2	1
15	In my daily life, I like to seek opportunities to practice my oral English skills.	5	4	3	2	1
16	In my daily life, I like to practice speaking English with my friends.	5	4	3	2	1
17	I am always motivated to attend oral English classes.	5	4	3	2	1

18	I am always motivated to do my oral English assignments.	5	4	3	2	1
19	I am always motivated to practice the oral skills I have learned in English class.	5	4	3	2	1
20	I am always motivated to imitate proper intonation and pronunciation in speaking English.	5	4	3	2	1

## Appendix B

### *Semi-structured Interview Prompts*

1. Overall, what were your impressions of the teaching treatment experience this semester?
2. What distinctions can you identify between your experiences in face-to-face classes and those in online self-learning environments?
3. What were your impressions of the materials provided for online self-learning tasks?
4. In what manner did you utilise the online materials?
5. Was the experience of learning online independently beneficial or difficult for you? Please provide some examples if applicable.
6. Would you be willing to share your observations, thoughts, or perceptions regarding face-to-face instruction and online learning?

## **Leveraging Music-Generative AI That Motivates Learners to Repeat Reading Aloud in Foreign Language Teaching**

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### **Abstract**

This study explores the benefits of leveraging music-generative AI (artificial intelligence) that adds melodies to sentences when teaching English as a foreign language, mainly when practicing reading aloud. To examine the effect of using this technology, we compared two experimental cases: one with ordinary oral readings without melodies and the other using sentences with added melodies with music-generative AI. The result of this experiment is that oral reading practices using melodies are more effective than oral reading without melodies. This result might not simply prove that adding melodies to sentences motivates students to repeat their learning activities of reading aloud because it was found that many students prefer famous songs over sentences that music-generative AI accompanies. However, it can be estimated that adjusting the melody production of music-generative AI could help create more appropriate songs that can motivate students to practice reading sentences aloud. This finding suggests that utilizing music-generative AI could aid in developing teaching materials for reading aloud and increase the motivation of students to repeat their learning practices through reading aloud.

*Keywords:* music-generative AI, reading aloud, compelling input, academic language, putting melodies on sentences

Recent publications on various reading-aloud practices in language learning materials indicate that reading aloud benefits language acquisition. While reading aloud is typically practiced in individual learning settings, introducing this practice into university education can enhance the classroom atmosphere, encourage independent learning, and improve language literacy. This study explores implementing reading aloud in foreign language learning activities in university educational settings.

When incorporating the read-aloud method into language teaching at colleges, motivating students to practice reading aloud both in and outside class is important. Encouraging students to practice reading aloud as their homework is difficult. Some teachers may resort to penalties such as grade deductions or withholding credit to compel students to complete reading-aloud assignments. However, effective education should prioritize motivating students rather than coercing them. Motivation plays a crucial role in the success of language learning, particularly in the university setting, where students have more freedom in their learning environment than in high or junior high schools. “Without sufficient motivation, even individuals with the most remarkable abilities cannot accomplish long-term goals, and neither are appropriate curricula and good teaching enough on their own to ensure student achievement” (Dörnyei, 1998, p.117).

Incorporating songs as learning materials in university language class activities effectively strengthens students’ motivation for practicing reading aloud because reading song lyrics is itself singing songs. However, no matter how enjoyable the practice of reading by singing songs is, songs cannot serve as proper learning materials for university language education because they do not always contain the appropriate content or grammar for language education.

We presuppose that leveraging music-generative AI (artificial intelligence) helps us create language-learning materials suitable for college education. This technology can add

melodies to any sentence and create songs in any language. College students are expected to acquire the language ability to gain knowledge of their expertise or specialties and present or discuss their ideas in academic settings. It is difficult for university students to have the motivation to keep learning the academic language. Continuing the practice of reading aloud the language materials is difficult to maintain. The technology of music-generative AI could encourage students to repeat reading-aloud practice for language acquisition in the university's language classroom.

### **Music-Generative AI for Language Learning**

Reading aloud practice could be effective when using songs; when music-generative AI puts melodies in sentences suitable for academic education, students could enjoy learning academic language without difficulties, and their motivation to learn reading aloud practice after class could be cultivated. As the effect of reading aloud can be obtained by practicing repeatedly, motivating students to repeat reading even after class is necessary. Leveraging music-generative AI helps provide songs with the academic language that fits their levels or interests, which could be appropriate for learning materials of academic language.

Rapid technological development has provided educators with opportunities to use technology for education. Technology can be currently useful in almost all areas of language education, supporting the development of all language skills, such as listening, writing, reading, speaking, grammar, and vocabulary. Because of technological advances, the texts and tools available to us have been dramatically altered. "It was also found that learning environments created by utilizing technology were pleasant for student language learning" (Shadiev, 2020, p. 2). Applying technology for language learning and instruction to education contributes to "improving the quality of input, making communication authentic, and providing timely and relevant feedback" (Shadiev, 2020, p. 2), which leads to an improvement in educational language learning methods. "Studies have shown that technology can promote the learning performance of language learners, increase learning motivation and

providing [sic] them with more efficient means for language learning” (Shadiev, 2020, p. 2). However, although technology effectively improves the language learning method, “there is a need to review technologies applied to language learning and instruction more frequently and reconsider earlier, present and future practices” (Shadiev, 2020, p. 2). The development of technology is so fast that it is true that some technologies have become outdated and are never used again. We should keep track of the applications and changes in technologies.

The recent wave of generative AI technology impacts human creativity in expressing ideas, such as tools like ChatGPT or Midjourney. Above all, the advent of musical generative AI transforms the environment in which we create and listen to music, changing our musical experience. Many AI music platforms have recently emerged to allow the creation and customization of music, such as SongR, Meta’s Audiodraft, OpenAI’s MuseNet, Suno, Soundful, Soundraw, Boomy, Amper Music, and Loudly. “Generative AI holds transformative potential for the music industry, acting as a catalyst for creativity and innovation. In this domain, it can create new compositions, generating novel melodies, harmonies, and rhythms that can inspire or aid musicians in their work” (Marr, 2023). When we leverage generative AI, we can experiment to create unique sounds and explore various styles of music to expand the boundaries of musical genres since “generative AI can personalize music for different audiences, tailoring tracks to individual tastes and preferences” (Marr, 2023).

Music-generative AI is cutting-edge information technology that can generate music freely with high-quality sound. In recent years, we have seen a wave of generative AI technology that has tremendously impacted creativity, such as writing documents or painting pictures. A recent trend of creating music using generative AI allows anybody to create and customize music. Music-generative AI can create new compositions, generating novel melodies, harmonies, and rhythms. Artists and producers can leverage AI tools to explore diverse musical styles and experiment with unique sounds, thereby expanding the boundaries of musical genres.

Music-generative AI that adds a melody to sentences helps create teaching materials for reading-aloud practice. The main advantage of this technology is that we can make learning materials by adding melody to the texts. If we teach academic language with melodies, students are encouraged to continue learning repeatedly, so this technology helps their reading practice to acquire academic language effectively.

### **The Evolution of Reading Aloud**

In order to prove the effect of reading aloud practice for language acquisition, let us consider the evolution of reading aloud in society throughout human history. Reading aloud has its roots in oral storytelling tradition, which dates back to around 200,000 BCE, the birth of human speech. In the early days, storytelling occurred in the ceremony of rituals and events involving the hunt, sharing information needed for human survival and entertainment. The early storytelling shared daily existence, rituals, and events involving the hunt. During the Dark Ages, the Greeks and European monks practiced reading aloud in public places and groups. “Not everyone was literate or possessed reading materials, so to read aloud was the common practice and helped to share knowledge between generations” (Paganelli, 2019, p.5).

In the past, people delivered and shared the stories as ensemble groups in segments by reading aloud. Robert Darnton, a historian, wrote, “For the common people in early modern Europe, reading was a social activity. It took place in workshops, barns, and taverns. It was almost always oral but not necessarily edifying” (Ha, 2017). Reading aloud has historically been a community activity, evidenced by the fact that early Latin texts did not have spaces between words because reading aloud facilitated understanding of the written word without spacing between words. However, the style of Latin texts without spaces changed according to a gradual shift in the reading style of people, from reading aloud in groups to silent reading in private. As there was a gradual shift from a religious custom of silent reading and sometimes the texts were reproduced gradually, spaces were added in Latin to facilitate understanding and help them engage the text with greater understanding. This change in the

style of Latin texts also facilitated the change toward silent reading (Ha, 2017).

With the development of printing technology and the birth of books, there was a gradual shift from reading aloud in groups in public to silent reading privately. By the 17th century, when technological advances in printing presses like Gutenberg's contemporary technology allowed for multiple copies of information, silent reading became more common than reading aloud. This silent reading enabled people to share culture and knowledge they had never experienced. Silent reading freed people to explore ideas individually to follow their curiosity, contributing to creating their internal world and private thoughts.

The evolution of the media period began in the 1800s, when the mass media industry began, when Alexander Graham Bell and Thomas Edison invented the electric telephone and wax cylinder recording. "Since the 1800s, photography, radio, motion pictures, telephones, television, digital media, and social media have become hugely influential factors of human existence" (Paganelli, 2019, p.7). In the 1900s, the birth of the radio and film led to the invention of television in the 1950s. With these advancements in media technologies and the facilitation of silent reading, the traditional oral culture of reading aloud has been increasingly declining.

However, even today, the habit of reading aloud remains and is practiced privately in storytelling to small children or language learning in school education. There is a typical image of the reading-aloud style of a parent reading a picture book to help a child sleep. With the advent of technology, this archetype changes into the activities of reading aloud in social or cultural groups or, eventually, educational language learning classroom settings for language learning (Paganelli, 2019, p.7).

The modern digital era began with the U.S. government releasing Internet control in 1994. The World Wide Web has changed the speed and style of information exchange. The 21<sup>st</sup> century has created social media platforms that allow participants to share information. (Paganelli, 2019, p.7). Printing technology leads to silent reading that cultivates thinking

ability. Portable players help practice listening and speaking. The web has enabled freely accessible audio, images, and text and increased learning content. With e-books and mobile apps, we can now learn anywhere. “Technology is a tool that can serve many purposes and bolster success. Technology use is a life skill that can be shared as value-added in the read-aloud experience” (Paganelli, 2019, p.9). With these technologies, the original reading-aloud archetype, represented by an adult parent’s reading to a small child, has been transformed into private learning, practicing in small groups such as cultural or social activity, or eventually the learning practice in the classroom setting in school education. Various media technologies could support reading-aloud learning with the current development of information technologies.

### **Read Aloud Practice in Language Learning**

Reading aloud has been a social habit for a long time in human history. With the development of technology, the custom of reading aloud in human society has become obsolete. The human custom of reading aloud was replaced by the habit of silent reading. However, in recent digitalization and technological advancement, the custom of reading aloud has again been activated and restored for language learning education. Read-aloud activities are utilized in childcare at nurseries, kindergartens, homes, and various educational settings, including universities. During reading-aloud activities at school, students are forced to participate in activities, not just listen to the teacher’s explanations. Incorporating reading-aloud practice in the classroom could activate the process of lesson style in any educational setting.

The recent development of technology enables teachers to introduce reading-aloud practice to language learning as an effective way to learn language and improve communication skills. For example, the advent of digital texts and speech recognition technology could completely change the student’s language learning style. Students who read digital texts with speech recognition technology can check their pronunciation, so they learn

correct pronunciation automatically with this technology. Language education, which had previously been conducted as a group class, could shift from a typical group lesson style to a hybrid style with private learning practices. With this technology, students' motivation to practice reading aloud can be cultivated. With these technologies, their pronunciation could be corrected precisely. Many students enjoy pronunciation correction, as their motivation to speak the language like native speakers can be supported by these technologies. Correcting their pronunciation to be like native speakers' pronunciation could become the motivation for learning a language. Students' activities in correcting their pronunciation with speech recognition technology seem to be as if it were a game. Learning English for them is no longer something that requires effort; rather, it is something that they can engage in as a playful and habitual task.

However, incorporating reading-aloud practice for language acquisition in college foreign language classrooms is not just correcting pronunciation. Reading aloud practice has many benefits besides correcting pronunciation. When we generally think about reading aloud, we probably think of a parent reading a story to their child. Focusing on reading aloud, we can easily imagine that it gives children various benefits. As Krashen reviewed, "There is overwhelming evidence that children like to be read to and that many adults enjoy reading to children," as when "children hear exciting stories, they want to read on their own" (Krashen et al., 2018, p.23). As Wang and Lee suggest that "storytelling is the bridge," (Wang & Lee, 2007), when children are read to aloud by their teachers in school or parents in their homes, they become interested in the world of stories and develop an interest in reading.

