RESEARCH ARTICLE

TESTING THE INTELLIGIBILITY OF INDIAN ENGLISH TO SPEAKERS OF OTHER VARIETIES: AN EMPIRICAL STUDY

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ABSTRACT

The global spread of Englishes and accent discrimination has brought the topics of intelligibility and nativeness to the forefront. Indian English is one of the varieties of World Englishes that has developed. This study collected chose a sample of Indian English and tested the intelligibility of the sample to speakers of other varieties of Englishes using the mixed methods approach, which included comprehensibility and accentedness ratings. This was followed by an interview where these 6 listeners described their reactions to the utterances. The intelligibility scores, comprehensibility and accentedness ratings were then analysed, keeping in mind how the speakers learnt pronunciation and how the listeners reacted to it. The results were similar to previous studies where suprasegmentals, segmentals and the speaking rate were found to be important for intelligibility. These results were used to make recommendations for pronunciation instruction in India.

Key words: intelligibility, pronunciation, World Englishes, accents

INTRODUCTION

The multi-cultural and diverse country of India is home to many religions, languages and different Englishes. Unlike in other countries where English is a second or a foreign language, the pronunciation of English, is completely ignored in classrooms. Activities which are common in other countries such as listening to pre-recorded audio CDs and the learning of the International Phonetic Alphabet are ignored as well. The focus in most Indian schools is on reading comprehension, literature in English and grammar (Vaish 2006). Although this approach gets most students through their exams, many educated Indian students still cannot speak simple sentences (Graddol 2005). Therefore the teaching of Speaking skills should be incorporated into the curriculum. The teaching of Speaking skills should focus on the aspects of speaking that affect intelligibility rather than the 'neutralization' of the accent. Therefore, a study must be conducted to explore the intelligibility of Indian English, the aspects that cause unintelligibility and find ways to promote intelligibility through learning and teaching in schools. This study aims to do so.

The focus of pronunciation teaching used to be, sounding native-such as, but it has now become, being intelligible to speakers of other varieties of English. The objective of this assignment is to determine how intelligible one variety of Indian English is to speakers of other varieties of English. This assignment first looks

at previous intelligibility studies, the present research and finally analyzes the results to make suggestions about the teaching of pronunciation in the country.

Before a study of intelligibility can take place, a discussion of what the word entails is required. Derwing and Munro's tripartite perspective (Munro, Derwing and Morton 2006) distinguishes *accentedness-* how different someone's speech seems from the listener's variety, *comprehensibility-* the listener's experience of how difficult the speech is to understand and *intelligibility-* how much of the speech is understood by interlocutors. Of these components, accentedness is the least relevant to communication. This is because many L2 speakers have strong accents but are intelligible to interlocutors as listeners can easily adjust to divergences from their own speech patterns (Munro, Derwing and Morton 2006). Intelligibility and comprehensibility, on the other hand, need to be given careful attention because they are closely connected to success in communication (Munro, Derwing and Morton 2006).

It should be noted that phonetics is not the only contributor of unintelligibility because many breakdowns in intelligibility have been caused by other factors. For example, an aviation accident occurred because the traffic controller's sentence " Take taxiway right" was heard as " You can backtrack if you like"(Mc Millan 1998 44, cited in Derwing and Munro1998). Derwing and Munro's 1998 analysis found that a Cantonese speaker trying to say "One man drive car, go" sounded to the researchers as "One man dry cuckold". In the case of the airline pilot, both sentences had similar rhythm and intonation, but it was difficult to determine what exactly caused the unintelligibility. In the second sentence, the causes of unintelligibility were inaccurate grammar and pronunciation, including a high pitched monotone intonation and staccato rhythm. These examples show that the human perceptual system tries to find meaning in speech that is unfamiliar, by finding the closest sounding unit that makes sense. This may lead to misunderstandings due to multiple ambiguities (Derwing and Munro 1998).

