



## **Voice Quality Impacts Listeners' Perception And Intelligibility Of English**

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### **Abstract**

The goal of this study is to see if there's a link between phonetic aspects of connected speech and listener response. It also clarifies listeners' comments on the speakers' voice quality and intelligibility to them. The listener's top and bottom picks for best and worst speakers are compared to the speaker's related speech and other phonetic properties. On the voice quality parameter, the first three characteristics were evaluated on a three-point scale: 'P' for 'Pleasant,' 'U' for 'Unpleasant,' and 'W' for 'Worst.' To determine the ranking order, each parameter's coded elements were assigned a fixed numerical value such as 3, 2, or 1. Following that, the 'Best' speaker, 'Worst' speaker, and Teaching Model ratings were calculated (T.M). Listeners' suggestions for the greatest and worst speakers were recorded. Different sorts of figures were employed to illustrate the findings for clarity.

**Keywords:** connected speech, listeners' feedback, voice quality, Intelligibility, and best and worst speakers.

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### **Introduction**

In this study, listeners' perceptions are influenced by English intelligibility and voice quality. Listeners view the message as unimportant when the voice quality is poor, according to the study. Poor voice quality can also have a negative impact on the productivity and motivation of the listeners. According to recent research, the intelligibility of the English language and the quality of a speaker's voice can have a major impact on how a listener perceives them. This is due to the fact that strong voice quality allows people to understand the speaker even if they don't understand the language. Poor voice quality, on the other hand, might make it difficult for individuals to listen to the speaker, regardless of their comprehension level. This research also looks at how intelligibility and voice quality affect listener perception and offers suggestions for improving both. For many people, a lack of English comprehension can be a barrier to success. It can make it difficult to interact successfully with others, as well as lead to job discontent. The impact of voice quality on listeners' perceptions of someone speaking in English was explored in this paper. We also go over how to make your English speech more understandable to listeners by improving its intelligibility. Listeners' perception is influenced by the intelligibility of English and the quality of the voice, according to a study by Northeastern University. Businesses that wish to reach a larger audience should make sure their voice is understandable, since

this will help listeners understand the message better. Furthermore, poor voice quality can result in unfavourable client experiences and lower loyalty, both of which can be detrimental to organisations.

It is critical in today's society for communication to be simple to comprehend. This is particularly crucial for persons who are learning English as a second language or who have hearing problems. Many circumstances, however, might affect a message's intelligibility, and listeners are typically unaware of this. In this research, we look into how listeners' perceptions are influenced by voice quality and English intelligibility. Listeners are more likely to rate a speech as comprehensible if it is presented in a clear and understandable voice, according to studies on the impact of intelligibility on perception. The reason for this is that when information is provided in an easily understandable manner, listeners are more likely to understand it. This can help to improve the speech's overall quality and make it more interesting for the listener. Voice communication is commonplace, and it is used to communicate with individuals in person or over the phone. Voice communication is used to get work done, acquire information, and socialise. As a result, the quality of one's voice has a significant impact on one's capacity to comprehend and complete activities. The impact of intelligibility and voice quality on listeners' perception is discussed in this paper.

### **Literature Review**

A few papers have been studied as part of the review of literature in order to create a research foundation for the book. The following are summaries of these works.

#### **Enhancement Of Speech Intelligibility And Naturalness Using Radwt by Malathi P**

Laxmi Narayana conducted experiments on syllable stress in speaker recognition in 2007. Autocorrelation and zero crossing rates are commonly used to determine the pitch of a spoken stream. In noisy circumstances, however, precision in pitch detection is accomplished by using cepstrum of the autocorrelation of the speech signal. The stress levels of syllables in Tamil are identified as a combination of pitch and energy. When the first syllable is a short vowel, the first syllable is generally stressed, and the second syllable is usually stressed. The experiment used four speakers and six English terms, as well as a large number of utterances. Pitch, amplitude, and length were used to identify the syllable. The Euclidian distance between the constructed and pronounced phrase outlines was determined, and the speaker was identified by the smallest distance.

