Pronunciation and Context Based Intelligibility

Andy W. Fuller

Colorado State University
Abstract

For over three decades, teaching English pronunciation has been grounded on the notion of intelligibility. Intelligibility is defined as “the ability of judges to transcribe the actual words of an utterance…” (Field, 2005, p. 400). However, intelligibility is a complicated construct that is highly subjective and context dependent. For example, depending on the context the ‘judges’ might be native speakers, or non-native speakers that may or may not share the same L1. Additionally, little consensus exists on what features of phonology contribute most to intelligibility (Field, 2005). This is largely due to the different contexts in which intelligibility is examined. Of equal importance concerning this issue is how non-native speakers perceive the teaching and learning of pronunciation. Are we not, as teachers, supposed to help learners achieve their goals? It is this authors position that teaching pronunciation is highly context dependant and no single feature of phonology can be pointed out that will enhance intelligibility for all speakers. This paper will examine research on intelligibility and explore learner perceptions in a variety of contexts to explain the complexity of teaching pronunciation. It will also offer some recommendations, based on empirical research, for teaching pronunciation to English language learners (ELLs) in these contexts.

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Before exploring the various contexts in which intelligibility issues arise, it is important to understand how intelligibility is examined. Intelligibility research focuses on what features of phonology will increase the intelligibility of a speaker based on judgments by listeners. The features examined are segmentals and suprasegmentals (also called prosody), where the former is defined as the collection of vowels and consonants and the latter is defined as (but not limited to) nuclear and lexical stress, intonation and rhythm (Celce-Murcia, Brinton & Goodwin, 1996). These features are usually examined in isolation from one another, however, they have been studied together in hopes of understanding the relationship they share in intelligibility.

Intelligibility in the EIL and WE contexts

Over a period of three years, Jenkins (2002) examined students’ pronunciation errors in her classrooms in the English as an International Language (EIL) context. In this context, intelligibility is largely examined from the perspective that non-native speakers (NNSs) are using English to speak with other NNSs. As Jenkins explained, loss of intelligibility manifested itself quite differently when the ELLs had a different L1 than when the L1 was the same. Accommodation is a common strategy employed by ELLs that have different L1’s when they are attempting to speak intelligibly. According to Jenkins, when ELLs do not share the same L1 “speakers converge on what they construe as a more target like pronunciation” (2002, p. 92). In other words, speakers attempt to sound more target like when they think there is a problem with their pronunciation. When communication is between speakers who share the same L1, they tend to converge on their L1 phonology when speaking English. For example, two of Jenkins’s Swiss German students “were appalled at the extent of their L1 phonological transfer when the
recording of their exchange was played back to them. (2002, p. 94). This suggests that it is
difficult to teach accommodation strategies to learners who share the same L1.

Another interesting dynamic between ELLs with different L1s is their reliance on
phonological information to understand an utterance despite contextual information that might
increase their level of understanding. According to Jenkins, during a communication activity,
students “tend to focus on the acoustic signal” of the speaker despite “clear contextual
information in the form of visual clues” (2002, p. 89-90). For example, students attempting to
understand the description of pictures will focus on the pronunciation of their interlocutors
instead of using the pictures to help them decipher the message (Jenkins, 2002).

Based on her classroom findings, Jenkins suggested a Lingua Franca Core (LFC)
phonological syllabus to help students with particular features that are needed for “successful
communication among NNS of English from a wide range of different L1’s” (2007, p. 23).

According to Jenkins (2002; 2007), the core should include:

- all consonant sounds, except for the dental fricatives /θ/ and /ð/ (thin, these) and the dark
  /l/ (real)
- aspiration that follows initial voiceless stops /p/ /t/ /k/ because when unaspirated they
  sound like the voiced /b/ /d/ /g/
- vowel length contrasts e.g. /i:/ leap and /i:/ leap
- nuclear stress (marks important information in an utterance)
- consonant clusters in initial and middle positions

Other research found similar features of phonology that either aided or hindered intelligibility for
NNS (Deterding & Kirkpatrick, 2006, cited in Sewell, 2010). Although these studies
acknowledge similar findings, Jenkins suggested further research in the area of segmentals and
suprasegmentals and recognized that other factors like teaching listener/speaker accommodation skills are important to intelligibility (2002; 2007).

