



Hiroshima Lexical Research Forum

H-LRF 2023

September 9th & 10th, 2023

Book of Abstracts

H-LRF 2023

How to Participate

This year's H-LRF will be held on Saturday, September 9th and Sunday, September 10th. All of the day's of the conference will be held using the same Zoom session. You will be able to join the Zoom session by clicking on the link below during the conference times.

Zoom Link:

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[https://us02web.zoom.us/j/81745248955?
pwd=ZVFXQUpqK0NWSEwzNWIrUU1ka0lHdz09](https://us02web.zoom.us/j/81745248955?pwd=ZVFXQUpqK0NWSEwzNWIrUU1ka0lHdz09)



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The conference schedule can be found here:

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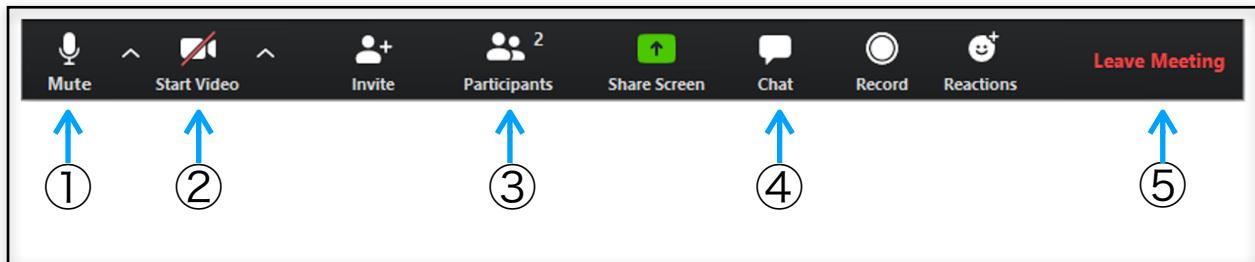
Zoom Etiquette:

To ensure that everyone gets the most out of this year's conference, we have included a few requests regarding Zoom etiquette below.

- Please ensure that your microphone is muted when the presenter is talking
- We want the discussions to be as interactive as possible, so please feel free to use the Chat feature to ask and answer questions or make comments during the presentation.
- While the speaker will (probably) not be able to respond to your question during their presentation, we will have a question and answer session at the end of each talk.
- If you have a question, you would like to ask, please use the “raise your hand” feature of Zoom after the speaker has finished presenting.
- When asking your questions during the question and answer session, please ask your questions orally and ensure that both your microphone and camera are turned on.

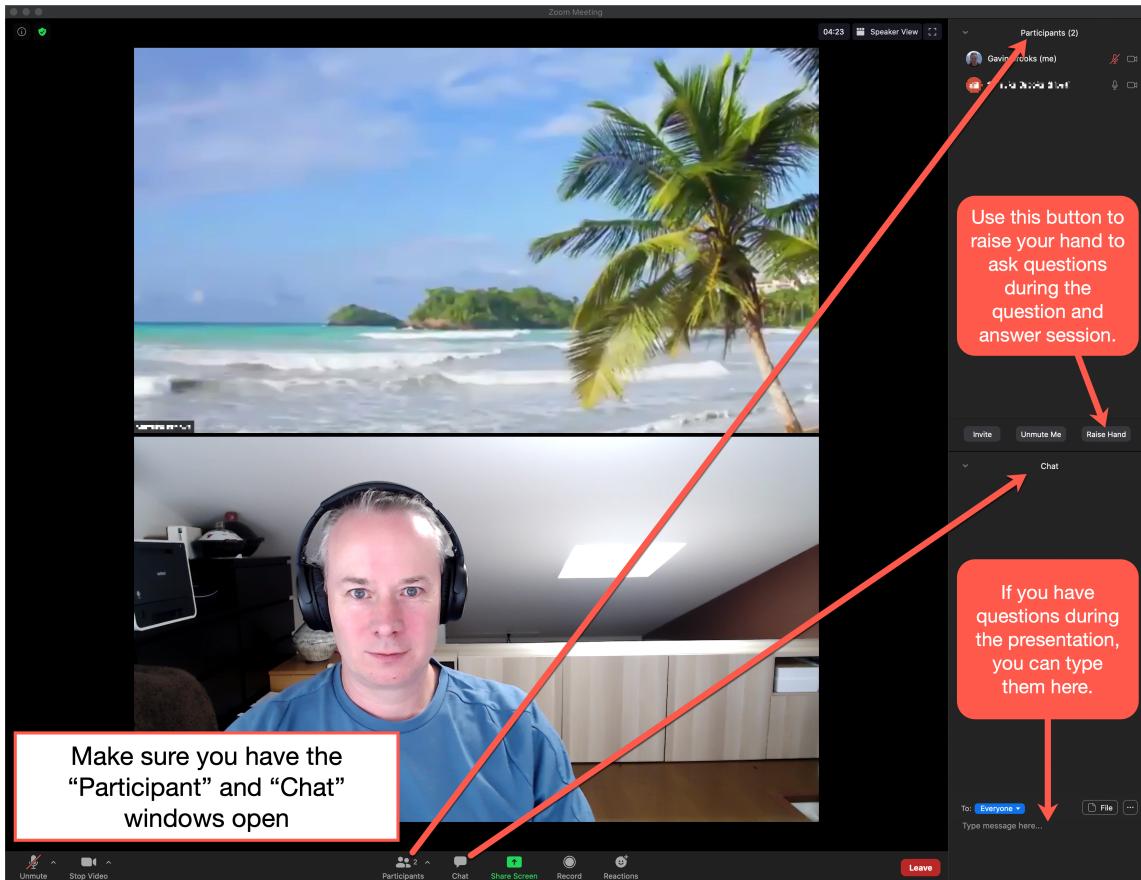
Using Zoom:

This year's H-LRF will be delivered using Zoom. While I am sure that everyone is very familiar with Zoom at this point in time, we have included a few simple instructions and requests to ensure that the conference runs smoothly.



