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ACCENT ON ACCENTS: HELPING LEARNERS BETTER UNDERSTAND ENGLISH SPOKEN BY SPEAKERS HAVING A VARIETY OF ACCENTS

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Abstract: This article aims to introduce a few tools to help English (ESL/ELF/EFL) teachers improve their students' understanding of a variety of accents in English. Related issues have been addressed by researchers, but the question of how to help L2(+) listeners with a good level of comprehension of 'standard' varieties of English, to better understand an unfamiliar accent, has not been widely studied. This paper will introduce several methods that were tried in a classroom setting, with differing results .A global approach, as opposed to a segmental approach, seems to be more promising, as results were better for the techniques that focused more on longer passages, as opposed to isolated words or phrases. This article will open the discussion about how language teachers and researchers can continue to improve methods used to help learners increase their understanding of unfamiliar accents.

Key words: ESL, EFL, accents, pronunciation, comprehension, pedagogy, intonation

1 Introduction

Speakers from a wide variety of linguistic backgrounds use English together as a lingua franca in any number of contexts but understanding speakers with an unfamiliar accent can be a significant challenge for listeners. Since the beginning of the internationalization of higher education, international students who are not L1 English speakers have experienced difficulty understanding their courses in English, in part due to their professors' accents. For example, Bilbow (1989) discussed the difficulties of international students in the United Kingdom and Richards (1983) described the factors creating difficulty for international students in Hawaii. The difficulties associated with understanding a speaker with an unfamiliar accent have been well-documented. For example, Eisenstein & Berkowitz (1981) demonstrated that ESL learners understand 'standard' American English[1] better than that spoken by other L2(+) speakers or by working-class New Yorkers. Major et al. (2005) found that L2(+) listeners understood L1 speakers of American English in a comprehension test better than L2(+) speakers, whether or not they were speaking a 'standard' variety of American English.

[1] For the sake of simplicity, we will use the expression 'standard English' or 'standard American English' to refer to varieties of English that many North American speakers of English would consider unmarked in terms of pronunciation. Similarly, a number of different accents are grouped together under umbrella terms for the region in which similar accents are spoken (e.g. Scottish accent, Indian accent). It should not be inferred that there is a single accent for the regions under consideration.

Learners themselves have an intuition that a speaker's accent can affect their understanding. In a study led by Goh (1999), 66% of ESL learners indicated speaker accent as one of the factors that influence comprehension (other factors being vocabulary, topic familiarity, speech rate, and type of input).Other researchers have discouraged random choices with respect to the speakers chosen for oral comprehension tests for L2(+) listeners (Elder & Harding, 2008; Ockey& French, 2016).Even a "light" accent can have a negative impact on understanding for anL2(+) listener (Ockey et al.,2016).

Lynch (2009) postulated that the difficulty involved in understanding a given accent is due not to the intrinsic difficulty of the accent itself, but rather to the fact that it is unfamiliar to the listener. For him, it is an example of a more general phenomenon in human beings, who must make more of an effort to understand something unknown than something with which they have had previous experience. According to Lynch, a listener should simply have to become familiar with a particular accent to understand it better. However, he did not actually test this hypothesis.

1.1 Materials available for ESL/EFL teachers

English teachers recognize the need for our learners to understand a variety of accents in English. However, it is common to feel almost paralyzed by the enormity of the task at hand, given the huge number of different accents that are found in the wide range of different situations in which English is used as a language of communication. This might be why there is so little literature that tests methods for helping learners improve their understanding of unfamiliar accents. There are, however, resources available for teachers who wish to help their students expand the range of accents that they can understand.

One example is Patsko's (2015) presentation at the IATEFL conference, which laid out a plan for helping learners understand a particular accent, using a short clip by a speaker with the accent in question. Her (largely segmental) approach involves pointing out specific phonemes in a series of sentences and having students identify how the phonemes are pronounced differently than in more familiar varieties of English. Learners are then asked to predict how the phoneme will be pronounced in other examples. Discussion is encouraged about why learners of English need to be able to understand speakers with a variety of accents, and Patsko stresses the importance of analyzing, but not mocking, the aspects of a speaker's pronunciation that are different from what learners are used to.

Some websites for English learners are also starting to allow users to search for audio recordings by speaker accent. For example, elllo.org provides audio recordings and listening exercises in a variety of accents from the Inner, Outer and Expanding Circles (Kachru 1985). Badger (2017) suggests listening to the same song sung by singers with a variety of accents, comparing a given quote or story pronounced by different speakers, and also repeating what is said, trying to imitate the accent. The blog by the Bloomsbury English School in London (Bloomsbury International 2013) recommends listening to a variety of accents in a list of tips for learners of English to improve their English comprehension. Woodpecker Learning (2017) lays out various differences (e.g. rhotic vs. non-rhotic accents) between several accents and provides video clips of speakers of those accents, to help L2(+) English speakers better understand them.

