



Research article

# English Majors' Acceptability and Intelligibility of Six English Phonological Varieties

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## Abstract

This paper reports an empirical study on the intelligibility of American English, British English, Indian English, South African English, French English and China English, aiming to explore to what extent each English variety is acceptable and intelligible to the English majors and find out factors affecting them. The primary data are derived from tests and questionnaires, conducted on a sample of 200 English majors. The findings reveal that there is a significant difference of intelligibility between Englishes from the Inner Circle, the Outer Circle and the Expanding Circle. Learners show a high acceptability to the Inner Circle Englishes. China English is the most intelligible one. The amount of exposure and familiarity are found to be factors contributing to higher intelligibility. Phonological problems that contribute to lower intelligibility are speed, clarity, fluency and pauses. From the language learning and teaching perspective, this makes it pedagogically relevant to acquaint learners with a variety of pronunciations instead of one or two standard varieties. **Copyright © WJER, all rights reserved.**

**Keywords:** English majors, English phonological varieties, acceptability, intelligibility

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## 1. Introduction

English as an international language of communication is used by a growing number of people of different mother tongues and diverse cultural backgrounds. As a result, English has shown some distinct regional characteristics and resulted in different varieties in phonology. As a consequence of colonization and the expansion of the British Empire, English has come to be utilized as a second language in a number of countries, such as India and Canada (Jenkins, 2009). English has also spread to many countries where English has no historical roots and it



does not be viewed as an official language within the society due to the economic, political and cultural influence of countries where English as their mother tongue in a globalised world, especially the United States (Kachru, 1992). English in those countries are used as a foreign language which only taught in class or for specialized use. For demographic reasons, the number of English as second language (ESL) and English as foreign language (EFL) speakers who are already fluent and competent in English is gradually larger than the native speakers of English when it comes to the proportion of English speakers worldwide (Crystal, 2003). Therefore, it is believed that the English today should not only be viewed as the language belongs to its native speakers but as a lingua franca whose norms are determined and shaped by all its speakers all over the world who consider English as a communication tool, yielding a fluid, innovative and adaptive language system of English (Seidlhofer, 2012). In this regard, Kachru (1992) conceived the idea of three concentric circles of the language, which are the Inner Circle, the Outer Circle, and the Expanding Circle. Successful communication between native and non-native speakers of English greatly depends on the mutual understanding of other's speech. Smith & Nelson (1985) made a thorough explanation of intelligibility and distinguished it from comprehensibility and interpretability. Intelligibility focuses on utterance recognition; comprehensibility expresses utterance meaning, while interpretability denotes the meaning behind utterance. As far as the China context is concerned, Gui (2015) found the problem that in China English is just one of the subjects in class and the exposure of English is limited in several hours each week. Wen (2003) pointed out that intelligibility was a key point in the globalization and localization of English, the construction of localization must be consistent with the intelligibility. Therefore, it can be found that the study of intelligibility can promote the development of English as lingua franca in China.

According to three concentric circles model, six English phonological varieties are chosen as the samples and they are: American English (AmE) & British English (BrE) from the inner circle, Indian English (InE) & South African English (SAE) from the outer circle and China English (ChE) & French English (FrE) from the expanding circle. For these six English phonological varieties, people take it for granted that English from the inner circle may have a higher intelligibility, comprehensibility or even interpretability, and then English from the outer circle and the least intelligible one is from the expanding circle. Experiments by Derwing and Munro (1997) in which native speakers of English were asked to orthographically transcribe Cantonese, Japanese, Polish and Spanish-accented English phrases showed that a strong accent does not necessarily disrupt speakers' full intelligibility in terms of word and utterance recognition. Thus the hypothesis that speech of native speakers is more intelligible than non-native speakers is overturned. Zhang (2015) studied the intelligibility of English spoken by Chinese University students. The results revealed that although the speakers' English had accents, it was intelligible to international listeners. Therefore, whether the intelligibility of China English is higher than other five English varieties, which is a question deserving our attention.

What's more, many studies focused on the preference to the mainstream English and some researchers analyzed different English phonological varieties from the theoretical perspective, while few empirical studies are seen in literature. The purpose of this study is to investigate English majors' intelligibility of different phonological varieties. More specifically, this study aims to explore to what extent each English variety is acceptable and intelligible to the English majors and find out factors affecting the intelligibility. Practically, the findings of this study, hopefully, can improve Chinese English majors' awareness of the different English phonological varieties. Also, the study may yield findings contributing to English Language Teaching (ELT) in China by attempting to reveal how language teaching can be adapted to suit the needs of international communication based on the characteristics of the local context.