The read-aloud practice provides linguistic competence, including vocabulary, grammar, and knowledge of how texts are constructed, making reading of written or listening language text more comprehensible. When students are motivated to read the topic or story written in the textbooks, they are stimulated to learn the language of the textbooks. When they read the stories of the textbook and start to practice reading aloud the language of the

textbooks, they will also have greater knowledge of the text languages, which will contribute to a better comprehension of the world.

### **Compelling Input**

The effects of reading aloud are not limited to pronunciation correction. They cover a wide range of subjects, from understanding the structure of the language to the acquisition of grammatical knowledge and vocabulary comprehension. Reading aloud has many effects that compel us to speak the correct language.

The purpose of practicing reading aloud is different from that of practicing conversation. We do not always need to speak with the correct expression or grammar of the language when we are in real interactive situations. Most of the time, free conversation between people can be established even if people do not speak a grammatically correct language. As the purpose of conversation is not to acquire grammatical knowledge or new vocabulary of the language itself but to establish communication between people, how to deal with the topic of conversation is more important than speaking correct English. Reading-aloud exercises differ in purpose from conversation practice, which is to acquire basic knowledge of correct English sentences.

When students are engaged in class activities such as reading aloud, they are compelled to learn the correct English sentence. These activities need to be repeated many times because by repeating practicing reading aloud correctly, they can acquire proper sentence expressions without much difficulty. The reading-aloud activities incorporate the correct expressions of the language, so through reading-aloud activities, they can understand the sentence's meaning and acquire grammatical knowledge, vocabulary, and sentence construction. Therefore, they can improve their vocabulary, grammar, listening ability, and reading comprehension.

Reading aloud practice is effective for language acquisition because it demonstrates the characteristics of compelling input, which is regarded as “an extremely important factor in language and literacy development” (Krashen et al., 2018, p.1). What is necessary for

language acquisition is not to motivate students to learn various details of grammatical knowledge or lots of vocabulary. Learning in an unconscious state is more important for acquiring language ability than having the motivation to learn; “Language acquisition is a subconscious process; while it is happening we are not aware that it is happening, and the competence developed this way is stored in the brain subconsciously” (Krashen et al., p.2). If “language acquisition and literacy development are most efficient when input is compelling,” “it radically changes the idea of motivation: motivation to acquire another language or improve its aspects of literacy (e.g., increase one’s vocabulary or writing ability) dwindles in importance, and may even become unimportant when what is heard or read is compelling” (Krashen et al., p.1). When we speak grammatically correct language through practicing reading aloud, our speaking activities are guided not by our motivation to learn the language but by the compelling input function of reading-aloud activities. In other words, the language itself teaches us the correct language. Reading aloud practice enhances motivation and strengthens compelling input. It can be said that we are no longer motivators but language itself that guides us in the direction of learning.

### **Our Classroom Practice in Cyberspace Using Song Videos**

We have had the experience of actually practicing English classes at university using songs, and we were able to feel the effects of the songs. In 2020, our university, Kanagawa Institute of Technology, shifted to online classes due to the coronavirus pandemic. As a result, we explored new teaching methods suitable for online language classes. Using popular songs as learning materials in our English classes positively impacted our students. Recently, music platforms have been made more accessible to various songs, such as YouTube, Apple Music, Spotify, etc. Our study also demonstrated that song-movies can be used as valid materials to cultivate thinking ability, which is required for building high-level language learning skills. Presenting our findings at the university’s IT symposium, we discussed how incorporating popular songs encouraged students to enjoy singing and reading English aloud even after

class. This approach demonstrated the benefits of using song movies in the online classroom, providing on-demand lessons, and promoting facilitative practices for teaching foreign languages in cyberspace (Kono, 2021). Our teaching practice in the classroom demonstrates that the effectiveness of reading aloud is enhanced by using songs to practice reading aloud.

### **The Significance of Using Songs in Language Learning**

Reading aloud effectively achieves its effect when it is constantly repeated. In teaching foreign languages in college classrooms, teachers encourage their students to repeatedly urge reading aloud practice, not only as practice activities in the classroom but as homework after class. Reading aloud practice includes the compelling input effect. By reading aloud, they are always compelled to read, understand, and pronounce language correctly. By repeating the practice of reading aloud, they will gradually be able to speak the correct language unconsciously, and they will be able to gain comprehensive comprehension.

We hypothesize that proposing teaching strategies for reading aloud by utilizing songs that are effective for repeat reading would be beneficial. Using songs to help students repeat the practice effectively makes reading activities a daily routine. Introducing songs into language education is a commonly practiced method. Various songs have been used in language classrooms to stimulate the learner's interest in learning and increase the learner's motivation to learn the language. Songs have been used to introduce classes, familiarize students with English, and increase students' concentration at the beginning of the class. However, as Medina suggests, "Using songs in the classroom has been a common practice to support language acquisition" (Medina, 1993, p.1): In most cases, utilizing songs in a language classroom has not been established as a teaching method of language learning, but just supporting the main teaching. It has just a subordinate role in the main strategy of teaching language.

Although popular songs have commonly been used in college language classrooms, the purpose of incorporating songs is not to use them as the main teaching method but as a

subordinate teaching method to increase students' interest in learning. As Medina suggests, "there is concern that music may be simply a supplemental activity with little instructional value"; "While teachers commonly use songs in the classroom to promote second language acquisition, empirical support for this practice is lacking" (Medina, 1993, p.1). The teaching method of using songs in language education has been neglected because it is regarded as a kind of play that serves as an introduction to learning and is not beyond the realm of entertainment.

On the other hand, there is a justification for using songs in language learning. Zola regards song "as linguistically authentic and culturally reliable text," indicating that singing a song can be equivalent to giving a speech: "Song and speech are both produced in some form, structure, or organization, through time, with rhythm and tone, and express and communicate some content through language. Song does not materially differ from speech qualitatively, that is, linguistically" (Zola & Sandvoss, 1975, p.73). Songs are valuable in language education because they can be considered justified learning materials like authentic speech. By focusing on the authenticity of the lyrics of a song, the lyrics themselves have many elements that can be used as learning texts.

The effectiveness of using songs in language acquisition is related to the efficacy of music. One of the most significant benefits of using songs in language education is caused by the effect of music accompanying the song's lyrics. Song lyrics without music are written words that have no taste or impression. However, when played with music, song lyrics bring various images beyond the written texts to mind, transforming the message conveyed in the lyrics into meaningful information. As Medina demonstrates, "language acquisition results when the target language is heavily laden with meaning" (Medina, 1993, p.7). We memorize meaningful information more effectively than meaningless information. When music is added to a word, the melody emphasizes the meaning of the word, and the word becomes memorable.

Music supports putting impressions or meaning on language materials. Therefore, songs cannot be regarded as recreational devices because they have enough instructional value to be utilized in teaching languages. This can lead to the idea that songs should be more prominent in the language curriculum. “Not only can children benefit from additional exposure to the second language, but songs can also provide the classroom teacher with an alternative means of promoting second language acquisition apart from nonmusical means such as oral stories” (Medina, 1993, p.8).

Another advantage of utilizing songs is that they repeatedly encourage us to sing. When we are impressed with the melody of songs, we repeatedly hum or sing them. As repetition is the best way to memorize song lyrics, songs could be a powerful tool for memorization of vocabulary or grammatical expressions of the authentic language. Iwasaki et al. found that “song lyrics aided vocabulary development, as they are learned through repeated listening” (Iwasaki et al., 2013, p.138). Our memorization is enhanced when verbal information is presented with music. We can memorize every line in our favorite song lyrics by repeating them many times so that we no longer need to listen to them (Gfeller, 1983; Schuster & Mouzon, 1982).

### **Academic Language**

Although using songs in the classroom could be helpful, songs do not always contain the appropriate content or grammar. Abrate advocates the usefulness of using songs in language teaching but states that teachers must choose songs carefully:

Not all songs are suited to all levels or goals, although nearly any song can be used to highlight some aspect of syntax, grammar, or pronunciation. The teacher must evaluate the students’ mastery of the target language and initiate them gradually to the textual study of popular songs (Abrate, 1983, p. 8).

Furthermore, Abrate argues that, when choosing a song, it is important to consider the

lyrics and the musical element of the song:

The type and quantity of musical accompaniment are extremely important considerations. Simple guitar is often best for the classroom as it seldom obscures the lyrics. In fully orchestrated arrangements, on the other hand, the lyrics are often difficult to distinguish clearly. The speed of the song affects the choice of presentation (Abrate, 1983, p. 8).

However, even though song lyrics help learn everyday conversation, college education should teach academic language. Compared with everyday or social language, academic language is usually used in classroom lessons. It is “the oral, written, auditory, and visual language proficiency required to learn effectively in schools and academic programs” (Great Schools Partnerships, 2013). University students are expected to learn and achieve fluency in academic language which “includes a variety of formal-language skills—such as vocabulary, grammar, punctuation, syntax, discipline-specific terminology, or rhetorical conventions—that allow students to acquire knowledge and academic skills while also successfully navigating school policies, assignments, expectations, and cultural norms” (Great Schools Partnerships, 2013). For this reason, the term academic language is sometimes used interchangeably with academic literacy (Great Schools Partnerships, 2013).

Learning academic language contributes to college students acquiring academic literacy, the comprehensive language skills necessary for academic studies. Using songs as teaching materials is effective for students to learn language with enjoyment, but it does not allow them to master academic literacy. However, if we teach academic language with a song-teaching method, we could encourage students to repeat reading aloud and contribute to their effective acquisition of academic literacy. In order to learn academic language by reading aloud, it is necessary to read aloud over and over again. Although songs are ineffective in acquiring academic literacy, their melodies encourage students to repeat reading aloud. Is it possible to apply this effect of the song’s melody to the practice of reading aloud

academic language? We can suppose that, when learning academic language as a song by adding a melody, we can promote the student's academic literacy effectively by adding a melody because of the effect of the repetition of music. Using cutting-edge technology recently developed, we can put a melody to any sentence to create song-like text appropriate for learning reading aloud academic language repeatedly.

There are benefits of leveraging music-generative AI to add melody to academic English sentences. With this technology, we can create singable learning materials whose topics match the student's expertise and interest. We can effectively and efficiently practice our reading-aloud activities. If we can add a melody to the lyrics to encourage learners to read aloud, we can learn academic language effectively. We can use this technology to practice reading aloud academic topics repeatedly that are suitable for university education. In addition, learning English by singing melodies is fun, so we can expect students to continue the practice. AI technology can create teaching materials with melodies designed to be singable.

### **Method**

We presuppose that the AI-generated song method has the advantages of efficiency, fun, and continuity. The effectiveness of leveraging the technology of music-generative AI in practicing reading aloud is validated in our experiment of teaching practice conducted in 2023 from October to November in English learning classes at Kanagawa Institute of Technology, our university's EFL (English as a Foreign Language) classroom. The effect of the teaching method of using music-generative AI technology is shown in the following experiment conducted in our English class. The purpose of this approach is to show how efficiently it cultivates comprehensive language skills by practicing continuous reading aloud. We prepared the teaching materials that contribute to acquiring academic literacy with customized melodies. Leveraging music-generative AI, we can add melodies to any sentence, which helps provide songs that match students' levels, interests, or expertise.

From November to December 2023, we conducted this experiment using AI-generated songs with 88 students in the middle level of three English classes at Kanagawa Institute of Technology. We wrote a 100-word original text in English about ChatGPT, an academic topic suitable for our students' interests and expertise (see Table 3). We also prepared a summary of 40 words for this topic, considering that the learning effect may differ depending on the length of English text read aloud (see Table 4). The overview of this experiment is shown in Table 1. In this experiment, we compared this teaching method, reading-aloud practice using AI-generated songs, with two other types of reading-aloud practice methods: One is ordinary reading-aloud practice using texts written in academic English without melodies, and the other is using popular songs for reading-aloud practice like singing, where the reading materials are not academic English but authentic song lyrics. These two methods are compared with reading aloud the topic written in academic English with melodies added by music-generative AI "SongR."<sup>1</sup>

SongR can provide seven types of music, such as pop, hip-hop, and country. The voice can be selected as a "male" or "female" voice. Most of our English class students are male, so we selected "male" to avoid issues with high-pitched sounds being difficult to sing. To select the type of music, we tried to make some melody patterns with our students. We discussed which music they prefer for reading practice and selected "Piano Rock," which is similar to current music with classical piano sound.

**Table 1***Overview of our Experiment With AI-generated Song*

<b>Method</b>	<b>Materials</b>	<b>Encouraging Repetition</b>	<b>Fun</b>
<b>AI-Generated song</b>	<b>Academic</b>	<b>high</b>	<b>high</b>
Popular Song	Not Academic	high	high
Ordinal reading-aloud practice	Academic	medium	low

We compared it with normal reading practice to see if reading aloud practice with melody improves the effect. We arranged these four types of practices. First, students practiced reading aloud the original 100-word text without melody for 5 minutes. Second, they practiced the same-length text with melody for 5 minutes. Next, in practice 3, they must read aloud the 40-word text summary without melody. Finally, they read aloud the same summary with a melody added (see Table 2).

