

Assessing Intonation

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1 Introduction Although there is a body of literature (e.g. Kingdon (1948), Brazil (1994, 1997), Celce-Murcia et al (1996)) and a considerable web presence (e.g. Stibbard (1996), Celik (2001), Power (2009)) on teaching intonation, there is actually very little of immediate practical value and virtually nothing at all on assessment. Most publications simply summarise intonation structure and theory with no suggestions as to how this might be taught, and many never consider assessment at all. We have no empirical evidence that what we do is right, or even appropriate. In 2007, at the UCL Summer Course in English Phonetics, Jack Windsor Lewis (talking specifically about tone) said *Most learners of English as a foreign language [...] usually produce intonations when they speak spontaneous English that are perfectly OK [...] Now [...] if you ask them to read aloud, they make terrible mistakes quite often – but then so do native English speakers...* (JWL returns to the subject of learning intonation in a 2009 blog, <http://www.yek.me.uk/Blog.html#blog189>, where, talking especially about Japanese learners, he also discusses tonicity.) These words capture the dichotomy in what we do – especially in further and higher education. We have two different and maybe incompatible goals: teaching intonation to instil communicative abilities (intonation for the foreign language learner), and teaching it to ensure understanding of its nature, structures and role (intonation for the foreign language teacher, linguistics student, etc.). In neither case it is clear that reading aloud serves any immediate purpose and yet we often use this as the basis of assessment. We also seem to assume that a good knowledge of theory will ensure adequate performance skills, but even this is not proven – and given that intonation is a spontaneous response to a discourse situation, not the conscious and considered application of rules, this assumption could be misleading or even completely wrong. There are many unanswered questions: what should we teach when teaching intonation theory (and are rule-based manipulative skills part of this)? how much theory do FL teachers need and how much FL students? how does this compare with the needs of linguistics students? how do we assess knowledge of intonation and what exactly are we assessing? how do we assess communicative abilities? what is the relation between knowledge of the system and use of the system in a discourse situation? is what we ask of the FL student realistic and has it any value?

By way of beginning to find answers to these questions, we decided to document and question traditional methods of English intonation assessment and to compare the ability of English native speaker students with that of non-native speaker students, in this case, Japanese. Our very modest first step is the focus of this paper.

2 Testing

2.1 Procedure and participants

Using typical materials from the Japanese higher education programme, we recorded students carrying out a short assessment exercise consisting of two tests focusing on tonicity and tone. These were evaluated as if for assessment purposes. We then reviewed the results and attempted to summarise what they told us about the training and evaluation processes, and we considered their relevance for communication.

The process involved two groups of participants. All were volunteers, university

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students with at least 12 weeks of formal training in English intonation attending a typical study programme, a mix of lectures focusing on the intonational phrase – tonality, tonicity (N) and tone (T) – plus practical sessions training them to apply the theory in textual analysis and to describe and produce different intonation tunes. There were 10 students in each group, matched as closely as possible for learning experience and gender, one a group of Japanese native speakers (JNS) and the other of English native speakers (ENS).

2.2 Materials and recordings

Test materials consisted of a short passage, adapted from Taniguchi & Tara (2005), already chunked into 14 IPs (Figure 1a), and structured to encourage the use of appropriately context-sensitive tonicity and a range of rising and falling tones. For the first test, participants were given ten minutes preparation time and asked to annotate the passage for reading aloud, underlining the nuclear syllable in each IP and indicating the nuclear tone they intended to use. After preparation, participants read the test passage aloud, the reading recorded using an Edirol R-09 24 bit wave/MP3 recorder. A minimum of two weeks later, participants returned and were given the same passage, this time with the intonation marked up (Figure 1b). They were again given practice time before reading the passage aloud for recording.