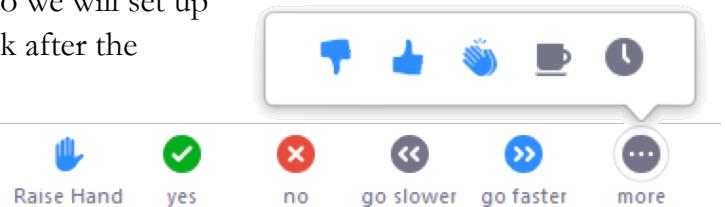
When Joining:

- As soon as you login, make sure your video ② and microphone ① are turned on. To make things easier, we would also appreciate it if you could mute your microphone when the presenters are talking, as background noise from the microphones of audience members could cause Zoom to shift the focus away from the presenter.
- You should also open the participant ③ and chat windows ④ so that you can raise your hand if you have any questions or send a message to someone in the session.
- Make sure that your name is visible in the participant's window, as this is the name that the session chair will see when you are asking questions.
- If you need to leave the presentation, you can do so by clicking on Leave Meeting ⑤.



Asking questions:

- Please ensure that your microphones are muted when the presenters are talking.
- You can ask questions during the presentation using the Chat feature of Zoom.
- We want these sessions to be as interactive as possible, so please feel free to respond to other audience members' comments or questions in the Chat box.
- After the presenter finishes, there will be time for questions and answers. These will be done orally. To ask a question:
 - Raise your hand using the "Raise Hand" button in Zoom.
 - The session chair will call on the audience members in the order in which they raised their hands.
 - When your name is called, please turn on your microphone and ask your question to the presenter.
 - Due to time constraints, we may not get to all of the questions. If you have a question that you wanted to ask but were not able to we will set up a question channel in the H-LRF Slack after the conference and continue the discussion there.



Acquisition of L2 Italian Vocabulary Through Listening to Songs

Authors: Mahnaz Aliyar, *Victoria University of Wellington*; Anna Siyanova-Chanturia, *Victoria University of Wellington, Ocean University of China*

Previous research into incidental vocabulary learning through listening to songs has primarily taken place in classroom settings (Pavia et al., 2019) and they mostly relied on learners' self-report checklists on the outcomes of listening (Kuppens, 2010). Results of such studies have showed that L2 learners pick up new vocabulary incidentally from listening to songs (Nie et al., 2022; Pavia et al., 2019). However, the effects of listening to songs for pleasure and in an ecologically valid setting on incidental vocabulary learning remain to be investigated. The present study aims to fill this gap by exploring incidental learning of 23 novel Italian words – 12 single words and 11 multi-word expressions – through repeated listening to nine Italian songs from a range of popular genres, including pop, rock, and rap.

Adopting a pre-test-post-test-delayed-post-test design, 95 Iranian university students of Italian (advanced proficiency level) were randomly assigned to either the experimental group ($n = 33$) or the control group ($n = 62$). Learners in the experimental group listened to each song six times in their free time during a four-week listening for pleasure treatment, and were tested on three vocabulary knowledge dimensions: form-meaning connection, meaning recall, and meaning recognition. The test results were analysed using mixed-effects modelling in R. We discuss pedagogical implications for the effectiveness of listening to songs in incidental vocabulary learning and retention.

References

- Kuppens, A. H. (2010). Incidental foreign language acquisition from media exposure. *Learning, Media and Technology*, 35, 65–85. <https://doi.org/10.1080/17439880903561876>
- Nie K., Fu J., Rehman, H. & Zaigham, G. H. K. (2022) An empirical study of the effects of incidental vocabulary learning through listening to songs. *Frontiers in Psychology*, 13, 891146. <https://doi.org/10.3389/fpsyg.2022.891146>
- Pavia, N., Webb, S., & Faez, F. (2019). Incidental vocabulary learning through listening to songs. *Studies in Second Language Acquisition*, 41(4), 745–768. <https://doi.org/10.1017/S0272263119000020>

Incidental Vocabulary Learning From Reading a Graphic Novel

Author: Mahnaz Aliyar, *Victoria University of Wellington*; Haijuan Yan, *Ocean University of China*; Anna Siyanova-Chanturia, *Victoria University of Wellington, Ocean University of China*

While previous research has revealed the facilitative effects of the text-picture combination on L2 learning, little research has investigated how reading graphic novels, which have a wealth of textual and pictorial cues, contributes to incidental lexical development (Aliyar & Peters, 2022; Mayer, 2014). This study aims to address this gap by investigating the effects of comics' imagery on incidental vocabulary acquisition and how these effects compare to the effects of glossing on incidental learning of novel words.

Twenty Chinese university students, who had an advanced proficiency level in English, read for pleasure the English graphic novel “Kampung Boy, Yesterday and Today” (Lat, 1993) in one week. The target items are 20 Malay words – with imagery support, with in-text gloss, or the control items i.e., without any textual or pictorial support. Two vocabulary tests, including, the Vocabulary Knowledge Scale (Wesche & Paribakht, 1996) and a multiple-choice meaning recognition test, are used to evaluate participants' incidental lexical gains. Since target items are from a language unknown to participants, no pretest will be administered. This study has important pedagogical implications for effectiveness of the use of comic books in fostering incidental learning of new vocabulary.

References

- Aliyar, M., & Peters, E. (2022). Incidental acquisition of Italian words from comic books. *Reading in a Foreign Language*, 34(2), 349–376. Available at <http://hdl.handle.net/10125/67429>
- Lat (1993). *Kampun boy, yesterday and today*. Berita Publishing. ISBN 967-969-307-4
- Mayer, R. (2014). *The Cambridge handbook of multimedia learning (Cambridge Handbooks in Psychology)*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139547369.002>
- Wesche, M., & Paribakht, T.S. (1996). Assessing L2 vocabulary knowledge: Depth versus breadth. *The Canadian Modern Language Review*, 53(1), 13–40. <https://doi.org/10.3138/cmlr.53.1.13>

L2 Lexical Attrition in Receptive and Productive Knowledge of Collocations Among Bilingual Saudi Arabic-English Returnees and Saudi Heritage Speakers in the United States

