

研究ステーション研究成果報告書

1. 研究ステーション名 イノベティブ理工系英語教育研究ステーション
研究代表者名(所属部局・職・氏名) 共通教育部・教授 SHI Jie (史傑)

2. 設置期間
2019年 4月 1日 ~ 2021年 3月 31日

3. 研究組織(設置期間中かかわった、全ての構成員を記載してください。)
※所属機関・部局・職は現在のもの、もしくは離脱時のものを記して下さい。

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青山学院大学 准教授 Charlie Robertson
多摩大学 講師 YU Yan、Chris Litten
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電気通信大学 非常勤講師 Adam Dabrowski

4. 研究の特筆すべき成果

(研究の主な成果、得られた成果の国内外における位置づけとインパクト、今後の展望などの点から記述すること)

The Research Station for Innovative and Global Tertiary English Education (IGTEE) made great efforts to realize the research and educational goals. Main research results were achieved both in and outside of the country by the members of the IGTEE.

The main achievement of the research station this year revolved around the following: consolidating the results of the educational program of the Undergraduate Technical English (UTE) as an excellent ESP program, curriculum improvement of the Graduate Technical English (GTE) course, Cognitive studies on translation and education, and CALL (Computer-Assisted Language Learning). Among the above aspects, the first half of the academic year focused very much on the GTE surveys that were created to investigate on graduate students' needs and expectation of the course before the start of the course, their feedback on the course in the middle of the semester and their holistic evaluation of the course at the end of the course. In addition, a survey on the teachers' feedback on the GTE course was carried out in order to find out the general evaluation of the course that they taught, their role as a teacher and participation in the course and what they felt that the course could be improved by. The surveys on students showed relatively positive feedback toward the course, while the teachers' survey showed the mixed feelings toward the course though most teachers presented supportive thoughts on the course and their participation and showed positive motivation to improve the course in future. These results were presented at international conferences by some members of the IGTEE Research Station as well as the former Vice-President for Academic Affairs of UEC, Professor Koji Abe.

The research on Cognitive Studies by the main researcher, Jie Shi, was divided into two areas, Cognitive Learning and Education and Cognitive Translation. The former has to do with learning strategies, mental process of linguistic acquisition, and educational methods that can incorporate cognitive studies such as psychology and neuro-sciences. Adult language education which depends on imitating first-language acquisition is not entirely suitable for second language or foreign language context in which learners face disadvantages such as early stage of learning, time constraints, poor communication environment, and lack of motivation in knowledge-based learning. Hence, this area of study is extremely crucial for the learners of English in Japan at university level and above. Efficiency, effectiveness and autonomy are three of the many goals of learning that depend on methodology for self-study as well as teacher-assisted study. Cognitive Translation is a very important area of research for both human translation and machine translation. The latter imitates the process of the former and shows both advantages and disadvantages as compared with the former. The research conducted in this area by Shi tries to decode the process of the AI-Assisted Translation (AIAT) and Computer-Assisted Translation (CAT). The former holds novelty as it is a combination of human translation process and the teaching of it to machines, or AI, at a deep level. The research on AIAT is hugely welcome to the human translation researchers and practitioners in and outside of Japan. Being the first researcher of this area from the language education and translation fields, Shi's research is considered to be a pioneer one and is expected to be developed further.

The research on ESP and global English education trends continue to be the main areas of IGTEE Research Station. Serving the education of the English language at UEC and beyond remains to be the main purpose of the research station. The involvement of full-time and part-time faculty of UEC and the researchers of other universities is of great importance to educational programs and research activities. The research achievements listed below demonstrate the academic activities conducted by other members of the research station. The Associate Professor of the English group and Technical English Section, Suwako Uehara, conducted research on students' survey with a part-time teacher of the GTE team of the Department of Engineering Science, Alexandra Terashima, and has made tremendous contribution to not only the departmental course but also the entire university. Their research was published in the invited Japan Panel at the 3rd Annual Conference of Asia ESP & the 8th Chinese National Conference on ESP along with the papers presented by Yan YU, Shin'ichi Hashimoto, SHI Jie and Robert Gommerman. This panel was the highlight of the conference and was highly evaluated.

