



Title of Project:

Accents and Workplace Listening Comprehension of
Thai Undergraduates in Asian ELF Contexts

Researcher:

Panjanit Chaipuapae
Northern Arizona University
pc367@nau.edu



Panjanit Chaipuapae

Research Supervisor:

Dr. Joan Jamieson
Northern Arizona University

Final Report

Motivation for the Research

The role of English as a lingua franca (ELF) is prominent in Asia (Kirkpatrick, 2010). For Thai university graduates to be successful in their future careers, being able to understand various accents with Thailand's major trading partners, particularly American, Chinese, and Japanese, seems vital. As a listening test that included these different accents was needed, the Workplace Listening Test (WLT) was developed to determine whether Thai students need more training in understanding these accents. Before a test becomes operational, validity arguments for test score interpretations are needed (AERA et al., 2014).

Accents have been identified as obstacles to successful listening comprehension. Closely related to the effects of accents on comprehension are the notions of a shared first language (L1), but previous research has provided inconclusive findings (e.g., Major et al., 2002). Only a few studies have addressed the fact that, apart from the shared-L1, accent familiarity can also be considered as the degree of exposure to accents (e.g., Harding, 2011; Ockey & French, 2016). Thus, it is important to measure listeners' accent familiarity and examine its effects on comprehension.

Another factor that is closely related to accent familiarity and listening comprehension is attitudes toward accents. Although L2 listeners prefer native to nonnative accents, it is unknown if negative attitudes would result in low listening comprehension scores or positive attitudes would yield high listening scores. Only a few studies investigated this issue, and the findings were inconclusive (e.g., Harding, 2011; Kang & Rubin, 2009).

The primary purpose of this study, which was situated in the context of ELF, was to investigate the effects of accented speech on workplace listening comprehension of Thai undergraduates. This examination included three aspects. First, the study sought to provide



justification for the need of the WLT as a readiness measure for Thai undergraduates. Second, the study investigated potential effects of American, Chinese, Japanese, and Thai speakers' accents on students' listening comprehension. Third, the study sought to understand the roles accent familiarity and attitudes toward accents played on their listening performances.

Research Questions

This study had three research questions.

Research question 1. To what extent is the interpretation of the Workplace Listening Test's scores supported? Following the interpretation/use argument (IUA) approach, four types of inferences—domain definition, evaluation, generalization, and explanation—were addressed.

Research question 2. To what extent do speakers' accents affect listening comprehension of Thai students?

Research question 3. To what extent do accent familiarity and attitudes toward accents in listening tests predict listening comprehension?

Research Methodology

Participants included 144 undergraduates at a Thai university. Four main instruments were employed—the English Learning Questionnaire, the WLT, two accent familiarity questionnaires, and two accent attitudes questionnaires.

First, the English Learning Questionnaire provided information about students' proficiency levels. It provided a determination of their initial ability levels (i.e., low, lower-mid, upper-mid, and high), recent English courses, and course grades. Students of each level were randomly assigned to create four equivalent groups of mixed-proficiency levels.

Second, students took the WLT and listened to eight monologic listening passages spoken by two male speakers each of American, Chinese, Japanese, and Thai accents. The order of the speakers was counterbalanced. The topics covered various functional areas of business and industry. Each passage had six multiple-choice questions with total scores ranging from 0 to 48 points. Scores were interpreted as the ability to listen to accented speech (readiness) or not (unreadiness). The cut-off score determined by the contrasting group method was used to make such decisions.

Third, the accent familiarity questionnaires consisted of two portions—immediate and overall judgments. The first portion was embedded in the listening test. That is, after students answered the questions in each passage, they were asked to immediately rate their familiarity with the speaker's accent that they had just heard. The second portion was the overall accent familiarity, which was administered after students completed the test. The ratings were done on a 5-point Likert scale. The ratings for the two speakers of the same accents were averaged resulting in immediate and overall familiarity scores (from 1.00 to 5.00) for each accent.



Fourth, the attitude questionnaires also consisted of two portions—immediate and overall judgments. The first portion was placed in the listening test after the immediate familiarity judgment question. That is, after students answered questions in each passage and rated their familiarity with each accent, they were asked to immediately rate their attitude toward the accent they had just heard. The second portion was the overall attitudes toward accents, which was given to students at the end of the test. Students rated their attitudes on a 5-point Likert scale. Scores from the two speakers of the same accent were averaged. This procedure resulted in immediate and overall attitude scores (from 1.00 to 5.00) for each accent.

To validate the test scores, evidence was gathered following the IUA approach. Four inferences—domain description, evaluation, generalization, and explanation—were examined. One part of the study utilized a quasi-experimental research design to investigate effects of accents on workplace listening comprehension. The design was a replication of a four-by-four Latin square. A three-way ANOVA was used to analyze the data.

This study also used a correlational design. The data obtained from the questionnaires on accent familiarity and attitudes were used to examine the extent to which these two variables would contribute to prediction of listening scores. For each of the four accents, a Spearman's correlation was used to examine the relationships between (a) immediate familiarity and listening scores, (b) overall familiarity and listening scores, (c) immediate attitudes and listening scores, and (d) overall attitudes and listening scores.

Summary of Findings

WLT score interpretations. Some substantial evidence was found to support the domain definition, evaluation, generalization, and explanation inferences. Overall, the WLT was deemed moderately appropriate to measure the ability to understand accented speech in the Asian ELF workplace although the test needed some revisions. The test lacked an appropriate number of easy and difficult items. Thus, some items should be rewritten to increase discrimination power. Revisions should yield better psychometric properties of items as well as the reliability of the test.

