Acquiring and teaching pronunciation (part 2)

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• SLA research has mostly tackled the problems which arise in acquiring a second language that has a different overall writing system from one’s first language:
  – For example, going from a meaning-based route to a sound-based one, as in Chinese students of English.
  – from one type of alphabetic script to another, say, Greek to English or English to German.

• Chikamatsu (1996) found that English people tended to transfer their L1 sound-based strategies to Japanese as an L2, Chinese people their L2 meaning-based strategies.

• In the reverse direction, the Chinese meaning-based system handicaps reading in English; upper high school students in Taiwan read at a speed of 88 words per minute, compared to 254 for native speakers (Haynes and Carr, 1990).

• Students’ difficulties with reading may have more to do with the basic characteristics of their L1 writing system than with grammar or vocabulary.

• Chikamatsu (1996) found that English people tended to transfer their L1 sound-based strategies to Japanese as an L2, Chinese people their L2 meaning-based strategies.

• Indeed the characteristics of the writing system you learn first may affect you in other ways:
  – For example, Chinese people are more visually dominated than English people, probably due in part to their character-based writing system.

• Box 5.5 gives examples of the spelling mistakes made by L2 users of English:

<table>
<thead>
<tr>
<th>Box 5.5 Missspelling with English spelling</th>
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<tbody>
<tr>
<td>The words most commonly misspelled by L2 users of English</td>
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<tr>
<td>accommodating, because, beginning, business, career, choice, definite, describe, develop, different, government, integrals, interesting, kindergarten, knowledge, life, necessary, particular, professional, professor, really, study/student, their/there, which, would</td>
</tr>
<tr>
<td>Some typical L2 mistakes</td>
</tr>
<tr>
<td>address, adress, adresse</td>
</tr>
<tr>
<td>because, beause, becaus, becaus, becuase, becaus, becuase, begause, becuse, becuas</td>
</tr>
<tr>
<td>business, busines, business, business</td>
</tr>
<tr>
<td>grammar (etc.): gramma, grammatical, grammartical, grammar</td>
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<tr>
<td>professional, profession, professional, professional, professional</td>
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<tr>
<td>sincerely, sincirely, sincerely, sincerely, sincerly</td>
</tr>
<tr>
<td>student, student, student, student, stuent</td>
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</tbody>
</table>

• Many of them are similar to those made by native speakers.

• This tends to show that the English spelling system itself is to blame rather than the difficulties of writing in a second language.

• ‘accommodate’ is often spelt wrong because people are unsure of the consonant doubling rules and gamble that consonants would not be doubled twice in the same word – similarly for ‘address’.
• The vowel correspondence rules cause problems for native speakers as well as non-native users of English.
  – e.g., what does the final spoken /ə/ in ‘grammar’ correspond to in writing? <ar>, <a>, <ah> and<br> would all be equally plausible if sound correspondences were all that mattered.

• Research shows that adult L2 user university students make about as many spelling errors as 15-year-old English native children.
  – In one sense this is disappointing in that they are not writing like native adults.
  – In another way it is encouraging; the students would probably be very pleased to be told that they spoke English as well as 15-year-old native children.

• Just as an L2 user’s accent can betray their first language, so their spelling can indicate not only the kind of L1 writing system they were taught first, but also the phonology of their first language.

• An Arabic student may well leave out vowels from their spellings, say ‘coubrod’ (cupboard) or ‘recive’ (receive), showing that this is a feature of the consonantal Arabic writing systems: they may also add vowels ‘punishment’ showing that <shm> is not a possible consonant sequence in Arabic.

• Box 5.6 gives some examples of typical spelling mistakes from different L2 learners. These do indeed reveal something about the learners’ L1 and L1 writing systems.
  – The most common type of mistake was letter doubling (both consonant and vowel) with 35 per cent ‘specialise’, followed by letter omission with 19 per cent ‘exlaimed’, using the wrong letter with 18 per cent ‘enjoiing’, and adding an extra letter with 10 per cent ‘boreing’.