1.2 Experimental studies in laboratory settings with L1 speakers

The idea that it is possible to improve one's understanding of an unfamiliar accent is not novel. This phenomenon has been demonstrated in different populations of L1 English listeners, with various unfamiliar (L1 and L2(+)) accents. Language teachers will not be surprised to learn the results of a study carried out by Gass & Varonis (1984), in which two groups of L1 English listeners – one group of students and one group of ESL instructors – were asked to transcribe English sentences read aloud by English language learners whose L1 was either Arabic or Japanese. In both cases, the English teachers made fewer mistakes than the students (i.e. they understood the speakers better). According to the authors, this is because the English instructors were accustomed to listening to speakers with these accents, but it is also possible that they had learned compensation techniques to allow them to better understand any unfamiliar accent.

Weil (2001) trained L1 English listeners to better understand a Marathi speaker, over three days of different types of exercises. After these three days, the participants had improved their understanding of this speaker and another Marathi speaker, but with different results depending on the task in question. Kasparek (2008) carried out a similar study, comparing two different approaches. Two groups of L1 listeners trained their ear using either lists of English words or lists of English sentences spoken by anL1 Spanish speaker, in order to improve their understanding of this accent. The results proved to be much better for those subjects who had worked with full sentences, rather than lists of words. The author postulated that this would be the best approach for L1 or L2(+) listeners wanting to improve their understanding of a particular accent.

Other studies have demonstrated similar results. Floccia et al.(2009) compared the comprehensibility and intelligibility of sentences spoken in an accent that was unfamiliar to the group of L1 English listeners being tested. The terms *comprehensibility* and *intelligibility* were defined as follows:

> Speech is said to be *intelligible* if the message intended by the speaker is properly conveyed… Speech is *comprehensible* as a function of the perceptual and cognitive effort which was necessary to identify the intended word… Therefore, an accented speech sample can be rated as highly intelligible, but difficult to process at the same time.(Emphasis added)(Floccia et al., 2009, p.308)

It was found that if L1 listeners are exposed to a particular (L1 or L2(+)) accent, the intelligibility of this accent improves for these listeners. This is not the case, however, for comprehensibility. In other words, we can learn to better understand someone with an unfamiliar accent, but it will still take us more time or effort to understand them. This might be due to different mechanisms being used, or perhaps the brain uses these mechanisms to different degrees depending on whether the speech in question is pronounced by an L1 or L2(+) speaker (Cristia et al. 2012).A similar result was found by Derwing & Munro (1997), who stated that L1 listeners could "guess" a word in a given context and thus transcribe words pronounced by anL2(+) speaker, even if they found the speaker difficult to understand overall.

It can be seen that a fair amount of work has been carried out in laboratory settings to study what can help L1 listeners better understand an unfamiliar accent. The question in this paper is how to apply these findings to L2(+) learners in the language classroom setting. The goal of this study

is to apply what has been done in experimental laboratory settings to the classroom setting, while maintaining learner interest.

2 Research design

2.1 Participants and setting

Data were collected during the 2016-2017 academic year, with two different groups of CEFR level C1 (advanced) English learners, in a half-semester C1 course (20 hours) designed to expose students to a variety of accents and explore issues related to accents (e.g. identity, discrimination, otherness). The learners were first- and second-year engineering students in an engineering school in France.

2.2 Input types being tested

Several types of input were tested in this initial study, which was used to identify the techniques with the most potential for effective use in the classroom. They were combined in different ways for the different accents under study, as laid out in Table 1, and details about each technique are given below.

Accent	**Input used**
Australian	*Please call Stella* recordings, accent training videos, stand-up comedy
Scottish	*Please call Stella* recordings, accent training videos, stand-up comedy, phoneme isolation
Singaporean	Individual work in language lab - listening to *Please call Stella* recordings and writing pronunciations for words; developing expectations for consonant clusters
Nigerian	*Please call Stella* recordings, listening to a short segment from a documentary three times
Indian	Watching a film (*Amu*) with subtitles turned on

Table 1. Overview of input methods used for each accent.

2.3 Systematic comparison of the accent in question with a ‘standard’ American accent

Various techniques were used to point out specific segmental differences between a particular accent and a ‘standard’ American accent.