Effects of accents. Results supported the shared-L1 benefit between the listener and the speaker. When the listeners and speakers were Thai, the listeners' comprehension was facilitated. No differences were found among American, Chinese, and Japanese accents; Thai test-takers had a similar level of difficulty listening to these three accents. Unexpectedly, effects of listening passages were present. One of the eight listening passages was generally easier than the rest and this led to a few marginally significant interactions.

Accent familiarity, attitudes, and listening comprehension. Results showed that immediate and overall familiarity and attitudes were not related to listening scores when the speaker's accent was American, Chinese, Japanese, or Thai. Interestingly, it was also found that scores on immediate and overall judgments of familiarity and attitudes were statistically unrelated and so could not be combined.



Implications

This dissertation provided three types of implications—theoretical, methodological, and pedagogical. First, the WLT was developed following the theoretical models of listening regarding cognitive processing and speech production, L2 assessment, and L2 pedagogy (Bejar et al., 2000; Flowerdew & Miller, 2005; Vandergrift & Goh, 2012). With this multi-faceted framework, it is viable to measure workplace listening comprehension at local and global levels. Second, methodologically, it is viable to identify the target language use domain and use semi-structured outlines to create listening stimuli, which should better represent real-world listening in an Asian ELF context. Last, Thai undergraduates need to develop their listening competence for ELF workplace tasks. Once the WLT is implemented, students would not only be informed of their listening readiness to understand various accents, but they would also be motivated to improve their listening skills if more training was needed. Stakeholders, such as English instructors, curriculum developers, and administrators, could revise the curriculum better to help prepare students for the Asian ELF workplace by revising the existing courses or creating new courses with a greater proportion of listening activities that include a variety of English accents.



References

- Abeywickrama, P. (2013). Why not non-native varieties of English as listening comprehension test input? *RELC Journal*, 44(1), 59-74.
- Adank, P., Evans, B. G., Stuart-Smith, J., & Scott, S. K. (2009). Comprehension of familiar and unfamiliar native accents under adverse listening conditions. *Journal of Experimental Psychology: Human Perception and Performance*, 35(2), 520-529.
- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2014). *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.
- American Psychological Association. (1954). *Technical recommendations for psychological tests and diagnostic techniques*. Washington, DC: American Psychological Association.
- Anderson, J. R. (1995). *Cognitive psychology and its implications* (4th ed.). New York, NY: Freeman.
- Anderson, J. R. (2015). *Cognitive psychology and its implications* (8th ed.). New York, NY: Worth Publishers.
- Anderson-Hsieh, J., & Koehler, K. (1988). The effect of foreign accent and speaking rate on native speaker comprehension. *Language Learning*, 38(4), 561-598.
- Anderson-Hsieh, J., & Venkatagiri, H. (1994). Syllable duration and pausing in the speech of Chinese ESL speakers. *TESOL Quarterly*, 28(4), 807-812.
- Association of Southeast Asian Nations. (2007). *The ASEAN Charter*. Jakarta, Indonesia: ASEAN Secretariat.
- Association of Southeast Asian Nations. (2016a). About ASEAN [Website]. Retrieved from <http://asean.org/asean/about-asean/>
- Association of Southeast Asian Nations. (2016b). ASEAN+3 [Website]. Retrieved from <http://asean.org/asean/external-relations/asean-3/>
- Bachman, L. F. (2004). *Statistical analyses for language assessment*. New York, NY: Cambridge University Press.
- Bachman, L. F. (2005). Building and supporting a case for test use. *Language Assessment Quarterly*, 2(1), 1-34.
- Bachman, L., & Palmer, A. (2010). *Language assessment in practice: Developing language assessments and justifying their use in the real world*. Oxford, UK: Oxford University Press.



- Baese-Berk, M. M., Bradlow, A. R., & Wright, B. A. (2013). Accent-independent adaptation to foreign accented speech. *The Journal of the Acoustical Society of America*, 133(3), EL174-EL180.
- Baker, W. (2008). A critical examination of ELT in Thailand: The role of cultural awareness. *RELC Journal*, 39(1), 131-146.
- Baker, W. (2009). *Intercultural awareness and intercultural communication through English: An investigation of Thai English language users in higher education* (Doctoral dissertation, University of Southampton, Southampton, UK). Retrieved from <https://eprints.soton.ac.uk/66542/>
- Baraldi, A. N., & Enders, C. K. (2010). An introduction to modern missing data analyses. *Journal of School Psychology*, 48(1), 5-37.
- Becker, A. (2016). L2 students' performance on listening comprehension items targeting local and global information. *Journal of English for Academic Purposes*, 24, 1-13.
- Bejar, I., Douglas, D., Jamieson, J., Nissan, S., & Turner, J. (2000). *TOEFL 2000 listening framework: A working paper* (TOEFL Monograph Series, Report No. 19). Princeton, NJ: Educational Testing Service.
- Belasco, S. (1967). The plateau; or the case for comprehension: The "concept" approach. *The Modern Language Journal*, 51(2), 82-88.
- Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman grammar of spoken and written English*. London, UK: Longman.
- Blass, L., & Bargo, M. (2013). *Pathways: Reading, writing, and critical thinking 2A*. Boston, MA: National Geographic Learning.
- Blewett, T. T. (1951). An experiment in the measurement of listening at the college level. *The Journal of Educational Research*, 44(8), 575-585.
- Bonk, W. J. (2000). Second language lexical knowledge and listening comprehension. *International Journal of Listening*, 14(1), 14-31.
- Bowen, T., Rogers, M., Taylore-Knowles, J., & Taylore-Knowles, S. (2014). *Open Mind: Level 1* (2nd ed.). London, UK: Macmillan Education.
- Bradlow, A. R., & Bent, T. (2008). Perceptual adaptation to non-native speech. *Cognition*, 106(2), 707-729.
- Brown, J. D., & Hudson, T. (2002). *Criterion-referenced language testing*. New York, NY: Cambridge University Press.