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This study analyses the impact of the L1 on processing of L2 verb-noun collocations among returnees and heritage speakers. As noted by Schmid and Köpke (2009), the most sensitive component of the linguistic system is the lexicon. The available empirical research to date investigating attrition in lexical knowledge is scarce, particularly attrition in collocational knowledge (Schmitt, 2010). One of the few available studies (Kopotev, Kisselev, & Polinsky, 2020) suggests that heritage speakers (HSs) use transfer-based non-standard word combinations, and that analysing such combinations can throw new light on the role of input in HSs language development. Here we aim to contribute to this discussion in a study of English L2 verb-noun collocations among different groups of Arabic HSs and returnees who have received very little attention in the literature. Participants were 44 child and adolescent returnees who had lived in the US for an extended period of time and returned to their country of origin, Saudi Arabia, either in early childhood or in adolescence. They were compared to 54 US-based child and adolescent Saudi HSs and a group of 20 adult HSs, as a control group. Productive knowledge was measured with a novel online gap-filling task consisting of English verb-noun collocations which were either congruent, such as 'have experience' or incongruent between Arabic and English, for example, 'do homework'. Furthermore, an online lexical decision task (LDT) focusing on verb-noun collocations was used to measure receptive collocational knowledge, and a range of baseline tests were administered to test vocabulary and grammar knowledge. Both online tasks were designed in PsychoPy to measure accuracy and reaction time (RT). It was predicted that HSs would achieve higher accuracy scores and experience less Arabic influence on all productive and receptive tasks and would process English collocations faster than returnees, as the HSs are exposed to more and a richer input in English than the Saudi returnees. Generalized linear mixed effect modelling was used for RT and linear mixed effect modelling for accuracy among all 118 participants. This revealed that returnees obtain significantly lower scores than both groups of HSs on the LDT and the gap-filling task. In terms of RT, child and adolescent HSs perform at similar levels as adult HSs on the LDT despite being younger and less experienced. The findings indicate a strong influence of Arabic among returnees, possibly L2 attrition after return. However, accuracy data show that child and adolescent HSs score significantly lower than adult HSs. This significance seems to be the result of incomplete acquisition rather than attrition among returnees. We finish by formulating implications for the role of input and attrition in HSs and returnees.

References

- Kopotev, M., Kisseelev, O., & Polinsky, M. (2020). Collocations and near-native competence: lexical strategies of heritage speakers of Russian. *International Journal of Bilingualism*, 136700692092159. <https://doi.org/10.1177/1367006920921594>
- Schmid, M. S., & Köpke, B. (2009). L1 attrition and the mental lexicon. In A. Pavlenko, *The bilingual mental lexicon: Interdisciplinary approaches* (pp. 209-238). Multilingual Matters. <https://doi.org/10.21832/9781847691262-011>
- Schmitt, N. (2010). *Researching vocabulary: A vocabulary research manual*. Palgrave Macmillan. <http://dx.doi.org/10.1057/9780230293977>

Commercial Off-the-Shelf Game in English as a Foreign Language Classroom: The Impact of English Proficiency, Pre-Vocabulary Instruction and Learners' Perceptions on Vocabulary Learning and Retention

Author: Maha Alzahrani, *University of Reading*

Learning new vocabulary is a challenging task for second language (L2) learners and retaining these new words in the long-term is even more difficult. One suggestion to enhance vocabulary learning and retention is using digital games. Recently, the use of digital games in L2 has grown in popularity and some empirical research has yielded positive results in terms of the number of learned words and levels of retention following playing digital games (Franciosi, Yagi & Tomoshige, 2016; Miller & Hegelheimer, 2006; Ranalli, 2008). However, more empirical studies are needed to gain a comprehensive understanding and in-depth insight into digital games' potential and effectively integrate them into teaching and learning vocabulary in L2 classroom. This study aims to explore the effectiveness of commercial off-the-shelf (COTS) games, by comparison with an interactive e-learning platform (Active Presenter) and the role of pre-teaching vocabulary of target words and learners' perceptions of and experiences with integrating COTS games in the L2 classroom. This study reports findings from an intervention study with a 2x2 mixed factorial design among 101 adult Saudi EFL learners. Two different teaching interventions were compared: a COTS game was compared with Active Presenter, and half of each group was taught target words with Quizlet prior to the intervention. A control group only received vocabulary teaching through Quizlet without gaming or multimedia resources for 30 minutes. Semantic priming and form recognition tasks were conducted to measure vocabulary learning and retention at the pre-test, immediate post-test and delayed post-test. I plan to present the outcomes of my study at the conference.

References

- Franciosi, S. J., Yagi, J., Tomoshige, Y., & Ye, S. (2016). The effect of a simple simulation game on long-term vocabulary retention. *CALICO Journal*, 33(3). 355–379. <https://doi.org/10.1558/cj.v33i2.26063>
- Miller, M. E. and Hegelheimer, V. (2006). *The Sims* meet ESL: Incorporating authentic computer simulation games into the language classroom. *Interactive Technology and Smart Education*, 3(4), 311-328. <https://doi.org/10.1108/17415650680000070>
- Ranalli, J. (2008). Learning English with *The Sims*: Exploiting authentic computer simulation games for L2 learning. *Computer Assisted Language Learning*, 21(5), 441-455. <https://doi.org/10.1080/09588220802447859>

ESL Speed Readings, the Free Mobile App and LMS

Author: TJ Boutorwick, *Sanyo Gakuen University*

Speed reading is an important skill for language learning. It is categorized into Paul Nation's (2013) fluency strand of language learning. This is because there should be no unknown vocabulary, or at least very little, in the readings. In this way, learners can focus on increasing their reading speed, instead of learning vocabulary. At the English Language Institute, Victoria University of Wellington, teachers have been incorporating speed reading for years. Over these years, Sonia Millett, Paul Nation, and Emmy Quinn have written over 100 stories for the speed reading component at the Institute. Each of these stories has a comprehension quiz which consists of 8-10 multiple-choice questions. Until recently, these stories were only available in PDF format. This presentation introduces the newest format for the speed readings. The speed readings have been used to create a mobile app titled 'ESL speed readings'. This is a free app and is available for both Android and iOS devices. The app currently has 120 stories graded into four different levels. The app manages the entire speed reading process, from easy selection of the readings, to automatic quiz scoring, and also data visualization. By automatizing this process, learners can focus on increasing their reading speed without worrying about writing down their reading time or grading their own quizzes. The presenter, who is also the developer of the app, will first outline the history of the readings. Next, they will mention some of the mechanics built into the app. The remaining portion of the presentation will be dedicated to a live demonstration of the app.