Trudgill (2005) disagreed with the notion of a LFC and argued that because NNS need more segmental information to understand the speaker, reducing their phonological inventories might be unhelpful as it decreases the distinction between one word and another. Although NS can easily grasp meaning from context, predict words before they are completed, and intuitively know collocations, NNS tend to rely heavily on acoustic information to gain meaning (Trudgill, 2005). Of extreme importance, according to Trudgill, is increasing the ability of learners to make phonemic distinctions because “if speakers cannot produce a phonemic contrast it reduces their chance of hearing it also” (2005, p. 221). In light of his argument, Trudgill stated that it might be better to strive for a phonological system with a “maximum number of readily attainable contrasts” that fit the particular context of the learners (p. 226). Trudgill concluded that pronunciation, at the segmental level, should focus on those features with a high functional load (features that appear often in the language), while keeping in mind the level and desires of learners.

Many who research World Englishes (WEs) have noted the difference the concept of intelligibility has in this context than in the EIL context. Andrew Sewell (2010) wrote an article explaining some of these differences. According to Sewell, ELF research focuses on creating a common core of phonological features that maintain intelligibility, but WE intelligibility research is based on the principles of multiplicity and creativity. Furthermore, WE intelligibility research considers any combination of native and non-native speakers, whereas ELF intelligibility research focuses on NNS interactions (Sewel, 2010).
Another factor distinguishing the WEs context from the EIL context is the examination of Inner Circle varieties and Outer Circle varieties of English. Inner Circle varieties of English are American, British, and Australian etc. Outer Circle varieties of English consist of places such as India, Singapore and Nigeria (Deterding, 2010). Speakers of these Outer Circle varieties often have English as their L1 and are extremely proficient in the language despite differences in accent and pronunciation from the Inner Circle varieties.

Concerning the Outer Circle varieties, Deterding (2010) examined pronunciation norms that occur in Southeast Asia and argued that the features that do not hinder intelligibility should be accepted by Inner Circle speakers. New data examined in this study involved recordings of 33 female undergraduate students from Singapore. Deterding found that this particular Outer Circle variety of English has some common characteristics such as the absence of reduced vowels, syllable based rhythm, and dropped final consonants: a mixture of segmental and suprasegmental variances (2010).

An interesting question is presented in Deterding’s research concerning dropped final consonants. Inner Circle varieties of English often drop the final consonant sound /t/ in consonant clusters; for example, the /t/ is dropped in phrases such as best man, last month, next May, and first birthday (Deterding, 2010). As this is also the case in some Outer Circle varieties, should teachers encourage students to drop some final consonants? Deterding noted that some teachers believed this should not be encouraged, as it can create problems with spelling and diminish the “distinctions” between words (2010, p. 375).

Deterding (2010) noted the complicated nature of creating a LFC that all speakers of English can agree on. For example, some Outer Circle varieties of English are geographically closer to areas where English is being learned as a foreign language. Should that variety of
English inform instruction? Although the Singapore variety of English drops final consonants, Chinese ELLs are much less likely to drop final consonants and may not agree that this should be taught. Additionally, Japanese ELLs difficulty with /l/ and /r/ is well documented (Deterding, 2010) and some suggested this be an unimportant feature of English pronunciation for Japanese students. However, other research in Asia points to the distinction of /l/ and /r/ being much less difficult for Mandarin and Cantonese speakers of English (Deterding, 2006; Hung 2002). This lack of consensus on what features contribute to intelligibility is likely to continue and will certainly make the adoption of a LFC extremely difficult in the WEs context.

This section has examined the intelligibility debate in the WE and EIL context. WE research recognizes many varieties of English as being autonomous in their own right. EIL research attempts to find a commonality of phonological features among NNSs of English that will increase the overall intelligibility of their spoken English. The next section will examine intelligibility in the English as a Foreign Language (EFL) and the English as a Second Language (ESL) contexts.

**Intelligibility in the ESL and EFL contexts**

As noted by many researchers, little consensus exists concerning what factors of speech are most important to a speakers intelligibility (Field, 2005; Hahn, 2004; Levis, 2005) In hopes of clarifying this issue in the ESL (Hahn, 2004; Field 2005) and the EFL (Trudgill, 2005; Walker, 2005) contexts, relevant research conducted on segmentals and suprasegmentals will be examined.

Field (2005) examined how lexical stress (word stress) and vowel quality affect intelligibility in the ESL context. Field cites a number of studies conducted on lexical stress and argues that “the most compelling reason for investigating lexical stress lies in an L1 study that
produced striking evidence that certain types of stress misplacement appear to seriously impair intelligibility” (2004, p. 403). The researchers reported no loss of intelligibility when the stress was shifted from right to left; however, a significant amount of intelligibility was lost when the shift was from left to right accompanied by a change in vowel quality (Field, 2005).

