

L2 speech perception: An effect of listener's L1 background on comprehensibility judgement

Shuhei Kudo

Graduate School of Education, Waseda University

w.shuukudo@gmail.com

Abstract

In the recent research and pedagogical fields of second language (L2) teaching, comprehensibility (i.e., ease of understanding) of L2 speech has been regarded as a realistic goal for L2 learners and emphasized for them to accomplish effective communication (Derwing & Munro, 2009; Saito, Webb, Trofimovich & Issacs, 2016). Although previous empirical studies on L2 speech comprehensibility rating mainly used native speaker's judgement, few studies adopted non-native speaker's benchmark (i.e., various L1 rater's judgement). In this study, a variety of English users who have various L1 background (Japanese, Korean, Chinese) rated comprehensibility of Japanese-accented English speech to investigate whether there is a rating difference among rater groups. The results showed that the comprehensibility judgement scores among three types of raters were significantly different and Japanese raters evaluated Japanese English speech more leniently than Korean and Chinese raters did. The key findings of this study were that L2 accented speech comprehensibility rating by non-native listener was influenced by listener's L1 background, and that a shared-L1 condition between speaker and listener had a positive effect on L2 speech comprehension.

Keywords

Comprehensibility, L2 speech perception, L1 background, shared-L1 benefit on L2 comprehension.

Introduction

Many L2 researchers and practitioners put an emphasis on setting a realistic and achievable goal for L2 speakers such as comprehensible speech rather than nativelike speech for successful communication because it was clear that adult L2 learners had difficulty in achieving

a nativelike pronunciation based on previous SLA research knowledge (Derwing & Munro, 2009; Levis, 2005). Furthermore, in the recent globalized situation in the world, many various L1 speakers have used English as an international language (EIL). Therefore, comprehensible speech to non-native speakers of English is the first priority in this EIL situations. However, most previous research focused on comprehensible speech to native speaker of English. In order to bridge this research gap, the current study used non-native speakers benchmark for English speech comprehensibility rating.

1 Theoretical background

1.1 Comprehensibility

Comprehensibility was operationally defined as a measure of "listeners' perceived ease or difficulty of understanding L2 speech" through the use of scalar ratings (Derwing & Munro, 2009; Trofimovich & Isaac, 2012).

1.2 L2 comprehension rating by non-native listeners

Some previous empirical studies investigated an effect of listener's L1 on L2 comprehension. Bent and Bradlow (2003) showed a shared-L1 condition between speaker and listener can have a facilitating effect on L2 accented speech comprehension because a L1 matching pair can share knowledge of their L1 and interlanguage's phonetic features. This study focused on L2 speech intelligibility rating as a measure of L2 comprehension. However, few studies have tested this potential shared-L1 benefit for L2 comprehensibility rating.

2 Research question

In order to fill these research gaps, the current study investigates the following two research questions.

- (1) Is there any difference of comprehensibility rating score according to rates' L1 background?
- (2) Do L1 Japanese raters judge Japanese accented English more leniently?

3 Method

3.1 Speakers and a speech task

56 Japanese learners of English in a private university in Japan participated as a speaker. Their English speeches were elicited by an information-carrying task to mention recent challenging events.

3.2 Raters and a rating task

17 non-native English speakers in a private university participated as a rater, who used English daily and had different L1 background (six Japanese, six Korean and five Chinese). They listened to the 56 Japanese accented English speeches and evaluate them in terms of comprehensibility with 9-point Likert scale (Derwing & Munro, 2009).

3.3 Analysis

Repeated measures analysis of variance (RM ANOVA) with one within-subjects factor (rater groups [Japanese, Korean, Chinese]) was conducted to examine whether there is a significant difference among three rater groups' rating scores.

4 Results

The results of RM ANOVA showed that the effect of rater type on comprehensibility rating score was statistically significant at the .01 level, $F(1.75, 96.16) = 13.32, p < .001, \eta^2 = .195$. Bonferroni-adjusted comparisons (see table 1) indicated that the mean scores between Japanese raters ($M = 5.32$) and Korean raters ($M = 5.05$) had significant difference ($p = .015$) and those between Japanese raters and Chinese raters also did so ($p < .001$) while those between Korean raters and Chinese raters had no significant difference ($p = .075$). The results are summarized in table 1 and figure 1 below.

Table 1: Pairwise comparison among rater types

R type (I)	R type (J)	Mean Difference (I-J)	P^b
J rater	K rater	.271	.015*
	C rater	.485	< .001**
K rater	C rater	.214	.075

Note: R type = rater type. J rater = Japanese rater. K

rater = Korean rater. C rater = Chinese rater.
b indicates adjustment for multiple comparison: Bonferroni. * indicates $p < .05$. ** indicates $p < .01$.

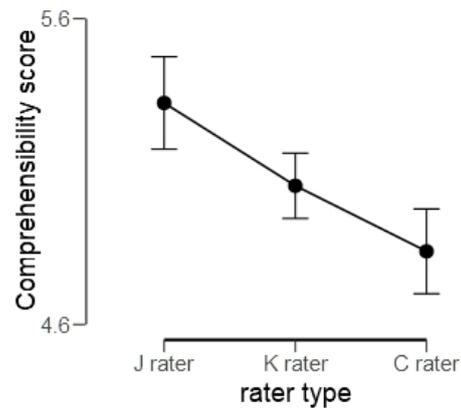


Figure 1: The difference of the mean scores of comprehensibility rating among three types of rater groups. Error bars indicate 95% Confidential Interval.

5 Discussion and conclusion

The results indicated that L1 Japanese raters evaluated Japanese accented English speech more leniently than L1 Korean and L1 Chinese raters did because they shared same L1, which contributed to their accented speech comprehension. These results supported the knowledge of previous study (Bent & Bradlow, 2003) and revealed that a shred-L1 benefit can be applied to L2 comprehensibility rating.

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