Automated Transcription and Measures of Lexical Diversity in L2 Spoken Texts

Author: Gavin Brooks, *Kyoto Sangyo University*; Jen Jordan, *Kwansei Gakuin University*

Recently, there has been a lot of discussion about using OpenAI's transformer-based model, ChatGPT, to generate text for use in the classroom. This presentation examines the viability of using another application of this model, Automated Speech Recognition (ASR), in L2 research. While there has been an increase in the use of models like OpenAI's Whisper for transcribing L1 speech (e.g. Lin, 2023; Radford et al., 2022) using ASR with speech produced by L2 English learners can be difficult due to factors such as pronunciation errors, disfluencies, and atypical grammatical constructions (Wang et al., 2021). This is especially relevant to corpus-based research such as measures of lexical diversity where mistakes in the transcription process can lead to incorrect measures of lexical diversity. The presenters address this problem by examining the differences in the lexical diversity rates of automated compared to human transcription. This was done by looking at the lexical diversity measures of 100 samples of L2-generated texts recorded in the classroom. These include 50 presentations, with only one speaker, and 50 discussions, between two to four speakers. The lexical diversity measures of the transcripts were compared against the professionally transcribed versions along with a cleaned version of the transcript that was checked for errors. While the results show that the accuracy of automated transcription comes close to the professional translation, the presenters will highlight areas where ASR-based transcribers struggle and best practices for recording and cleaning transcriptions when using models such as Whisper for transcribing L2 presentations and discussions.

References

- Lin, H. Y. (2023). Standing on the shoulders of AI giants. *Computer*, 56(1), 97-101.
- Radford, A., Kim, J. W., Xu, T., Brockman, G., McLeavey, C., & Sutskever, I. (2022). *Robust speech recognition via large-scale weak supervision*. <https://doi.org/10.48550/arXiv.2212.04356>
- Wang, X., Evanini, K., Qian, Y., & Mulholland, M. (2021). Automated scoring of spontaneous speech from young learners of English using transformers. *2021 IEEE Spoken Language Technology Workshop (SLT)*. <https://doi.org/10.1109slt48900.2021.9383553>

A Study Investigating Word Association Behaviour in People With Acquired and Communication Disorders

Author: Angela Maria Fenu, *Swansea University*

The participants selected for the experimental group were 4 individuals with mild Broca's aphasia. The control group consisted of 51 cognitively intact age- and gender-matched individuals.

The participants were asked to perform a word association task in which they had to say the first word they thought of when hearing each cue. The participants from the experimental group were administered the word association test every two weeks, for two months when they received speech-language therapy.

To analyse different patterns of word association responses in both groups, the nature of the relationship between the cue and the response was examined: responses were divided into five categories of association. To investigate the similarity between aphasic and non-aphasic subjects, the stereotypy of responses was examined.

While certain stimulus words (nouns, adjectives) elicited responses from Broca's aphasics that tended to resemble those made by non-aphasic subjects; others (adverbs, verbs) showed the tendency to elicit responses different from the ones given by normal subjects. This suggests that some mechanisms underlying certain types of associations are degraded in aphasics individuals, while others display little evidence of disruption. The most significant variation was noticed when the grammatical class of the cue word was an adverb. Unlike the normal individuals, the experimental subjects gave the most idiosyncratic associations, which are often produced when the attempt to give a paradigmatic response fails. In turn, the failure to retrieve paradigmatic responses when the cue is an adverb might suggest that Broca's aphasics are more sensitive to this grammatical class.

The findings from this study suggest that, from research on word associations in people with aphasia, important data can arise concerning the specific lexical retrieval impairments that characterize the different types of aphasia and the various treatments that might positively influence the kinds of word association responses affected by language disruption.

References

- Fitzpatrick, T., & Izura, C. (2011). Word association in L1 and L2: An exploratory study of response types, response times and inter-language mediation. *Studies in Second Language Acquisition*, 33(3), 373-398. <https://doi.org/10.1017/s0272263111000027>

Fitzpatrick, T., Playfoot, D., Wray, A., Wright, M. J. (2015). Establishing the reliability of word association data for investigating individual and group differences. *Applied Linguistics*, 36(1), 23-50. <https://doi.org/10.1093/applin/amt020>.

Fitzpatrick, T., Thwaites, P. (2020). Word association research and the L2 lexicon. *Language Teaching*, 53(3), 237-274. <https://doi.org/10.1017/s0261444820000105>

Gewirth, L. R., Schindler, A.G., Hier, D. B. (1984). Altered patterns of word associations in dementia and aphasia. *Brain and Language*, 21(2), 307-317. [https://doi.org/10.1016/0093-934x\(84\)90054-3](https://doi.org/10.1016/0093-934x(84)90054-3)

Gollan, T. H., Salmon, D. P., Paxton J. L. (2006). Word association in early Alzheimer's disease. *Brain and Language*, 99(3), 289-303. <https://doi.org/10.1016/j.bandl.2005.07.001>

Flashcard Learning: Comparing Massing (No Spacing) and Spacing

Author: Zheng Guangliang, *Hiroshima University*; Jon Clenton, *Hiroshima University*; Tatsuya Nakata, *Rikkyo University*; TJ Boutorwick, *Sanyo Gakuen University*

Studies suggest that spacing facilitates the acquisition of explicit knowledge (as measured by recall and meaning recognition tests) for second language (L2/ bilingual) learners. Nakata and Elgort (2021), however, found no significant difference between massing and spacing for the acquisition of tacit knowledge (measured by a lexical decision task). Their results may be partly because of the type of treatments they used (i.e., contextual learning, as opposed to paired-associate learning). As a case in point, while research involving paired-associate learning typically reports spacing benefits, studies investigating contextual vocabulary learning report smaller benefits of spacing (e.g., Serrano & Huang, 2018). Non-vocabulary studies also suggest that, whereas long spacing may be effective for the acquisition of declarative knowledge, short spacing is sometimes beneficial for proceduralization (Li & DeKeyser, 2019). The current study, therefore, examines the effects of massing and spacing on the acquisition of explicit and tacit knowledge in flashcard learning.

We aim to report on an investigation of approximately 60 undergraduate L1 Japanese L2 English participants, with CEFR levels ranging B1 - C2. Participants are to be split into two groups: (1) massing and (2) spacing.

By investigating whether spacing facilitates the acquisition of not only explicit but also tacit knowledge, the findings of this study will allow us to examine whether Nakata and Elgort's (2021) results also apply to paired-associate learning. We also discuss our findings in relation to the extent to which findings of non-vocabulary studies can apply to vocabulary learning.