Field (2005) modified this study to fit an L2 context. The study contained 82 NS judges from a secondary school in Britain and 76 intermediate level NNS from private language schools in Britain who had different L1 backgrounds. The words used in the study were presented in isolation rather than within a text (see Table 1, p. 405). It was found that NSs and NNSs all experienced a diminished understanding of the words when lexical stress was shifted from left to right. Field (2005) concludes that while incorrect lexical stress does seem to affect intelligibility, it might be significantly higher if the words were contained within sentences. For example, lexical stress is usually part of an utterance that cues listeners into key information in a sentence; thus, when lexical stress is misplaced it can severely hinder the intelligibility of the speaker (Field, 2005).

Based on these findings, Field (2005) reviewed some commonly used practices in teaching lexical stress and commented on their usefulness. According to Field, of high importance may be teaching students that most content words are stressed on the first syllable in connected speech, using exercises that require students to group words with the same stress pattern, and helping students separate connected speech into individual words (2005).

A similar study conducted by Hahn (2004) focused on the role incorrect, misplaced, or absent primary stress has on NS comprehension when listening to a NNS. Hahn (2004) stated that, “in English, new and contrastive information is presented in stressed elements, and old or given information is expressed in unstressed elements” (p. 202). For example, *He’s always*
hungry, is spoken with the stress on always because it is new information presented to the question Is he hungry? Similarly, contrastive information is presented like I would rather eat than sleep, where the stress is on the words eat and sleep. Thus, when this feature of the English language is not observed, there is a communication breakdown (Hahn, 2004).

Hahn’s study consisted of 90 American freshmen judges from the same university listening to recordings of one NNS international teaching assistant (ITA) from Korea. The Korean ITA read three separate versions of the same text with (a) the correct stress (b) the stress incorrectly placed (c) the stress completely absent (p. 206). Hahn (2004) concludes that “when listening to speech with correct primary stress, the participants recalled significantly more content and evaluated the speaker significantly more favorably than when primary stress was aberrant or missing” (2004, p. 201). The list below contains some of the strategies suggested by Hahn based on her findings (p. 217-218)

- addressing contrastive stress when practicing functions such as disagreeing or contradicting.
- students could listen to recordings and attempt to identify where the primary stress is in the sentence.
- focused practice of primary stress in student discourse (e.g. student presentations and conversations)
- giving students practice with stressed new information and unstressed old information

Hahn’s research suggests that NNS utilization of correct primary stress is important for intelligibility in the ESL context. It should be noted that primary stress was observed by Jenkins (2002) to be important to intelligibility in the EIL context as well. This might suggest the importance of teaching correct primary stress regardless of context. However, the number of
participants in these two studies was relatively small and more research on primary stress must be conducted to either confirm or nullify its importance.

The EFL context is quite different than the ESL or EIL context. In EFL classrooms, most students share the same L1. This creates a dynamic where students usually substitute a difficult sound in English by converging on their L1 phonology. Walker (2005) noted that in an EFL classroom

… when activities move from the initial teacher-led drills to student-governed pair or group work, pronunciation accuracy can suffer. When an attempt at a minimal-pair discrimination is unsuccessful, for example, the speakers tend to converge not on an internationally intelligible LFC form of the problem sound, but on a pronunciation influenced by their shared L1 phonology (p. 551)

In light of these facts, Walker (2005) stated that because accommodation towards the target like sound does not appear to happen in the EFL context, teachers should engage students in communication tasks that provide students with teacher and peer feedback. Walker suggested a recorded monologue or dialogue focused on the content of the classroom that examines a limited number of phonological features at a time. Phonological features focused on are those contained in the LFC. These recordings would be subject to teacher and peer review in hopes of generating a consensus of intelligibility in the classroom. Unfortunately, the article does not include any empirical evidence that this particular technique increases the intelligibility of the students.

There is also no mention of how this technique helps the learners in monolingual classrooms stop converging on their shared L1 phonology.

Research allows practitioners to understand which particular features of English phonology are difficult for ELLs. However, most teachers are not familiar with this research and
lack training in English phonology; as a result, teachers usually design pronunciation activities around personal intuition rather than research based pedagogy (Derwing & Munroe, 2005; Levis, 2005). Derwing and Munore (2005) and Levis (2005) both argued that this disconnect between research and practice has lead to the emphasis on suprasegmentals in pronunciation even though limited empirical evidence supports this direction. More empirical research, that is classroom focused and involves teachers and informs instruction, is needed to create useful materials for teachers to teach pronunciation (Derwing & Munroe, 2005). As context is extremely important when teaching pronunciation, these materials should be focused on particular teaching situations and groups of students. For example, materials could focus on either heterogeneous groups or homogeneous groups of learners at different proficiency levels with varied language goals.