Recent research on listening factors affecting intelligibility reminds us the importance of the listener as well as the speaker in the process of intelligibility. Listeners with exposure to different varieties of English, certain experience and attitude may be more successful in comprehending L2 speech (Derwing and Munro 2009). Sharing the same L2 as the speaker, and familiarity with a particular L2 accent may help in the comprehension of L2 speech (Derwing and Munro, 2009). Misunderstandings or unintelligibility might be a result of the listener's investment in the conversation rather than difficulties with the speech. For example, prejudices against certain accents can result in accent discrimination (Munro 2003), which might be mistakenly named unintelligibility.

As Derwing, Munro & Wiebe's 1998 study shows, it is possible for intelligibility and comprehensibility to improve through instruction without any noticeable change in accentedness . Since pronunciation instruction is part of an ESL program, it cannot be the only focus in the classroom. Therefore, priorities need to be set. It is now accepted that difficulties in prosody undermine intelligibility, and these difficulties can be solved. This is demonstrated by many studies: in Hahn's 2004 study of nuclear stress, listeners' processing of words with and without primary stress errors were compared; in Tajima, Port, and Dalby's (1997) test, intelligibility of recorded speech was improved by digitally manipulating the rhythm; Derwing, Munro & Wiebe's 1998 study found comprehensibility had improved due to global prosodic instruction.

This review has given a clear picture of intelligibility, the causes of intelligibility other than phonology, listener factors in intelligibility and has cases where pronunciation instruction led to improved intelligibility. The research will involve intelligibility and comprehensibility, analyze the results of unintelligibility and suggest possible solutions.

Discussion

After a survey of previous intelligibility studies, it was decided that the present study would be use methods from different studies to attempt to effectively measure intelligibility. In L2 intelligibility tests a very common task used is dictations where the listener tries to write down in standard orthography, what has been heard and understood (Derwing and Munro 1997). The number of words that were transcribed correctly was taken as the index of speaker intelligibility. Although this is an effective method, I have chosen a cloze passage

instead of a dictation task as done by Smith and Rafiqzad (1979), so that connected speech (which is more natural) rather than single words are tested, and so that the rest of the speech, including the prosody and stresses can aid intelligibility. This part of the test focused on testing intelligibility, according to Munro and Derwing's perspective.

Like in Anderson-Hsieh and Koehler (1988), comprehension questions were chosen so that unlike in the elicitation of summaries, the questions aid the participant in remembering what was understood, and do not test the memory of the participant. This was done to test comprehensibility, according to Munro and Derwing's perspective.

Jenkins' 2007 study, which involved accent ratings and in-depth interviews with non-native speaker, proved to be effective in eliciting attitudes and opinions about accents and intelligibility (Jenkins, 2007). A similar interview was done here to elicit attitudes, opinions, and to determine the listener factors, which may affect intelligibility. Previous studies on comprehensibility and accentedness were conducted on the basis of listener judgments on equal-interval rating scales (such as a 9 point scale). As results of many studies show (Derwing and Munro 1997, Hageman and Edwards 2003 & Southwood and Flege 1999: cited in Derwing and Munro,1997), the results of these tasks and the division into equal intervals are reliable. As accentedness does not necessarily affect intelligibility, the rating scale here was on intelligibility, and not on accented and a 10 point scale was chosen.

The study involved the participants listening to a reading of Comma Gets A Cure by an Indian English speaker and answering three sets of questions: i) A Cloze Passage test (of Comma Gets A Cure), ii) A comprehension test and iii) An interview where the participants gave their comments on the intelligibility of the speaker, gave an Intelligibility Score to the speaker and gave an insight into possible learner factors affecting intelligibility.

The study involved six English Language Teachers from six different countries that speak different varieties of English. The teachers were from the UK (the British English speaker), Egypt (the Arabic speaker), Cyprus (the Greek speaker), Chile (the Spanish speaker), Indonesia (the Indonesian Speaker) and Hong Kong (the Cantonese speaker). At the time of the study they were all studying their Masters in TESOL (Teaching English to Speakers of Other Languages) at a university in the UK. They were chosen because of the different L1 backgrounds they come from and the different experiences they had: The British English speaker had spent one year in Bolivia, and two years in Portugal where she learnt Spanish and Portuguese; the Arabic speaker spent a year in Japan where she learnt a bit of Japanese and was at the time of the study, learning Korean; the Greek speaker completed her undergraduate degree in the UK and has learnt French; the Chilean speaker spent a year in the UK as a Spanish language assistant, the Indonesian speaker spent a year in the US as an Indonesian language assistant and the Cantonese speaker has seven years' experience teaching English in Hong Kong.

