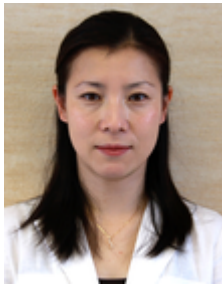# Center for Language Research

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Summary of Achievement

Refereed Journal Papers

[jperkins-01:2014] Jeremy Perkins Seunghun Lee. An acoustic study of fricasseed vowels in Nuosu Yi: an exploratory study. *Journal of the Korean society of speech sciences*, 6(4):109–115, December 2014.

[kimusik-01:2014] M. Ocampo and K. Rockell. Perceived Stress, Burnout and Coping Strategies of Native and Non-native English Speaking Teachers in Japan. *The Asian EFL Journal*, 78(2):16–26, October 2014.

Due to a variety of work pressures, teachers face different types of stress. However, the many mental health related issues that teachers of English face are often ignored. Focusing on teachers of ESL in contemporary Japan, this study affirms the existence of stress as a definite problem and identifies and a range of coping strategies that are being applied. Differences between the way native and non-native English speaking teachers deal with stress are examined. Although both groups share certain significant stressors, the study shows that each group tends to apply a contrasting set of coping strategies. These findings help to streamline approaches that assist teachers in coping with stress and have clear implications for teacher training curricula design.

[kimusik-02:2014] K Rockell and B. Merissa. Musicians in the Language Classroom: The Transfer of Musical Skills to Teaching a "Speech Mode of Communication". *English Language Teacher Education and Development (ELTED)*, 16:34–45, Spring 2014.

While EFL instructors come to the classroom from a variety of backgrounds, little is known about skill transference to a language teaching environment. Motivated initially by the authors' personal experiences using music to teach English, this article presents the results of a recent research that evaluated the effectiveness of musical skill transference in EFL teachers in Japan in 2012. For this purpose, a heuristically constructed list of musical skills or qualities was first offered by way of exploring the links between music and language, and highlighting important areas for music's potential application. Encouraged by the research findings, a fresh approach to the application of musical skills termed "RMR" (Rhythmic/Melodic Recalibration) is advocated. This approach can assist teachers to develop the ability to use music more confidently when teaching English. The paper also explored the perception that EFL teachers in contemporary Japan

were successfully managing the reapplication of core musical skills, in particular, to teach a " speech mode of communication " .

[wilson-01:2014] I. Wilson. Using ultrasound for teaching and researching articulation. *Acoustical Science and Technology*, 35(6):285–289, 2014.

Safely viewing and accurately describing the motion of the tongue during speech has been a challenging problem for many years. Although methods of viewing the tongue during speech have existed for decades, many of these methods are not ideal for various reasons: too expensive (MRI), too dangerous (x-ray, CT scan), too troublesome (electromagnetic articulometry – EMA), or too limited in the data one can get (electropalatography – EPG). Ultrasound, however, is becoming cheaper, is safe, is easy to set up and use, and is able to provide real-time images of the whole tongue during speech. The continuing development of diagnostic ultrasound machines as tools to view the tongue during speech has contributed to both speech research and pronunciation teaching. This article is an overview of the contribution of ultrasound to the teaching and research of articulation.

[wilson-02:2014] I. Wilson and S. Kanada. Pre-speech postures of second-language versus first-language speakers. *Journal of the Phonetic Society of Japan*, 18(2):106–109, 2014.

In this research, the coronal-plane position of an EMA marker on the side of the tongue is measured for pre-speech and speech. This is done for three native speakers of English and four non-native speakers of English. The non-native speakers consist of three Japanese and one Spanish speaker, and two of them have near-native pronunciation proficiency while the other two are of a lower level. Results show that while native and near-native speakers have pre-speech postures that are close to the median speech position, the lower proficiency non-native speakers have inefficient pre-speech postures with respect to the width of the tongue.

[wilson-03:2014] I. Wilson. Chouonpa-wo mochiita chouon-no shidou-to kenkyuu {Using ultrasound for teaching and researching articulation}. *The Journal of the Acoustical Society of Japan*, 70(10):560–564, 2014.

