2021年度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　　　イノベー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．研究組織(今年度関わった全ての構成員を記してください。)

＜学内構成員＞
電気通信大学　大学院情報理工学研究科　共通教育部　准教授　上原寿和子
電気通信大学　大学院情報理工学研究科　共通教育部　准教授　大石由紀子
電気通信大学　大学院情報理工学研究科　共通教育部　教授　　鈴木勝
電気通信大学　大学院情報理工学研究科　情報・ネットワーク工学専攻　教授　村松正和
電気通信大学　大学院情報理工学研究科　情報・ネットワーク工学専攻　教授　植野真臣
電気通信大学　大学院情報理工学研究科　情報・ネットワーク工学専攻　教授　芳原容英
電気通信大学　大学院情報理工学研究科　情報・ネットワーク工学専攻　教授　肖鳳超
電気通信大学　大学院情報理工学研究科　機械知能システム学専攻　准教授　饗庭恵理子
電気通信大学　大学院情報理工学研究科　機械知能システム学専攻　准教授
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　HG-Matuttis
電気通信大学　大学院情報理工学研究科　基盤理工学専攻　准教授　清水亮介
電気通信大学　大学院情報理工学研究科　基盤理工学専攻　准教授　Vorun Vohra
電気通信大学　大学院情報理工学研究科　情報学専攻　　　准教授　金路

＜学外構成員＞
国際基督教大学　John Maher
東京医科歯科大学　Patrick Foss
青山学院大学　Charlie Robertson
成蹊大学　藤田玲子
多摩大学　YU Yan
東洋大学　Uma Maheswari Rajagopalan
筑波大学　Sonia Sharmin
東海大学　橋本信一、西川恵、John Cross
明治大学　Robert Moreau
慈恵医科大学　中村直子
　　創価大学　Forrest Nelson
Temple University Japan（TUJ）　Jonathon Derr
東京大学　Tito Akintele
東海大学　Nicholas Carr
University of Sussex, UK　Nobuyuki Oishi
Fudan University, China　CAI Jigang

Beijing Foreign Studies University SUN Youzhong

Beijing Foreign Studies University　LI Liwen

Huazhong University of Science and Technology DU Jianying

Hubei University of Technology GAO Xiao

Sichuan International Studies University WANG Yin

３．令和３年度の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.

　４．令和３年度の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) The 23rd Research Seminar of the Research Station for Innovative & Global Tertiary
　　English Education (IGTEE), UEC Tokyo
　　　　Date: Oct. 26, 2021, Tuesday 16:15 - 17:45
　　　　Venue: Online
Presentation：
Title: A Modular, Corpus-based Approach for the Systematic Development of 2nd Language
Vocabulary: The New General Service List (NGSL) Project
Presenter: Charles Browne (Meiji Gakuin University)
Abstract:

　　This presentation will introduce our seven open-source, corpus-based vocabulary word list specifically designed meet the needs of second language learners of English. Each word list is short, and offers the highest coverage of any published wordlist (92% or higher) for language in that genre, and includes word lists for general daily English (New General Service List or NGSL), academic English (New Academic Word List or NAWL), TOEIC English (TOEIC Service List or TSL), business English (Business Service List or BSL), spoken English (New General Service List-Spoken or NGSL-S), children's English (New Dolch List or NDL) and fitness English (Fitness English List or FEL). Most of our lists were developed in a modular approach so they can be efficiently mixed and matched

to meet a broad range of academic needs. After introducing the lists, the presenter will then move on to introduce our large and growing number of free, pedagogically-driven online tools, apps and resources designed to help people to utilize these lists for teaching, learning, assessment, materials creation as well as research and analysis. The tools include interactive flashcards, diagnostic tests, games, vocabulary learning apps, text creation tools, and more. The presentation will also briefly review the growing body of published NGSL research.

(2) The 24th Research Seminar of the Research Station for Innovative & Global Tertiary English Education (IGTEE), UEC Tokyo

Date: Nov. 4, 2021, Thursday 16:15 - 17:45
Venue: Online
Presentation :
Title: Corpora and Word Lists: How to Choose Academic Words
Presenter: Shin'ichiro Ishikawa (Kobe University)
Abstract:
Corpora have been widely utilized for compilation of varied types of word lists. In this talk, I will briefly touch upon the history of corpus-based word lists. Then, I will introduce two kinds of recently developed wordlists: New JACET8000 (JACET, 2016) and BABILON2000 (Ishikawa, 2018). New JACET8000 is a general-purpose word list designed for college students in Japan. It is based on the frequency data from the British National Corpus (BNC), Corpus of Contemporary American English (COCA), and a set of supplementary corpora including the texts that Japanese students are likely to encounter in the near future. Meanwhile, BABILON2000, which is intended to expand the Academic Word List (Coxhead, 2000), is a list of high-frequency and high-coverage academic words chosen on the basis of six key principles: Balanced, Broad, Integrated, Lemma-based, and Open.