Box 5.6 Problems for users of specific L1 writing systems
Chinese: omission of consonants ‘subject’; addition of <e> ‘boyes’.
Dutch: double <k>: ‘wokel’.
French: wrong double consonants ‘comming’; vowel substitution ‘definitely’.
German: omission of <e> ‘hopped’, substitution of <i> for <y> ‘rinpod’.
Unique: ‘telephone’.
Greek: consonant substitution, <c>/k/ ‘Creek’; double unnecessarily ‘satisfaction’; transposition ‘staleed’. Unique <e> for <g> ‘Creek’ (Greek).
Italian: consonant omission ‘witch’ (whether); failure to double ‘biger’.
Urdu: vowel omission ‘sometimes’ and final <d> and <ç> ‘woot’, ‘leff’.

Box 5.7 Spelling and L2 learning
• The English spelling system has a number of specific rules such as structure word rules.
• L2 learners of English make spelling mistakes based in part on their L1 writing system, in part on lack of knowledge of the English spelling rules.
• Each language uses a certain number of sounds called phonemes that distinguish words and morphemes from one another.

• Phonemes signal the difference between words and meanings:
  – the spoken distance between 'I adore you' and 'I abhor you' is a single phoneme, /a/ versus /b/.

• A phoneme is a sound which is conventionally used to distinguish meanings in a particular language.

• Any language only uses a small proportion of all the sounds available as phonemes.

• Japanese does not have two phonemes for the /l/ in 'lip' and the /r/ in 'rip'.

• Human languages have between 11 and 141 phonemes, English being about average with 44 or so (depending on accent).

• There are allophones – variant pronunciations for a phoneme in different situations.

• In English the phoneme /l/ has two main allophones.
  1. At the beginning of a word such as 'leaf', it is a so-called 'clear' [l], sounding more like a front high vowel.
  2. At the end of a word such as 'feel', it can be pronounced as a 'dark' [l], sounding lower and more like a back low vowel.

• The problem for second language acquisition is that each language has its own set of phonemes and allophones.

• Two phonemes in one language may correspond to two allophones of the same phoneme in another language, or may not exist at all.

• For example, the two English phonemes /θ/ 'thigh' and /ð/ 'thy' seem to be allophones of one phoneme to a Spanish speaker.

• When the phonemes of spoken language connect one-to-one to the letters of alphabetic written language, the writing system is called transparent, as in Finnish or Italian, e.g., a = /a/, i = /i/, e = /e/.

• The English writing system is far from transparent because there are many more sounds than letters to go round: 44 phonemes will not go into 26 letters.
• Pairs of written letters go with single sounds, like ‘th’ for /θ/ in ‘three’ or ‘ed’ for /iː/ in ‘bean’.

• Single letters go with two sounds, like ‘x’ for /ks/ ‘six’.

• Letters have multiple pronunciations, like the <a> in ‘pat’ /æ/, ‘atomic’ /ɘ/ , ‘ska’ /aː/ and ‘swan’ /ɒ/.

• Kenworthy’s *The Pronunciation of English: A Workbook* (2000), intended more for teachers than students, uses phonetic symbols to train the listener to locate and discuss phonemes in authentic English speech.

• Pronunciation textbooks like *Ship or Sheep?* (Baker, 1981) present the student with pairs of words: ‘car’ /ka:/ versus ‘cow’ /kau:/ or ‘bra’ /bra:/ versus ‘brow’ /brəʊ/.

• In typical pronunciation materials the student learns how to distinguish one phoneme from another by hearing and repeating sentences with a high concentration of particular phonemes.

• This technique originated from the ‘minimal pairs’ technique used by linguists to establish the phonemes of a language from scratch; you present the native speaker with a series of likely or unlikely pairs of words and ask them whether they are different.
Phoneme learning

- Traditionally, much research into the L2 acquisition of phonology has focused on the phoneme.

- One classic example is the work of Wieden and Nemser (1991), who looked at phonemes and features in the acquisition of English by Austrian schoolchildren.

They found that some phonemes improved gradually over time while others showed no improvement.

Beginners, for example, perceived the diphthong /əʊ/ in 'boat' only 55 per cent correctly, but managed 100 per cent after eight years.

The sound /ə/ at the end of 'finger', however, gave students as much trouble after eight years as it did at the start.

This example shows the important role of transfer from one language to another in acquiring pronunciation.

It is not, however, a simple matter of transferring a single phoneme from the first language to the second, but of carrying over general properties of the first language.