References

- Li, M., & Dekeyser, R. (2019). Distribution of practice effects in the acquisition and retention of L2 Mandarin tonal word production. *The Modern Language Journal*, 103(3), 607-628. <https://doi.org/10.1111/modl.12580>
- Nakata, T., & Elgort, I. (2021). Effects of spacing on contextual vocabulary learning: spacing facilitates the acquisition of explicit, but not tacit, vocabulary knowledge. *Second Language Research*, 37(2), 233-260. <https://doi.org/10.1177/0267658320927764>
- Serrano, R., & Huang, H.-Y. (2018). Learning vocabulary through assisted repeated reading: How much time should there be between repetitions of the same text? *TESOL Quarterly*, 52(4), 971–994. <https://doi.org/10.1002/tesq.445>

Exploring the Potential Effects of Vocabulary Learning Strategies on Productive Vocabulary Use in L2 Writing

Author: Takeshi Hattori

Teaching vocabulary is central to improving second language (L2) or foreign language (FL) reading, listening, speaking, and writing skills (Webb & Nation, 2017). Despite the importance of vocabulary learning to improve all four skills, the relationship between vocabulary and writing is least studied (Nation, 2020). In order to facilitate vocabulary learning, vocabulary learning strategies (VLSs) play an essential role (e.g., Le-Thi et al., 2022; Uchihara, et al., 2022; Yamada, 2018). This study is motivated by two gaps in the literature on VLSs and vocabulary acquisition: Lack of research on the relationship between vocabulary and L2 writing, and lack of research on the relationship between VLSs and productive vocabulary in L2 writing. Thus, the current study investigated the potential effects of VLSs (self-regulation, input-seeking, association, dictionary use, oral rehearsal, written rehearsal, and imagery strategies) on productive vocabulary in L2 writing. To investigate the potential effects of VLSs on productive vocabulary in L2 writing, the current study was conducted using the following instruments: one essay writing task, vocabulary level tests, and a vocabulary learning strategy survey. A total of 14 Japanese university students in Tokyo generously participated in this study. To measure the productive vocabulary knowledge, lexical profile and Type-Token-Ratio (TTR) were used to measure lexical sophistication and lexical diversity respectively. The study revealed two important findings. One is oral input plays an essential role in improving productive vocabulary. The other implication was that meaning-focused learning could enhance lexical diversity and form-focused learning could enhance lexical sophistication.

References

- Le-Thi, D., Dörnyei, Z., & Pellicer-Sánchez, A. (2020). Increasing the effectiveness of teaching L2 formulaic sequences through motivational strategies and mental imagery: a classroom experiment. *Language Teaching Research*, 26(6), 1202-1230. <https://doi.org/10.1177/1362168820913125>
- Nation, I. S. P. (2020). *Learning vocabulary in another language*. Cambridge University Press. <https://doi.org/10.1017/9781009093873>
- Uchihara, T., Eguchi, M., & Clenton, J. (2022). The contribution of guessing from context and dictionary use to receptive and productive vocabulary knowledge: a structural equation modeling approach. *Language Teaching Research*, 136216882211221. <https://doi.org/10.1177/13621688221122138>

Webb, S., & Nation, I. S. P. (2017). How vocabulary is learner. Oxford University Press.

Yamada, H. (2018). Exploring the effects of metacognitive strategies on vocabulary learning of Japanese junior high school students. *The Journal of AsiaTEFL*, 15(4), 931-944.
<https://doi.org/10.18823/asiatefl.2018.15.4.3.931>

Developing Vocabulary Learning Software for Medical English Students

Author: Marshall Higa, *Hiroshima University*; Simon Fraser, *Hiroshima University*; Walter Davies, *Hiroshima University*

This presentation will describe the development of vocabulary learning resources that are being integrated into the curriculum and materials of a medical English course at Hiroshima University. Working closely with medical doctors, an applied linguistics team has created a content-based “quasi-parallel” syllabus for EFL learners in the medical school. This syllabus parallels the medical content students learn but goes slightly beyond it on the basis of learnability. There is a strong lexical focus, and a word list for the course has been created through an interplay between materials design based on content and corpus analysis of key medical reference books.

In an effort to create an efficient process for memorizing the medical word list, accompanying software is being developed to be integrated into the course. The main function of the software is to enable learners to perform simple analyses of digital texts and build personalized word lists. The software contains a set of word lists that help students to identify and store useful words in the texts they read. One of these lists is the medical English word list developed by the applied linguistics team. Furthermore, the software has a pedagogic function that helps learners review the words they store at intervals determined by an algorithm in order to maximize efficiency, thus aiding learning.

The software not only offers students a tool for enhancing their medical English vocabulary but can also help researchers, with students’ consent, to explore their individual word lists and analyze the words they have identified and saved. Through analyzing the data and identifying themes and patterns within the saved words, the course word list can be modified to include items that may have been overlooked. Additionally, instructors can utilize the software to customize the existing list according to the specific requirements of their students and curriculum.

A Function-First Approach to Identifying Formulaic Language With GPT-4

Author: Dan Hougham, *Hiroshima University*; Jon Clenton, *Hiroshima University*; Takumi Uchihara, *Tohoku University*

Pedagogically-oriented descriptions of formulaic language have gained increased interest. Predominantly, studies (e.g., Simpson-Vlach & Ellis, 2010) have employed a frequency-based form-first approach, identifying formulas from recurring patterns in corpora. While valuable, the form-first approach is insufficient as it does not initially incorporate communicative context—a critical aspect for formula identification (Wray, 2002, p.31). Addressing this, Durrant & Mathews-Aydinli (2011) introduced a function-first approach, favouring function over frequency. However, the labour-intensive and complex process of starting with semantic functions leaves it underexplored. While computer analysis traditionally lacked variable/discretionary capabilities, advanced models like GPT-4 could enable this, making a function-first approach feasible. Recent research has examined the reliability of AI-based models to automatically score essays (Mizumoto & Eguchi, 2023), but to date, no study has investigated the extent to which GPT-4 can accurately identify functional categories of formulaic language and recurrent forms associated with these functions in learner corpora. This study investigates the potential of using an AI language model for a function-first approach, aiming to categorize a spoken learner corpus into communicative functions, and track proficiency-level variations in formulaic language use.

We used a UK university corpus ($N = 150$) of oral presentations, assessed per IELTS descriptors. Building on Durrant and Mathews-Aydinli's (2011) framework, which employs Swales' (1990) notion of “generic moves”, a unique analysis of moves was devised, involving an iterative multi-step process. Move types were validated manually, with GPT-4's classification performance measured via a three-point accuracy scale. AI misclassifications were analyzed; this rigorous process, involving multiple review rounds, honed the AI's capacity to identify communicative functions.

Our findings suggest that GPT-4 can accurately (94.3% on average) and moderately precisely (68.6% on average) classify a spoken learner corpus into functional categories. We discuss these findings in terms of future research and pedagogical implications.