#### **Intelligibility of American English Vowels by Native and Non-native speakers in Quite and Speech-shaped noise.**

Chang, Charles B, and Liuso-HyunJ conducted the research (2012). The study looked at the intelligibility of twelve American English vowels produced by native English, Chinese, and Korean speakers while they were exposed to quiet and speech-shaped noise at six different sensation levels ranging from 0dB to 10dB. Due to a lack of listeners who have heard Non-native generated speech and acoustic aberrations, the study found that background affected Non-native Speakers' vowel intelligibility more than Native Speakers.

#### **A Comparative study of connected speech features in Nigerian English and Received Pronunciation**

Rotimi O. Oladipupo conducted the research (2015). The goal of the study was to see how close educated Nigerian English speakers were to Received Pronunciation (RP). In three voice quality processes, such as regressive devoicing, progressive devoicing, regressive place, and consonant elision, all of the speakers had a striking resemblance to RP. Nigerian English, on the other hand, has a different

pattern of related speech elements than RP. Nigerian English, on the other hand, is heavily impacted by a mother tongue. As a result, Nigerian English is distinguished from RP linked speech traits.

### Methodology

The purpose of this research is to compare the intelligibility of the four native speakers' speech to 200 listeners from 20 different countries in the outer and expanding circles. The goal of this chapter is to link the phonetic aspects of connected speech to the feedback of listeners. It also clarifies the listeners' reactions to the speakers' pronunciation, voice quality, and intelligibility. The listeners' top and bottom picks for best and worst speakers are compared to the speakers' related speech and other phonetic properties. The first three criteria were evaluated on a three-point scale: 'G' for 'Good,' 'A' for 'Average,' and 'B' for 'Bad' on pronunciation, 'P' for 'Pleasant,' 'U' for 'Unpleasant,' and 'W' for 'Worst' on Voice Quality, and 'E' for 'Easy,' 'NE' for 'Not Easy' to determine the ranking order, each parameter's coded elements were assigned a fixed numerical value such as 3, 2, or 1. Following that, the 'Best' speaker, 'Worst' speaker, and Teaching Model ratings were calculated (T.M). Listeners' suggestions for the greatest and worst speakers were recorded. Different sorts of figures were employed to illustrate the findings for clarity.

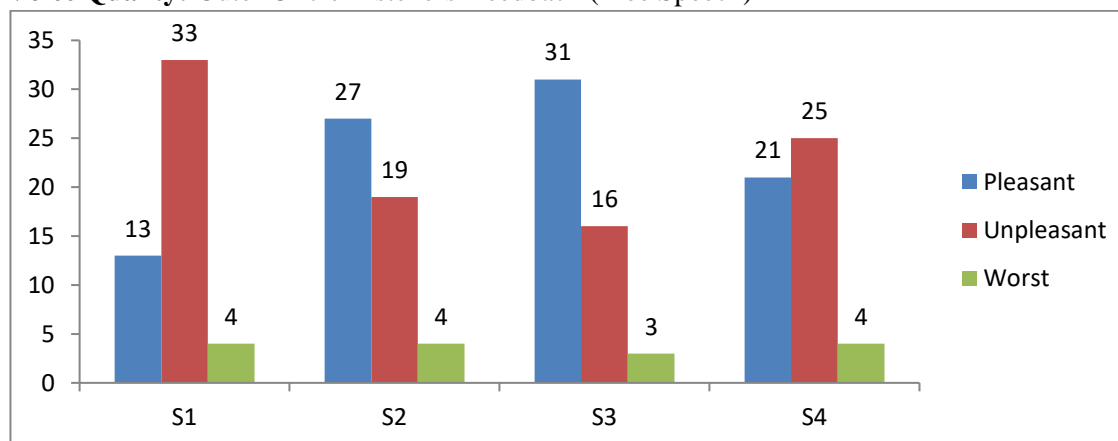
### Data Analysis and Interpretation

"The characteristic auditory colouring of an individual's voice, derived from a variety of laryngeal and supra laryngeal features and running continuously through the individual's speech the natural and distinctive tone of speech sounds produced by a particular person yields a particular voice," according to Trask, R.L. (1996: 381).

#### Voice Quality: Outer circle Listeners' Feedback

S3 and S2 have gotten the highest number of Ps-31 and 27, respectively, as shown in Figure (1). S4 and S1, on the other hand, have earned the highest number of Us-33 and 25, respectively. Overall, the Outer Circle listeners evaluate S3 and S2 as "Pleasant at Voice Quality" and the rest of the speakers as "Unpleasant at Voice Quality" when it comes to a characteristic called "Voice Quality."

