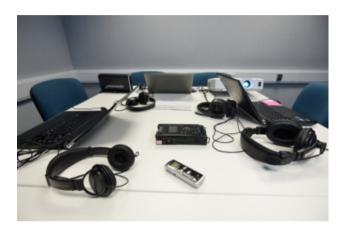# Research Briefing No. 28

Effects of international students' first language backgrounds on their speech productions

Key findings and implications for Policy Makers

Foreign accents tend to receive a disproportionate amount of attention because they are so noticeable to listeners. For example, previous research has shown that listeners with no linguistics training can tell native and nonnative speakers apart after listening to a language they do not understand, backwards speech, or a sound bite that is just 0.03 seconds long. However, most applied linguists agree that what really counts for oral communication is not accent reduction or sounding like a native speaker, which for most adult learners is an unrealistic goal. Rather, the consensus view is that the goal of pronunciation teaching should be to help nonnative speakers be understandable to their interlocutors (i.e., the other people involved in the information exchange) and able to get their message across. This study confirms that someone who sounds different from a native speaker is not necessarily communicating ineffectively. In fact, a whole host of factors, such as pronunciation, grammar, and vocabulary, often contribute to the successful transmission of a message, and the speaker's native language background plays a part. Whereas for Chinese learners of English, vowel/consonant errors did affect their understandability, for Hindi and Urdu speakers, it was vocabulary choice and grammatical structures (and not accent features) that added value to their ability to be understood.

The research

Forty-five international university students from Chinese (15), Hindi/Urdu (15) or Farsi (15) first language backgrounds studying at a Canadian university were audio recorded telling a picture story in English. Next, 10 native English listeners evaluated the first 30 seconds of each speaker's story using slider scales on a computer for accentedness, or how different the speaker sounds from a native speaker of English (1 = heavily accented, 1,000 = no accent at all), and comprehensibility, or how easy the speech is to understand (1 = hard to understand, 1,000 = easy to understand). They also evaluated either the recordings or written transcripts of the speech for 10 additional linguistic variables drawn from the domains of pronunciation, fluency, vocabulary, grammar, and discourse using separate slider scales. Statistical analyses revealed first language effects on the speech ratings.

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Significant correlations (r) between speech measures & comprehensibility by group

		Chinese	Hindi-Urdu	Farsi
Pronunciation	Segmentals	.71		
	Word stress			
	Intonation			
	Rhythm			
	Speech rate			
Lexicogrammar	Lex. appropriateness		.77	
	Lex. richness		.73	
	Grammar accuracy			
	Grammar complexity		.71	
	Discourse richness		.72	

Significant correlation: α = .0025

Pearson correlations (r) between the 10 rated linguistic categories and comprehensibility by student first language group

Research design

After determining that listeners were sufficiently consistent in their judgments for further analyses, a two-way analyses of variance ANOVA), with group (Chinese, Hindi-Urdu, Farsi) as the between-subjects factor and overall listener rating (accentedness, comprehensibility) as the within-subjects revealed that the Chinese speakers were judged to be more accented than the Farsi speakers and as less comprehensible than all groups, with no differences detected between the Farsi and Hindi-Urdu speakers. The next analysis (Principal Component Analysis), which examined the clustering between the 10 additional linguistic variables and both accentedness and comprehensibility, revealed that accentedness was linked to pronunciation for all language groups. Conversely, comprehensibility cuts across a much wider range of linguistic domains than accent, with pronunciation and lexical-grammar dimensions differentially contributing to comprehensibility ratings depending on the first language group.

Further information

Article upon which the research briefing is based

Crowther, D., Trofimovich, P., Saito, K., & Isaacs, T. (2015, in press).Second language comprehensibility revisited: Investigating the effects of learner background. *TESOL Quarterly*.

Related publications that are part of the same research programme

Isaacs, T., & Trofimovich, P. (2012). "Deconstructing" comprehensibility: Identifying the linguistic influences on listeners' L2 comprehensibility ratings. *Studies in Second Language Acquisition*, *34*, 475–505.

Saito, K., Trofimovich, P., & Isaacs, T. (2015, in press). Second language speech production: Investigating linguistic correlates of comprehensibility and accentedness for learners at different ability levels. *Applied Psycholinguistics*

Trofimovich, P. & Isaacs, T. (2012). Disentangling L2 comprehensibility from accentedness. *Bilingualism: Language and Cognition*, *15*, 905–916.

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