References

- Durrant, P., & Mathews-Aydinli, J. (2011). A function-first approach to identifying formulaic language in academic writing. *English for Specific Purposes*, 30(1), 58–72. <https://doi.org/10.1016/j.esp.2010.05.002>

Mizumoto, A., & Eguchi, M. (2023). Exploring the potential of using an AI language model for automated essay scoring, *Research Methods in Applied Linguistics*, 2(2), 1-13. <https://doi.org/10.1016/j.rmal.2023.100050>

Simpson-Vlach, R., & Ellis, N. C. (2010). An academic formulas list: New methods in phraseology research. *Applied Linguistics*, 31(4), 487-512. <https://doi.org/10.1093/applin/amp058>

Swales, J. (1990). *Genre analysis: English in academic and research settings*. Cambridge University Press.

Wray, A. (2002). *Formulaic language and the lexicon*. Cambridge University Press. <https://doi.org/10.1017/cbo9780511519772>

Learners' Appropriate Use of Discourse Organizing Phrases in Academic Writing

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This presentation discusses findings from a study on learners' development of formulaic language (FL) for discourse organization in second language academic essays. Studies from the Contrastive Interlanguage Analysis (CIA) paradigm comparing L1 and L2 language use and have concluded that L2 formulaic language (FL) use is different from L1 use even at advanced levels (e.g. Bestgen & Granger, 2014; Esfandiari & Barbary, 2017; Laufer & Waldman, 2011, Li & Schmitt, 2009). Bardovi-Harlig and Su (2018) observed that learners of Chinese as a foreign language initially produced a 'lexical core', the most salient lexical word in a phrase, which was followed by the ability to produce the target MWE with increasing accuracy.

However, the existing research overlooks learner MWE use in terms of semantic and grammatical appropriateness. Therefore, this study aimed to examine learners' development of internally, grammatically, and semantically appropriate MWE use in academic essays. A large-scale developmental learner corpus was used focusing on the lexical cores of 11 MWEs used as discourse organizers by Japanese learners of English in an EFL EAP program in Japan. Each attempt at the target MWE was assessed for its internal, grammatical, and semantic appropriateness.

The results supported previous findings indicating that learners used a lexical core before mastering a complete MWE. Overall, MWEs became more fixed as learners used them more frequently. Semantic appropriateness improved and seemed also to be related to learners' expanded MWE repertoires. Grammatical inappropriateness decreased consistently over the course of the study. Importantly, the results varied among MWEs, with some being used appropriately almost 100% of the time, while other presented more of a challenge.

These findings have implications for the development of learning materials for EFL writing courses. Understanding MWE development can help materials designers employ effective strategies to aid learner writing development.

References

- Bardovi-Harlig, K., & Su, Y. (2018). The acquisition of conventional expressions as a pragmalinguistic resource in Chinese as a foreign language. *Modern Language Journal*, 102(4), 732-757. <https://doi.org/10.1111/modl.12517>
- Bestgen, Y., & Granger, S. (2014). Quantifying the development of phraseological competence in L2 English writing: An automated approach. *Journal of Second Language Writing*, 26, 28-41. <https://doi.org/10.1016/j.jslw.2014.09.004>

Esfandiari, R., & Barbary, F. (2017). A contrastive corpus-driven study of lexical bundles between English writers and Persian writers in psychology research articles. *Journal of English for Academic Purposes*, 29, 21-42. <https://doi.org/10.1016/j.jeap.2017.09.002>

Laufer, B. and Waldman, T. (2011). Verb-noun collocations in second language writing: a corpus analysis of learners' english. *Language Learning*, 61(2), 647-672. <https://doi.org/10.1111/j.1467-9922.2010.00621.x>

Li, J., & Schmitt, N. (2009). The acquisition of lexical phrases in academic writing: A longitudinal case study. *Journal of Second Language Writing*, 18(2), 85-102. <https://doi.org/10.1016/j.jslw.2009.02.001>

Listening with TED Talks Textbooks. A Keynote Vocabulary Load Analysis

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Using commercial textbooks with resources such as TED Talks is central in developing learners' vocabulary in language learning. In 2015, Cengage Learning developed a textbook series of five titles (<http://ngl.cengage.com/ted>) to facilitate using TED Talks as authentic listening materials and they are now widely used and cognitively validated in English for Academic Purposes (EAP) (Elk, 2014). Recently, the development of TED Talks textbooks has provided teachers with suitable frameworks to use when teaching listening.

Although such commercial textbooks are well-developed and structured instructional tools for the classroom, they may not provide learners with the necessary vocabulary knowledge to progress in their listening when using TED Talks. Studies have shown that learners need between 3,000 and 5,000 base word families to achieve 95% coverage and between 5,000 and 10,000 base word families to achieve 98% coverage (Coxhead & Walls, 2012; Liu & Chen, 2019; Nurmukhamedov, 2017). These studies show that irrespective of the learners' lexical knowledge, TED Talks include a large variance in the word families needed for audiences to understand the different themes.

Therefore, this presentation outlines the vocabulary load and lexical profile of twelve TED Talks chosen for the listening component in a commercial EAP textbook. Analysis conducted using the BNC/COCA 25,000 general wordlists shows that the lexical demands for each TED Talk in the unit were appropriate to the textbook level. However, additional vocabulary profiles suggest that each TED Talk varies in difficulty depending on the talk length and lexical frequency. These results suggest that learners may need more vocabulary guidance when completing specific units in the textbook. The presentation concludes by suggesting teaching with specific unit word lists created from the vocabulary profiles for each TED Talk to help learners improve their lexical knowledge and attend to their difficulties while listening.

References

Bohlke, D., Dummett P., Lansford, L., & Stephenson, H. (2016). *Keynote 2*. Cengage/Heinle & Heinle.