## **2. Materials and Method**

In the study, 100 freshmen and sophomores majoring in English and 100 junior and senior English majors in comprehensive key universities in Jiangsu province were investigated, aged between 19 and 24.



Questionnaire and tests are used to study the intelligibility and factors. Biographical questions are provided to get the insight of age, gender, grade, the extent of exposure in reference to the varieties of English and the familiarity with each variety of English.

The speech samples are all of the same difficult level selected from the recordings in the book *Voices around the World* (Zhu & Tang, 2011). The speech is shortened into approximately the same length. Each sample lasts for about one minute and ranges from 163 to 184 words. The samples include topics such as Women's Day, study life in American, the Internet, hotel check in, opening ceremony and special festival. Each speech sample is played twice.

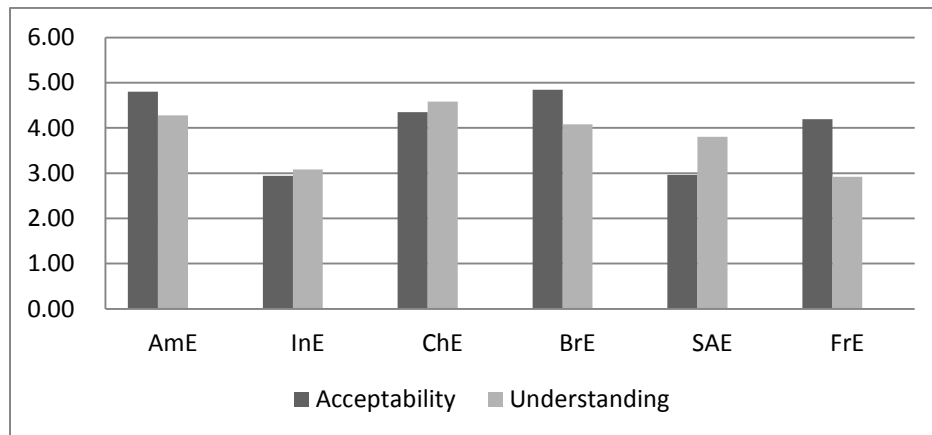
Partial dictation questions are developed to test the intelligibility of the speech samples. Each dictation question includes ten blanks. Then, two questions are provided to judge each variety's acceptability and understanding, using a five-point Likert scale. For example, the statement is 'I accept/understand American English.' A response of 5 indicates 'strongly agree' and a response of 1 indicates 'strongly disagree.' The following questionnaire items are used to assess the listener's general impression, studying the speaker's factors, which referred to the research conducted by Matsuura et al. (1999). There are eight discrete point questions regarding speech quality, i.e., accent, speed, clarity, intonation, fluency, grammar and vocabulary, vocal intensity and pause. They are also on a five-point scale.

The study took place during regular weekly class hours using a part of the usual class time, 45minutes. Data analysis is conducted with SPSS 22.0. Pearson's correlations are used to reveal the relationships between variables like factors.

### **3. Results and Discussion**

#### **3.1. Acceptability and understanding ratings of Six English Phonological Varieties**

Figure 1 shows the mean of acceptability and understanding ratings of six English phonological varieties. From a general perspective, the order of acceptability of the three circles is the Inner Circle> the Expanding Circle> the Outer Circle. Though China English is the most understandable one, the overall ranking of understanding is also the Inner Circle> the Expanding Circle> the Outer Circle, similar to the acceptability. Maybe surprisingly, just because some English phonological varieties such as Indian English and South Arabic English which belong to the Outer circle, as well as China English in the Expanding Circle appearing higher understanding scores does not necessarily mean that they also have higher acceptability. Overall, results show that American English, British English and China English lie in the top three acceptability and understanding rankings, followed by South African English, French English and then Indian English.



**Figure 1.** Mean of acceptability and understanding ratings of six English phonological varieties

### 3.2. Intelligibility scores and its correlation with understanding ratings

How much the learners understand the six speech varieties under investigation are encapsulated in two scales: subjectively, the understanding ratings which showed above and objectively, the multiple choice scores which reflects the overall intelligibility. Since understanding ratings and intelligibility scores are two different types of statistics, so the nominalized data are used for analysis.