#### Voice Quality: Outer Circle Listeners' Feedback (Free Speech)



Speakers

fig .1

The Outer Circle Listeners' feedbacks and the rankings obtained by S1, S2, S3, and S4 under 'voice quality' parameter are presented below in table (4.3).

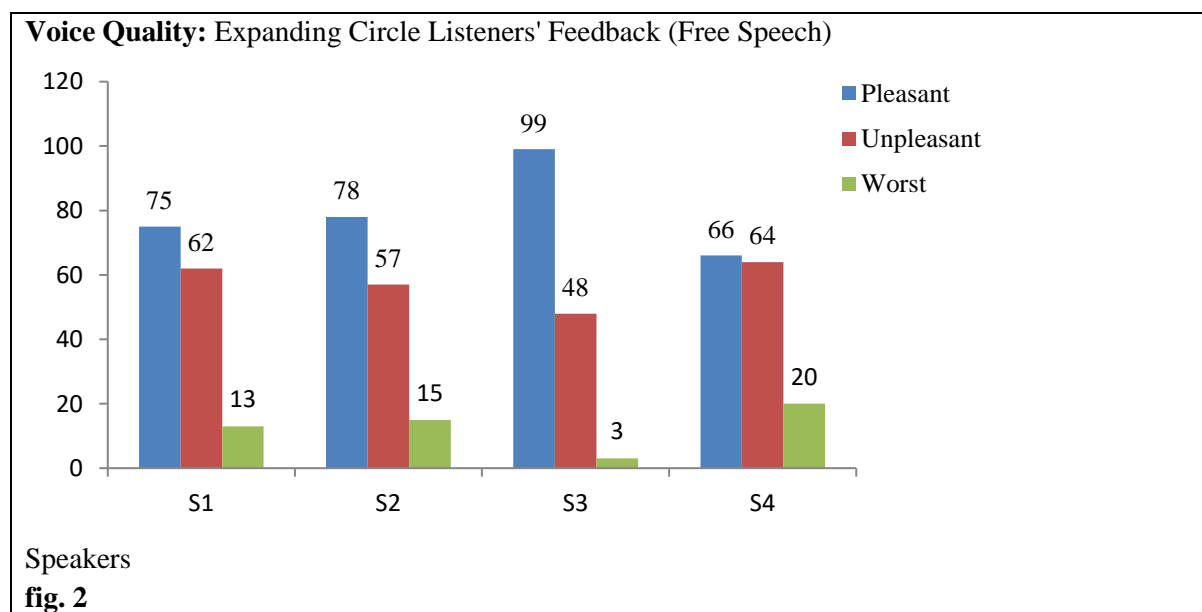
<b>Voice Quality Ranking: Outer Circle Listeners' feedback (Free Speech)</b>				
<b>SP</b>	<b>S1</b>	<b>S2</b>	<b>S3</b>	<b>S4</b>
<b>RM</b>				
3 x Ps	39	81	93	63
2 x Us	66	38	32	50
1 x Ws	4	4	3	4
Total	109	123	128	117
Rank	<b>4</b>	<b>2</b>	<b>1</b>	<b>3</b>

**Table 1**

Table (4.3) shows that among the four speakers, S3 (British) and S2 (American) scored first and second, respectively, in terms of voice quality parameter based on outer circle listener feedbacks, but the other two speakers, S4 (British) and S1 (American), scored third and fourth, respectively.

**Voice Quality:** Expanding circle Listeners' Feedback

Figure 2 shows that, as compared to the other three speakers, S3 has gotten the most Ps-99. S2, S3, and S4 on the other hand, received more Ps than Us, with 78, 75, and 64, respectively. In general, when it comes to a metric called "Voice Quality," the Expanding Circle listeners evaluate S3 as "Pleasant at Voice Quality," while the other three speakers are rated as "Unpleasant at Voice Quality." It is worth noting that S3 received fewer Ws than S2, S3, and S4.