This is a Japanese translation of Prof. Wilson's English article that appears in *Acoustical Science and Technology* . The article is an overview of the contribution of ultrasound to the teaching and research of articulation. The translation was done by Takayuki Arai, Mako Ishida, and Ai Mizoguchi.

Refereed Proceeding Papers

[jperkins-02:2014] Jeremy Perkins. Non-Local Consonant-Tone Interaction in Thai. In *TAL-2014*, pages 112–115, 2014.

Proceedings paper from the 4th International Symposium on Tonal Aspects of Languages, Nijmegen, The Netherlands, May 13-16, 2014

[kaneko-01:2014] Emiko Kaneko. Eigo gakushusha corpus ni okeru meishi-ku hattatsubunseki [English learner corpus based analysis of noun phrase development]. In *Proceedings of 21st Annual Conference of the Association for Natural Language Processing*, pages 792–795, 2014.

Presented the research on March 19.

[wilson-04:2014] S. Kanada and I. Wilson. Tongue width at rest versus tongue width during speech: A comparison of native and non-native speakers. In *Journal of the Acoustical Society of America*, volume 136, page 2143, 2014.

Most pronunciation researchers do not focus on the coronal view. However, it is also important to observe because the tongue is hydrostatic. We believe that some pronunciation differences between native speakers and second-language (L2) speakers could be due to differences in the coronal plane. Understanding these differences could be a key to L2 learning and modeling. It may be beneficial for pedagogical purposes and the results of this research may contribute to the improvement of pronunciation of L2 English speakers. An interesting way to look at native and L2 articulation differences is through the pre-speech posture and inter-speech posture (ISP – rest position between sentences). In this research, we compare native speakers to L2 speakers. We measure how different those postures are from the median position of the tongue during speech. We focus on movement of a side tongue marker in the coronal plane, and we normalize for speaker size. We found that the mean distance from pre-speech posture to speech posture is shorter for native English speakers (0.95 mm) than for non-native English speakers (1.62 mm). So, native speakers are more efficient in their pre-speech posture. Results will also be shown for distances from ISP to speech posture.

[wilson-05:2014] Y. Hashimoto, I. Wilson, and Y. Heo. Ability to identify unfamiliar speech sounds negatively correlates with second language proficiency. In J. Hay and E. Parnell, editors, *Proceedings of the 15th Australasian*

International Conference on Speech Science and Technology, page 240. ASSTA, December 2014.

It is natural to think that if a person is good at identifying sounds, he or she would have proficiency in a foreign language as well. In this research, we administered a 45-question, forced-choice Korean sound identification test to 25 Japanese university students. Then, we investigated whether there was a correlation between their test score (bottom-up processing) and their English proficiency as measured by the TOEIC test (arguably more top-down processing). Our results showed that English proficiency has a medium-strength negative correlation with ability to identify unfamiliar Korean sounds. Our results suggest that having the ability to identify very small phonetic differences could be a distraction when trying to attain good overall language listening skills.

[youngheo-01:2014] Younghyon Heo and Hyowon Song. The influence of native-like parsing practice on reading comprehension. In *Celebrating Diversity to Enhance Progressive Pedagogical Practices*, pages 50–54, 2014.

Along the line of research on the relationship between parsing and English reading proficiency (Kim 2007, 2009; Schreiber 1980), this study investigates whether native-like parsing practice in reading aloud promotes reading comprehension of EFL learners. The results of a pilot study with three Korean students showed that participants' understanding of the same reading passage increased after providing them the correct parsing input during read-aloud practice. 84 Japanese and 26 Korean college students are recruited and divided into two groups; in both language groups, Group 1 participates in native-like parsing practice whereas Group 2 does not. It is expected that Group 1 in both Korean and Japanese obtains better scores in the reading test. The goals are to see 1) whether or not parsing practice in speaking promotes reading comprehension; and 2) whether there is any difference between different language backgrounds.

Books

[rozycki-01:2014] Kikuchi K. Rozycki W. Namai, K. and M. Shimura. *Discovery: English Communication II*. Kairyudo, April 2014.