2.3.1 Speech Accent Archive *Please call Stella* recordings and IPA

The Speech Accent Archive at George Mason University (Weinberger 2015) was used to demonstrate the main differences between the accent in question and a 'standard' American accent. This archive, available on the internet, contains thousands of recordings of speakers with a wide variety of L1 languages and accents, all reading a single short text that contains all of the phonemes of English, often with a phonetic transcription.[2]By comparing the transcription and recording of an American speaker with a 'standard' accent (the most accessible variety of English for many of our students) with a speaker of the accent that we wish to understand better, the instructor brought out the main differences and had learners try to repeat a given word or phrase in the two accents. Specific words or phrases were also isolated in the recording and played one after the other (e.g.'standard' American and then Singaporean), to make the systematic differences clearer(e.g.the height or backness/frontness of a particular vowel, r-insertion in non-rhotic dialects, etc.).

Learners were also taught certain phonemes along with their phonetic transcription, using the International Phonetic Alphabet (IPA). The goal was not to be able to produce a text in IPA, but rather to be able to read a text in IPA and transcribe it in English. This technique was used mainly to point out the differences between the vowel systems of various accents.

2.3.2 Accent training videos for actors

For L1 accents of English, there are often videos online to help, for example, American actors to speak with an Australian accent. Generally, these videos isolate the phonemes that are different from one dialect to another (often vowels), and the actor on the video pronounces particular words with a standard American accent, and then with an Australian accent. This is another way to make clear the systematic differences between two accents. For example, we might learn that in a particular accent, the tongue is pulled back more than in a standard American accent, which has an effect on the vowel system of that accent. Accent training videos also often address differences in prosodic systems between dialects of English.

2.3.3 Stand-up comedy

For accents in which we can find comedians who do stand-up comedy, this is a very interesting tool. By using a short extract, we can get students to laugh at the comedy the first time around, and then do the work of isolating the sounds and showing systematic differences between the accent in question and 'standard' accents.

2.3.4 Developing expectations

One session involved working in the language lab, listening to a variety of speakers of Singaporean English in the *Please call Stella* archive and noting how specific words were pronounced. Participants then wrote down their expectations for how certain words involving

[2] The text used in the recordings of the Speech Accent Archive is the following: *Please call Stella. Ask her to bring these things with her from the store: Six spoons of fresh snow peas, five thick slabs of blue cheese, and maybe a snack for her brother Bob. We also need a small plastic snake and a big toy frog for the kids. She can scoop these things into three red bags, and we will go and meet her Wednesday at the train station.*

consonant clusters would be pronounced, and then checked them against the recordings. This is similar to one of the steps in the process used by Patsko (2015).

2.4More global approaches to differences between accents

As opposed to the segmental approaches described above, methods more focused on longer passages of speech were also used, to allow the learner to absorb the differences in intonation and prosody between different accents.

2.4.1 Repeated listening to a single recording

When working on the Nigerian accent, we watched a short news clip that contained interviews with a few Nigerian women. We listened to the interviews three times, without pointing out specific differences in the phonemic systemic of Nigerian English compared to other more familiar varieties, but rather listening simply for understanding.

2.4.2 Watching a film

One week, the class watched an Indian film, *Amu* (70% in English and 30% in Hindi), to become familiar with the Indian accent in question. English subtitles were turned on.

3 Methods of data collection

3.1 Pre- and post-tests

At the beginning of each accent unit (Indian, Scottish, Nigerian, Australian, Singaporean), students were given a pretest, to determine their base level of understanding of the accent. The pretest involved listening to a recording approximately 20 seconds long in the target accent and transcribing what was understood, word for word. First the recording was played all the way through; then snippets approximately four seconds long, divided according to slight pauses in the speaker's speech, were played three times with pauses in between (to allow time to write); finally, the recording was played all the way through again. After the various activities in class dealing with a particular accent, a post-test was given. The post-test involved the same process. The voice of the speaker from the pre- and post-tests was not included in the training activities, in order to prevent listeners from simply becoming accustomed to a particular person's voice.

Once testing was completed, the number of correctly transcribed syllables was noted for each participant, and a percentage of correct syllables was calculated for each subject. This method was chosen in order to have a numerical measurement. Misspelled but phonetically identical syllables were counted as correct (e.g., *too* written as *to* would be considered correct). Ideally, comprehension questions would be developed to measure an improvement in comprehension, but this seemed too cumbersome a task for this study. Another possibility would be to determine the key words in each recording and to count the number of key-words that were transcribed correctly.This method seems promising for future studies, but the identification of key words also

might introduce an additional complicating factor for natural speech. Hardman (2010) used this method, but the recordings used were not of naturally occurring speech.