- Buck, G. (2001). *Assessing listening*. Cambridge, UK: Cambridge University Press.
- Butler, Y. G. (2007). How are nonnative-English-speaking teachers perceived by young learners? *TESOL Quarterly*, 41(4), 731-755.
- Cambridge English Language Assessment. (2016). *Principles of good practice: Research and innovation in language learning and assessment* [PDF file]. Retrieved from www.cambridgeenglish.org/images/22695-principles-of-good-practice.pdf
- Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Boston, MA: Houghton Mifflin Company.
- Canale, M. (1984). Considerations in the testing of reading and listening proficiency. *Foreign Language Annals*, 17(4), 349-357.
- Carr, N. T. (2011). *Designing and analyzing language tests*. Oxford, UK: Oxford University Press.
- Carroll, J. B. (1972). Defining language comprehension. In R. O. Freedle & J. B. Carroll (Eds.), *Language comprehension and the acquisition of knowledge* (pp. 1–29). New York, NY: John Wiley and Sons.
- Chaipapae, P. (2016). *English language teaching and testing in Thailand*. Unpublished manuscript, Department of English, Northern Arizona University, Arizona, USA.
- Chaipapae, P. (2018). Investigating linguistic features of scripted and semi-scripted spoken texts. *Corpus Linguistic Research*, 4, 49-68.
- Chalhoub-Deville, M. (1997). Theoretical models, assessment frameworks and test construction. *Language Testing*, 14(1), 3-22.
- Chalhoub-Deville, M. (2003). Second language interaction: Current perspectives and future trends. *Language Testing*, 20(4), 369-383.
- Chang, A. (n.d.). *Latin square design analysis* [PDF file]. Retrieved from http://gchang.people.yasu.edu/SPSSE/SPSS_LatinSquare_tire.pdf
- Chapelle, C. A., Enright, M. K., & Jamieson, J. M. (2008). *Building a validity argument for the Test of English as a Foreign Language™*. New York, NY: Routledge.
- Chen, J. (2009, November). Jane Chen: A warm embrace that saves lives [Video file]. Retrieved from https://www.ted.com/talks/jane_chen_a_warm_embrace_that_saves_lives
- Cheok, M. (2017, August 28). Online shopping is taking off in Southeast Asia [Online news]. *Bloomberg*. Retrieved from <https://www.bloomberg.com/>.



- Cheung, C., & Sung, M. (2015). Exposing learners to global Englishes in ELT: Some suggestions. *ELT Journal*, 69(2), 198-201.
- Choomthong, D. (2014). Preparing Thai students' English for the ASEAN Economic Community: Some pedagogical implications and trends. *Language Education and Acquisition Research Network Journal*, 7(1), 45-57.
- Clark, D. (2006). *Essential BULATS* [PDF file]. Retrieved from https://www.cambridge.org/download_file/697596/0/
- Clark, M. (2014). The use of semi-scripted speech in a listening placement test for university students. *Papers in Language Testing and Assessment*, 3(2), 1-26.
- Cobb, T. (n.d.). The Compleat Web VP (Version 2) [Computer software]. Retrieved from <https://www.lex tutor.ca/vp/comp/>
- Cope, L. (2009). *CB BULATS: Examining the reliability of a computer-based test* (Research Notes 38). Retrieved from <http://www.cambridgeenglish.org/images/23157-research-notes-38.pdf>
- Council of Europe. (2001). *Common European Framework of Reference for Languages: Learning, teaching, assessment*. Cambridge, UK: Cambridge University Press.
- Council of Europe. (2009). *Manual for relating language examinations to the Common European Framework of Reference for Languages (CEFR)*. Strasbourg, France: Author.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage Publications.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage Publications.
- Cronbach, L. J. (1949). *Essentials of psychological testing*. Oxford, UK: Harper.
- Cronbach, L. J., & Meehl, P. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52(4), 281-302.
- Crystal, D. (2003). *English as a global language* (2nd ed.). Cambridge, UK: Cambridge University Press.
- Crystal, D. (2008). *A dictionary of linguistics and phonetics* (6th ed.). Malden, MA: Blackwell Publishing.
- Davies, A., Brown, A., Elder, C., Hill, K., Lumley, T., & McNamara, T. (1999). *Dictionary of language testing*. Cambridge, UK: Cambridge University Press.
- Day, R. W., & Quinn, G. P. (1989). Comparisons of treatments after an analysis of variance in ecology. *Ecological Monographs*, 59(4), 433-463.