**Table 2**

*Reading-aloud Practices*

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Practice 1: 100-word original text without melody
Practice 2: 100-word original text with melody
Practice 3: 40-word summary text without melody
Practice 4: 40-word summary text with melody

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To investigate the effect of each practice, we assigned a fill-in-the-blank test at the end of each practice. As suggested in the section “compelling input,” the effect of reading aloud practice is not to encourage free conversation but to learn the correct sentences with the correct grammatical order. The fill-in-the-blank test effectively measures how much the students understand the sentences’ grammatical structures. We have written the text about ChatGPT for teaching English in two types of text lengths: the original text is about 100 words, and its summary is about 40 words. From these texts, we have made two sample tests for completing English sentences to check the effect of reading aloud. Table 3 is the test of the original text, and Table 4 is the test made from its summary. Table 5 shows the audio data we used for our experiments, showing text type, number of words, and audio time.

**Table 3**

*Original Text (about 100 words)*

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ChatGPT is (based on) an (enormous) neural network architecture called GPT (Generative Pre-trained Transformer), which is one of the (large-scale) language models. The first step (in making) GPT produce natural conversation is to (train) it with many sample sentences. However, GPT is an (artificial intelligence) that can create only sentences. If they (interact) naturally with humans like ChatGPT, they must learn many examples of “(dialogue).” With this learning process, GPT can “generate” humanlike dialogues (in response to) a person’s statement (as if) it were said as another person’s (utterance), (enabling) it to interact naturally with humans.

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**Table 4**

*Summary Text (about 40 words)*

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ChatGPT (is based on) GPT, a (large-scale) language (model). GPT (produces) natural conversation (by training) with many (sentences). GPT is an (artificial intelligence) to create only sentences. When they learn (dialogue), they (interact) naturally with humans. With this (learning process), GPT can (generate) (humanlike) dialogues.

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**Table 5**

*Audio Data*

Audio	Text type	# of words	Time [sec]
<b>Text audio 1</b>	Original	100	52
<b>Text with melody 1</b>			115
<b>Text audio 2</b>	Summary	40	31
<b>Text with melody 2</b>			52

## Results

The results of our experiment with reading-aloud practice (see Tables 6 and 7) show that reading-aloud practice with an AI-generated song has a positive effect on language acquisition. You can see the scores for each class. The test scores in the practice with AI-generated melody are higher in all classes. On the other hand, there was no difference between the practice with 100 words of the original text and 40 words of the summary. This result indicates that the length of reading aloud affected its effectiveness. What affected the effectiveness of reading aloud was not the length of the English text but whether or not the melody was added.

**Table 6**

*Reading-aloud Practices 1 and 2 (Original text)*

	<b>Class 1</b>	<b>Class 2</b>	<b>Class 3</b>	<b>Avg.</b>
<b>Reading Aloud ordinarily</b>	6.48	7.78	8.88	7.71
<b>AI-Generated Song</b>	10.00	9.6	11.18	10.26
<b>Gained score</b>	<u>3.52</u>	<u>1.83</u>	<u>2.29</u>	<u>2.55</u>

**Table 7**

*Reading-aloud Practices 3 and 4 (Summary text)*

	<b>Class 1</b>	<b>Class 2</b>	<b>Class 3</b>	<b>Avg.</b>
<b>Reading Aloud ordinarily</b>	8.48	8.04	8.88	8.47
<b>AI-Generated song</b>	10.78	10.26	10.97	10.67
<b>Gained score</b>	<u>2.30</u>	<u>2.22</u>	<u>2.09</u>	<u>2.20</u>

After the experiment, we conducted a survey to ask students which method is easier to learn by: reading aloud normally or singing AI-generated songs (see Table 8).

**Table 8**

*Questionnaires*

**Q1: Which is easier to remember: reading English texts aloud normally or reading them aloud using texts with a melody?**

- (1) Read aloud normally
- (2) Read aloud using texts with a melody
- (3) Neither will change

**Q2: What changes did you notice when you listened to texts with a melody after reading them aloud? (multiple answers possible)**

- (1) Understood the pronunciation of words and felt it easier to read them aloud.
- (2) Felt relaxed and motivated to read aloud.
- (3) Being a song made me feel more familiar with English
- (4) Memorized the words just by reading them aloud, even without singing.

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(5) Felt difficult to memorize melodies but would like to sing a melody that is easy to remember.

**Q3: What do you think about generative AI that can add melody to any English text?**

(1) Want to add melodies to various English sentences myself.

(2) Want to learn English using existing songs because the melodies that I know is preferable.

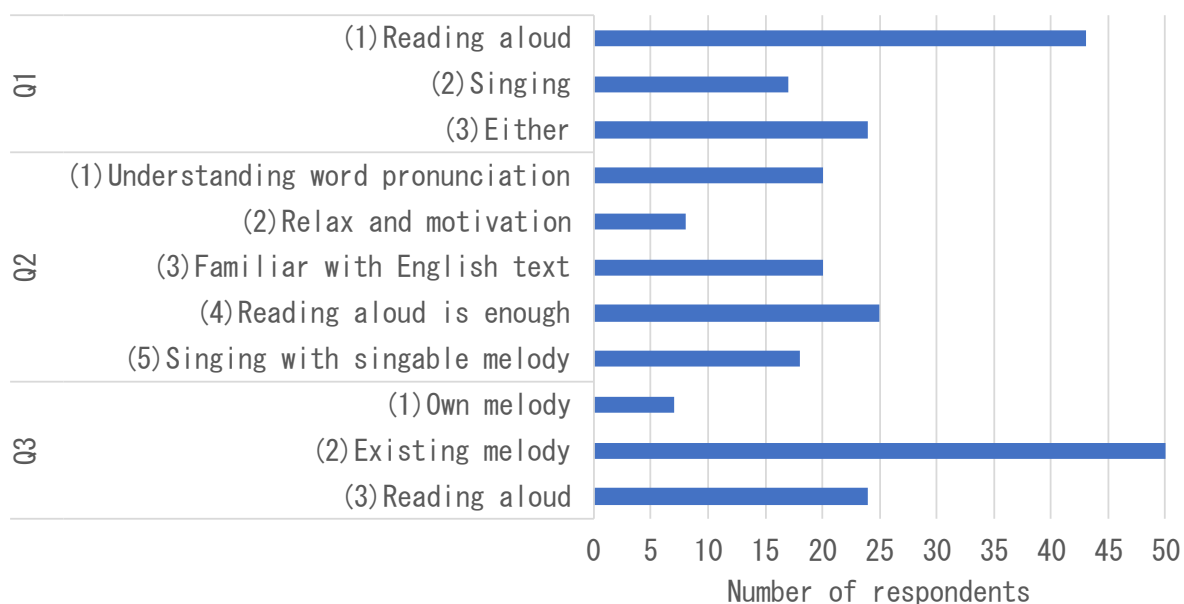
(3) Enough just to read aloud without adding a melody

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Figure 1 shows the questionnaire results. We found that there is still a problem with the effect of motivating learning. Many students answered in this questionnaire that it was better to read ordinary English sentences aloud than English sentences written into songs. In addition, many students answered that they preferred popular songs to AI-created English text songs.

**Figure 1**

*Questionnaire Results*



**Discussion**

The better test scores of the students who finished the reading-aloud practice with AI-generated songs might suggest that leveraging music-generative AI is effective for language

learning (see Tables 6 and 7). This finding could have significant implications for language learning and educational technology, suggesting that incorporating music into language learning activities could enhance students' academic literacy. However, it might not be appropriate to simply conclude that leveraging music-generating AI is effective for acquiring academic literacy. The increase in their score may be due to the melody being given and the same English sentence being tested a second time. At first, students read the English text aloud and did the first test, and then read aloud the exact text with melodies generated by AI, and they got higher points on the test. Since the reading-aloud test in English with music is the second test, it cannot be said that the higher score is on the second test is due to the effect of the melody. Separating the students into experimental and regular read-aloud practice groups in each class would have been best to get more precise results. However, when practicing reading aloud with music, students were more attentive to the music and more concentrated on the practice in class. From this, music AI can be expected to motivate students to practice reading aloud repeatedly to arrange a more interactive and spontaneous reading-aloud class.

### **Conclusion**

In this study, we presupposed that leveraging music-generative AI to add melodies to any sentence helps provide songs matching students' levels or interests. As expected, reading English sentences with melodies aloud was more effective than reading original English sentences. However, the melody created by generative AI is not as impressive as the famous popular songs. Reading aloud requires repetition. If generative AI can create remarkable melodies, the quality of music will improve, and the effect of encouraging reading aloud will increase. As an improvement for the future, we would like to try to obtain more accurate results by comparing a variety of proficiency levels of student groups in our experiment.

### **Notes**

1. The URLs of the actual product of music-generative AI we used are as follows:

SongR, <https://www.songr.ai/>

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## **Clarity and Emotional Polarity of Goal Setting for English Learning among Science Students—From Free Writing Responses**

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### **Abstract**

This research sheds light on the orientation of science students toward English language learning and provides suggestions for educational intervention. Two research questions are based on this objective: RQ1 “What is the relationship between proficiency and goal clarity?” and RQ2 “What is the relationship between emotional polarity and proficiency and learning?” The survey was conducted with students in the science department of a private Japanese university; they answered open-ended questions in a free writing format. The answers were scored on the degree of abstractness and emotional polarity, while statistical analysis and text mining were also conducted. From RQ1, we found that high-proficiency students tend to have clearer goals and emphasize the acceptance of content in English, while, for low-proficiency students, the act of using English itself is the purpose. From RQ2, we found no correlation between proficiency and emotional polarity, but that high-proficiency students tended to strongly emphasize pragmatic extrinsic motives over intrinsic motives. These results suggest that, for science students, it is more effective to emphasize English language learning’s

English is a tool that can be used to expand their options.

*Keywords:* free writing, goal setting theory, emotional polarity, text mining

Through a questionnaire survey of non-English majors at several Japanese universities, the authors clarified that the relationship between psychological factors such as international posture, self-efficacy, class anxiety, motivation, and the degree of influence differs depending on English proficiency (Janssens-Shintani et al., 2023, Shintani et al., 2022, 2024). However, these surveys were based on Likert scales using psychometric scales, meaning it was not possible to obtain a detailed description of the psychological state of students learning English, that is, whether their reason for learning English is clearly defined, and what emotions they have about learning English. Additionally, in research conducted to date, we have used the English Motivation Scale (Hiromori, 2005) to investigate the motivation and intentions of non-English majors to learn English. However, when analyzing the results of the English Motivation Scale among non-English majors, there were often two or three of the five subscales that were less reliable in the scale and were rejected<sup>1</sup>; therefore, to explore motivations for learning English without relying on the English Motivation Scale, a free writing format was adopted. For these reasons, we decided to focus our research on students who take English as a general education course at their universities, that is, science students among non-English majors, and to conduct a survey based on free writing to understand their intentions for learning English. With this research, we aim to provide practical and appropriate educational suggestions to students by acquiring a picture regarding their intentions to learn English.

## **Research Questions**

This study consists of two research questions. RQ1 examines whether the clarity of students' goals for learning English differs according to their proficiency level. Locke's Goal-Setting Theory (Locke et al., 1981) proposes that clear and specific goals are more motivating than ambiguous ones. When this theory is applied to English learning, the hypothesis is that students with a high level of English proficiency are more motivated (Shintani et al., 2022, 2024), and such students have clearer goals than students with a low level of English proficiency. In the RQ1 survey, we calculated the clarity of free writing responses regarding international posture and motivation for learning English and determined whether differences in clarity can be observed in differences in proficiency. Additionally, by using this in conjunction with text mining, we shed light on the characteristics of words used according to proficiency level.

RQ2 examines students' emotional polarity toward English and English learning, that is, whether it is positive or negative and whether this makes a difference to their levels of proficiency. According to Isen and Reeve (2005), positive emotions have the function of increasing intrinsic motivation. Meanwhile, it has been reported that learning behavior results when intrinsic motivation for learning English increases (Mizumoto & Takeuchi, 2008). Combining the two, we can hypothesize that students with positive feelings regarding English learning will be motivated intrinsically and stimulated, meaning they will actively engage in English learning and improve their English proficiency. The RQ2 survey clarifies the relationship between English proficiency level and English learning by calculating the emotional polarity of phrases in free writing responses related to motivation for learning English.

Verification of the above two hypotheses is significant for clarifying the psychological tendencies of the majority of non-English majors in Japan who do not necessarily have a deep commitment to English, such as those who take English in general education courses, within

providing appropriate guidance in the classroom on how to set goals for students' English learning and how to prepare to learn English.