Comma Gets A Cure is a passage written using John C Wells's 24 lexical set words (Wells, 1982). The passage allows the listener to analyze the speaker's pronunciation in different phonemic contexts. Wells's 24 lexical sets were classified according to how the vowel of the stressed syllable is pronounced in Received Pronunciation (henceforth RP) and General American (GA) (Wells 1982). The passage was made into a cloze passage by picking out certain words which Indian English speakers have difficulty with such as the retroflexed, tapped r (veterinary, territory, hurry), replacement of of w's with v's (Woman, was) not aspirated p's and t's (private, stressed) among others.

The speaker was chosen because she speaks Indian languages from two families- Tamil is her mother tongue (from the Dravidian family of languages) and Gujarati (from the Indo-Aryan family of languages), as well as India's national language- Hindi (which is from the Indo-Aryan family of languages as well. First she read out Comma Gets A Cure and then she spoke for 25 seconds about her life (international dialects of English archive, 2015). Questions about this extemporaneous speech were asked in the Comprehension Test.

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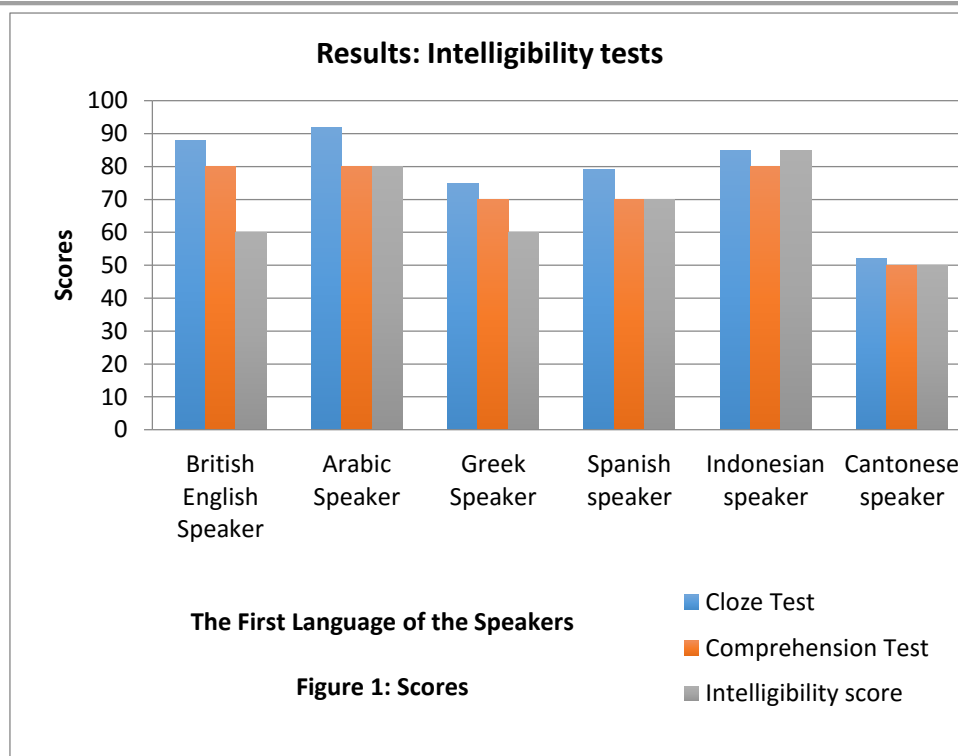
Figure 1: Scores

The results of the Cloze Test, Comprehension Test and the Intelligibility Scores that the participants assigned to the speaker's speech are shown in Figure 1 as percentages. The next section is the discussion and analysis of the results.

The Arabic speaker scored the highest in the Cloze Test, this could possibly be because Arabic is phonetically similar to Hindi. Figure 2 shows the percentage of participants who transcribed each word correctly. All the participants correctly transcribed 20 words out of the total 52 words. The most unintelligible word was itchy (only 17% of the participants found it intelligible), followed by North, rare, strut, penicillin (33%) and Duke Street, beautiful, different, futile (50%). According to the participants, the difficulty in understanding her came in her word stress, intonation and the flapped r.