- Derwing, T. M., & Munro, M. J. (1997). Accent, intelligibility, and comprehensibility: Evidence from four L1s. *Studies in Second Language Acquisition*, 19(1), 1-16.
- Derwing, T. M., & Munro, M. J. (2009). Putting accent in its place: Rethinking obstacles to communication. *Language Teaching*, 42(4), 476-490.
- Diederich, P. B. (1973). *Short-cut statistics for teacher-made tests*. Princeton, NJ: Educational Testing Service.
- Dörnyei, Z. (with Taguchi, T.) (2010). *Questionnaires in second language research: Construction, administration, and processing* (2nd ed.). New York, NY: Routledge.
- Dunkel, P. (1991). Listening in the native and second/foreign language: Toward an integration of research and practice. *TESOL Quarterly*, 25(3), 431-457.
- Educational Testing Service. (2007). *TOEIC® listening score descriptors* [PDF file]. Retrieved from https://www.ets.org/Media/Tests/TOEIC/pdf/TOEIC_LR_Score_Desc.pdf
- Educational Testing Service. (2017a). *Test and score data summary for TOEFL iBT® Tests* [PDF file]. Retrieved from https://www.ets.org/s/toefl/pdf/94227_unlweb.pdf
- Educational Testing Service. (2017b). *2016 Report on test takers worldwide: The TOEIC listening and reading test* [PDF file]. Retrieved from https://www.ets.org/s/toEIC/pdf/ww_data_report_unlweb.pdf
- Educational Testing Service. (2017c). *Examinee handbook: For the updated version of the TOEIC® Listening and Reading test* [PDF file]. Princeton, NJ: Educational Testing Service.
- Educational Testing Service. (2018, March 6). Updates to the TOEIC® Listening and Reading test worldwide [Website]. Retrieved from https://www.ets.org/toEIC/listening_reading_updates
- EF English Live. (2013). How to write the perfect presentation [YouTube]. Retrieved from <https://www.youtube.com/watch?v=XVc3yRjYWSg>
- Field, A. (2013). *Discovering statistics using IBM SPSS Statistics* (4th ed.). Thousand Oaks, CA: Sage Publications.
- Field, J. (2008). *Listening in the language classroom*. Cambridge, UK: Cambridge University Press.
- Field, J. (2013). Cognitive validity. In A. Geranpayeh & L. Taylor (Eds.), *Examining listening: Research and practice in assessing second language listening* (pp. 77-151). Cambridge, UK: Cambridge University Press.
- Flowerdew, J. (1994). Research of relevance to second language lecture comprehension: An overview. In J. Flowerdew (Ed.), *Academic listening: Research perspectives* (pp. 7-29). Cambridge, UK: Cambridge University Press.



- Flowerdew, J., & Miller, L. (2005). *Second language listening: Theory and practice*. New York, NY: Cambridge University Press.
- Foley, J. A. (2005). English in ... Thailand. *RELC Journal*, 36(2), 223-234.
- Fulcher, G. (2010). *Practical language testing*. London, UK: Hodder Education.
- Galloway, N., & Rose, H. (2014). Using listening journals to raise awareness of global Englishes in ELT. *ELT Journal*, 68(4), 386-396.
- Gass, S., & Varonis, E. M. (1984). The effect of familiarity on the comprehensibility of nonnative speech. *Language Learning*, 34(1), 65-89.
- Geranpayeh, A. (2001). *CB BULATS: Examining the reliability of a computer-based test using test-retest method* (Research Notes 5). Retrieved from <http://www.cambridgeenglish.org/images/22644-research-notes-5.pdf>
- Goh, C. (1997). Metacognitive awareness and second language listeners. *ELT Journal*, 51(4), 361-369.
- Goh, C. (2008). Metacognitive instruction for second language listening development: Theory, practice and research implications. *RELC Journal*, 39(2), 188-213.
- Goh, C. C. M. (2000). A cognitive perspective on language learners' listening comprehension problems. *System*, 28(1), 55-75.
- Goh, C. C. M. (2014). Second language listening comprehension: Process and pedagogy. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language* (4th ed.) (pp. 72-89). Boston, MA: Heinle & Heinle Publishers.
- Gooskens, C. (2013). Experimental methods for measuring intelligibility of closely related language varieties. In R. Bayley, R. Cameron, & C. Lucas (Eds.), *The Oxford handbook of sociolinguistics* (pp. 195-213). New York, NY: Oxford University Press.
- Grabe, E., & Low, E. L. (2002). Durational variability in speech and the rhythm class hypothesis. In C. Gussenhoven & N. Warner (Eds.), *Laboratory Phonology 7* (pp. 515-546). New York, NY: Mouton de Gruyter.
- Greenall, S. (2003). *People like us: Exploring cultural values and attitudes*. Oxford, UK: Macmillan Education.
- Grice, H. P. (1975). Logic and conversation. In P. Cole, & J. Morgan (Eds.), *Studies in syntax and semantics III: Speech acts* (pp. 183-198). New York, NY: Academic Press.



- Hackett, E. (2002). *Revising the BULATS Standard Test* (Research Notes 8). Retrieved from University of Cambridge Local Examinations Syndicate website: www.cambridgeenglish.org/images/23120-research-notes-08.pdf.
- Hallgren, K. A. (2012). Computing inter-rater reliability for observational data: An overview and tutorial. *Tutorials in Quantitative Methods for Psychology*, 8(1), 23-34.
- Hansen, C., & Jensen, C. (1994). Evaluating lecture comprehension. In J. Flowerdew (Ed.), *Academic listening: Research perspective* (pp. 241-268). New York, NY: Cambridge University Press.
- Harding, L. (2008). Accent and academic listening assessment: A study of test-taker perceptions. *Melbourne Papers in Language Testing*, 13(1), 1-33.
- Harding, L. (2011). *Accent and listening assessment: A validation study of the use of speakers with L2 accents on an academic English listening test*. Frankfurt, Germany: Peter Lang.
- Harding, L. (2012). Accent, listening assessment and the potential for a shared-L1 advantage: A DIF perspective. *Language Testing*, 29(2), 163-180.
- Harding, L., & McNamara, T. (2018). Language assessment: The challenge of ELF. In J. Jenkins, W. Baker, & M. Dewey (Eds.), *The Routledge handbook of English as lingua franca* (1st ed.) (pp. 570-582). New York, NY: Routledge.
- Hatch, E., & Lazaraton, A. (1991). *The research manual: Design and statistics for applied linguistics*. Boston, MA: Heinle & Heinle Publishers.
- Hilliard, A. (2014). Spoken grammar and its role in the English language classroom. *English Teaching Forum*, 52(4), 2-13.
- Hudson, T. (2013). Criterion-referenced approach to language assessment. In A. J. Kunnan (Ed.), *The companion to language assessment* (pp. 561-577). Hoboken, NJ: John Wiley & Sons.
- Imhof, M., & Janusik, L. A. (2006). Development and validation of the Imhof-Janusik Listening Concepts Inventory to measure listening conceptualization differences between cultures. *Journal of Intercultural Communication Research*, 35(2), 79-98.
- In'nami, Y., & Koizumi, R. (2012). Factor structure of the revised TOEIC® test: A multiple-sample analysis. *Language Testing*, 29(1), 131-152.
- Jamieson, J. (2013). Defining constructs and assessment design. In A. J. Kunnan (Ed.), *The companion to language assessment* (pp. 1-17). Hoboken, NJ: John Wiley & Sons.
- Jamieson, J. M., Eignor, D., Grabe, W., & Kunnan, A. J. (2008). Frameworks for a new TOEFL. In C. A. Chapelle, M. K. Enright, & J. M. Jamieson (Eds.), *Building a validity argument for*