### **RQ1: Survey on Goal Setting Clarity**

Since the clarity of individual goal setting cannot be measured with the conventional Likert scale, we determined clarity by analyzing free writing responses. In this survey, the degree of clarity is determined by the degree of abstractness and the number of words. This is because it is assumed that the clearer the goal a person has the more concrete—with a lower level of abstractness—the words they use will be, and the more words that will be used. In this survey, we compare the numerical values obtained by calculating the level of abstractness of the students' free writing responses with their proficiency level, following which we compare the number of words. For further qualitative analysis, we also examine whether the characteristics of words used differ for different proficiency levels.

### **RQ1: Survey Overview and Analysis Methods**

#### ***Study Participants and English Proficiency Levels***

From the end of May to early June 2023, a total of 211 first- to fourth-year students in the faculty of science at a private university in the Kanto region were asked for their cooperation in the survey. To divide the survey participants into lower and higher proficiency groups, the participants were asked to self-report the scores of their last TOEIC IP or TOEIC official test. The scores were compared to the Common European Framework of Reference (CEFR), making the A1-A2 layer with up to 549 points the lower group, and the B1-B2 layer with 550 points or more the upper group. As a result, the lower group comprised 133 participants, and the upper group had 78. The minimum value of the sample was 165 points, the maximum value was 990 points, the mean was 509.94 points, and the standard deviation was 125.54 points. To ensure ethical considerations, participants were verbally informed of

the purpose and significance of the study and were asked to complete the questionnaire only if they agreed to participate. The data collected was strictly managed and securely stored with password protection to ensure the privacy of the participants.

### Questions

Survey participants were asked to answer the ten questions in Japanese in Table 1 regarding international posture (hereinafter, “IP” for “International Posture” in Table 1) and motivation (hereinafter, “M” for “Motivation” in Table 1) in a free writing response format on the Web. To ensure participants did not deviate from the content of the question, questions other than IP5 were in a fill-in-the-blank format. The approximate English translations of the questions are shown in Table 1.

**Table 1**

#### *Free Writing Question Format*

Item Number	Question
IP1	自分の興味のある( )を見るために、よく海外のサイトや SNS など を閲覧する。 I often browse overseas websites and social media to see ( ) that interest me.
IP2	私にとって身近な国際体験とは、( )だ。 For me, an accessible international experience is ( ).
IP3	私は将来、海外の( )に旅行に行きたい。 In the future, I want to travel abroad to ( ).
IP4	私は将来、海外の( )に住んでみたい。 In the future, I want to live in ( ) for a while to experience life in another culture.
IP5	あなたが知っている国際機関をできるだけ多く列挙して下さい。 Please list as many international organizations as you know.
M1	英語ができるようになったら、私は一番に( )がしたい。 Once I learn English, the first thing I want to do is ( ).
M2	大学で英語を勉強しておけば、きっと私は( )と思う。 If I study English at university, I believe I will ( ) in the future.
M3	私が大学在学中に英語を勉強している理由は( )とされているからだ。 The reason I study English while in university is that it is said to be ( ).
M4	私にとって英語を勉強する時間は( )と思う。 I think the time I spend studying English is ( ).

M5 私は英語の( )が苦手だ。

I am not good at ( ) in English.

---

### ***Analysis Method***

**Abstractness Analysis.** We used the “Abstractness of Word Database for Japanese Common Words” (including 15,220 words) (Social Computing Laboratory, NAIST, 2019) for the analysis of the abstractness level. We assigned a five-point scale to the words contained in the responses (1 = most concrete to 5 = most abstract). The sum of the abstractness levels of the words contained in each response was divided by the number of words, and the resulting value was defined as the abstractness level in each response. Subsequently, the mean values of the upper and lower groups were compared using unpaired *t*-tests.

**Extraction of Characteristic Words.** We employed KH Coder 3.Beta.03i (Higuchi, 2020) to measure the responses we obtained. We calculated the proportion of various words in the responses of every group and defined the words that were in a high proportion in each group as the characteristic words of each group. The Jaccard Similarity Index was used to calculate the coefficients. A two-dimensional correspondence analysis was also performed, and the proportion of words in each group was shown in a scatter chart.

### **RQ1: Results and Discussion**

#### ***Using an Unpaired T-test to Compare the Mean Abstractness Values and Number of Words for Each Group***

Table 2 shows the results of comparing the mean abstractness levels for each item and the average number of words used in the lower and upper groups. Although IP2 and M2 were the only items with significantly higher levels of abstractness in the phrases in the responses of the lower group ( $p < .05$ ), there was a tendency, although not significant, for all the remaining eight items to be high in the lower group. In the mean value of the number of

words, significantly higher values are shown for the upper group for all items. The total number of words in the responses obtained was 12,387 from the lower group and 10,135 from the upper group. Looking at the ratio of the number of participants and the number of words, the number of participants in the lower group was 1.70 times that of the upper group, while the number of words was 1.22 times larger.

**Table 2**

*Comparison of Mean Values of the Lower Group (n = 133) and the Upper Group (n = 78)*

Item Number	Mean values and standard deviation of abstractness			Mean values and standard deviation of the number of words		
	Lower group	Upper group	t-value	Lower group	Upper group	t-value
IP1	3.15 (1.41)	2.96 (1.17)	1.01	7.97 (5.94)	11.01** (7.58)	-3.04
IP2	2.99* (1.47)	2.62 (1.04)	2.15	11.12 (8.18)	15.91*** (9.80)	-3.81
IP3	3.01 (1.53)	2.77 (1.03)	1.32	6.91 (6.75)	9.85** (7.97)	-2.85
IP4	3.19 (1.52)	3.00 (1.40)	0.90	6.50 (7.00)	8.94* (9.99)	-2.08
IP5	1.59 (1.96)	1.53 (1.82)	0.22	4.86 (4.97)	6.32* (4.85)	-2.08
M1	3.13 (1.51)	2.84 (1.23)	1.44	12.15 (6.95)	16.92** (12.12)	-3.18
M2	2.91* (1.13)	2.52 (0.82)	2.89	11.21 (7.15)	13.86** (6.94)	-2.63
M3	2.66 (0.80)	2.50 (0.72)	1.51	14.24 (8.15)	17.95** (10.94)	-2.80
M4	2.66 (1.17)	2.51 (0.75)	1.10	10.47 (7.49)	15.59*** (9.29)	-4.14
M5	3.54 (1.84)	3.31 (1.62)	0.94	6.98 (6.89)	9.59** (7.19)	-2.60

*Note.* \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ; Asterisks are displayed in the upper and lower groups with higher mean values; The parentheses in the table indicate the standard deviation; Scale of word abstractness level: 1 = most concrete to 5 = most abstract.

**List of Characteristic Words and Correspondence Analysis**

Due to space limitations, we present the analysis results of the description of IP1, “the object of browsing overseas information,” where there was a particularly significant difference between groups, and the description of M1, “the purpose of learning English,” which asks about motivation. Table 3 and Table 4 show the characteristic words contained in the responses obtained from IP1 and M1 in the lower group and the upper group, respectively, from highest to tenth place in the Jaccard Similarity Index. There is no clear threshold for the Jaccard coefficient, but based on Higuchi et al. (2022, p. 124), characteristics are considered to exist at 0.1 or higher. The responses are in Japanese, and so the English translation is included in parentheses. Figure 1 and Figure 2 present scatter charts of the results of correspondence analysis of IP1 and M1, respectively. The groups of words presented in the first quadrant are prominent in the upper group, and the groups of words presented in the third quadrant are prominent in the lower quadrant. Additionally, the words near the origin are often displayed in both groups, but for the sake of the plot’s clarity, these words are not displayed, and only the words characteristic of both groups are displayed (the top 30 rankings are displayed). Since it is not possible to attach an English translation to all words on the scatter chart, only those words that can be judged to be significant are accompanied by an English translation.

**List of Characteristic Words in IP1 and Correspondence Analysis Results.** In the list of characteristic IP1 words shown in Table 3, the upper group tends to browse subjects that require English proficiency to understand the content, such as “drama,” “movie,” “news,” “research,” and “research paper/thesis,” while the lower group tends to browse subjects that are somewhat understandable even without English proficiency, such as “soccer,” “music,” “matches” and “athlete/players.” A similar trend can be seen in the correspondence analysis results in Figure 1. Additionally, the value of the Jaccard coefficient was lower for the words in the lower group in Table 3 as a whole, indicating that there were few common words in the

group and there was less consensus. Conversely, the words of the upper group generally have high Jaccard coefficients, indicating that there is a strong tendency to have the same opinion within the group.

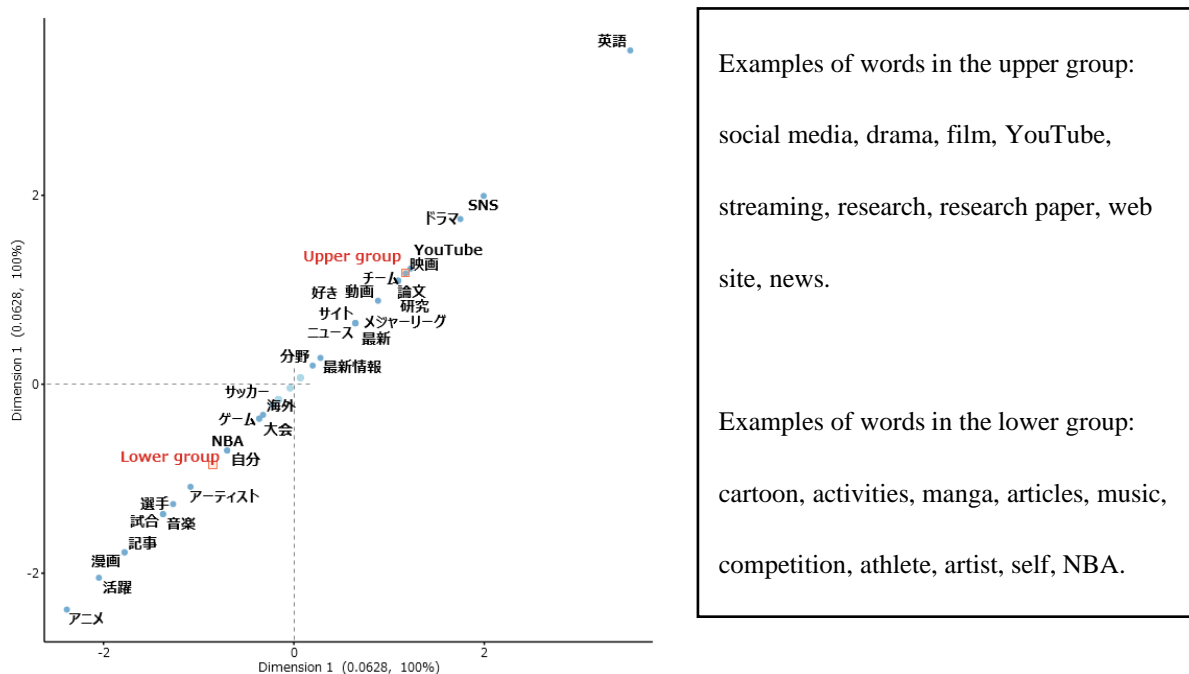
**Table 3**

*List of Characteristic Words for the Item IP1*

Lower group		Upper group	
サッカー(soccer)	.120	海外 (overseas)	.168
選手 (athlete/player)	.080	情報 (information)	.165
記事 (article)	.059	ゲーム (video game)	.146
アーティスト (artist)	.058	映画 (film)	.135
アニメ (cartoon)	.052	ニュース (news)	.112
音楽 (music)	.044	動画 (streaming)	.093
試合 (match/game)	.044	ドラマ (drama)	.072
活躍 (activity)	.037	研究 (research)	.060
漫画 (manga)	.030	論文 (thesis/research paper)	.060
NBA	.030	最新情報 (latest information)	.059

**Figure 1**

*Two-dimensional Scatter Chart Based on Correspondence Analysis of Item IP1*



**List of Characteristic Words and Correspondence Analysis Results for MI1.** As shown in Table 4, the upper group tends to want to use English to exchange information with others, employing such words as “conversation,” “exchange,” “communication,” and “foreigner,” while the lower group has vague objectives, such as “study abroad,” “travel,” and “culture,” and there is no mention of how to use English specifically. In the lower group, verbs such as “go,” “see,” and “read,” stand out. The actions are self-contained and interaction with others is not found. Additionally, and as evidenced in Table 1 of IP1, the Jaccard coefficients of the words in the upper group tend to be high, while those in the lower group tend to be low, so a difference in the amount of consensus within each group can be seen. The scatter chart in Figure 2 shows roughly the same trend as in Table 4. In particular, members of the upper group mention their own future and specializations, such as “companies,” “industry” and “technology.”