Coxhead, A., & Walls, R. (2012). TED Talks, vocabulary and listening for EAP. *TESOL ANZ*, 20(1), 55-68. <http://web.b.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=0&sid=46aa715e-2c39-447d-b440-ef2f9f77eaf1%40sessionmgr101>

Elk, C. K. (2014). Beyond mere listening comprehension: Using TED Talks and metacognitive activities to encourage awareness of errors. *International Journal of Innovation in English Language Teaching and Research*, 3(2), 215-247. <https://www.proquest.com/scholarly-journals/beyond-mere-listening-comprehension-using-ted/docview/1655287119/se-2>

Liu, CY., & Chen, H. HJ. (2019). Academic spoken vocabulary in TED Talks: Implications for academic listening. *English Teaching & Learning*, 43(4), 353-368. <https://doi.org/10.1007/s42321-019-00033-2>

Nurmukhamedov, U. (2017). Lexical coverage of TED Talks: Implications for vocabulary instruction. *TESOL Journal*, 8(4), 768-790. <https://doi.org/10.1002/tesj.323>

Definition Placement, Contextual Support, and Contextual Learning of Phrasal Verbs

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This presentation is an overview of a planned research project, and we welcome feedback. Providing definitions after supportive texts may lead to superior vocabulary learning compared with giving definitions before the text (Elgort et al., 2019). However, in non-supportive texts, incorrect inferences may affect word knowledge negatively (Elgort, 2017). Our hypothesis is that definition placement and the availability of contextual support may interact in their effect on vocabulary learning. To investigate this interaction in contextual learning of multi-word expressions, the current study will focus on English phrasal verbs (PVs). Twenty-eight figurative PVs have been selected based on a norming study with English L1 speakers. For each PV, two short texts, namely neutral (not supportive of PV figurative meanings) and supportive (contextual clues in the form of short definitions), were developed by the researchers, and normed study with 10 English L1 speakers. One hundred Iranian high school students will read the texts in four intact classes, while the definition placement and contextual support conditions will be counterbalanced across the classes. Participants' knowledge of form and meanings of the target PVs will be measured to check the research hypothesis.

References

- Elgort, I. (2017). Incorrect inferences and contextual word learning in English as a second language. *Journal of the European Second Language Association*, 1(1) 1–11. <http://doi.org/10.22599/jesla.3>.
- Elgort, I., Beliaeva, N., & Boers, F. (2019). Contextual word learning in the first and second language: Definition placement and inference error effects on declarative and nondeclarative knowledge. *Studies in Second Language Acquisition*, 42(1), 7-32. <https://doi.org/10.1017/S0272263119000561>.

The Importance of Technical Vocabulary and Multi-Word Expressions in Agriculture

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One way that researchers differentiate between the vocabulary found in texts is to divide it into categories from general to technical (Nation, 2016; Schmitt & Schmitt, 2020). Technical vocabulary is essential for students studying in a specialised subject area as it can comprise over 30% of the words in a domain-specific text (Coxhead, 2018; Chung & Nation, 2003). While domain-specific word lists exist for fields as diverse as medicine (Lei & Liu, 2016) and engineering (Hsu, 2011), there is a need for more research on the use of technical vocabulary in agriculture (Martínez et al., 2009).

The current study will attempt address this issue by examining the composition, size, and density of the technical vocabulary used in agricultural textbooks. Building upon previous studies (Chung & Nation, 2003; 2004; Fraser, 2010), three raters will classify the vocabulary from an agricultural, a medical, and an applied linguistics textbook into four categories: general words, words minimally related to the field, words closely related to the field, and words with a meaning specific to the field. I will also examine the multi-word expressions (MWE) in which technical words appeared to identify critical technical phrases in the texts.

In this research overview, I will compare the technical words found in these three fields, attempt to demonstrate how the amount and importance of technical vocabulary and MWE used in agricultural texts have been underestimated in the past. I will then explain how these findings can support students and teachers in the field and argue that there is a pressing need for an agricultural word list.

References

- Chung, T. M., & Nation, P. (2003). Technical vocabulary in specialised texts. *Reading in a Foreign Language*, 15(2), 103-116. <https://scholarspace.manoa.hawaii.edu/handle/10125/66770>
- Chung, T. M., & Nation, P. (2004). Identifying technical vocabulary. *System*, 32(2), 251-263. <https://doi.org/10.1016/j.system.2003.11.008>
- Coxhead, A. (2017). *Vocabulary and English for specific purposes research: Quantitative and qualitative perspectives*. <https://doi.org/https://doi.org/10.4324/9781315146478>
- Fraser, S. (2010). *The lexis of pharmacology texts: A corpus linguistic analysis*. [Unpublished doctoral thesis, Swansea University].

- Hsu, W. (2014). Measuring the vocabulary load of engineering textbooks for EFL undergraduates. *English for Specific Purposes*, 33, 54-65. <https://doi.org/10.1016/j.esp.2013.07.001>
- Lei, L., & Liu, D. (2016). A new medical academic word list: A corpus-based study with enhanced methodology. *Journal of English for Academic Purposes*, 22, 42-53. <https://doi.org/10.1016/j.jeap.2016.01.008>
- Martínez, I. A., Beck, S. C., & Panza, C. B. (2009). Academic vocabulary in agriculture research articles: A corpus-based study. *English for Specific Purposes*, 28(3), 183-198. <https://doi.org/10.1016/j.esp.2009.04.003>
- Nation, P. (2016). *Making and using word lists for language learning and testing*. John Benjamins Publishing Company. <https://doi.org/10.1075/z.208>
- Schmitt, N., & Schmitt, D. (2020). *Vocabulary in Language Teaching*. Cambridge University Press. <https://doi.org/10.1017/9781108569057>

VREs in ESP lessons: The practice and a teacher's perception

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English for Specific Purposes (ESP) is one of the courses in trades education in Vietnam. Teachers and students often struggle with this course because of a high amount of technical vocabulary. This talk reports on the practice and a teacher's perception of vocabulary-related episodes (VREs) in an ESP class in Mechanical Engineering. VREs are interactions between teachers and students when they talk about vocabulary. A total of 247 minutes of ESP lessons were observed and recorded. I listened carefully to these lessons and identified VREs to transcribe and translate into English. Then the VREs were coded according to aspects of knowing a word (Nation, 2013) and techniques to explain the vocabulary. I also interviewed the ESP teacher for 50 minutes about what she thought of the VREs in her class. Two hundred and sixty-one VREs were identified in the observational data; they were initiated by both the teacher and the students, but the teacher initiated three times as many VREs as the students. Among these VREs, 75.56% involved technical vocabulary. Most of the VREs ($n=216$) focused on the meaning of words; the remaining VREs dealt with part of speech ($n=47$), pronunciation ($n=36$) and grammar ($n=34$), with 17% of the VREs covering more than one word aspect. The most frequent technique was using Vietnamese explanations, which occurred in 209 out of 261 VREs. In the interview, the ESP teacher emphasized time constraints as the main reason for not giving students enough opportunities to initiate VREs. If time had not been an issue, she would have employed other techniques, such as using English synonyms, images, or realia to support students' vocabulary learning. The findings suggest that the teacher and students pay a lot of attention to technical vocabulary in class and the first language is preferred for reasons of convenience.