5. 研究成果の公表実績

(主催した研究会・シンポジウム、研究成果の発信状況等)

1. IGTEE 研究会(co-organized with JACET ESP KANTO) No. 1 (2019)

Date: Jul 20, 2019 (Sat) 15:00 ~17:00

Venue: Room 15501 (5th Floor), Gaucher Building No. 15, Aoyama-Gakuin University

Presentation:

Utilization of AI and ICT in Teaching Worldviews for Effective 21st Century Learning

Professor Hiroyuki Obari, Aoyama-Gakuen University

Abstract:

A constructivist approach to flipped learning inspires students to activate their brains to create new knowledge and to reflect more deeply and consistently on their learning activities where twenty-first century skills with the 8Cs of effective communication are emphasized in the learning process. One of the critical 8Cs is to learn how to

coexist with AI. In the present study, two case studies were carried out for the purpose of enabling students to experience weak AI using smart speakers in the L2 learning process. The focus was on evaluating the use of AI speakers such as Google home mini and Amazon echo dot to determine their effectiveness in improving the English skills of native Japanese undergraduate students. The technologies used included Google Home mini, ATR CALL Brix, Facebook, Line, and online materials related to worldview studies. The first empirical study was conducted with a goal of examining the overall effectiveness of the program in improving the TOEIC test scores of a target group of Japanese students. The investigation was carried out from September 2018 to January 2019, targeting 24 third-year undergraduates who were divided into eight groups, four using Google home mini and four using Amazon echo dot. The participants were required to study their favourite English language programs for four months using AI speakers and to conduct a diary study, sometimes while shooting their studies with a smartphone. Finally, at the end of the training program, students of all eight groups delivered presentations about their research activities using AI speakers with flipped lessons, as well as provided feedback on the study, including its limitations. TOEIC pre- and post-training results (n=24) indicated the training program had assisted the students in improving their overall English proficiency with the help of the AI speakers during the four-month training period, especially their listening comprehension. Additionally, a post-course survey revealed a majority of the participants responded favourably toward the use of AI speakers as a part of their daily life in studying English, and 88% felt its effectiveness had revolutionized their way of learning English. In this presentation, the future use of AI in 21st century learning will be discussed through the results of the target case study.

Keywords: AI, EFL, 21st century skills, Google home mini, Echo dot, TOEIC

2. IGTEE 研究会(co-organized with JACET ESP KANTO) No. 2 (2019)

Date: Oct 19, 2019 (Sat) 15:00 ~17:00

Venue: University of Electro-Communications (UEC Tokyo), Building East 1, Room 602 (UEC Tokyo, 1-5-1 Chofugaoka, Chofu, Tokyo, 182-8585)

Presentation1:

ESP for Engineering Graduate Students at Tokai University

Rich Bailey, Tokai University (Shonan Campus)

Abstract:

In response to the Tokai University Engineering department's concerns regarding the English levels of their graduate students, two semester-long (14 weeks, once-a-week) ESP courses were created: Technical English for Engineers (TEfE) [required] and English Presentation for Engineers (EPfE) [elective]. While the original unified TEfE syllabus has been phased out in favor of teacher-selected textbooks and a new TOEIC focus, EPfE has evolved over time, especially to meet the needs of different student levels and an increase in international students. The presenter will explain the various curricular aspects of TEfE/EPfE courses including syllabus design, the use of supplemental materials, pedagogical activities, and successes and challenges of the implementation of the courses.

Presentation2:

An analysis of preliminary student performance data in an EMI program for economics and business management majors: Are we overstating the importance of prior English proficiency?

Robert Gommerman, Chuo University

Abstract:

In the last few years, several universities in Japan have opened departments with courses and entire programs instructed exclusively in English. As these programs become more popular, it is important to understand the extent to which English proficiency at the onset of studies can predict performance in content classes where instruction, course materials, and support are delivered entirely in English. Data from a newly created business department at a respected Japanese university suggest that prior English ability could not predict performance in two core subjects (Introductory Economics and Business Management). Despite having low English proficiency scores, many students were able to achieve high grades in both subjects, while some students with high proficiency scores did not perform well. While this analysis is still in the exploratory phase, the findings so far could have significant implications for the viability of EMI programs in Japan, and criteria for admission to such programs.