3.2 Procedures

Participants were told that their allowing their results to be used was optional, and that their grade in the class would not be affected by their decision of whether to allow the use of their results. They were also told that their results would not affect their grade, but they were encouraged to take the pre- and post-tests seriously, and they signed a consent form allowing their results to be used in the study. All students agreed to participate.

4 Results and discussion

4.1 Results

4.1.1 Overall results

The results were generally positive, but were not statistically significant overall.A single-factor (one-way) ANOVA was chosen to look for within-group and between-group variance for the overall results (i.e. pre-test vs. post-test across all the accents studied), and the same test was also run within each of the accents under study. The small numbers of students in each group (6 in Fall 2016 and 13 in Spring 2017), presented a challenge to statistical significance. Learners improved somewhat in the transcriptions after most activities and combinations of activities tested, when compared to the pre-test. Overall results for the various accents explored in class are given in Tables 2 (Fall 2016) and 3 (Spring 2017).The figures in the column labeled Average show the average percentage of correctly transcribed syllables before and after the class activities.

SUMMARY	**Count**	**Sum**	**Average**	**Variance**
Before	24	1178.69	49.11	511.5952
After	24	1365.511	56.90	425.3428

Table 2. Overall results from Fall 2016.

SUMMARY				
	Count	**Sum**	**Average**	**Variance**
Before	44	2545.53	57.85	330.3072
After	44	2701.694	61.40	345.7225

Table 3. Overall results from Spring 2017.

4.1.2 Results for more segmental approaches

Three accents that were studied using a largely segmental approach were Australian, Scottish and Singaporean accents. Australian accent: Please call Stella recordings, accent training videos, stand-up comedy. Scottish accent: Please call Stella recordings, accent training videos, stand-up comedy, phoneme isolation. Singaporean accent: Individual work in language lab - listening to Please call Stella recordings and writing pronunciations for words; developing expectations for consonant clusters.

None of the results from these three accents are statistically significant: Neither the Australian accent, (F=0.137, df 23, n.s), nor the Scottish accent (F=0.089, df 21, n.s.), or the Singaporean accent (F=0.006, df 19, n.s). The lack of significant differences may be explained by the very small differences between the pre-test and the post-test in all three of these results investigations. In fact, the post-test results for the Australian accent were slightly worse than the pre-test results. It is possible that this may well have been due to students being tired on a Friday afternoon at the end of the semester, or perhaps they were less invested than in other accents. Another possibility is that the second transcription was more difficult than the first.

A faster rate of speech for the second recording is not a possible explanation. The speaker spoke at a rate of 4.58 syllables per second for the first recording (pre-test) and 4.06 syllables/second for the second recording (post-test), However, it might well be interesting to look at the rate of articulation in the future, which can be calculated by removing the pauses and recalculating the number of syllables per second without the pauses. This measurement is more precise (Griffiths 1991), and we have used it in further studies.

4.1.3 More global approaches

The results for the more global approach are provided in Tables 4 and 5 for the Nigerian and Indian accents and tables 6 and 7 for the Indian accent, respectively.

Groups	**Number of Participants**	**Total number of correct syllables**	**Mean**	**Variance**
Pre-test	6	228.93	38.155	45.983
Post-test	6	439.67	73.278	233.959

Table 4 Nigerian accent: *Please call Stella* recordings, listening to a short segment from a documentary three times

Source of variation	Sum of squares	Degrees of freedom	Mean of squares	F	Probability	Critical value for F
Between groups	3700.946	1	3700.946	26.44	0.000	4.965
Within groups	1399.71	10	139.971			
Total	5100.665	11				

Table 5 Analysis of variance of the Nigerian accent

Groups	Number of Participants	Total number of correct syllables	Mean	Variance
Pre-test	12	796.31	66.359	160.942
Post-test	12	967.92	80.66	41.105

Table 6 Indian accent Watching a film (*Amu*) with subtitles turned on

Source of variation	Sum of squares	Degrees of freedom	Mean of squares	F	Probability	Critical value for F
Between groups	1227.083	1	1227.083	12.147	0.002	4.301
Within groups	2222.513	22	101.023			
Total	3449.596	23				

Table 7 Analysis of variance of the Indian accent

The results for work done on both the Nigerian accent and the Indian accent are both statistically significant. There was a clear improvement between the pre-tests and the post-tests, with p-values of 0.00043645051 for Nigerian and 0.00209729442 for Indian, which indicates that the results were statistically significant. These results are in line with the finding of Kasparek (2008), suggesting that hearing full sentences, rather than isolated words or phrases, is a more fruitful approach.