- the Test of English as a Foreign Language*TM (pp. 55-95). Cambridge, UK: Cambridge University Press.
- Jamieson, J., Jones, S., Kirsch, I., Mosenthal, P., & Taylor, C. (2000). *TOEFL 2000 framework: A working paper* (TOEFL Monograph Series Report No. 16). Princeton, NJ: Educational Testing Service.
- Jenkins, J. (2000). *The phonology of English as an international language: New models, new norms, new goals*. Oxford, UK: Oxford University Press.
- Jenkins, J. (2009). *World Englishes: A resource book for students* (2nd ed.). New York, NY: Routledge.
- Johnstone, C. J., Bottsford-Miller, N. A., & Thompson, S. J. (2006). *Using the think aloud method (cognitive labs) to evaluate test design for students with disabilities and English language learners* (Technical Report 44). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.
- Jones, N. (2000). *BULATS: A case study comparing computer based and paper-and-pencil tests* (Research Notes 3). Retrieved from <http://www.cambridgeenglish.org/images/23114-research-notes-03.pdf>
- Jung, E. H. (2003). The role of discourse signaling cues in second language listening comprehension. *The Modern Language Journal*, 87(4), 562-577.
- Kachru, B. B. (1992). World Englishes: Approaches, issues and resources. *Language Teaching*, 25(1), 1-14.
- Kachru, Y. (1985). *Applied linguistics and foreign language teaching: A non-western perspective*. (Report No. ED256175). Champaign, IL: University of Illinois at Urbana-Champaign. Retrieved from ERIC database.
- Kane, M. (1992). An argument-based approach to validity. *Psychological Bulletin*, 112(3), 527-535.
- Kane, M. (2013). Validating the uses and interpretations of test scores. *Journal of Educational Measurement*, 50(1), 1-73.
- Kane, M., Crooks, T., & Cohen, A. (1999). Validating measures of performance. *Educational Measurement: Issues and Practice*, 18(2), 5-17.
- Kang, O. (2010). Relative salience of suprasegmental features on judgments of L2 comprehensibility and accentedness. *System*, 38(2), 301-315.
- Kang, O., & Rubin, D. L. (2009). Reverse linguistic stereotyping: Measuring the effect of listener expectations on speech evaluation. *Journal of Language and Social Psychology*, 28(4), 441-456.



- Kang, O., Moran, M., & Thomson, R. (2019). The effects of international accents and shared first language on listening comprehension tests. *TESOL Quarterly*, 53(1), 56-81.
- Kang, O., Thomson, R. I., & Moran, M. (2018). Empirical approaches to measuring the intelligibility of different varieties of English in predicting listener comprehension. *Language Learning*, 68(1), 115-146.
- Kang, T., Gutierrez Arvizu, M. N., Chaipupae, P., & Lesnov, R. (2019). Reviews of academic English listening tests for non-native speakers. *International Journal of Listening*, 33(1), 1-38.
- Kaur, A., Young, D., & Kirkpatrick, R. (2016). English education policy in Thailand: Why the poor results? In R. Kirkpatrick, *English language education policy in Asia* (pp. 345-361). Basel, Switzerland: Springer International Publishing.
- Kim, T. (2008). Accentedness, comprehensibility, intelligibility, and interpretability of NNESTs. *The CATESOL Journal*, 20(1), 7-26.
- Kirkpatrick, A. (2003). English as an ASEAN lingua franca: Implications for research and language teaching. *Asian Englishes*, 6(2), 82-91.
- Kirkpatrick, A. (2010). Researching English as a lingua franca in Asia: The Asian Corpus of English (ACE) project. *Asian Englishes*, 13(1), 4-18.
- Koo, T. K., & Li, M. Y. (2016). A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *Journal of Chiropractic Medicine*, 15(2), 155-163.
- Kormos, J. (2011). Speech production and the cognition hypothesis. In P. Robinson (Ed.), *Second language task complexity: Researching the Cognition Hypothesis of language learning and performance* (pp. 39-59). Philadelphia, PA: John Benjamins.
- Kuehl, R. O. (2000). *Design of experiments: Statistical principles of research design and analysis*. Pacific Grove, CA: Duxbury/Thomson Learning.
- Lee, D., & Hatesohl, D. (1993, October). Listening: Our most used communication skill [Website]. Retrieved from <http://extension.missouri.edu/p/CM150>
- Levelt, W. J. M. (1993). Language use in normal speakers and its disorders. In G. Blanken, J. Dittmann, H. Grimm, J. C. Marshall, & C.-W. Wallesch (Eds.), *Linguistic disorders and pathologies* (pp. 1-15). Berlin, Germany: De Gruyter.
- Levis, J. M. (2005). Changing contexts and shifting paradigms in pronunciation teaching. *TESOL Quarterly*, 39(3), 369-377.
- Liao, C.-W. (2010). *Field study results for the redesigned TOEIC® Listening and Reading test* (Research Report No. TC-10-03). Princeton, NJ: Educational Testing Service.