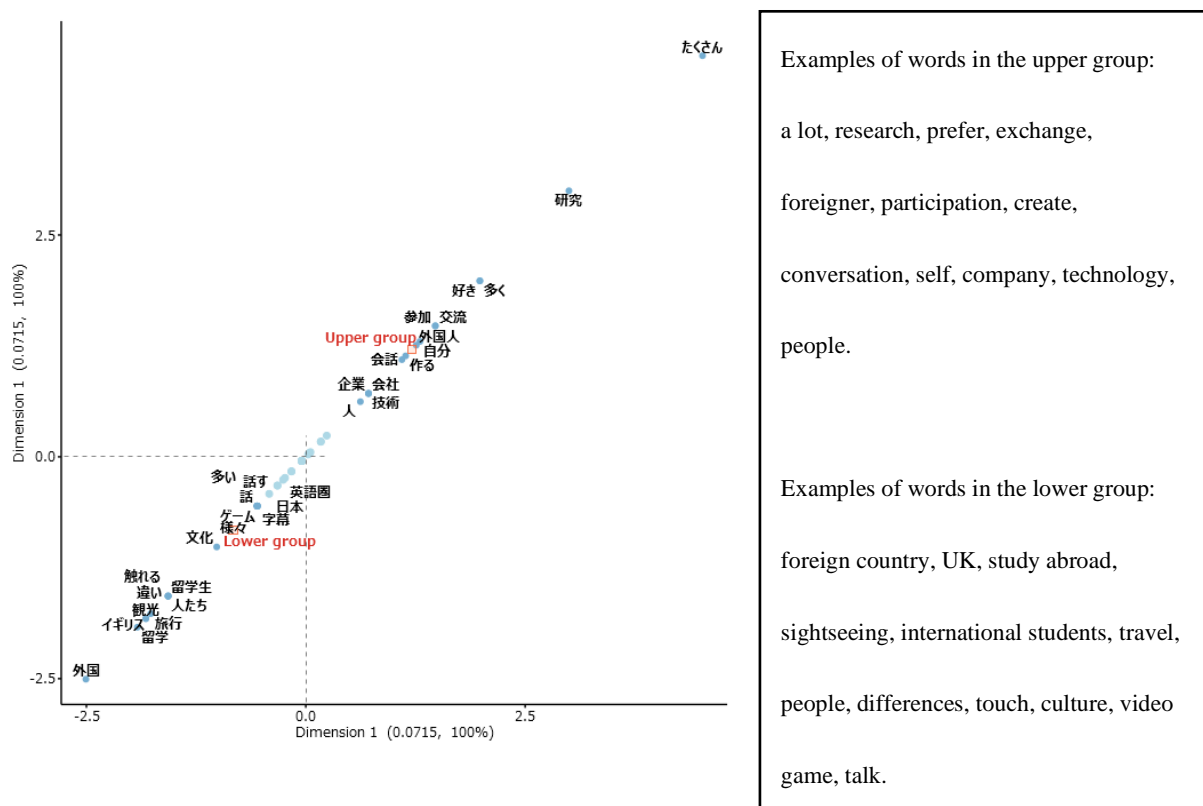
**Table 4**

*List of Characteristic Words for the Item MI*

Lower group		Upper group	
行く (go)	.176	海外 (overseas)	.244
海外旅行 (overseas travel)	.164	英語 (English)	.175
旅行 (travel)	.139	人 (people)	.172
外国 (foreign country)	.082	自分 (self)	.171
留学 (study abroad)	.082	外国人 (foreigner)	.126
英語圏 (English-speaking country)	.073	会話 (conversation)	.115
見る (see)	.065	交流 (exchange)	.107
文化 (culture)	.059	現地 (foreign place)	.081
読む (read)	.058	コミュニケーション (communication)	.080
アメリカ (the U.S)	.044	友達 (friends)	.080

**Figure 2**

*Two-dimensional Scatter Chart Based on Correspondence Analysis of Item M1*



**RQ1: Conclusion**

The results of the survey support the hypothesis that students with a high level of English proficiency have a higher degree of clarity in their goals than students with a lower level of English proficiency. Students with lower proficiency in English tend to use more abstract words and employ fewer words in their responses. Therefore, it can be seen that the contents described lack concreteness and there are a small number of words. When looking at the characteristic words by group, students with high proficiency mention specific subjects that can be approached using English (e.g., research, thesis, technology, conversation, communication, exchange), while students with low proficiency make using English itself a purpose (e.g. go, read, watch, study abroad, travel) and do not mention specific objectives. For this reason, it is important for teachers to give less-proficient students a more concrete image of what they can achieve in English, and to help them imagine expanding their future

options. Additionally, in the general education English courses taken by non-English majors, educational intervention is needed so that students have the volition to do something using English rather than making learning English itself the goal.

## **RQ2: Survey of Emotional Polarity and English Learning**

In this study, we calculated the emotional polarity of the phrases in responses from non-English major science students to a free writing questionnaire on their motivation for English learning and clarified the relationship between English proficiency and emotion concerning learning. RQ2 uses the same data as the RQ1 survey.

### **RQ2: Survey Overview and Analysis Methods**

#### ***Study Participants and English Proficiency Levels***

The explanation of this item is omitted because the data employed is the same as that used for RQ1.

#### ***Questions***

In RQ2, to investigate the motivation for learning English, we analyzed the phrases in responses to items M1 through M5 in Table 1.

#### ***Analysis Method***

**Sentiment Analysis.** To convert the emotional polarity of a response phrase to a numeric value, the response phrase was sent using the Cloud Natural Language API provided by Google Cloud Platform, and the numeric value was received. This API is a system that extracts analytic information from unstructured text using machine learning and calculates the sentiment score (hereinafter, PN score). It can also handle negative statements because it can determine dependency. The PN score ranges from +1 (positive) to -1 (negative).

**Causal Analysis of PN Score and Proficiency.** The following two types are adopted.

***Simple Regression Analysis.*** The average PN score (sum of PN scores divided by the number of items) obtained from all the responses of each survey participant was

calculated as the coefficient of determination ( $R^2$ ) of the model explaining the TOEIC score, and the existence of causality between the variables was checked.

**Unpaired T-tests.** Considering the TOEIC score and the ratio of the number of participants, the survey participants were divided into three groups. The mean values of the PN scores in the upper group (550 points or more,  $n = 78$ ) and the lower group (less than 500 points,  $n = 75$ ), excluding the middle group of the TOEIC score ( $n = 58$ ), were compared using unpaired  $t$ -tests.

## RQ2: Results and Discussion

### Results of the Single Regression Analyses

**Figure 3**

*Two-Variable Scatter Chart*

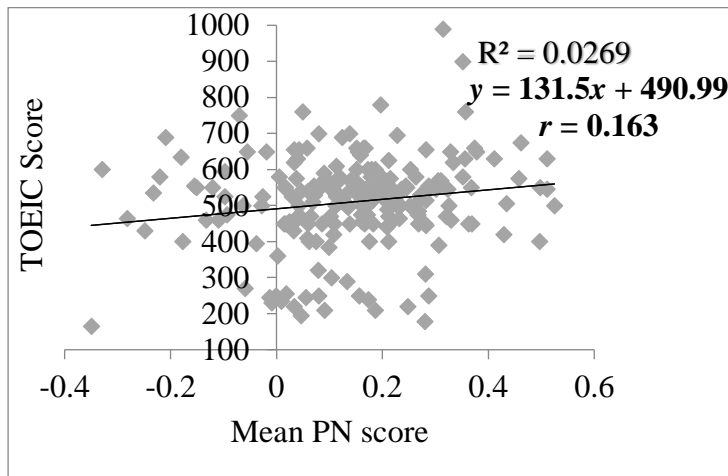


Figure 3 shows a two-variable scatter chart. It was found that the mean PN score does not explain the TOEIC score because the coefficient of determination was significantly low ( $R^2 = .0269$ ), and the accuracy of the regression formula obtained was judged to be low. As a precaution, the PN score and TOEIC score for each item from M1 to M5 were also analyzed via simple regression analysis, but the coefficient of determination for these items was not

greater than .05. Therefore, it can be said that there is no causality between the difference in emotional polarity for English learning and the difference in English proficiency level.

### Unpaired T-test Results

Table 5 compares the mean PN scores of the TOEIC scores of the upper and lower groups, but there is no difference in the PN scores for any of the questions according to the difference in the groups (ns). There was no difference in the emotional polarity of motivation for learning English between highly proficient and low-proficiency individuals.

**Table 5**

*Comparison of Mean PN Scores Between the Lower TOEIC Score Group (n = 75) and the Upper TOEIC Score Group (n = 78)*

Item Number	Lower group		Upper group		t-value
	PN score Mean value	SD	PN score Mean value	SD	
M1	0.106	0.210	0.172	0.252	-1.76 (ns)
M2	0.370	0.319	0.366	0.406	0.06 (ns)
M3	0.129	0.239	0.152	0.239	-0.60 (ns)
M4	0.026	0.533	0.168	0.484	-1.70 (ns)
M5	-0.047	0.251	-0.088	0.282	1.00 (ns)

Note. “ns” means “not significant.”

### RQ2 Summary and Additional Validation

The results of these two analyses showed no causality between emotions toward learning English and proficiency in English, and there was no difference in emotions among students with differing proficiency levels. Therefore, the hypothesis that the higher the positive emotions toward learning English, the higher the English proficiency, was not supported. For additional verification to investigate the reason for this, we used KH Coder 3.Beta.03i (Higuchi 2020) to text-mine answers from M1 to M5 in the high-proficiency group to investigate their perception of English learning. We constructed a co-occurrence network

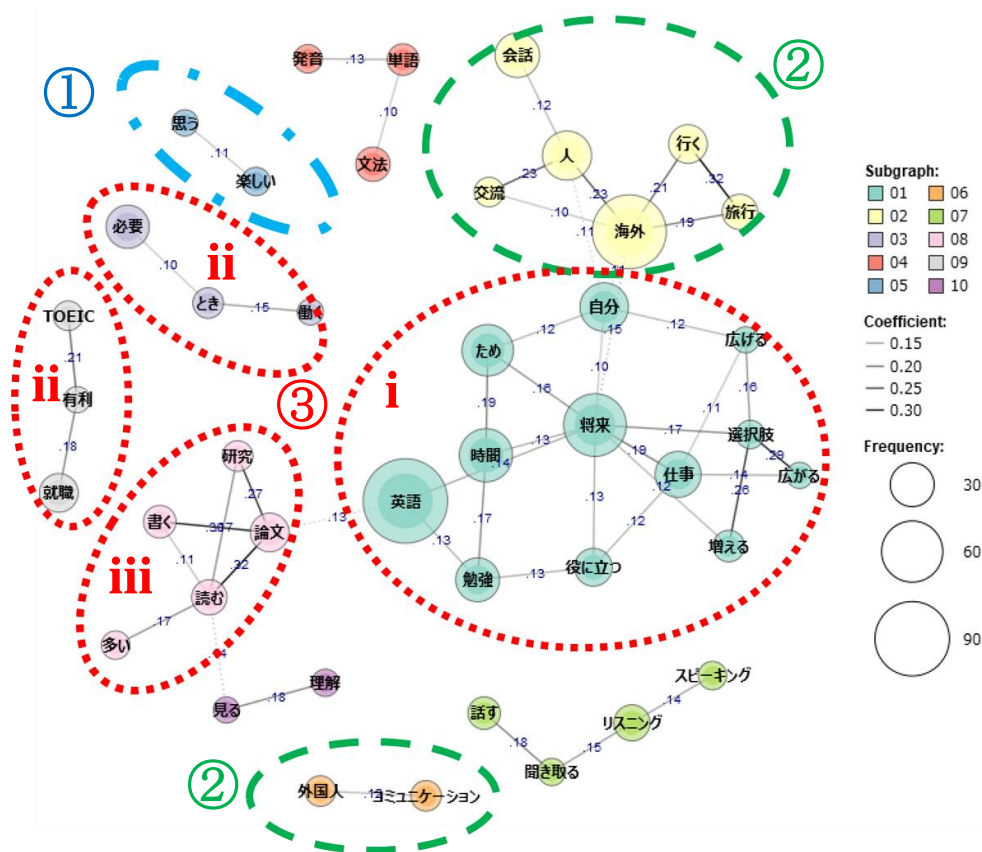
and compared it with the motivational classifications and identified a cluster of words with high co-occurrence intensity as a concept, in addition to examining the trends.

**Results of Additional Verification**

**Figure 4**

*Co-occurrence Network Diagram of Words and Phrases in the Higher English Proficiency Group*

Group



**Table 6**

*List of Concepts Defined Based on the Results of the Co-occurrence Network*

No.	Type of motivation	Concept name	Examples of included words
①	Intrinsic motivation	Learning English is fun	fun, feel
②	WTC	Overseas exchange	overseas, travel, conversation, foreigner, communication
③	i Extrinsic motivation	More options in the future	future, job, options, expand
	ii Extrinsic motivation	Job-hunting activity, profession	employment, advantageous, TOEIC, work, necessary
	iii Extrinsic motivation	Academic research	research paper/thesis, research, write, read

The co-occurrence network diagram in Figure 4 shows a combination of words with a Jaccard Similarity Index of 0.15 or higher as the co-occurrence intensity. The size of the bubble plot is proportional to the height of the frequency. Table 6 shows the concepts obtained from Figure 4 and the English translation of their collocations. In this analysis, we were able to obtain three concepts: ① a concept based on intrinsic motivation (blue box), ② a concept based on willingness to communicate (WTC) (green box), and ③ a concept based on extrinsic motivation (red box), but of these, it can be seen that concept ③, which has a strong pragmatic aspect, occupies the majority of the diagram.