[high school English textbook]

Grants

Summary of Achievement

[kaneko-02:2014] Emiko Kaneko. Shadowing to yuhatsumoho no L1jihatsuhatsuwani taisuru eikyo no hikaku [Comparison of the effects of shadowing and elicited imitation on L2 spontaneous speech], 2013-2015.

[kaneko-03:2014] et al. Okamoto. seijin nitaisuru tadokuno yukoseikensho to daigaku outreach katsudo toshiteno tadokukyoiku model kochiku [Investigation of the effectiveness of extensive reading and the establishment of extensive reading education framework for adults as a university outreach activity], 2014-2016.

[kaneko-04:2014] Yukio Tono et al. Gakuishusha corpus niyoru Eigo CEFR level kijuntokusei no tokutei to katsuyo ni kansuru sogoteki kenkyu [Identification and application of English CEFR criterial features based on learner corpus], 2012-2015.

[naomi-o-01:2014] Naomi Ogasawara. 自然災害発生時の避難勧告・指示文の分類と言語学的分析, 2014-2017.

Academic Activities

[kaneko-05:2014] Emiko Kaneko, 2014.

> Japan Language Testing Association (JLTA) Research Meeting Committee Referee of JLTA Journal

[naomi-o-02:2014] Anna Danielewicz-Betz and Naomi Ogasawara, 5 2014.

> True or false statements: A study of prosodic, paralinguistic, and discursive cues in Japanese speakers. (Oral presentation)

[wilson-06:2014] I. Wilson, February 2015.

> Reviewer, International Congress of Phonetic Sciences (ICPhS).

[wilson-07:2014] J. Ginsburg, I. Wilson, E. Kaneko, and N. Ogasawara, July 2014.

> Refereed Poster Presentation, Wh-question intonation patterns in the Showamura dialect of Japanese. At the *14th Laboratory Phonology conference (LabPhon 14)*, Tokyo, Japan.

[wilson-08:2014] J. Ginsburg, I. Wilson, E. Kaneko, and N. Ogasawara, May 2014.

> Refereed Poster Presentation, The prosodic domains of Wh-questions in the Showamura dialect of Japanese. At *Exploring the Interfaces 3: Prosody and Constituent Structure conference (ETI 3)*, Montreal, Canada.

[wilson-09:2014] D. Erickson, S. Kawahara, I. Wilson, C. Menezes, J. Moore, A. Suemitsu, and Y. Shibuya, September 2014.

> Refereed Poster Presentation, Jaw displacement patterns as articulatory correlates of metrical structure. At *Phonetic Building Blocks of Speech* conference, Victoria, Canada.

Ph.D and Others Theses

[wilson-10:2014] Yurika Hashimoto. Graduation Thesis: Ability to identify unfamiliar speech sounds negatively correlates with second language proficiency, School of Computer Science and Engineering, March 2015.

> Thesis Advisor: I. Wilson, Referee: Prof. J. Villegas

[wilson-11:2014] Bektur Ryskeldiev. MSc Thesis: Realtime spatial sound rendering using streamed audio displayed through mobile device loudspeakers, Graduate School of Computer Science and Engineering, March 2015.

> Thesis Advisor: M. Cohen, Committee Member: I. Wilson

[wilson-12:2014] Terumasa Doi. Graduation Thesis: An electromagnetic articulometry study of L1 and L2 tongue shapes for American English /r/, School of Computer Science and Engineering, March 2015.

> Thesis Advisor: I. Wilson, Referee: Prof. J. Villegas

[wilson-13:2014] Ayaka Orihara. Graduation Thesis: Reaction time to unnatural and natural pronunciation by native and non-native speakers, School of Computer Science and Engineering, March 2015.

> Thesis Advisor: I. Wilson, Referee: Prof. J. Villegas

Others

[kaneko-06:2014] Emiko Kaneko. Revisiting Mechanical Speaking Practices, 2014.

> Invited lecturer of Japan Language Teachers Association Morioka Chapter

Summary of Achievement

[kaneko-07:2014] Emiko Kaneko. Validity and Practicality of Using ACTFL-Related Speaking Tests for Japanese EFL Learners, 2014.

    Invited panel at Japan Language Association Annual Conference