3. IGTEE 研究会(co-organized with JACET ESP KANTO) No. 3 (2019)

Date: Jan 11, 2020 (Sat) 15:00 ~17:00

Venue: Room 15501 (5th Floor), Gaucher Building No. 15, Aoyama-Gakuin University

Presentation:

Program Innovations: International Communication for Scientists and Engineers

Associate Professor Charles E. Robertson and Professor David W. Reedy, Aoyama Gakuin University

Abstract:

This presentation details how a college of science and engineering of a major private university in Tokyo attempted to incorporate major changes to its English curriculum that had been in place for over 20 years. Six years into the reformed program, the presenters will illustrate an array of improvements in a department not well-known for its commitment to English education, specifically: implementation of a comprehensive freshmen orientation, integration of a department-wide e-learning system, class streaming based on a standardized test, administration of pre-tests and post-tests, operation of credit-bearing study abroad programs, application of a strict EMI policy, and a CEFR-based curriculum utilizing an EGP to EAP to ESP strategy. The increased promotion of English education has contributed to changes in student attitudes and performance as well as the calibre of incoming freshmen. Students are now aware that English is a crucial element of their tertiary education and that resources are available to assist them to improve their English language skills, including English for science and engineering. The presenters believe that these students now strive for an identity as global scientists and engineers and that the new curriculum, which promotes ESP, has increased learner motivation and autonomy.

Keywords: ESP, curriculum development, English for Science and Technology, learner motivation, autonomy

4. IGTEE 研究会 (co-organized with JACET ESP KANTO) No. 1 (2020)

Date: Jul 11, 2020 (Sat) 15:00 ~17:00

Venue: Online

Presentation 1:

Peer Review in Online Writing Classes

Patrick Foss, Tokyo Medical and Dental University

Abstract:

Conducting peer review activities in the traditional classroom is simple enough, but doing them online can be a logistical challenge. The presenter will discuss how to use Zoom's shared screen and annotation tools for peer review involving short assignments and how to incorporate WebClass for review activities involving longer pieces of writing.

Presentation 2:

Zooming with Students

Tito Akindele, University of Tokyo

Abstract:

Effective teaching is best evaluated by productive learning, which in turn is most fruitful when students take ownership of their studies. For students to take ownership of their studies, a teacher has to be competent and more importantly, approachable. Unfortunately, the absence of face to face communication in remote teaching hampers the teacher's efforts. This presentation will focus on the strategies that were employed while remotely teaching Active Learning of Science for Science Students and Fluency-oriented Workshop, to first-year students at The University of Tokyo. Undoubtedly, the use of Zoom has changed the way education will be delivered for years to come.

Presentation 3:

Difficulties in Remote Teaching

Johnny Chu, University of Electro-Communications

Abstract:

Teaching remotely has been an important topic for many teachers these past several months. It has caught many teachers by surprise because some teachers do not have a lot of knowledge about LMS and using video conferencing software to teach. Remote teaching is especially challenging for part-time teachers because they have to deal with many different university standards and LMS. The presenter will discuss some of the challenges they encountered while teaching remotely during the coronavirus pandemic.

Presentation 4:

Enhancing Teacher-Student Resonance in Remote Teaching and Learning

SHI Jie, University of Electro-Communications

Abstract:

Language teaching in the context of remote or online education needs to be especially carefully calibrated in order to achieve the desired learning objectives. A remote classroom is sometimes considered to be undesirable for language learning and inferior to face-to-face context. This paper, however, presents the pedagogical techniques derived from technological manipulations and curricular adjustments that enhance student experiencing and participation in and outside of the class.