<p>B Shall we meet at three thirty? A How about four thirty? B Isn't four thirty a bit late? A Not really. Are any Olympic athletes coming? B Donald Dolphin's coming. A He's a medallist! He's got six gold medals and a silver one. B He's a very good swimmer! A He's an excellent swimmer! B I think he came to Japan in nineteen eighty nine. A And he came again in nineteen ninety nine. </p>	<p>B Shall we meet at three /<u>thirty</u>? A How about \<u>four</u> thirty? B Isn't four thirty a bit /<u>late</u>? A Not \<u>really</u>. Are any Olympic /<u>athletes</u> coming? B Donald \<u>Dolphin</u>'s coming. A He's a \<u>medallist</u>! He's got six \<u>gold</u> medals and a \<u>silver</u> one. B He's a very good \<u>swimmer</u>! A He's an \<u>excellent</u> swimmer! B I think he came to Japan in nineteen eighty \u<u>nine</u>. A And he came a \<u>gain</u> in nineteen \u<u>ninety</u> nine. </p>
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(a) Test 1 – the reading passage chunked into IPs

(b) Test 2 - the reading passage marked up for tonicity and tone

Figure 1 The two versions of the reading passage

2.3 Analysis

Recordings were analysed auditorily by both authors independently asking two questions: does the performance, in terms of tonicity and tone, match the transcription when reading from the participant's own transcription? and does the performance match the transcription when reading from the marked-up version? The results were scored out of 14 for each category (awarding 1 for right and zero for wrong) and judgements were then compared.

3 Results

3.1 Japanese native speaker results

Figure 2a, scores for **tonicity**, shows two trends. First, performance overall improves in Test 2 – in Test 1 accuracy varied from 50% to 100% correct, in Test 2 the majority of participants were between 86% and 100% accurate. Six participants improved, while two remained the same and two scored less. Second, although a number of participants in the middle of the range performed a lot better in Test 2, the weaker

participants remained weaker in relative terms and the better ones retained their higher positions in the performance range. In Figure 2b, the results for **tone** show similar trends, although the levels of achievement overall are a little lower. JNS participants scored between 36% and 100% in Test 1 and 71% and 93% in Test 2. The overall improvement in Test 2 results for tone is very noticeable.