### ***Additional Verification Discussion***

The subjects of this survey are science students, and it can be said that the learning of English among highly-proficient people in this kind of population is triggered by extrinsic factors, such as necessity, rather than intrinsic factors, such as “English is fun.” In English education, it is widely supported that intrinsic motivation plays an important role in learning efforts (Hiromori, 2010). Many of the English teachers come from the faculty of foreign

studies or letters and have themselves wished to receive specialized English education. With this background, English teachers probably have positive feelings about the English language. For this reason, there is a tendency to want students to share their feelings, saying “I want them to enjoy English” or “I want them to get to like it.” However, looking at the co-occurrence network of the words in the responses of the upper group, it seems that science students are more likely to respond to educational intervention that appeals to pragmatic aspects of English rather than an intervention that encourages positive feelings about English.

### **Conclusion**

In this study, with RQ1, we investigated the relationship between students’ clarity of goals and proficiency in English learning, and, with RQ2, the causality between the emotional polarity of students’ English learning motivation and proficiency. Furthermore, as an additional verification derived from this, we employed text mining to explore the motivation of the English learning group with the highest proficiency level.

From these studies, verification, and consideration of the results, the possibility of an effective educational intervention for science students, which is the population of this study, can be said to have the following two aspects. The first is to give a concrete image of the usefulness of English for individual students. The results of RQ1 and additional verification revealed that having a clear and concrete image of how English can be useful to each student’s future goals is related to English proficiency. Therefore, the effectiveness of English education is enhanced by having students apply themselves to English studies while thinking of English as a tool and thinking how useful it is for self-realization, rather than making learning English itself the goal. This suggests that English education should include meta-aspects of the language, not only teaching students the English language but also encouraging them to think about how English can help them achieve their own future goals.

The second point that paradoxically follows from this is that, in the first place, imagining one's own future image has a lot to do with improving English proficiency, as is clear from the above research results, but it also goes beyond the scope of English education. In general, at universities, education about the student's future image is carried out as part of career education; or, depending on the student's career path, it may be closely related to the way English is used in their field of specialization. Therefore, at universities, English education tends to be self-contained within the scope of the English language and is linked to cultural education and intercultural communication. However, educational collaboration with other areas and fields, including career education, is essential.

### Notes

1. In this regard, Agata et al. (2024) re-examined the effectiveness of the English learning motivation scale for non-English majors and demonstrated that it is necessary to reexamine it as a scale.

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# **Selected Papers**

## **Practitioner Reports**



## **Descriptive Record and Statistical Analysis of 14 Years of Changes in TOEIC® Scores at a Japanese University**

Ian Wilson  
Jeremy Perkins  
Younghyon Heo  
Emiko Kaneko  
University of Aizu

### **Abstract**

This paper provides a detailed examination of 14 years of TOEIC (Test of English for International Communication) score trends at a Japanese university specializing in computer science and engineering. The report focuses on the various administrative and pedagogical measures taken to improve TOEIC scores among undergraduate students, from an average of 350 in 2011 to 560 in 2023. The paper highlights the significance of TOEIC as a widely recognized tool for measuring English proficiency in Japan and other Asian countries. Several policy implementations, such as setting minimum TOEIC score requirements for course progression and introducing frequent testing opportunities, were found to correlate with increased scores. The paper uses a linear mixed model (LMM) analysis to examine the impact of these measures, showing statistically significant improvements in scores following key interventions. The analysis also discusses challenges related to sustaining score improvements and student motivation. Although the report acknowledges the difficulty in isolating the effect of individual changes, it concludes that stringent requirements and frequent testing contribute to raising TOEIC scores, providing insights for educational institutions seeking to enhance English language proficiency among students.

*Keywords:* TOEIC, Japanese university, longitudinal record, ICT majors, motivation

A standardized test, such as the TOEIC (Test of English for International Communication) can provide learners with an objective, internationally recognized

benchmark of their ability in a foreign language. For academic institutions, it can provide measurable data that can be used for internal evaluations, reports to accreditation bodies, or to demonstrate the effectiveness of language programs. On the other hand, such standardized tests have drawbacks, including the risk of promoting test-specific learning, limiting comprehensive language development, and creating barriers for those who struggle with the test format or its cost. Nevertheless, many universities in Japan and other Asian countries administer the TOEIC, with Japanese universities often using scores as one indicator of the degree of internationalization at the university. In such a context, language teachers and program administrators probably wonder if there are ways, besides “teaching to the test”, that scores can be raised and by how much.

The purpose of this practitioner report is to discuss measures taken at the University of Aizu to see an increase in the mean high TOEIC scores of Japanese undergraduate students from 350 in 2011 to 560 in 2023. Although the measures focus heavily on purely administrative ways of influencing the scores, there are some teaching-related measures too. Given the significance of TOEIC in Japan and Asia, it is anticipated that this report will be of benefit to tertiary administrators and teachers in this region.

### **Importance of TOEIC in Japan and Asia**

In various Asian countries, TOEIC is used by some universities as a graduation requirement. For example, 64 out of 201 four-year universities/colleges in Korea had TOEIC as a graduation requirement in 2011 (Lee, 2012). In 2015, that number had risen to 119 out of 204, and in 2022 it was 105 out of 189 (Korea TOEIC Committee, 2022). Universities in Taiwan also use TOEIC scores as a graduation requirement (Hsieh, 2017), as do some universities in Indonesia (Masrul & Rasyidah, 2023).

In Japan, the Ministry of Education, Culture, Sports, Science and Technology (“MEXT”) allows universities to award academic credits for certain scores in standardized

tests like TOEIC. According to a survey conducted in 2021, the numbers of universities, junior colleges and technical colleges (“Kosen”) that use TOEIC scores for credit recognition are 334, 56, and 44, respectively (IIBC, 2021).

TOEIC has also been used as a measure of internationalization in the 10-year (AY (academic year) 2014–2023) Top Global University Project, “a funding project that aims to enhance the international competitiveness of higher education in Japan” (MEXT, 2014).

The salience tied to TOEIC creates pressure on universities to show increasing scores. What can be done besides simply “teaching to the test”? We discuss our own situation at the University of Aizu, where the first author is the director of the Center for Language Research (CLR), the department responsible for EFL teaching, and the other three authors are all professors in that department. The lead author also had an administrative role as the director of the Center for Globalization during the last four years of the 10-year Top Global University project.

### **Contextual Background**

The University of Aizu (UoA), located in Aizuwakamatsu, Fukushima, is a public university specializing in computer science and engineering. Despite its rural location, its most distinguishing characteristic is its global environment, with approximately 40% of faculty members coming from 19 different countries outside Japan.

#### **English at the University of Aizu**

English serves as an official academic language at the UoA because in the field of ICT, English is the language for oral as well as written communication. To prepare the students for such a profession, many computer science courses are offered in English during the third and fourth years of the undergraduate program, and students are required to write and orally present their graduation research in English to graduate. However, most undergraduate students admitted to the UoA are science majors from regular Japanese high schools, and their

typical English level is lower intermediate. The requirements imposed by the university are truly challenging for many of them. To equip these students with the English proficiency necessary to thrive in this university, there has historically been an emphasis on the importance of English education. The CLR, responsible for English language instruction, is composed of 12 PhD holders in fields related to foreign language education and linguistics, which is unusual for a science university in Japan.

Although the goal of English education at the UoA is to nurture future global ICT specialists, there is a need for an objective measure that enables students and faculty to track the progress of students' overall English proficiency. Due to its superior feasibility and high recognition among Japanese companies, the university decided to utilize the TOEIC Listening & Reading Test for this purpose.

### **TOEIC Testing and Actions Taken at the University of Aizu**

The TOEIC IP (Institutional Program) Listening & Reading test was first administered in May 2010 at the UoA. At that time, the average score of the first-year students was about 350. Because taking TOEIC was not mandatory, only a limited number of students took the test after the first year, which made it difficult to track the progression of students' English ability. In 2014, the university was one of only two public universities in Japan selected for the Top Global University Project. The university had explicit TOEIC goals to be achieved over the 10-year duration of the project, thus adding a sense of urgency to raise the TOEIC scores of our students.

### **Promotion Bar for Second-Year Students**

In 2018, the UoA introduced two key requirements for taking courses offered to third- and fourth-year students; one was to achieve a minimum score of 400 in the TOEIC Listening & Reading Test, and the other was to earn at least 55 credits of the Strongly Recommended Courses, ones that are fundamental to computer science and engineering regardless of what

the student goes on to specialize in. Those who do not meet these requirements are ineligible to advance to third year. Namely, they are not allowed to take higher-level courses, which likely leads to at least a six-month delay in their graduation. The introduction of this TOEIC policy had a significant positive impact on the students, encouraging them to take TOEIC more frequently with greater seriousness. As a result, the mean score of all students at the UoA improved from about 410 in 2017 to about 455 in 2018, and all second-year students successfully progressed to their third year. A statistical analysis of the effect of this and other policy measures will be presented in the Statistical Analysis section below.

Building upon this achievement, the university decided to raise the TOEIC requirement (so-called “promotion bar”) from 400 to 450 in 2021, following confirmation of the good performance of two second-year student groups. While this promotion bar was effective in motivating first- and second-year students, many ceased taking TOEIC after meeting the requirement to advance to third year.

### **Third- and Fourth-Year English Electives**

However, at the UoA, unlike many science universities in Japan, third- and fourth-year students must take at least two English Elective Courses, and they need to also write and present their graduation theses in English. This requirement suggests a continued improvement in English proficiency beyond the second year. To further assess the development of their English proficiency over the four years, we implemented an additional policy in 2022 and 2023, in which students were required to take TOEIC as part of third- and fourth-year English Elective Courses. This was done to 1) encourage students to achieve higher scores, and 2) provide them with the opportunity to confirm their improved scores, which we anticipated from upper-year students taking more English-taught courses. Although no minimum score was stipulated as a requirement, this policy led to a modest increase in the mean TOEIC score to over 500.

### **Promotion Bar for Third-Year Students**

Despite this, we abolished in-class TOEIC in AY2024 and introduced a second “promotion bar” of 525 for students advancing to their fourth year, starting with the AY2024 freshman cohort. To ensure that students’ progress is not delayed by this requirement, an alternative option is available: students who are unable to meet the TOEIC 525 requirement can complete a 30-hour (tentative) TOEIC e-learning program, allowing them to advance to the fourth year. We expect that most students will meet the 525 requirement, with the alternative pathway designed for a small subset of students. Our long-term goal is to eventually raise this second benchmark to 550 or higher, depending on student performance.

### **Online Versus Paper-Based TOEIC**

When the online TOEIC IP became available in 2020, we transitioned to online testing, leveraging our students’ high computer literacy to ensure efficient implementation. In response to student preferences gathered through surveys (paper-based vs. online), our TOEIC testing became fully online as of AY2023.

Some research has shown that the online test was, at least initially, easier than the paper-based test (Richard, 2023), but instead of the questions being easier, this difference may be explained by the fact that the online test is only one hour as opposed to two hours for the paper-based test. A shorter test enables students to maintain their concentration throughout the whole test.

### **Early Fee Collection and More Testing Opportunities**

To encourage students to take the TOEIC more frequently, the university has consistently offered on-campus TOEIC tests at least four to five times per academic year since AY2010. Until AY2021, a total of four TOEIC test fees were collected at admission, to be used throughout the student’s undergraduate degree. Until AY2017, the only requirement regarding the TOEIC was its compulsory nature for freshmen and juniors. However, despite

being labeled as compulsory, and despite the fees being collected upon entry to university, TOEIC participation among juniors was low, with only about half of the students taking the test each year. Additionally, this compulsory TOEIC did not necessarily lead to increased motivation among students to achieve high scores or to study for the test. Other measures had to be implemented, especially with the added pressure of meeting the university's stated TOEIC goals for the Top Global University Project.

### **Interdepartmental Cooperation**

Being a relatively small university, cooperation between departments is perhaps easier than at some larger universities. The Student Affairs Division (SAD) plans the on-campus TOEIC IP for the following year to ensure the smooth implementation of TOEIC on campus. After determining the dates and venues, SAD actively promotes the year-round TOEIC schedule through posters and regular email announcements, providing information on upcoming TOEIC IP tests and preparation courses. Additionally, SAD created a group of student proctors called the "TOEIC Team" to secure a pool of trained proctors for the smooth administration of the test on the day it is conducted. To reduce the workload of student TOEIC proctors, SAD implemented an automatic check-in system for students who are arriving to take the TOEIC test. This in-house check-in system, developed by a group of students in the Office for Learning Support, streamlines the ID- and payment-verification process. Furthermore, measures to prevent cheating, such as installing partitions and curtains, were funded from the SAD budget.