5. IGTEE 研究会(co-organized with JACET ESP KANTO) No. 2 (2020)

Date: Oct 31, 2020 (Sat) 15:00 ~17:00

Venue: Online

Presentation:

Constructing your own virtual online discussion site

Shin'ichi Hashimoto, Tokai University

Abstract:

Many university classes are originally designed to be taught in a classroom environment where students come together, listen to the teacher's lecture, work in small groups, have discussions or do other face-to-face tasks. What happens when those same aims have to be met minus the students in a classroom? That was the situation suddenly faced by many teachers this spring due to COVID-19. One way to deal with this is to retrofit discussion classes so that they can be held online in an on-demand (asynchronous) format. In this workshop-style presentation, the presenter will first present a short literature review of recent studies related to online teaching and the creation of online learning communities. Then, attendees will learn how to make their own homepage using Google Sites, a free web-based homepage making software application. The presenter will show how to use a combination of Google Forms, Google Sheets and Google Sites to create a simple webpage where students can post comments to a discussion question posed by the teacher. This is an easy, not-so-high-tech virtual solution to the problem of providing a forum that students can access anytime from anywhere. Those who do not consider themselves tech-inclined, may be pleasantly surprised that they too can become a webmaster!

6. IGTEE 研究会(co-organized with JACET ESP KANTO) No. 3 (2020)

Date: Jan 16, 2021 (Sat) 15:00 ~17:00

Venue: Online

Presentation 1:

Developing materials in English for specific purposes

Helen Basturkmen, University of Auckland, New Zealand

Abstract:

This presentation discusses ESP teaching methods and materials including why ESP teaching methods and materials may differ from those in general English language teaching. ESP teachers often develop or adapt materials to meet the particular needs of their group of learners, and this involves them in considering the kinds of teaching/learning activities that they will use. It is common for published materials to have only limited

relevance to their group of learners and so typically ESP teachers adapt existing materials or develop material ‘in-house.’ In this presentation, I discuss examples of teaching/learning activities drawing on case reports of teaching innovations in local settings, and I show ways that materials can be linked to the needs, methods and learning styles of the learners’ targeted work or study situations.

Presentation 2:

Novice EAP learners’ genre play capacity

DU Jianying, Huazhong University of Science and Technology (HUST), China

Abstract:

The dual nature of genre as both conventional and innovational encourages the EAP pedagogy to aim at not only genre production but also genre creation. As a relatively recent pedagogical endeavor, genre play serves as a bridge between conventional norms and innovative practices. Drawing on the pedagogical effect of genre play, this article calls for an attention to the novice EAP learners’ personal interest and personified expression as the universal learning need, in addition to target genres as their specific need. In our study, data obtained through textual analysis and discourse-based interview suggests that students are better motivated to push the genre boundaries when they maintain the control over the stylistic form and when their subjective views are valued. For the first-year undergraduate students with very limited experience in producing academic genres, the EAP-specific lexico-grammatical and rhetorical devices remain the shortest board in their genre capacity. The undergraduate EAP pedagogy therefore should encourage explicit discussion and playful manipulation of linguistic patterns and rhetorical effects. Meanwhile, though genre play has the potential to sweeten the undergraduate EAP pedagogy, pertinent learner need analysis is needed for the playful tasks to lead to an overall increase in the learner’s genre performance.

6. 外部資金の獲得状況

(代表的な10件以内、種別・種目・相手機関(企業)・研究題目・代表者名・直接経費額・間接経費額)

1. 科研費(基盤研究(B)):工学系の大学院生のためのライティングについての研究
代表者:名古屋工業大学 石川優香教授

7. 発表論文等(各項目とも、代表的な5件以内)

「雑誌論文」:著者名・論文標題・雑誌名・査読の有無・巻・発行年(西暦)及びページ

SHI Jie, “ESP Creation and Evolution in EFL Contexts from the Perspectives of the Change Theory”, The Japan Association of Applied Linguistics in JACET Conference Proceeding 2020, 査読有, 2021年3月(submitted)

SHI Jie, “Teaching the Research Article (RA) Abstract Genre to Japanese Graduate Students of EST”, The Annual Report of JACET-SIG on ESP, 査読有, 2021年3月

Suwako Uehara, “A quantitative investigation of science and engineering university EFL learner’s language learning autonomy”, In A. Peña Clavel, & K. Thornton (Eds.), *Whose autonomy? Voices and agency in language learning Selected Papers from the 2018 Independent Learning Association Conference* (pp. 50–83). Candlin & Mynard ePublishing Limited. <http://candlinandmynard.com/ILA.html>, 査読有, 2020年