- Lindemann, S. (2002). Listening with an attitude: A model of native-speaker comprehension of non-native speakers in the United States. *Language in Society*, 31(3), 419-441.
- Lippi-Green, R. (2012). *English with an accent: Language, ideology, and discrimination* (2nd ASEAN ed.). New York, NY: Routledge.
- Livingston, S. A., & Zieky, A. J. (1982). *Passing scores: A manual for setting standards of performance on educational and occupational tests*. Princeton, NJ: Educational Testing Service.
- Loewen, S., & Gonulal, T. (2015). Exploratory factor analysis and principal components analysis. In L. Plonsky (Ed.), *Advancing quantitative methods in second language research* (pp. 182-212). New York, NY: Routledge.
- Loewen, S., & Reinders, H. (2011). *Key concepts in second language acquisition*. New York, NY: Palgrave Macmillan.
- Lund, R. J. (1991). A comparison of second language listening and reading comprehension. *The Modern Language Journal*, 75(2), 196-204.
- Macaro, E., Vanderplank, R., & Graham, S. (2005). *A systematic review of the role of prior knowledge in unidirectional listening comprehension*. London, UK: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.
- Major, R. C., Fitzmaurice, S. F., Bunta, F., & Balasubramanian, C. (2002). The effects of nonnative accents on listening comprehension: Implications for ESL assessment. *TESOL Quarterly*, 36(2), 173-90.
- Major, R. C., Fitzmaurice, S. M., Bunta, F., & Balasubramanian, C. (2005). Testing the effects of regional, ethnic, and international dialects of English on listening comprehension. *Language Learning*, 55(1), 37-69.
- Manager Online. (2016, August 2). จ๊อบไทยเผยสถิติหางานของนักศึกษาป.ตรีจบใหม่ปี 2558 [JobThai reveals job statistics of Thai college graduates with bachelor's degrees]. *Manager Online*. Retrieved from <https://manager.co.th/home/>
- Matsuura, H., Chiba, R., Mahoney, S., & Rilling, S. (2014). Accent and speech rate effects in English as a lingua franca. *System*, 46, 143-150.
- Mauranen, A. (2018). Conceptualising ELF. In J. Jenkins, W. Baker, & M. Dewey (Eds.), *The Routledge handbook of English as lingua franca* (1st ed.) (pp. 7-24). New York, NY: Routledge.
- Maycock, L. (2007). *Using simulation to inform item bank construction for the BULATS computer adaptive test* (Research Notes 27). Retrieved from University of Cambridge Local



- Examinations Syndicate website: <http://www.cambridgeenglish.org/images/23146-research-notes-27.pdf>
- McGraw, K. O., & Wong, S. P. (1996). Forming inferences about some intraclass correlation coefficients. *Psychological Methods, 1*(1), 30-46.
- McKenzie, R. M., Kitikanan, P., & Boriboon, P. (2016). The competence and warmth of Thai students' attitudes towards varieties of English: The effect of gender and perceptions of L1 diversity. *Journal of Multilingual & Multicultural Development, 37*(6), 536-550.
- McNeish, D. (2018). Thanks Coefficient Alpha, we'll take it from here. *Psychological Methods, 23*(3), 412-433.
- Mecartty, F. H. (2000). Lexical and grammatical knowledge in reading and listening comprehension by foreign language learners of Spanish. *Applied Language Learning, 11*(2), 323-348.
- Messick, S. (1975). The standard problem: Meaning and values in measurement and evaluation. *American Psychologist, 30*(10), 955-966.
- Messick, S. (1980). Test validity and the ethics of assessment. *American Psychologist, 35*(11), 1012-1027.
- Messick, S. (1994). The interplay of evidence and consequences in the validation of performance assessments. *Educational Researcher, 23*(2), 13-23.
- Miller, M. D., Linn, R. L., & Gronlund, N. E. (2013). *Measurement and assessment in teaching* (11th ed.). Upper Saddle River, NJ: Pearson Education.
- Ministry of Commerce. (2016). *Thailand Trading Report* [PDF file]. Retrieved from <http://www2.ops3.moc.go.th/>
- Ministry of Education. (1996). *The 1996 English Curriculum*. Bangkok, Thailand: Ministry of Education.
- Ministry of Education. (2008). *The Basic Education Core Curriculum B.E. 2551* (A.D. 2008) [Announcement]. Retrieved from <http://academic.obec.go.th/web/news/d/302>
- Morley, J. (2001). Aural comprehension instruction: Principles and practices. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language* (3rd ed.) (pp. 69-85). Boston, MA: Heinle & Heinle Publishers.
- Mueller, D. J. (1986). *Measuring social attitudes: A handbook for researchers and practitioners*. New York, NY: Teachers College Press.
- Mueller, G. A. (1980). Visual contextual cues and listening comprehension: An experiment. *The Modern Language Journal, 64*(3), 335-340.