Efforts to enhance the administration of TOEIC testing on campus also include support from the Information Systems and Technology Center (ISTC) in improving the testing environment and ensuring security. After encountering issues with the TOEIC secure browser provided by IIBC, ISTC developed a more stable and secure local TOEIC browser, facilitating a smoother testing environment on campus. This TOEIC browser automatically

blocks access to other websites after login. These efforts have significantly enhanced the efficiency of on-campus TOEIC administration, providing students with an improved testing environment. TOEIC login information is updated after every on-campus TOEIC to maintain a secure testing environment.

While SAD and ISTC focus on enhancing the administration of TOEIC testing on campus, the CLR supports TOEIC instruction in two ways: 1) by appointing one CLR member responsible for two TOEIC preparation courses and communication with underperforming students, and 2) by flexibly addressing the urgent need to implement TOEIC-related class policies, such as making TOEIC compulsory in all 3rd and 4th-year courses. One CLR professor was hired to teach two different sections of TOEIC Preparation courses (TOEIC Preparation Course A and B) every semester. In addition to these regularly offered courses, short-term intensive courses are sometimes provided during the spring or summer vacation for underperforming students. While these courses are designed for TOEIC learning, some TOEIC elements have been integrated into the freshman courses to help students who do not enroll in these courses learn about the test and prepare for it. All students in the first two freshman English courses are required to complete a TOEIC e-learning component to pass. The assistance from the CLR was crucial when there was an urgent need to implement certain class policies, which SAD found challenging to address due to bureaucratic constraints. For example, all CLR professors agreed to introduce a course policy to implement in-class TOEIC testing to encourage more 3rd- and 4th-year students to know their latest scores and confirm improvements through additional English courses.

Additionally, the CLR has developed a Moodle page with TOEIC listening materials and sample questions, providing resources for all students, including those not enrolled in the TOEIC preparation courses, and we now provide 30 minutes of fluency practice in all four skills (reading, listening, writing, speaking) in every class of every freshman course.

## Go Beyond 500! Campaign

To meet the university's Top Global University Project goal of having at least 50% of its undergraduates achieve a TOEIC score of 500 or higher, a "Go Beyond 500!" campaign was implemented by the UoA in 2021. This was conducted jointly by administrative staff members and professors.

The university library got involved and created a TOEIC corner, where students had ready access to TOEIC study materials (see Figure 1).

**Figure 1**

*TOEIC corner in the university library*



Charms were created by students working in the Aizu Geek Dojo, a manufacturing facility on campus complete with 3D printers and a laser cutter. The charms were color-coded according to the score that was achieved between 500 and 990 (see Figure 2).

**Figure 2**

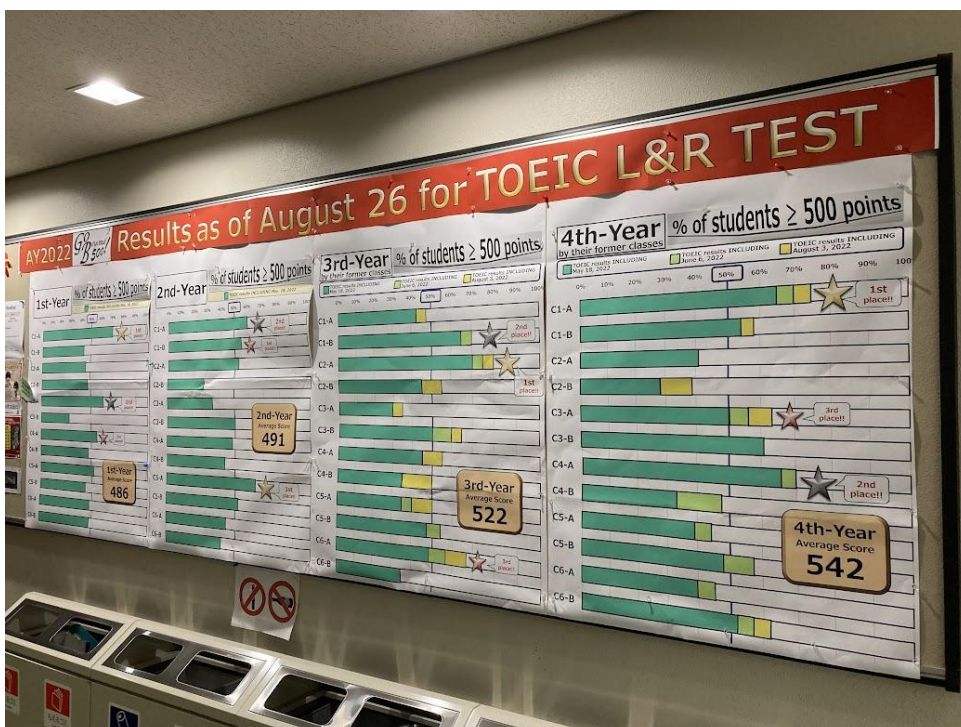
*Acrylic charms given to students who achieved TOEIC scores over 500*



Figure 3 shows bar graphs that were displayed on campus, showing students where their 20-student homeroom class stood in relation to other classes in the percentage of students above 500 points. This encouraged friendly competition between classes, and (without identifying individual students) also prompted higher-achieving students to help lower-achieving students in their class.

**Figure 3**

*Bar graphs comparing homeroom classes in percentage of students above 500 points*

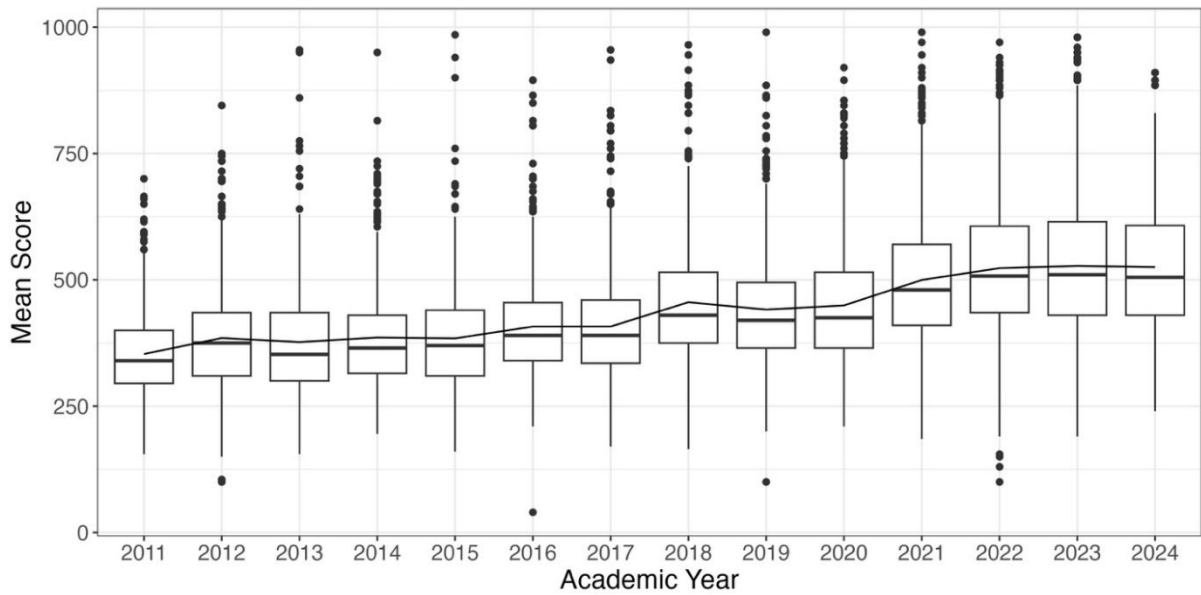


### Statistical Analyses

TOEIC scores increased over time, especially from 2017 to 2018, from 2020 to 2021, and from 2021 to 2022 as shown in Figure 4 and Table 1.

**Figure 4**

*TOEIC test scores of UoA undergraduate students during each academic year*



*Note.* The line shows mean scores and the boxplots display median, 1st and 3rd quartile scores.

**Table 1**

*Descriptive statistics of TOEIC scores by academic year (AY)*

AY	Mean	Median	S.D.	95% Confidence Interval of Mean	
				Lower	Upper
2011	353	340	87	345	386
2012	385	375	112	375	395
2013	377	352	115	367	387
2014	386	365	107	376	396
2015	384	370	110	374	394
2016	408	390	114	396	419
2017	408	390	117	396	419
2018	456	430	121	446	466
2019	441	420	115	432	450
2020	449	425	122	440	459
2021	500	480	128	491	508

2022	523	508	137	515	532
2023	528	510	136	520	536
2024	525	505	133	510	541

A linear mixed model (LMM) analysis was performed via the lme4 package (Bates et al., 2015) in R (R Core Team, 2024), on all TOEIC test scores taken by Japanese undergraduate students at the UoA between April 1, 2010 and May 15, 2024. Fixed effects were included for year of study (freshman, sophomore, etc.), admission status (Suisen or Ippan), test type (paper IP test or online), previous test experience, and two binary fixed effects that encoded whether a student was admitted before or after the third year-entry requirement policy changes to 400 TOEIC in 2018 and to 450 in 2021. A random intercept was included for each student. Post-hoc tests were performed using the emmeans package (Lenth, 2024) in R with effect sizes reported via Cohen’s *d*. A summary of the model with estimates for each fixed effect is given in Table 2. The intercept condition was set to 1<sup>st</sup> test attempt, with Test type as “IP” (institutional program), prior to either 400- or 450-score promotion bars, with “Ippan” admission status.

**Table 2**  
*Linear mixed model estimates of fixed effects for TOEIC score*

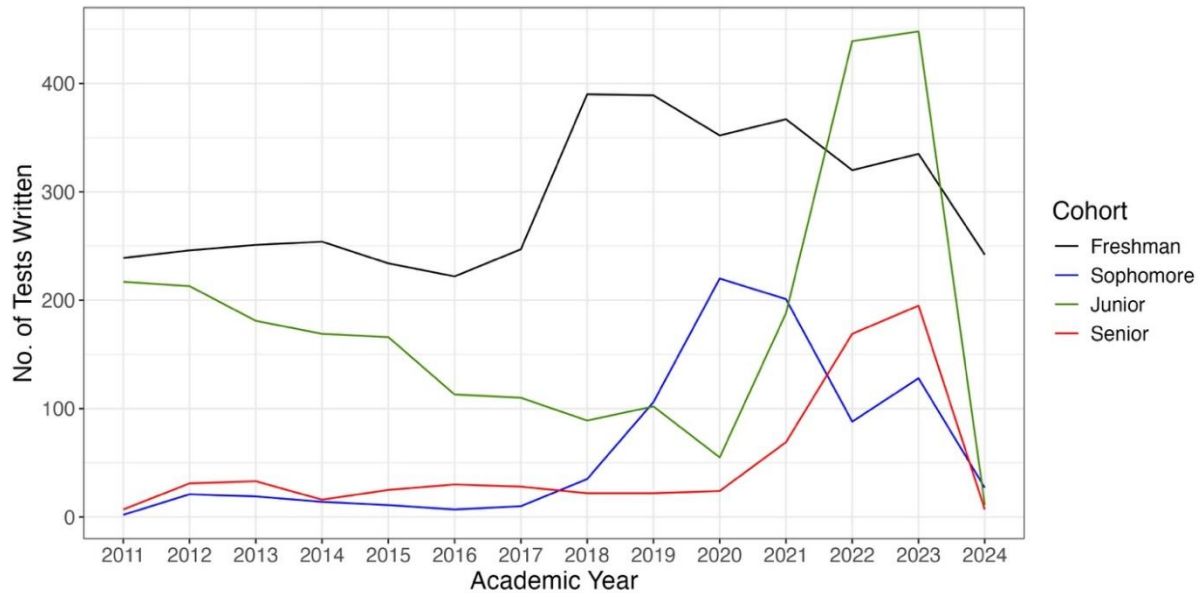
Fixed Effect	Estimate	Std. Error	<i>df</i>	<i>t</i>	<i>p</i>
Intercept	442.6	4.17	6182	106.06	< .001
<i>ith</i> test attempt	13.4	1.16	4726	11.50	< .001
Test type (external)	56.4	14.27	4302	3.95	< .001
Test type (online)	8.8	3.28	4819	2.70	.007
After 400 bar	54.3	4.04	2675	13.43	< .001
After 450 bar	47.4	4.40	2706	10.78	< .001
Cohort (linear)	36.8	3.78	4607	9.74	< .001
Cohort (quadratic)	-9.1	2.47	4159	-3.67	< .001
Cohort (cubic)	7.4	2.55	4222	2.89	.004
Admission Status (suisen)	-17.5	4.71	2657	-3.72	< .001

The model showed that TOEIC scores were 76.8 points higher following introduction of the 400-point promotion bar in 2018 ( $t = 13.4$ ,  $df = 2597$ ,  $p < .0001$ ), with estimated marginal mean test scores (EMMs) of 443 points before and 519 after. This effect size is large as measured by Cohen's  $d$  ( $d = 1.20$ , 95% CI = [1.02, 1.38]). For the introduction of the 450-point promotion bar in 2021, an increase of 67 points was seen ( $t = 10.8$ ,  $df = 2628$ ,  $p < .0001$ ), with EMMs of 448 before and 515 after. This effect size is large as measured by Cohen's  $d$  ( $d = 1.05$ , 95% CI = [0.86, 1.24]). Therefore, we would conclude that introduction of both promotion bars correlated with an increase in test scores at both times, but that the first (2018) promotion bar had a slightly larger effect than the second one (2021).