Beaufait, P.; Suwako Uehara.; Lucovich, D., & Gallagher, B. "What makes tutors tick? Exploring motives and experiences in the JALT Writers & Peer Support Group (PSG)", *Research in Online Literacy Education (ROLE)*, 査読有, (An Online Journal and therefore does not have page numbers.), 2019

Suwako Uehara, Terashima, A., & SHI Jie, “Needs analysis for graduate school technical English course design and materials development”, *Proceedings of the 3rd Annual Conference of Asia ESP & the 8th Chinese National Symposium on ESP*, 査読有, 2019/11/16

「学会発表」:発表者(代表)名・発表標題・学会等名・発表年月日・発表場所

SHI Jie, “Enhancing Teacher-Student Resonance in Remote Teaching and Learning”, JACET ESP Kanto Research Meeting Panel on the Challenges of Remote Teaching, 2020年7月

SHI Jie, “ESP As An Interdisciplinary Approach (ESP Kanto)”, 第13回(2020年度)JACET 関東支部大会 危機の時代と変わりゆく英語教育 *Changing English Education in Times of Crisis*, 2020年8月

SHI Jie, “ESP Creation and Evolution in EFL Contexts from the Perspectives of the Change Theory”, 第3回日本応用言語学会年会 JAAL in JACET Annual Conference, 2020年12月

SHI Jie, "Teaching the Research Article (RA) Abstract Genre to Japanese Graduate Students of EST", 第3回日本応用言語学会年会 JAAL in JACET Annual Conference 2020年12月

Suwako Uehara, “Preparing students and staff for the Kakehashi project”, 2019年全国語学教育学会 (JALT), 2019年11月

「招待講演発表」：発表者(代表)名・発表標題・学会等名・発表年月日・発表場所

Hashimoto, Shin'ichi, “Student attitudes toward gamification as an approach to vocabulary learning”, The 3rd Annual Conference of Asia ESP & the 8th Chinese National Conference on ESP, 2019年11月, Chongqing University, Chongqing, China.

Gommerman, Robert, “An analysis of the relationship between English proficiency and final scores in an international business EMI program: to what extent does English proficiency predict performance in content classes?”, The Chinese Association for English for Academic Purposes, 2019年4月, Fudan University, Shanghai, China.

SHI Jie, “Curricular Challenges in ESP Presentation Program for Graduate School Students of EST in Japan”, The 3rd Annual Conference of Asia ESP & the 8th Chinese National Conference on ESP, 2019年11月, Chongqing University, Chongqing, China.

Uehara, Suwako, Alexandra Terashima, Jie Shi, “Needs Analysis for Graduate School Technical English Course Design and Materials Development”, The 3rd Annual Conference of Asia ESP & the 8th Chinese National Conference on ESP, 2019年11月, Chongqing University, Chongqing, China.

YU Yan, “Instructional Design and Implementation of Academic Writing Tasks for Undergraduate Students of Science and Engineering”, The 3rd Annual Conference of Asia ESP & the 8th Chinese National Conference on ESP, 2019年11月, Chongqing University, Chongqing, China.

「図書」：著者名・出版社名・書名・発行年(西暦)及び総ページ数(共著の場合、最初と最後のページを記載)

SHI Jie, “Teaching Scientific Research Article Writing to Japanese Graduate Students of EST in Collaboration with Disciplinary Specialists” in エンジニアと英語—理論と実践—(科研費(基盤研究(B)):工学系の大学院生のためのライティングについての研究) 2021年3月(予定)

SHI Jie, “Chinese language in Japan”. Languages of Japan: Communities and Culture. J. Maher, ed. Oxford University Press. In press.

Soneda, K., & Suwako Uehara. “一日の会話のすべてを英語にしてみる。[Trying to make conversations in English for the whole day]”, Beret Publications. 2019年

Suwako Uehara, “Baby Driver. In Academy of Movie English Movie English (Ed.)”, The 8th Academy of Movie English, 2017. (pp. 176-179). Nagoya, Japan: Screenplay dept. Fourin, Inc. (34 authors)

SHI Jie, CAI Jigang, DU Jianying, LI Liwen, “ESP/EAP Development and Practices at Chinese Universities: Growing amid challenges (Chapter 10, pp 106-114) in Towards a New Paradigm for English Language Teaching”. 2019年11月, Routledge.