References

- Nation, I. S. P. (2013). *Learning vocabulary in another language* (2nd ed.). Cambridge University Press. <https://doi.org/10.1017/cbo9781139858656>

Measuring Lexical Diversity: Why Simple Is Good (Enough)

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In many SLA projects, researchers need a measure of language ability, because researchers wish to control for between group variability, and ascertain groups do not differ from each other in pretest-posttest designs. Because standardized tests exist for only a handful of languages, and because parallel tests for both languages spoken by informants are generally not available, a possible solution to the measurement issue is to compute a measure of lexical diversity on texts produced by learners. Using a lexical diversity (LD) measure as a proxy for language ability generally works well, because vocabulary knowledge is such an important component of language ability.

A key issue that has been debated for over a hundred years in the field, is that measures of lexical diversity tend to be text length dependent. As is well known, the type/token ratio (TTR), for example, is higher for shorter texts and lower for longer texts, while other measures (e.g. root TTR) increase with text length. Recently, Zenker and Kyle (2021) summarized their objections against TTR and root TTR, but did not provide evidence that more complex measures explain more variance in language ability than simple measures, nor did they discuss the effect of different lemmatization principles on the explanatory power of LD measures (Myint Maw et al., 2022; Treffers-Daller et al., 2016). I will review the reasons why a “quick and dirty” measure of LD, such as root TTR, can outperform more complex ones, despite its dependency on text length. A key reason for this is that more advanced L2 learners can produce longer texts (Grant & Ginther, 2000; McCarthy & Jarvis, 2013). I will also propose a simplification of the computation of the moving average TTR (Covington & McFall, 2010), and argue that simple, transparent measures of LD are to be preferred in studies of language ability in SLA.

References

- Covington, M. A., & McFall, J. D. (2010). Cutting the Gordian knot: The moving-average type–token ratio (MATTR). *Journal of Quantitative Linguistics*, 17(2), 94-100. <https://doi.org/10.1080/09296171003643098>
- Grant, L., & Ginther, A. (2000). Using computer-tagged linguistic features to describe L2 writing differences. *Journal of Second Language Writing*, 9(2), 123-145. [https://doi.org/10.1016/s1060-3743\(00\)00019-9](https://doi.org/10.1016/s1060-3743(00)00019-9)
- Myint Maw, T. M., Clenton, J., & Higginbotham, G. (2022). Investigating whether a lemma count is a more distinctive measurement of lexical diversity. *Assessing Writing*, 53, 100640. <https://doi.org/10.1016/j.asw.2022.100640>

- McCarthy, P. M., & Jarvis, S. (2013). From intrinsic to extrinsic issues of lexical diversity assessment. In S. Jarvis & M. Daller (Eds.), *Vocabulary knowledge: Human ratings and automated measures*. John Benjamins. <https://doi.org/10.1075/sibil.47.04ch2>
- Treffers-Daller, J., Parslow, P., & Williams, S. (2018). Back to basics: How measures of lexical diversity can help discriminate between CEFR levels. *Applied Linguistics*, 39(3), 302-327. <https://doi.org/10.1093/applin/amw009>
- Zenker, F., & Kyle, K. (2021). Investigating minimum text lengths for lexical diversity indices. *Assessing Writing*, 47, 100505. <https://doi.org/10.1016/j.asw.2020.100505>

A Conversational Analysis on the Relationship Between Vocabulary Knowledge and Speaking Fluency in Interactional Contexts

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Acquiring the skills to generate speaking topics, articulate opinions to both classmates and lecturers, as well as taking turns in leading a conversation, are becoming more and more important for those learning a second language in Higher Education. Its importance is well-illustrated by its high weight in a number of widely accepted speaking tests (i.e. 80% to 92% in Cambridge ESOL's main suite speaking tests (Cambridge Language Assessment, 2023); and approximately 50% in Chinese national CET 4 / 6 (College English Test level 4 and level 6) speaking test (WENR, 2023)). While there is an increasing demand of the interactional communication in academic environments, the interactive aspects of second language (L2) fluency, however, have always been neglected in most prior research on fluency. Thus far, studies examining the relationship between vocabulary knowledge and L2 speaking fluency are even scarce. The current study therefore aims to fill in this research gap. Participants were 72 Chinese undergraduate students of English from lower-intermediate level to advanced level. We employed five persuasive speaking topics to elicit L2 learners' speaking performance in dialogues and multilogues (three speakers). We used a range of vocabulary size tests to assess participants' vocabulary knowledge. L2 learners' interactional fluency was analyzed in reference to three measures (goal orientation, interactional contingency and quantitative dominance) used in conversation analysis (e.g. Nakatsuhara, 2013). The results will be presented at H-LRF conference. We hope the results will help extend the understanding the relationship between vocabulary size and L2 speaking fluency in interactional contexts.

References

- Cambridge Language Assessment (2023). Retrieved from <https://www.cambridgeenglish.org/exams-and-tests/>
- Nakatsuhara, F. (2011). Effects of test-taker characteristics and the number of participants in group oral tests. *Language Testing*, 28(4), 483-508. <https://doi.org/10.1177/0265532211398110>
- WENR (2023). World Education News and Reviews. Retrieved from <https://wenr.wes.org/2018/08/an-introduction-to-chinas-college-english-test-cet>

Does Textually Enhancing Difficult Words Help EFL Learners' Dictionary Use on Reading With a Tablet?

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Numerous studies have demonstrated the positive effect of dictionary use on L2 reading comprehension and incidental vocabulary learning. The current study explored whether the effect of dictionary use can be increased by textually enhancing low frequency words in a text so that readers are assisted in looking up difficult words for understanding the text.

Japanese-speaking university EFL students read two texts on a tablet either with or without a textual enhancement (i.e., unfamiliar words written in red). They were able to look up words with an in-app bilingual pop-up dictionary. Their vocabulary learning was measured with meaning-recall and recognition tests administrated before and after the reading.

The results showed that reading comprehension did not differ between the with and without textual enhancement conditions. While vocabulary learning occurred regardless of the conditions, the effect of textual enhancement on learning was moderated by the proficiency of learners. Among higher-proficiency learners, learning gains were higher for the textual enhancement condition, whereas the gains were lower with textual enhancement among lower-proficiency learners. We will discuss the detailed results and pedagogical implications.