The lack of pauses and system of word stress in the reading caused "itchy" to sound more such as "itching" and "beautiful" to sound more such as "byuful". North, rare, strut, different and Street were pronounced different to RP because of the flapped R. The word penicillin- which was understood by the NS as ten shillings, was unintelligible because it was pronounced as a disyllabic word (pen-cillin) than a three-syllable word (pen-i-cil-in). The word futile was pronounced with a darker t and the primary stress of the word was on the first syllable while the British English pronunciation stresses the first syllable. Although the replacement of the /w/ sound with the /v/ sound was noticed by three participants, it didn't cause intelligibility here, as it could be understood that /voman/ meant woman. Based on Munro and Derwing's perspective, the speaker was partially intelligible.
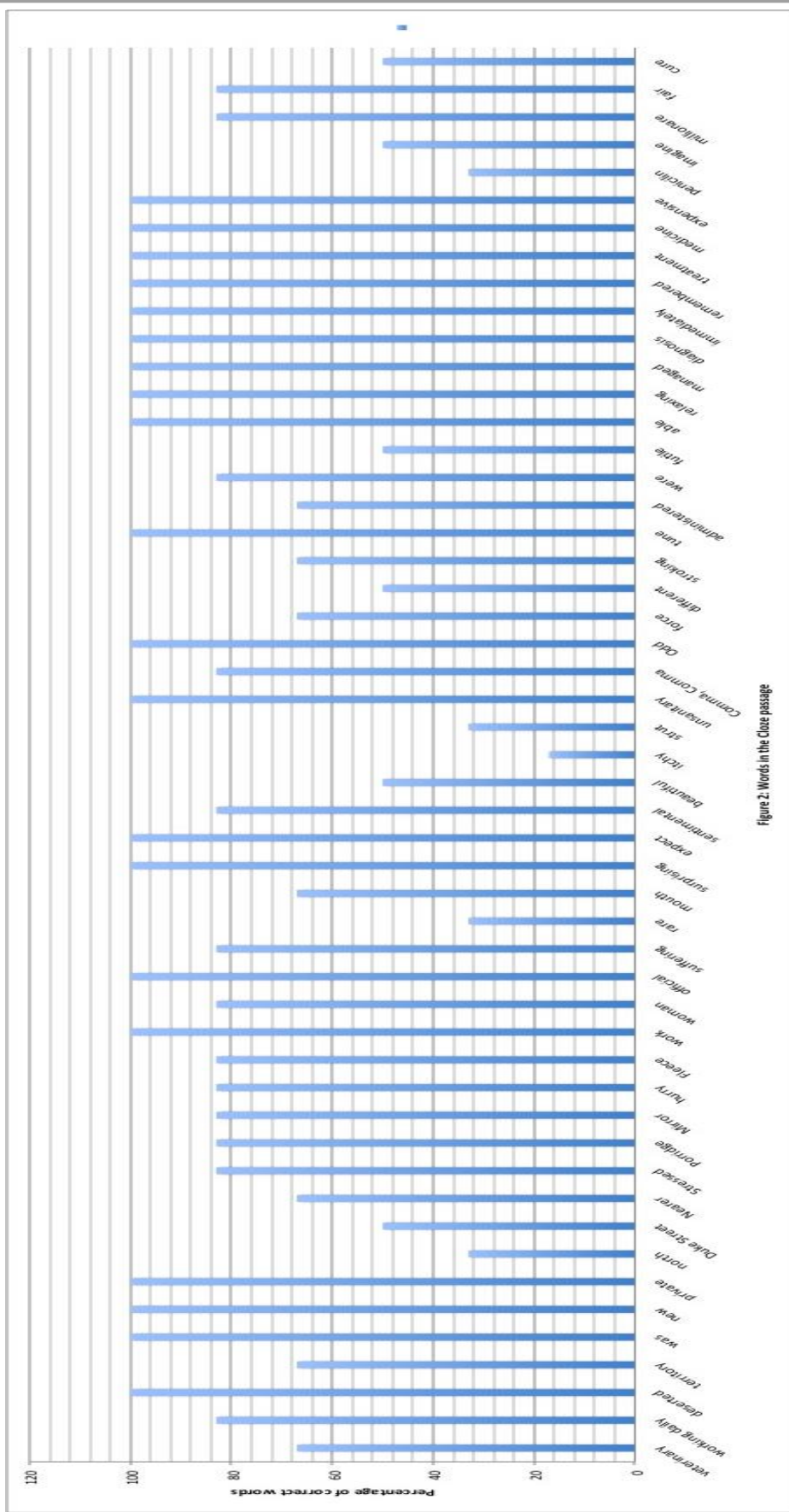
The British English speaker, the Arabic Speaker and the Indonesian Speaker scored the highest in the Comprehension Test with 80% of the answers correct. This could possibly be because of the British English speaker's close friendship with an Indian migrant in Middle School, similarity in the phonology between Arabic, Hindu and Indonesian. None of the participants were able to understand "Cal Fullerton State" university or "convent school". The name of her University was not understood because of the fast speed at which it was said and convent was understood as government and korma (an Indian curry). Even though there were significant difficulties in understanding the speaker, the key points that she studied English from a very young age and that she is doing her Masters in Psychology were understood by all the participants. Therefore, based on Munro and Derwing's perspective, the speaker was partially comprehensible. However, it must be noted that, each participant listened to the speech 3-5 times and this does not happen in natural conversations.