	Understanding Ratings		Intelligibility Scores		
	M	SD	M	SD	r
AmE	4.28	0.91	4.31	1.4	0.35*
InE	3.08	0.84	2.11	1.8	0.31
ChE	4.58	0.98	4.65	1.02	0.40*
BrE	4.08	0.82	4.28	0.82	0.32*
SAE	3.8	0.8	3.27	1.03	0.30*
FrE	2.92	1.13	3.38	0.92	0.26

\*p<0.05

**Table 1.** The understanding ratings and the intelligibility scores

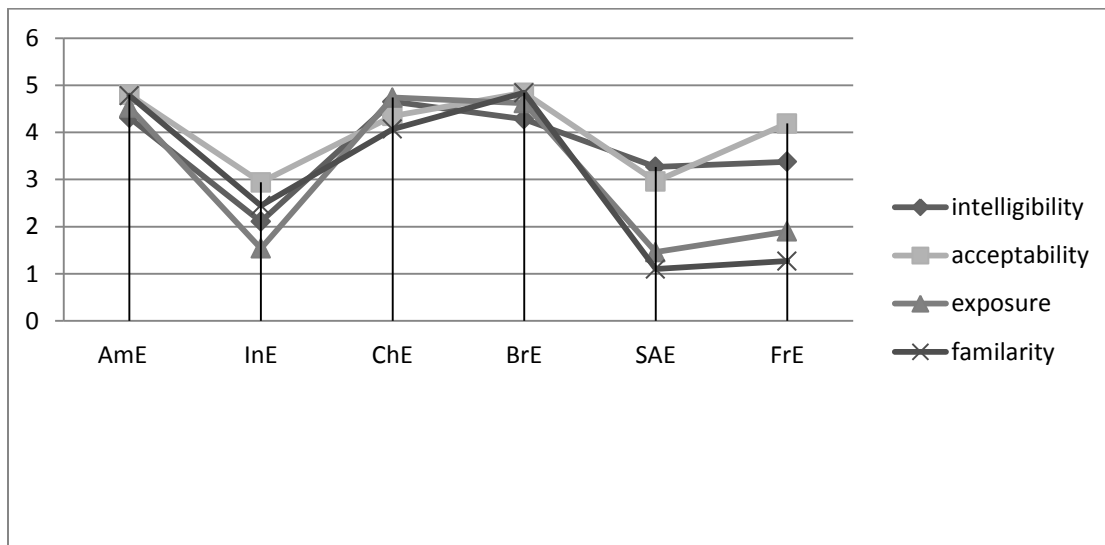
Table 1 shows the understanding ratings and multiple choice scores of each English variety. China English, with the mean rating of 4.58, is the most understandable one, followed by American English, British English, South Arabic English, Indian English and then French English. The ranking of intelligibility scores, however, does not exactly match the above order. Although rated the least understandable one, French English, with the average scores of 6.76, is not valued as the least intelligible one. The English variety found most intelligible is China English, followed by American English, British English, French English, South African English and Indian English. As the result of correlation studies, it is found that understanding ratings and intelligibility scores correlate significantly for four English phonological varieties (AmE, ChE, BrE, SAE).



### 3.3. Factors Affecting Intelligibility

Two groups of factors are found in this study: listeners' factors & speakers' factors. The former includes the amount of time of exposure to English varieties and familiarity with English varieties, while the latter includes speakers' vocal features, such as clarity, speed, intonation and etc.

Figure 2. compares the nominalized mean score of intelligibility with the average rating of acceptability when taking into account subjects' rating of exposure and familiarity to each English variety. It shows that subjects' have high exposure and familiarity to American English, British English and China English; therefore, the intelligibility and acceptability of these three accents are also high. More surprisingly, though French English has lower exposure and familiarity, the intelligibility and acceptability are higher than South African English and Indian English which relatively have the similar exposure and familiarity.



**Figure 2.** The relationship among intelligibility, acceptability, exposure and familiarity

Table 2. shows the correlations between the average scores of three tests and speakers' vocal features. The findings of Pearson's correlations show that the overall intelligibility significantly correlated with the ratings for speed, clarity, fluency and pauses of all six English phonological varieties. Among them, the correlations between clarity and overall intelligibility are high and correlation coefficients are  $p_{\text{clarity-French}}=0.416$ ,  $p_{\text{clarity-South African}}=0.482$ ,  $p_{\text{clarity-American}}=0.607$ ,  $p_{\text{clarity-Indian}}=0.635$ ,  $p_{\text{clarity-China}}=0.654$ ,  $p_{\text{clarity-British}}=0.684$ . Speed, fluency and pauses correlate weakly with the overall intelligibility. That is to say, the more clearly the speakers present, the higher the overall intelligibility of the specific English phonological variety. At the same time, some vocal features such as accent, speed, fluency and pauses also have effects on the overall intelligibility. For more than half of the speakers, accent, intonation, and grammar/vocabulary are found to correlate with the overall intelligibility at the significant level. Vocal intensity seems to have no correlation with the overall intelligibility.