- Munro, M. J., & Derwing, T. M. (1995a). Foreign accent, comprehensibility, and intelligibility in the speech of second language learners. *Language Learning*, 45(1), 73-97.
- Munro, M. J., & Derwing, T. M. (1995b). Processing time, accent, and comprehensibility in the perception of native and foreign-accented speech. *Language and Speech*, 38(3), 289-306.
- Munro, M. J., & Derwing, T. M. (1998). The effects of speaking rate on listener evaluations of native and foreign-accented speech. *Language Learning*, 48(2), 159-182.
- Myers, J. (2015, October 13). Which language are most widely spoken? [Online forum]. Retrieved from <https://www.weforum.org/agenda/2015/10/which-languages-are-most-widely-spoken/>
- Nation, I. S. P., & Newton, J. (2009). *Teaching ESL/EFL listening and speaking*. New York, NY: Routledge.
- Nichols, R. G. (1947). Listening: Questions and problems. *Quarterly Journal of Speech*, 33(1), 83-86.
- Nolin, M. J., & Chandler, K. (1996). *Use of cognitive laboratories and recorded interviews in the national household education survey* (Technical Report NCES 96-332). Washington, DC: U.S. Government Printing Office.
- Nunan, D. (1998). Approaches to teaching listening in the language classroom. In *Proceedings of the 1997 Korea TESOL Conference* (pp. 1-10). Seo-Taejon, Korea: Korea Teachers of English to Speakers of Other Languages.
- Ockey, G. J., & French, R. (2016). From one to multiple accents on a test of L2 listening comprehension. *Applied Linguistics*, 37(5), 693-715.
- Ockey, G. J., & Wagner, E. (2018). *Assessing L2 listening: Moving towards authenticity*. Philadelphia, PA: John Benjamins Publishing Company.
- Oehlert, G. W. (2000). *A first course in design and analysis of experiments*. New York, NY: W. H. Freeman.
- Office of the Higher Education Commission. (2016). นโยบายการยกระดับมาตรฐานภาษาอังกฤษในสถาบันอุดมศึกษา [English proficiency enhancement policy in higher educational institutions] [Announcement]. Retrieved from http://www.mua.go.th/users/bhes/front_home/Data%20Bhes_2559/04052559.pdf
- Oliveri, M. E., & Tannenbaum, R. J. (2017). *Insights into using TOEIC® test scores to inform human resource management decisions* (Research Report No. RR-17-48). Princeton, NJ: Educational Testing Service.
- Ortmeyer, C., & Boyle, J. P. (1985). The effect of accent differences on comprehension. *RELC Journal*, 16(2), 48-53.



- Oxenham, J. (2016, July 6). The 15 most spoken language in the world [Online forum]. Retrieved from <https://www.rocketlanguages.com/blog/the-15-most-spoken-languages-in-the-world/>.
- Pearson, E. S., & Hartley, H. O. (1962). *Biometrika tables for statisticians*. New York, NY: Cambridge University Press.
- Peterson, B., & Barney, H. (1952). Control methods used in a study of the vowels. *Journal of the Acoustical Society of America*, 24(2), 175–184.
- Plonsky, L., & Oswald, F. L. (2014). How big is “Big”? Interpreting effect sizes in L2 research. *Language Learning*, 64(4), 878-912.
- Powers, D. E. (2010). *Validity: What does it mean for the TOEIC® tests?* (Research Report TC-10-01). Princeton, NJ: Educational Testing Service.
- Powers, D. E., & Powers, A. (2015). The incremental contribution of TOEIC® Listening, Reading, Speaking, and Writing tests to predicting performance on real-life English language tasks. *Language Testing*, 32(2), 151-167.
- Powers, D. E., Kim, H.-J., & Weng, V. Z. (2008). *The redesigned TOEIC® Listening and Reading Test: Relations to test-taker perceptions of proficiency in English* (Research Report RR-08-56). Princeton, NJ: Educational Testing Service.
- Prapphal, K. (2008). Issues and trends in language testing and assessment in Thailand. *Language Testing*, 25(1), 127-143.
- Randomized complete block designs (RCBDs) and Latin squares [PDF file]. (n.d.). Retrieved from <http://www.unh.edu/halelab/BIOL933/Labs/Lab5.pdf>
- Richards, J. (1983). Listening comprehension: Approach, design, procedure. *TESOL Quarterly*, 17(2), 219-240.
- Richards, J. C., & Bohlke, D. (2012). *Four corners*. New York, NY: Cambridge University Press.
- Rost, M. (2005). L2 listening. In E. Hinkel (Ed.), *Handbook of research on second language teaching and learning* (pp. 503–528). Mahwah, NJ: Lawrence Erlbaum.
- Rost, M. (2011). *Teaching and researching listening* (2nd ed.). Harlow, UK: Pearson Education Limited.
- Rubin, D. B. (1976). Inference and missing data. *Biometrika*, 63(3), 581-592.
- Rubin, D. L. (1992). Nonlanguage factors affecting undergraduates’ judgments of nonnative English-speaking teaching assistants. *Research in Higher Education*, 33(4), 511-531.
- Schedl, M. (2010). *Background and goals of the TOEIC® Listening and Reading test redesign Project* (Research Report TC-10-02). Princeton, NJ: Educational Testing Service.