- The phonemes of the language do not exist as individual items but are part of a whole system of contrasts.

- Practicing a single phoneme or pair of phonemes may not tackle the underlying issue.

- Though some of the learners’ pronunciation rules are related to their first language, they nevertheless still make up a unique temporary system – an interlanguage.
Learning below the phoneme level

- For many purposes the phoneme cannot give the whole picture of pronunciation.
- As well as the allophone, the elements which make up a phoneme also need to be taken into account.
- Seemingly different phonemes share common features which will present a learning problem that stretches across several phonemes.

VOT

- Let us take the example of voice onset time (VOT), which has been extensively researched in SLA research.
- One of the differences between pairs of plosive consonants such as /p~b/ and /k~g/ is the VOT – the interval of time between the consonant and the following vowel.

- The difference between voiced and voiceless plosives is not a matter of whether voicing occurs but when it occurs, that is, of timing relative to the moment of release.

- It varies from one language to another: the Spanish /k~g/ contrast is not exactly the same as the English /k~g/ because English /k/ has VOT that starts +80 milliseconds (0.8 seconds), but Spanish /k/ has VOT of only +29 milliseconds (0.29 seconds), almost the same as English /g/.

- An interesting question is whether there are two separate systems to handle the two languages or one system that covers both.
- French learners of English, for example, pronounce the /t/ sound in French with a longer VOT than monolinguals (Flege, 1987).
- Spanish/English bilinguals use more or less the same VOT in both English and Spanish (Williams, 1977).
Learning syllable structure

- Phonemes are part of the phonological structure of the sentence, not just items.
- In particular they form part of the structure of syllables.
- One way of analysing syllables is in terms of consonants (C) such as /t/, /s/, /p/, and so on, and vowels (V) such as /i/ or /ai/.

- The simplest syllable consists of a vowel V /ai/ ‘eye’; this structure is found in all languages.
- In languages such as Japanese all syllables have this CV structure with few exceptions, hence the familiar-looking pattern of Japanese words such as ‘Miyazaki’, ‘Toyota’ or ‘Yokohama’.
- A third syllable structure allows combinations of CVC as in /tai/ ‘tight’.

One difficulty for the L2 learner comes from how the consonants combine with each other to make CC – the permissible consonant clusters.

- English combines /p/ with /l/ in ‘plan’ and with /r/ in ‘pray’ /prei/, but does not combine /p/ with /f/ or /z/; there are no English words like ‘pfan’ or ‘pzan’.

Phonemes and distinctive features

- Much learning of pronunciation depends on aspects other than the phoneme, for example, distinctive features.
- L2 learners gradually acquire the L2 way of voicing stop consonants.
- Their first language is affected by their knowledge of the second language, as well as their second being affected by their first.
• Longer clusters of three or four consonants can also occur, for example, at the end of 'lengths' /lɛŋkθs/ or the beginning of 'splinter' /splɪntə/.

• The syllable structure of some languages allows only a single consonant before or after the vowel.

• Japanese, for instance, has no consonant clusters and most syllables end in a vowel, that is, it has a bare CV syllable structure; the English word 'strike' starting with CCC becomes 'sutoraki' in Japanese, in conformity with the syllable structure of the language.

• L2 learners often try by one means or another to make English clusters fit their first languages.

• Examples are Koreans saying /kələs/ for 'class', and Arabs saying /bəlæstɪk/ for 'plastic'.

• They are inserting extra vowels to make English conform to Korean or Arabic, a process known as epenthesis.

• An alternative strategy is to leave consonants out of words if they are not allowed in the L1 - the process of 'simplification'.

• Cantonese speakers, whose L1 syllables have no final consonants, turn English 'girl' /gəːl/ into 'gir' /gəl/ and 'Joan' /dʒəʊn/ into 'Joa' /dʒəʊ/.

• Arabic syllables too can be CV but not CCV, that is, there are no two-consonant clusters.

• 'Straw' /strɔː/ is an impossible syllable in Arabic because it starts with a three-consonant cluster /str/ CCC.

• Egyptian–Arabic learners of English often add an epenthetic vowel /ə/ to avoid two or three-consonant clusters.

• 'Children' /tʃildrən/ becomes 'children' /tʃildrən/ in their speech because the CC combination /dr/ is not allowed.