Figure 3
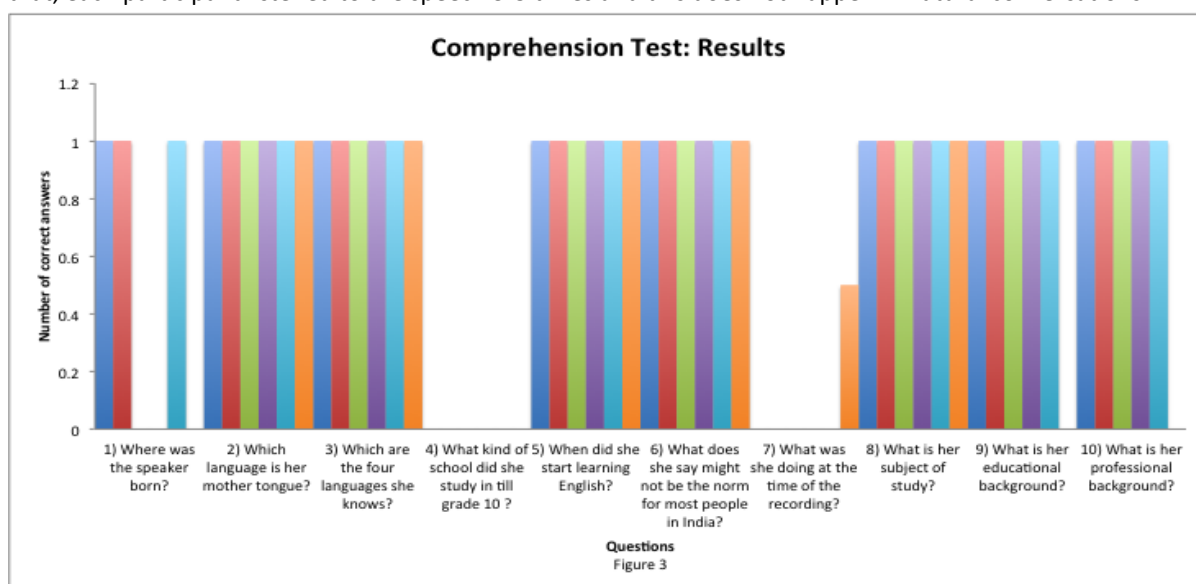
The participants were asked questions about their and their students' attitudes towards the speech, how easy the speech was to understand and how similar it was to varieties of English they had been exposed to and their L1s. This was to explore the different listener factors. As mentioned in the Literature Review, different listener factors have also caused unintelligibility. All the participants commented that they had been exposed to thicker, more difficult Indian accents before and were expecting the speaker to be much more difficult to understand. As Learner English suggests, the w and v, the th sound, the over pronunciation of vowels (such as in goose), the tapped r, intonation, word stress and pauses made the speaker less intelligible that she otherwise would have been.