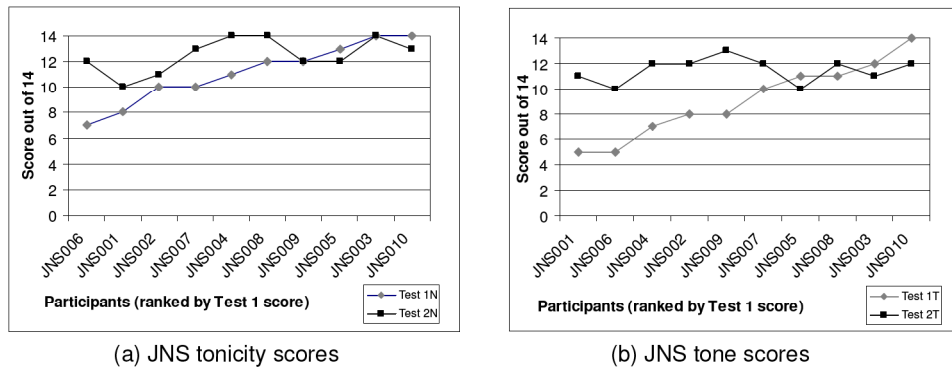


Figure 2. Scores for JNS participants

3.2 English native speaker results

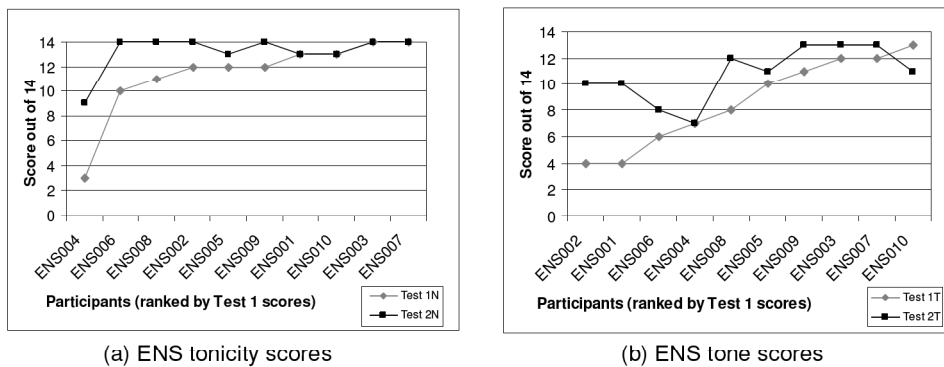


Figure 3. Scores for ENS participants

Figure 3 confirms that ENS participants also did better when reading from the marked-up text in Test 2. For **tonicity**, Test 1 scores ranged from 21% to 100% and Test 2 from 64% to 100%. Again six participants improved, although here the best four stayed the same. Scores for **tone** are again lower overall, ranging between 29% and 93% in Test 1, and 50% and 93% in Test 2. While only 1 participant performed less well in Test 2 in the ENS group, there is overall a rather smaller improvement from Test 1 to 2 except for the two weakest participants. Overall – and again like the JNS group – the biggest differences from Test 1 to Test 2 are noticeable in the scores of the weakest participants, the best varying only minimally.

3.3 Inter-group comparison

Figure 4 shows us how the two groups performed in relative terms in each test. The ENS group has just a very slight edge over the JNS group with the exception of tonality in Test 2 where the groups are equal. Achievement for tone is noticeably weaker for both groups. In summary:

- both populations are better at tonicity than tone;
- both populations generally score higher at each task in Test 2 (where they are told what to read) than in Test 1 (where they read from their own script).

4 Conclusions Bearing in mind the questions asked in the introduction, what has been learned? First, it is clear from the very close match of scores between the two groups that with respect to this test at least, what is being asked of the non-native speaker is entirely realistic. Trained native speakers of English perform very little better in this relatively simple exercise. Its actual value, however, depends on the focus – are we testing communicative skills or theoretical knowledge?

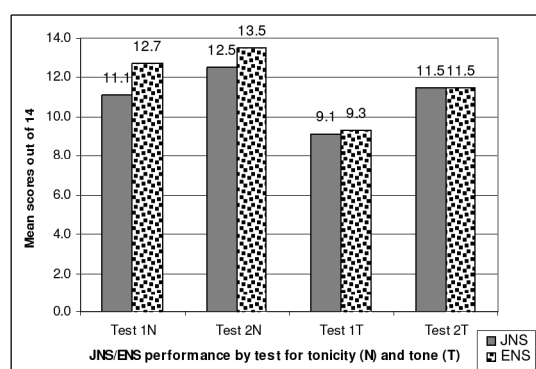


Figure 4. Comparison of the JNS and ENS scores by test

We believe that traditional tests of this kind can only be tests of knowledge and understanding of intonation theory. Although going some way towards simulating a discourse situation in which speakers are constantly weighing up options, they are artificial and in nature – choices are made, effectively, with the benefit of hindsight... what is coming next is known, there is leisure to mull things over, appeal to theory, and to practice the output. None of that occurs in spontaneous interaction.

The results, however, reveal flaws in the experiment. Lower scores in Test 1 results may indicate that although participants are able to read and perform intonation, the weaker ones may be less accomplished at marking up intonation themselves – low Test 1 scores could be a direct result of the fact that what they wrote did not match their intention. The discrepancy also points towards possible learning interference – participants learn how to play the game by taking Test 1. To determine which (if either) of these occurred, participants must be interviewed with regard to intonation mark-ups in Test 1, and the tests must be run in the opposite order. Other options include: running tests using pairs of different (but comparable) texts; 'free' reading of the text (with no mark-up) to determine how far apparent success is a matter of coincidence; reading of unlikely/unpredictable intonation mark-ups.

So, as a pilot, this experiment answers one question, suggests a number of ways forward and begins to document a hitherto undocumented process. It also suggests that very controlled use of 'reading aloud' may have a place in assessment.

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