５．外部資金の獲得状況
　　（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）

　　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

６．今後の研究発展
　　（外部への発信、外部資金獲得計画を含む）
　IGTEE Research Station will continue to build strong cooperation among members and collaboration with other research organizations and communities in Japan as well as overseas. We will carry on with the research and educational activities on innovative

English education especially for students of science and engineering. The core group of the English teachers will first work on the teaching methodology for remote teaching focusing on the curricular goals realization, collaborative education, student achievement evaluation, and teaching materials development for tele-lecturing. The research station is planning on organizing a colloquium or a panel on remote teaching along with the JACET ESP Kanto for which Shi Jie is serving as the chair for. Training for teachers who are not familiar with remote teaching as part of the CALL (Computer-Assisted Language Learning) methodology is also an important part of the first half of the academic year. Research presentations on members' individual research areas will be supported continuously. In the second half of the academic year and depending on the travel situation around the world, presentations at international conferences will be scheduled bringing the research results of the research station on English education to the international English education and professional education communities.

７．発表論文等（各項目ごとに記載してください。）
　　「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, J. Collaborating with disciplinary specialists in developing pedagogical tools for Japanese graduate students of engineering. The JACET International Convention Proceedings: The JACET 60th Commemoration International Convention (Online, 2021), 査読有, 2021, 165-166.

　　「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, J., & Yu, Y. The analysis of language choices of online translation services on Japanese prefectural websites. The Fourth Conference of JAAL in JACET, Dec. 4, 2021, Online.
Shi, J. AI-Assisted Translation and Its Adoption in ESP Education. The Fourth Conference of JAAL in JACET, Dec. 4, 2021, Online.
Shi, J. Collaborating with disciplinary specialists in developing pedagogical tools for Japanese graduate students of engineering. JACET 60th International Convention, Aug., 29, 2021, Online.
Zhang, Y., Shi, J., Xu, S., Jurgen, K., Li, Z., Hu, P., & Fu, L. Collaborative Curriculum Design for Enhancing Academic Competences in Research-Oriented Undergraduate Students of EST. The 4th Annual Conference of Asia ESP & the 9th Chinese National Conference on ESP, Aug., 17, 2021, Online.

　　「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
Shi, J., & Ishikawa, Y. Needs Analysis for Graduate School Technical English Course Design and Materials Development. The 4th Annual Conference of Asia ESP & the 9th Chinese National Conference on ESP, Aug., 18, 2021, Online.

Ishikawa, Y., & Shi, J. Enhancing productivity: The genre-based approach for teaching research article writing to graduate students of EST in Japan. The 4th Annual Conference of Asia ESP & the 9th Chinese National Conference on ESP. Aug., 18, 2021, Online.

Shi, J. ESP as Tertiary Academic Education in EFL Context. ESP Teaching and Talent Cultivation in Featured Tertiary Institutions in the Context of a Strong Transportation State and the 4th High-End Forum on the Development of Disciplinary Features of Beijing Jiaotong University, Jan., 6, 2022, Online.

Shi, J. Societal Deployment of Machine Translation for Multilingual Service on Government Websites in Japan. The International Symposium on Translation, Interpreting and Cognition in the Context of Innovation in a Global Vision & the 8th CATIC Conference, Sept., 18, 2021, Online.

Shi, J. The ESP implementation and management: The experience of Japanese universities of science and technology. Foreign Language and Communication Expert Forum (外语与传播学者讲坛), Sept., 22, 2021, Online.

Shi, J. The foundation of ESP in EFL and ESP-Oriented Curriculum Development. Foreign Language and Communication Expert Forum (外语与传播学者讲坛), Sept., 27, 2021, Online.

Shi, J. Decoding International Academic Publications: The genre approach. The International Higher Academic Publication Forum, Spr., 17, 2021, Online.

「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, J. Oxford University Press (OUP), Language Communities in Japan. Chapter 8 Chinese: A historical language of cultural influence, 2022, pp. 91-98.

「受賞」：授与団体・受賞者(代表者)名・受賞標題・受賞年月日

TESOL International Association, USA. Jie Shi. "ESP Project Leader", Nov. 2, 2016. Published in「English for Specific Purposes Project Leader Profiles: The Leadership Communication of 55 ESP Project Leaders」, pp 134-140, K. Knight, ed., Candlin & Mynard ePublishing. Mar 22, 2022.

「特許出願」：出願した特許の名称・発明者・権利者・種類・番号・出願年月日・国内外別

「その他」：ホームページ等