- Seidlhofer, B. (2011). *Understanding English as a lingua franca*. Oxford, UK: Oxford University Press.
- Shepard, L. (1993). Evaluating validity. *Review of Research in Education*, 19(1), 405-450.
- Shohamy, E., & Inbar, O. (1991). Validation of listening comprehension tests: The effect of text and question type. *Language Testing*, 8(1), 23-40.
- Smith, L. E., & Bisazza, J. A. (1982). The comprehensibility of three varieties of English for college students in seven countries. *Language Learning*, 32(2), 259-269.
- Smith, L. E., & Nelson, C. L. (1985). International intelligibility of English: Directions and resources. *World Englishes*, 4(3), 333-342.
- Stoynoff, S. (2009). Recent developments in language assessment and the case of four large-scale tests of ESOL ability. *Language Teaching*, 42(1), 1-40.
- Subkoviak, M. J. (1988). A practitioner's guide to computation and interpretation of reliability indices for mastery tests. *Journal of Educational Measurement*, 25(1), 47-55.
- Suppatkul, K. (2009). *Effects of teachers' English accents on listening comprehension ability of upper secondary school students* (Master's thesis, Chulalongkorn University, Bangkok, Thailand). Retrieved from <http://library.car.chula.ac.th/>
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston, MA: Pearson.
- Tannenbaum, R. J., & Wylie, E. C. (2008). *Linking English-language test scores onto the Common European Framework of Reference: An application of standard-setting methodology* (Research Report No. RR-08-34). Princeton, NJ: Educational Testing Service.
- Tauroza, S., & Luk, J. (1997). Accent and second language listening comprehension. *RELC Journal*, 28(1), 54-71.
- Taylor, L., & Geranpayeh, A. (2011). Assessing listening for academic purposes: Defining and operationalising the test construct. *Journal of English for Academic Purposes*, 10(2), 89-101.
- U.S. News & World Report. (2017). Best global universities in Thailand [Website]. Retrieved from <https://www.usnews.com/education/best-global-universities/thailand>
- University of Cambridge Local Examinations Syndicate. (2010). *Recognition* [PDF file]. Retrieved from <http://www.vantage-siam.com/bulats.php?contantid=4&PageShow=>



- University of Cambridge Local Examinations Syndicate. (2016). *BULATS: Guide for candidates* [PDF file]. Retrieved from www.cambridgeenglish.org/images/347637-bulats-guide-for-candidates.pdf
- University of Cambridge Local Examinations Syndicate. (2018a, May 8). Our heritage [Website]. Retrieved from <http://www.cambridgeassessment.org.uk/about-us/who-we-are/our-heritage/>
- University of Cambridge Local Examinations Syndicate. (2018b, May 8). About the test: Test format [Website]. Retrieved from <http://www.cambridgeenglish.org/exams-and-tests/bulats/test-format/>
- University of Cambridge Local Examinations Syndicate. (2018c, May 8). Results [Website]. Retrieved from <http://www.cambridgeenglish.org/exams-and-tests/bulats/results/>
- University of Cambridge Local Examinations Syndicate. (2018d, May 8). BULATS [Website]. Retrieved from <http://www.cambridgeenglish.org/exams-and-tests/bulats/>
- Urquhart, A. H., & Weir, C. J. (1998). *Reading in a second language: Process, product and practice*. London, UK: Longman.
- van Dijk, T., & Kintsh, W. (1983). *Strategies of discourse comprehension*. New York, NY: Academic Press.
- Vandergrift, L. (2007). Recent developments in second and foreign language listening comprehension research. *Language Teaching*, 40(3), 191-210.
- Vandergrift, L., & Goh, C. C. M. (2012). *Teaching and learning second language listening: Metacognition in action*. New York, NY: Routledge.
- Vandergrift, L., Goh, C., Mareschal, C., & Tafaghodtari, M. H. (2006). The Metacognitive Awareness Listening Questionnaire (MALQ): Development and validation. *Language Learning*, 56(3), 431-462.
- Wagner, E. (2004). A construct validation study of the extended listening sections of the ECPE and MELAB. *Spain Fellow Working Papers in Second or Foreign Language Assessment*, 2, 1-25.
- Wagner, E. (2014). Using unscripted spoken texts in the teaching of second language listening. *TESOL Journal*, 5(2), 288-311.
- Wagner, E. (2016). Authentic texts in the assessment of L2 listening ability. In J. Banerjee & D. Tsagari (Eds.) *Contemporary second language assessment* (pp. 103-123). New York, NY: Bloomsbury Academic.
- Wagner, E., & Wagner, S. (2016). Scripted and unscripted spoken texts used in listening tasks on high-stakes tests in China, Japan, and Taiwan. In V. Aryadoust & J. Fox (Eds.) *Current*



- trends in language testing in the Pacific Rim and the Middle East: Policies, analyses, and diagnoses* (pp. 103-123). Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Watson Todd, R., & Shih, C.-M. (2013). Assessing English in Southeast Asia. In A. J. Kunnan (Ed.), *The companion to language assessment* (pp. 1681-1689). New York, NY: John Wiley & Sons, Inc.
- Whitely, S. E. (1983). Construct validity: Construct representation versus the nomothetic span. *Psychological Bulletin*, 93(1), 179-187.
- Wongsantativanich, M. (2016). *01355112 Foundation English II*. Unpublished coursebook, Department of Foreign Languages, Faculty of Humanities, Kasetsart University, Bangkok, Thailand.
- Woodford, P. E. (1982). The Test of English for International Communication (TOEIC). In C. Brumfit (Ed.), *English for international communication* (pp. 61-72). Oxford, UK: Pergamon Press.
- Xiao, H. (2014). Dialect group of the Chinese language [Website]. Retrieved from <http://www.oxfordbibliographies.com/view/document/obo-9780199920082/obo-9780199920082-0024.xml>
- Xue, X., & Lee, J.- K. (2014). The effects of non-native listeners' L1 background and L2 proficiency on the perception of foreign accent for pitch-manipulated native and Chinese accented English speech. *Linguistic Research*, 31(2), 275-303.
- Yoo, H., & Manna, V. F. (2017). Measuring English language workplace proficiency across subgroups: Using CFA models to validate test score interpretation. *Language Testing*, 34(1), 101-126.