The British English speaker suggested that model of Standard Indian English be developed and pronunciation and listening activities be done in schools. The Cantonese and Arabic speakers suggested that the learners be taught to articulate the entire word. The Greek speaker suggested that there be more listenings done in the classroom. The Indonesian speaker suggested fun activities such as listening and modelling themselves on the speech TED talks as they are done by both NS and NNS. The general opinion was that the speech could be understood but that it was not easy.

The speaker's unintelligibility was caused by mispronunciation of consonants (flapped r and the retroflex t), different intonation, rhythm, rate of speech, word stress and syllable stress. These are the problems found in previous studies (Bansal, Learner English and part of Lingua Franca core than Jenkins suggests is most crucial to intelligibility). As Bansal writes in his conclusion, it is possible to judge the intelligibility of a variety of English if a large enough sample is taken. Even though a larger study of the intelligibility of Indian English is required to develop a well-researched pronunciation course for the country,

based on the similarities between the present study and the previous studies referred to earlier, suggestions are be made in section 3.11.

Listener factors, as seen in the study and in the literature review, can aid or impede intelligibility. Just as the similarities between the Arabic and Indonesian speakers' L1s helped the Arabic and Indonesian speakers, and familiarity with the Indian English variety helped the British English speaker, the Cantonese speaker found no similarities between his English and that of the speaker and felt that the speech was heavily accented. He mentioned the rhotic r, and that articulation be mastered before moving onto intonation and word stress. He mentioned that his students, such as him, would find it difficult to understand the speaker because they have been used to listening to the British RP and General American accents. Even though he felt that the speaker was successful as she could speak fluently in English without grammar errors, the interview suggests that the differences between his L1 and Indian languages and experience with listening also contributed to the intelligibility failure here.

There is a marked difference between the Speaker who has been exposed to many varieties and the Speaker who has not- the Cantonese speaker scored the lowest in all three- he got the lowest in the Cloze Test, the Comprehension Test and he gave the lowest intelligibility score. This suggests that listeners with more exposure to different varieties of English than RP or GA will find more varieties intelligible.

Based on the results of the research and my understanding of the literature, I suggest that the following practices be inculcated into Indian schools for the learners to be more intelligible:
Intonation, word and syllable stress, segmentals, listening skills and speaking activities.

I suggest that pronunciation of segmentals, intonation, word and syllable stress and listening sessions be done in class. For common errors in Indian English (such as the substitution of the w with the v), a whole lesson can be based on chapters 9 and 10 in Tree or Three (Baker 1982).

As suggested in in Joanne Kentworthy's Teaching English Pronunciation (1987) , pronunciation homework can be recorded and given/ emailed to the teacher. Regular listening to the student's speaking will enable to teacher to discover the weaknesses in speech, which need to be dealt with. The teacher can then suggest which chapter of the books in the language lab the student needs to concentrate on, and ask the student to practice, record and send the results to the teacher. This will also give the student a record that marks their improvement. Audio recording should also be done during speaking lessons. This will help the teacher identify weaknesses in pronunciation of individual students and the class as a whole.

The setting up of a language lab will be expensive and unaffordable for most state schools. In this case, I suggest a course that concentrates on reading, speaking, listening and writing rather than on literature. This will aid students in becoming independent ESL learners.

Conclusion

The results of this study were very similar to Bansal's 1969 study which found similar causes of unintelligibility in Indian speakers. As studies show, global prosodic instruction can lead to better intelligibility, and therefore the suggestions for pronunciation instruction should be taken into consideration and put into practice after careful research.

However, it must be noted that there were weaknesses in this study; i) The speaker did not represent all the different varieties of Indian English; ii) The cloze test was based on her reading out of a passage, and therefore this was not a natural way of speaker for her, and the grammar and vocabulary were chosen for her; iii) The number of participants were too less to make the study generalizable. A more extensive and generalizable study of the intelligibility of the varieties of Indian English needs to be conducted before it can form the basis of pronunciation teaching in the country.

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