In addition to improving their test scores, we found that more freshman and sophomore students took the TOEIC test following the implementation of the first promotion bar. Between 2017 and 2018, especially the number of tests taken by freshmen greatly increased (see the black line in Figure 5). At the same time, there was not much change (just a slight drop) in the number of tests taken by juniors and seniors, because they were not affected by the promotion bar policy.

**Figure 5**

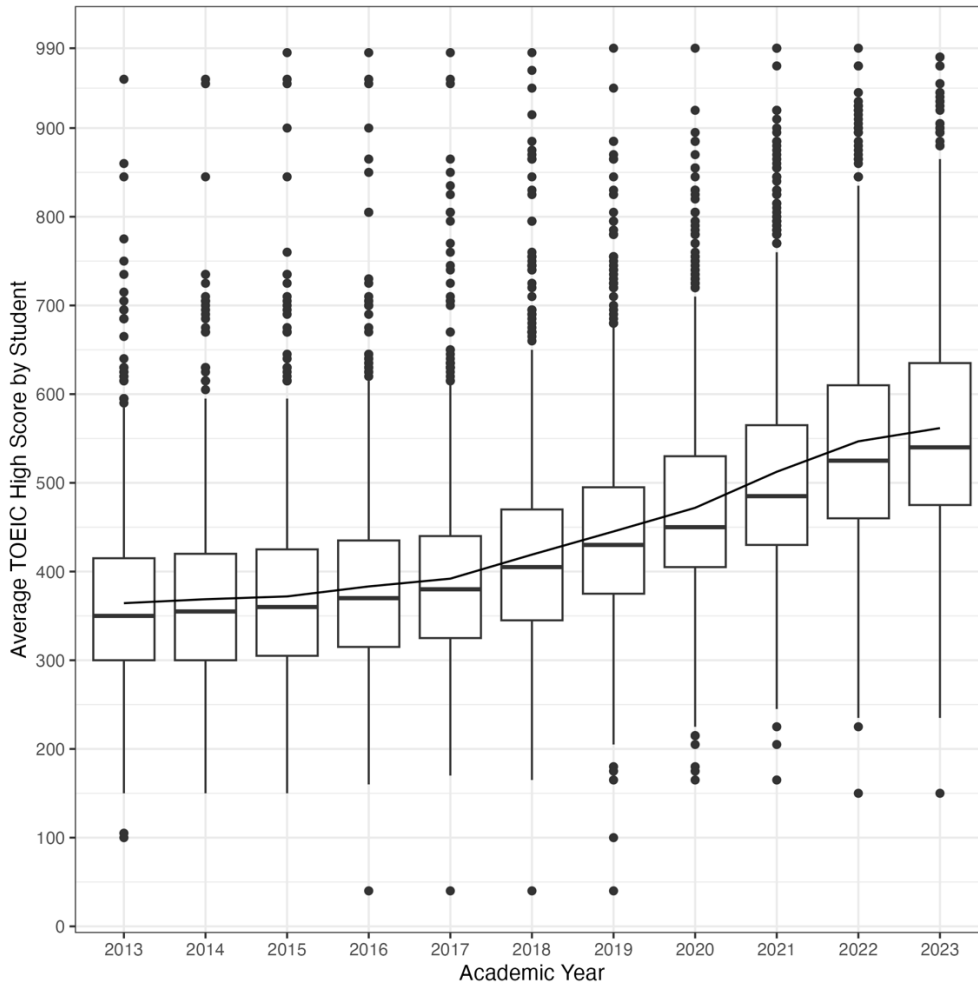
*Number of TOEIC tests taken during each academic year by cohort*



Following this analysis, we also calculated the high scores of each student at the end of each academic year between 2013 and 2023. Students' high scores were retained until their fourth year following admission and removed afterwards since we lacked data on when each student graduated (most students spend four years in the program). Since our dataset goes back to 2010, 2013 was the first year where we had a complete set of senior students' scores going back to their first year. Average mean and median high scores were computed by year and were plotted in Figure 6. The mean high scores improved continually over time, especially from 2018, when most of our policies were introduced to motivate students to improve their TOEIC scores.

**Figure 6**

*Average TOEIC high scores by student at the end of each academic year between 2013 and 2023*

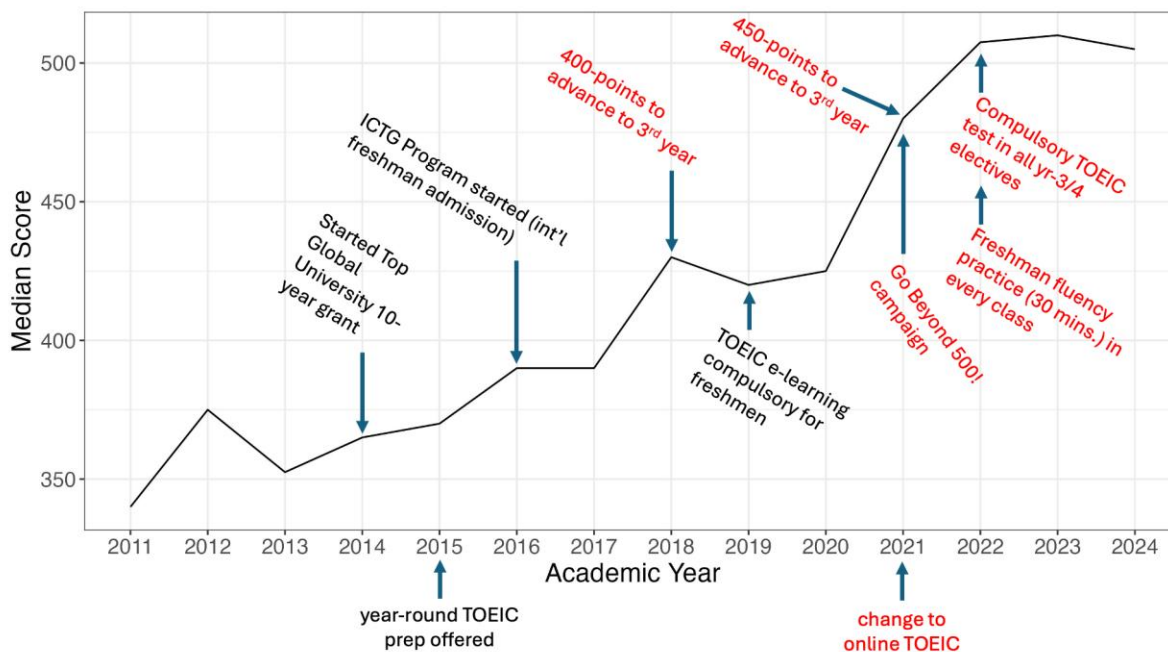


*Note.* The line shows mean scores and the boxplots display median, 1st and 3rd quartile scores.

In Figure 7, median TOEIC scores of all domestic undergraduate students can be seen from 2011 to 2024 (although for 2024, the data is not yet complete). Various measures that may have affected TOEIC scores are shown in the academic year that they were implemented. For example, the 400-point promotion bar was implemented in 2018 and a corresponding jump in the median TOEIC scores can be seen for that year. The ICTG Program that is shown for 2016 is an all-English program that allows students to complete their studies entirely in English. The implementation of this program has changed the atmosphere on campus, allowing for more communicative exchanges between Japanese and international students.

**Figure 7**

Timing of various measures shown together with the change in median TOEIC scores



*Note.* The line shows median TOEIC scores of domestic undergraduates from AY2011 to AY2024. The measures in red font coincide with years where TOEIC scores markedly increased. This is not necessarily causal though, as multiple factors are overlapping.

Overall, as so many measures were being implemented simultaneously, in the push to meet Top Global University Project goals, it proves challenging to isolate the effects of each change on students' TOEIC scores. However, the extrinsic motivation caused by putting strict TOEIC requirements in place (such as the promotion bars) without a doubt increases the number of tests taken and increases average scores. While students with a higher aptitude for English generally did not mind the increased focus on TOEIC, some of the least capable students certainly felt unwelcome pressure. This pressure, though, often caused "homeroom classes" to become tighter knit, with more proficient students helping the less proficient ones.

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# **Submission Guidelines**

# *JACET International Convention Selected Papers, Vol. 11*

## **SUBMISSION GUIDELINES**

Manuscripts for the JACET International Convention Selected Papers (JACET Selected Papers) will only be accepted by online submission. Please read the following guidelines carefully.

### **Important Dates:**

Submission Form Open: September 18, 2024

Submission Deadline: 11:59 PM Japan Standard Time, October 23, 2024

### **Submission Form:**

<https://www.jacet.org/selected-papers-submission2024/>

### **A. Requirements**

1. A paper must be based on a presentation (oral or regular poster presentation) given at the 63rd JACET International Convention (Nagoya, 2024) and the first contributor must be a member of JACET. All other contributors must have also presented the work at the 63rd JACET International Convention.
2. A paper based on a plenary lecture may be submitted as an Invited Paper (by invitation only).

### **B. Editorial Policy**

1. JACET Selected Papers, a refereed, open-access electronic journal, encourages submission of the following:
  - Research Articles on pedagogy and topics of significance to teachers of English
  - Symposium Papers on relevant issues to teachers of English (one per symposium)
  - Practitioner Reports to share findings and insights
2. Manuscripts submitted to JACET Selected Papers must not have been previously published, nor should they be under consideration for publication elsewhere.
3. Manuscripts which do not conform to the guidelines will not be considered for review.
4. Only one paper can be submitted by each contributor.
5. The Editorial Board of JACET Selected Papers reserves the right to make editorial changes in any manuscript accepted for publication to enhance clarity or style. The corresponding author will be consulted if the changes are substantial.
6. Paper offprints will not be provided.

### **C. Guidelines**

1. Manuscripts, including abstract, references, figures, tables, and appendix, should be formatted to A4 size and not exceed 8,000 words for Research Articles, 5,500 words for Symposium Papers, and 5,000 words for Practitioner Reports.
2. All manuscripts must be written in English.

3. All submissions to JACET Selected Papers must conform to the requirements of the Publication Manual of the American Psychological Association, 7th edition.
  - 3.1 Prepare manuscripts using Microsoft Word (2003 or later).
  - 3.2 Use 12-point Times New Roman font.
  - 3.3 Leave margins of 2.5 cm on all sides of every page (A4 size, 210 mm × 297 mm or 8.27 in × 11.7 in). There are 26 lines to a page.
  - 3.4 Do not justify right margins.
  - 3.5 Do not use running heads.
  - 3.6 For anonymity in the peer review process, submit papers without the author name(s).
  - 3.7 Include the title, an abstract (no more than 200 words), and keywords (no more than five keywords; a multiple-word key phrase can be counted as one keyword).
  - 3.8 Acknowledgements should not be included at the time of submission.
  - 3.9 For pagination, use Arabic numerals placed in the upper right-hand corner of each page.
  - 3.10 In order to guarantee anonymity in the review process, both the author name(s) and their publication information should be substituted with “ \*\*\*\*\* ” throughout the entire manuscript including references

#### **D. Submission Procedure**

1. All contributors must complete a submission form on the JACET website, which can be accessed from the Submission Guidelines.
2. Contributors must follow the instructions below.
  - 2.1 Convert the Word file manuscript into PDF format, saving it under the author’s full name as in the following examples: suzukikaoru or smithkerry. Submit the PDF file by clicking “choose file” on the submission form.
  - 2.2 If there are more than four authors, write all authors’ information on a separate file and send to the JACET office by e-mail: Author names, affiliation, membership number, postal code, address, telephone number, and e-mail address.  
(JACET e-mail address: [jacet@zb3.so-net.ne.jp](mailto:jacet@zb3.so-net.ne.jp))
  - 2.3 Do not include a cover sheet.

#### **E. Contributor’s Responsibility**

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#### **F. Copyright**

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