The Expanding Circle Listeners' feedbacks and the rankings obtained by speakers- S1, S2, S3, and S4 under 'Voice Quality' parameter are presented in table below (4.4),

<b>Voice Quality Ranking: Expanding Circle Listeners' Feedback (Free Speech)</b>				
<b>SP</b>	<b>S1</b>	<b>S2</b>	<b>S3</b>	<b>S4</b>
<b>RM</b>				
3 x Ps	255	234	297	198
2 x Us	124	114	96	128

1 x Ws	13	15	3	20
Total	392	363	396	346
Rank	<b>2</b>	<b>3</b>	<b>1</b>	<b>4</b>
<b>Table:2</b>				

According to table (4.4), among the four speakers, S3 (British) and S1 (American) have received the first and second places, respectively, in the voice quality parameter based on expanding circle listeners' feedbacks. The other two speakers, S2 (American) and S4 (British), on the other hand, came in third and fourth place, respectively. S3 (British) and S2 (American) placed first and second, respectively, at the Outer Circle, while S4 (British) and S1 (American) placed third and fourth, respectively. S3 (British) and S1 (American) have ranked first and second, respectively, at Expanding Circle, while S2 (American) and S4 (British) have ranked third and fourth, respectively. As a result, it can be claimed that S3 (British) has performed better than the other speakers in terms of voice quality. As a result, S4 was rated bad for voice quality, whereas S1 and S2 were rated medium.

### Implications

When it comes to the parameter 'voice quality,' S3 has the highest number of Ps compared to the other three speakers. S3, S2, S1, and S2 were awarded 130, 105, 88, and 87 points, respectively. S3 can be regarded the 'best speaker' at the global level, based on feedback from the outer and expanding circle listeners and parametric analysis under each category of pronunciation, voice quality, and intelligibility. In comparison to other speakers, S3 has the lowest number of Ws for the parameter 'voice quality.' S3, S1, S2, and S4 have respectively got 6 Ws, 17 Ws, 19 Ws, and 24 Ws. Overall, based on feedback from the outer and expanding circle listeners, as well as parametric analysis under each category of intelligibility in an international setting. S4 is often referred to as the "worst speaker."

### Conclusion

Listening to someone speak in a language you don't understand can be frustrating and distressing. When you can't understand what the speaker is saying, it's also discouraging. This is when the comprehensibility of English comes into play. You can make it easier for your listeners to grasp what you're saying by using clear and concise pronunciation. Furthermore, the quality of your voice is critical. Poor audio will worsen the issue by preventing your listeners from understanding what you're saying. To summarise, English comprehensibility and voice quality work together to make listening more enjoyable and productive for all. The quality of an audio recording, whether it is in English or another language, has an impact on how listeners perceive the speaker. Poor voice quality often leads to poor listener comprehension and an unpleasant listening experience. As a result, it's crucial that your audio is as clear as possible, not only for your audience but also for yourself. This will help your listeners have a better listening experience and build trust, which are both crucial in business communication.

When it comes to English comprehension, there is no one-size-fits-all answer. However, there are a few key elements that can make a big difference, such as using clear and succinct vocabulary, speaking at a consistent cadence, and being aware of your audience's fluency level. Volume, pitch, and inflection are just a few of the elements that might affect listeners' perception of voice quality. These foundations will assist you in improving the intelligibility of your voice and ensuring that your listeners can clearly understand you! English is unquestionably one of the world's most commonly spoken languages. However, as English becomes more understandable to people from all over the world, it is becoming more widely recognised as a necessary skill for a wide range of jobs. According to one study, people who can communicate well in English are up to 34% more likely to get promoted than those who can't.

Needless to say, this has far-reaching implications for corporations and their workers. This study looks at the importance of English intelligibility and how it affects listeners' perceptions. It also investigates the impact of voice quality on listener perception. Overall, it suggests ways to improve English comprehensibility and voice quality for better listener comprehension. Speak clearly and plainly while interacting with your audience. Regardless of your English ability, poor voice quality can make it difficult for them to understand what you're saying. This can have an impact on both your professional and personal life, therefore it's critical to be able to express yourself clearly without bothering or alienating your audience. Try some of the following tips to improve the quality and intelligibility of your speech: - Double-check that the words you're saying are pronounced correctly. - Consistently practise and master the language to the best of your ability. - Speak slowly and pause between sentences to give your listeners time to process what you've said. There has been a lot written about the intelligibility of English and how it impacts listeners' views. Some claim that there is no such thing as "perfect" pronunciation and that the only way to be heard is to talk with a regional accent. Others argue that people from other countries understand English more naturally than persons born and raised in the UK.

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