		AmE	IE	CE	BE	ArE	FE
Accent	M	3.35	1.65	3.15	1.62	1.37	3.05
	r	0.035	0.01	0.164*	-0.201*	0.152**	0.06*
Speed	M	3.87	2.36	3.6	3.27	2.36	3.72
	r	0.353**	0.433**	0.345**	0.92**	0.305**	0.309**
Clarity	M	3.98	1.96	3.8	2.69	1.72	3.61
	r	0.607**	0.635**	0.584**	0.482**	0.416**	0.654**
Intonation	M	4.03	2.37	3.67	2.97	2.34	3.56
	r	0	-0.052	0.759**	0.528**	0.281**	0.079
Fluency	M	4.15	2.36	3.59	2.8	2.49	3.69
	r	0.548**	0.446**	0.649**	0.476**	0.244**	0.586**
vocabulary & grammar	M	4.08	2.56	3.91	3.1	2.77	3.79
	r	0.200*	0.014	0.717**	0.555**	0.577**	0.049
vocal intensity	M	4.03	2.88	3.8	3.35	2.79	3.85
	r	0.017	0.503	0.675**	0.461**	0.584	0.195
Pauses	M	3.83	2.28	3.35	3.13	2.53	3.51
	r	0.366**	0.438**	0.474**	0.521**	0.624**	0.533**

\*\*p<0.01

\*p<0.05

**Table 2.** Correlations between overall intelligibility and vocal features

#### 4. Discussion

From the overall understanding of six English varieties, the most understandable is China English, followed by American English and British English. Indian English, South African English and French English lie in the last three ratings. Except China English, the results are in line with the observations of Feyér (2015) that English varieties in the inner circle are more intelligible than non-inner circle varieties. Also, the result that China English has the highest intelligibility in the Chinese context, which is on the one hand in line with Zhang's research and on the other, provides evidence for localization of China English. Munro & Derwing (1995) observed that though Mandarin-accented English speech samples were rated as moderately or heavily accented, they were often perfectly intelligible. From the results above, Indian English has a lower intelligibility, which is different from Bansal's result (1969). His research finding showed the intelligibility of Indian English is high. It is wrong to only view Indian English as non-standardized English.

Conversely, even if the listeners can grasp all the words correctly, it may not necessarily imply they can accurately understand what is actually said. However, in reality native speakers may not have such a flexible attitude towards ESL and EFL speakers of English, and some non-native varieties of English are often felt to be less intelligible, comprehensible and interpretable than native varieties are. Bent & Bradlow (2003) reported that non-native speakers found a higher intelligibility to a second language than to their mother tongue, while native speakers had an opposite feeling. Also, some research showed (Smith & Bisazza, 1982) that non-native speakers of English found the accent of speakers with the same language background more intelligible.



It is noteworthy that familiarity and exposure have a positive psychological effect on the listeners. This can lead to less inhibition, less bias and more tolerance toward different English phonological varieties. Smith & Nelson (1985) argued that the greater the familiarity a speaker has with a variety of English, the more likely it is that he/she will be intelligible to that speech. Derwing and Munro (1997) found that their native listeners' intelligibility scores and their familiarity with the specific accents are correlated, which is in line with this study. Also, the subject group with more English exposure tends to comprehend better than the group with less exposure, which is similar to the study that listeners' exposure to foreign languages and cultures has also been associated with their attitudes towards accented speech (Gass & Varonis, 1984). What's more, Feyér (2015) investigated Hungarian EFL learners' comprehension of Hungarian, Egyptian Arabic, American and British English. Surprisingly, Hungarian English had higher comprehensibility than the other English varieties, which also provided the evidence that their first language plays an important role in their perceptions of other English varieties. Therefore, China English having higher overall intelligibility seems to be explainable.

Although intonation and speed in this study do not tally with researchers' findings, this finding is in line with the literature conducted by Matsuura et al. (1999), suggesting that what really correlated with perceived comprehensibility ratings for all six speeches are ratings for such prosodic features as speed, clarity, intonation, fluency and pauses.

## 5. Conclusion

The results of the present study show that the overall intelligibility of these six English varieties is different. Learners appear to be the most successful in comprehending inner circle varieties. They also show relatively the highest comprehension scores with regards to the China English accent, although they deem this accent less intelligible than the two standard English accents. A number of intertwined factors are found to be positively related to English majors' success in understanding English phonological varieties. These findings suggest that ELT in China should include a wide range of English speech varieties in teaching materials, especially in listening and speaking. English learners need to learn English from a global point of view, showing no bias to all the English phonological varieties and cultivate ourselves to be an internationalized intellect.

These six accents featuring in the study only constitute a minute fraction of the countless speech varieties of English worldwide. Thus, similar empirical studies with different speech varieties may be needed to corroborate the present findings or complement them with further insights.

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