4.2Discussion

Participants in this study showed greater improvement in their level of understanding with the accents that were worked on using a more global, sentence-level approach (Indian and Nigerian), as opposed to the accents for which a mainly segmental approach was used (Scottish,

Australian and Singaporean). This finding is in line with Kasparek (2008), who found that the L1 participants in his study managed to improve their understanding of an unfamiliar accent more by training with complete sentences than with words. Prosody and intonation seem to play a significant role in listeners' understanding of an unfamiliar accent.

Another factor that may play a role is participant interest. Perhaps the students listened more attentively when watching a film in an Indian accent or listening to interviews of Nigerian women talking about their experiences than they did when listening to isolated words or phrases, which was the case with the other accents. Indeed, students in subsequent classes on this topic have expressed a preference for watching a film or listening to stories, as opposed to focusing on differences between the vowel systems of different accents, or even working on isolated sentences in given accent.

4.3 Limitations and future prospects

There is a great deal of potential for developing, testing and improving on methods that can be used to help learners of English gain greater understanding of a variety of different accents. The results of this study, namely that a global approach using longer recordings would seem to have more potential than segmental approaches focusing on specific phonemes and their representations in different accents, can help guide researchers in their efforts. There are different ways that the use of naturally occurring speech or dialogue used in films or television series might be explored. For example, participants might watch a film in an unfamiliar accent with or without the (English) subtitles on, or turning the subtitles off halfway through, once interest is established.

Incorporating student feedback for each activity also seems important. If we understand which activities are the most enjoyable for students or seem most useful to them, or even simply if they told us that they were more tired than usual on a particular day, perhaps we could understand why a certain set of results was better or worse than expected. Doing self-confrontation the week after an exercise is tested, for example, we could ask each learner why s/he thinks his or her results were more or less positive on that exercise.

Another aspect that seems important to study is the level of difficulty of the pre- and post-tests. They need to be roughly equivalent in difficulty level, and this is not certain for the tests used in this study. It seems important to have an equivalent rate of speech for both recordings. English has an average rate of 464 to 575 ms per word, according to Bradlow & Pisoni (1999), and Roach (1998) found that a normal rate of speech for English is between 3.3 and 5.9 syllables per second. Software like Audacity can be used to establish an equivalent rate of speech between the two recordings (i.e. pre- and posts-tests), which are occurrences of natural speech. Derwing & Munro (2001) found that L2(+) listeners preferred that English be spoken at a rate of 4.3 syllables per second, with a slightly lower rate of speech (4.1 syllables per second) when it comes to Chinese speakers speaking English. However, these preferences do not indicate a rate of speech beyond which comprehension becomes more difficult for L2(+) listeners. A number of factors contribute to level of difficulty: the clarity of the speaker's speech, rate of speech, vocabulary used, grammar,

pragmatic awareness of the listener, etc.[3]It is possible to control these other aspects to a certain extent, but in order to have a "perfect" recording, it would need to be created artificially, which would both lead to a loss in authenticity and limit the accents that could be worked on in class.

Several avenues seem to be potentially fruitful, but for the moment, we will probably focus on making sure that the pre- and post-tests are roughly equivalent in level of difficulty, and also on developing materials using complete sentences (Kasparek, 2008), rather than on isolated words, which has mainly been the case thus far.

5 Conclusion

This study aimed to determine the effectiveness of a variety of classroom techniques designed to help learners improve their understanding of an unfamiliar accent. It was determined that global approaches that allow prosodic and intonational differences to become apparent seem to hold more potential than more segmental approaches focused on specific phonemic differences between different accents. This finding is consistent with previous research on L1 comprehension that shows that L1 listeners gain better understanding of an unfamiliar accent if they are trained using materials that involve complete sentences, as opposed to words.

In our study, we found that learners were better able to transcribe passages in the target accent after 'training' involving watching a film or listening to interviews of speakers having the target accent, as opposed to focusing on specific segmental differences between accents. This may be due specifically to the identification of intonational or prosodic differences, or it might be due more to students remaining more engaged when storytelling is involved.

This area of research shows a great deal of potential, as little classroom research has been carried out thus far on techniques to help learners understand an unfamiliar accent. The results of this study imply that future work should focus on approaches involving a global, sentence-level (or higher) approach, allowing learners to consciously or subconsciously identify the prosodic and intonational differences that a particular accent presents.

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