**Learner Perceptions and Desires**

As has been demonstrated, research on the construct of intelligibility is highly context dependent. Different contexts also contain different types of learners with diverse language goals. As educators, it is extremely important to understand what the learners’ goals are and how they think instruction can help them reach their goals. He and Li (2009) gave a questionnaire to over 1000 Chinese participants, 820 students and 210 English teachers, from four different universities in China. The questionnaire asked participants their ideas concerning pronunciation goals, China English as a legitimate variety, and why Chinese students learn English etc. Their survey found that most Chinese learned English “for communication with NNS from other L1 backgrounds…” (2009, p. 85). Although the questionnaire found that most participants desired to sound like a native speaker (81.9%), most agreed that China English should be integrated in the teaching model and that it was a legitimate variety of English. Even though this questionnaire included a significant number of people, it did not include any universities in Hong
Kong nor did it include any English majors. He and Li stated their reasons for not including English majors

First, English majors in China are expected to graduate with near-native proficiency in English. Second, perhaps more importantly, since non-English majors constitute the absolute majority of potential English-speaking and using population in China, we believe the choice of a pedagogic model of English should be geared towards the needs of this largest group (2009, p. 76)

Their explanation for not including any English majors is quite puzzling. Should they not have been at least included in the sample? It is this author’s opinion that explicitly excluding a group from a questionnaire might cause problems with the validity of the data. Another similar questionnaire should be given, including English majors, to examine the possible differences in outcome.

Another interesting study was conducted in America concerning ELL’s perceptions of accent, desired accent, and ease of intelligibility of a speaker. Richard, Scales, Wennerstrom, and Wu (2006) stated that many learners in other studies have expressed desires to achieve native like pronunciation of English, even though they cannot recognize NS speech when listening to recordings. Their study involved 37 ELLs from university programs with different L1 backgrounds and 10 American undergraduate students. The task consisted of participants listening to speakers and judging them to be either native or non-native and judging the speakers ability to be a good English teacher. Although 62% of the NNS desired to sound native, only 29% could recognize NS accents (Richard et al., 2006). The American accent was judged as most easily understood and the most preferred. However, this could be explained by the fact that the study took place in America and familiarity with a particular accent can increase
intelligibility and comprehensibility (p. 718). Richard et al. (2006) concluded that there is an obvious disconnect between learner desire to sound native and perceptions of what a native speaker actually sounds like. They recommend that acknowledging who the learner might understand might be just as important as who will comprehend the learner. This author agrees that this would “address intelligibility and listening comprehension, increasing communicative flexibility and respect for accent diversity” (Richard et al, 2006, p. 735). Examining learner desires and goals is an important aspect of the intelligibility discussion as it can help focus teacher instruction in the classroom.

**Conclusion**

This paper has examined intelligibility research on a global scale. As context is extremely important in how intelligibility is defined, it is difficult to point to specific phonological features that always increase intelligibility regardless of the communicative situation. WE seems to have its own place in intelligibility as many people in this context have English as their L1. It is this author’s opinion that those varieties of English are legitimate and they should adopt whatever practices and models of pronunciation they deem appropriate. Concerning the EIL context, it does appear that Jenkins’s LFC has a wide range of classrooms to which it could apply. However, the classrooms where the LFC would be implemented should contain students with varied L1s otherwise the accommodation process cannot take place. Trudgill (2005) argued that segmental phonology is extremely important for NNS listeners and suggested that it may be better to strive for context dependant attainable contrasts in pronunciation. His argument seems to apply best to the EFL context because teaching monolingual students the maximum number of contrastive sounds might help them not converge on their L1 phonology when there is a communication problem. Walker’s (2005) suggested
audio recordings may be useful in helping students realize the presence or lack of contrastive sounds in their own speech. In the ESL context, it seems appropriate for teachers to focus on the native variety that is spoken in that country. Not only would it help ELLs communicate with native speakers, it would increase their ability to understand lectures at their university. Depending on the level of the students, teachers could initially focus on elements contained in the LFC. This might give the students a good foundation in phonology with which to improve on. Important to intelligibility is also the goals and desires of the learners. As a teacher it would be valuable to survey your class in terms of their overall language learning goals and what they hope to do with the language when they are finished studying. This might help them feel like more of an active participant in their learning and increase engagement in discourse. After compiling a vast amount of research on intelligibility it has become apparent how complicated and context dependent it is teaching pronunciation. Unfortunately, intelligibility research has largely been limited to small groups or classrooms. More empirical, replicable, and context focused classroom studies are needed to understand intelligibility and create materials for teachers to use when teaching pronunciation.
References