• 'Translate' /trænzleɪt/ comes out as 'tiransilate' /tirænzɪleɪt/ to avoid the two-consonant CC sequences /tr/ and /sl/. Part of their first language system is being transferred into English.

• Differences between the syllable structures of the first and second languages is resolved by adding vowels or leaving out consonants.

• It is not just the phonemes in the sentence that matter, but the abstract syllable structure that governs their combination.

• Indeed, some phonologists regard the syllable as the main unit in speaking or listening, rather than the phoneme.

• A crucial aspect of language acquisition is the mastery of syllable structure.

• Learners often try to make their second language syllable structure fit the structure of their first language, by adding or omitting vowels and consonants.
4.3 General ideas about phonology learning

Focusing questions

- Do you think your own accent gives away where you come from in your L1?
- In your L2?
- How important do you think the first language is in learning L2 pronunciation?

Keywords

transfer: carrying over elements of one language one knows to another, whether L1 to L2 or L2 to L1 (reverse transfer).
accent versus dialect: an accent is a way of pronouncing a language that is typical of a particular group, whether regional or social; a dialect is the whole system characteristic of a particular group, including grammar and vocabulary, and so on, as well as pronunciation.

L1 and transfer

- Usually it is very easy to spot the first language of a non-native speaker from their accent.
- For example, German speakers of English tend to say 'zing' when they mean 'thing', Japanese 'pray' when they mean 'play'.

- The components of foreign accent may be at different levels of phonology.
- The most salient may be the apparent use of the wrong phoneme.
- Cook ordered 'bière' (beer) in France and was surprised when the waiter brought him 'Byrhh' (a rein-forced wine).
- This carries perhaps the greatest toll for the L2 user as it involves potential misunderstandings.

- Next comes the level of allophones; saying the wrong allophone will not interfere with the actual meaning of the word, but may increase the overall difficulty of comprehension if the listener always has to struggle to work out what phoneme is intended.
- Consonant clusters may be a difficulty for some speakers.
- Spanish does not have an initial /st/ cluster, so Spanish speakers tend to say 'estation' for 'station'.

Cross-linguistic transfer

- The reason for these pronunciation problems has been called cross-linguistic transfer.
- A person who knows two languages transfers some aspect from one language to another.
- What can be transferred depends, among other things, on the relationship between the two languages.

- Eckmann et al. (2003) have drawn up three possibilities:
  1. The first language has neither of the contrasting L2 sounds. Korean, for example, does not have any phonemes corresponding to English /f-/ and /v/ as in 'fail/veil'. A Korean learning English has to learn two new phonemes from scratch.
  2. The second language has one of the L2 sounds. Japanese, for instance, has a /p/ sound corresponding to English /p/ in 'paid', but no /f/ phoneme corresponding to that in 'fade'. Japanese learners of English have to learn an extra phoneme.
The second language has both sounds as allophones of the same phoneme. In Spanish, plosive /d/ and fricative /ð/ are both allophones of the phoneme /d/.

Spanish learners of English have to learn that what they take for granted as alternative forms of the same phoneme are in fact different phonemes in English. Similarly, /l/ and /r/ are allophones of one phoneme in Japanese.

- Which of these creates the most problems for learners?
- Logically it would seem that missing sounds would create problems.
- However, totally new sounds do not create particular problems.
- One exception might be click phonemes in some African languages, which speakers of non-click languages find it hard to master, though young babies are very good at it.

- The more similar the two phonemes may be in the L1 and the L2, the more deceptive it may be.
- The first language phonology affects the acquisition of the second through transfer because the learner projects qualities of the first language onto the second.
- The same happens in reverse in that people who speak a second language have a slightly different accent in their first language from monolinguals.

- Learning pronunciation then depends on three different components – L1 transfer, universal processes and L2. The relationship between these varies according to the learner’s stage.

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<thead>
<tr>
<th>Box 4.5 Processes in acquiring L2 phonology</th>
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<tr>
<td>• A crucial element in L2 phonology acquisition is transfer from the L1, which depends partly on the nature of the two phonological systems.</td>
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<tr>
<td>• Nevertheless, phonological acquisition also depends on universal processes of language acquisition available to the human mind.</td>
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