

Technology for pronunciation

Robin Walker looks at the present and looks to the future.

There is no escaping the presence of technology in ELT today. However, despite the scientific foundations of pronunciation, programs for computers and apps for mobile devices are currently a relatively small part of what is on offer for language teaching, with grammar and vocabulary dominating here, just as in the traditional classroom. Why this should be is hard to say, but it could be to do with the fact that learning pronunciation is very different from learning grammar or vocabulary.

Learning to pronounce

The critical thing about learning second language pronunciation is that it is more a process of skills acquisition than of cognitive knowledge – pronunciation is what you can *do*, not what you *know*. Because of this skills component, pronunciation teaching can learn a lot from the skills acquisition processes found in sports or in playing a musical instrument. At its simplest, skills acquisition can be seen as a three-stage process, with a cognitive stage being followed by associative and autonomous stages.

When I was first learning Spanish, for example, the simple /r/ was a source of great difficulty to me. In an attempt to help me, a friend explained that I had to imitate the American way of producing the *t* in *water*. In this first stage, the *cognitive* stage, I was receiving explicit instructions of how to produce the target feature, together with a model to aim at. Production in this first stage is

conscious, deliberate, slow and requires the learner's full attention. We've all witnessed this in class!

In the *associative* stage, learners slowly convert what they *know* into what they can *do*. At this intermediary stage, they need to be offered opportunities for abundant repetition of the target feature within a narrow context. Games and tongue twisters are two activity types that can provide this abundant repetition.

In the *autonomous* stage, the production of the target feature has to become more and more automated and rapid. With pronunciation, much more than with grammar and vocabulary, production has to come about without speakers having to think consciously about what's happening inside their mouths.

Choosing apps and programs

If skills are learnt by a three-stage acquisition process, to what extent does technology come to the learner's aid? In order to answer this question, and to be able to decide for ourselves the real value of a new program or app, we need to think about a number of different issues.

● Suitability, choice and sequence

Not all learners have the same pronunciation problems, especially when they don't share the same first language. Programs and apps need to adapt to each learner – what is vital for a French speaker of English could be irrelevant to a Chinese speaker. Even

when learners share a first language, the chance to choose *what* the learner personally considers is important (choice) and *when* the learner thinks it's important (sequence) is essential for the motivation needed to maintain interest during drills, games and other repetitive pronunciation tasks.

● Place and pace

Good programs/apps need to pay attention to where the learning will happen (*place* – at school, in the classroom, at home, on the bus, etc) and at what speed (*pace* – different learners need to progress from one part of an activity to another at different speeds because of the muscle-training involved in skills acquisition).

● Explicit instructions

Because learners will usually be working on their own, programs and apps will need to give an explicit introduction as to what is being practised and why, as well as clear guidance as to what is going to happen in the activity, and how to do it.

● Abundant repetition

As we saw earlier, abundant repetition is essential in skills work, and one of the joys of machines is that, unlike teachers, they never lose their patience. Good programs and apps will, therefore, contain multiple opportunities for the repetition of a target feature in order to bring about automation.

● Feedback and correction

Feedback and correction are essential

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in order to overcome the use of existing first-language psychomotor habits for specific pronunciation features. This is a critical issue. In the absence of meaningful feedback, the first-language pronunciation habit will actually become reinforced, and with each failed attempt to produce the target feature correctly, the incorrect neuronal pathway will be *further* reinforced. This means that repeated 'off-target' attempts of a merely 'listen and repeat' type not only do *not* generate improved pronunciation but, in fact, actually make it increasingly hard to modify the incorrect (first-language-influenced) habit.

● Assessment and progress

Learning pronunciation on your own can be a cruel business, and if students don't perceive that they are making progress, they can get very depressed. Clear indications of progress promote increased and better quality learning. In addition, tangible progress helps to justify the cost of taking on the learning, both in terms of any financial outlay, and in terms of time and effort.

So how do current programs and apps fare against these criteria? Given the impossibility of discussing a significant number of these, I am going to limit my comments to websites, programs and apps that I am familiar with and that are free. I have organised these around the three areas where I have turned to technology for help in my own teaching – tuition, listening and recording.

Technology and tuition

Technology is often championed as the solution for students learning English on their own. But is this true with pronunciation? It is impossible even to begin to review the countless free sites that claim to teach pronunciation, but here are two that give us some insight into what is currently available.

BBC Learning English

(www.bbc.co.uk/worldservice/learningenglish/grammar/pron/)

The BBC Learning English website

offers 'tips on pronunciation'. This covers individual sounds, includes a brief section on connected speech, and has three radio programmes by a pronunciation expert.

There is a short video for each of the sounds of English. In each, the speaker models the target sound, draws attention to the shape of her mouth, and then tells the viewer to listen and repeat. Sadly, the videos fail to solve the basic problems of computer/online tuition with respect to two important issues.

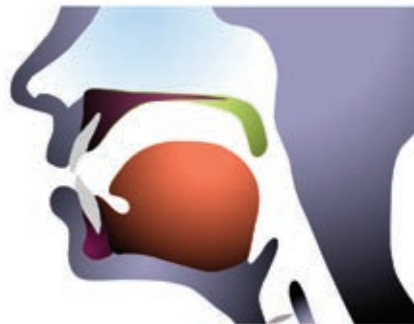
The first is that for most of the sounds of English, focusing on the shape of the mouth gives learners little meaningful information. Try learning how to pronounce /dʒ/ as in *judge* from looking at a person's face, and you'll soon see what I mean. Secondly, as we saw earlier, the more we listen and repeat without being corrected, the harder it becomes ever to pronounce well.

The BBC site is not alone here. In fact, none of the sites I have seen so far offer this critical corrective feedback. At best, they allow you to record yourself and compare what you have done with the model, but this is still a long way from what is needed by learners working on their own.

The Sounds of American English

(www.uiowa.edu/~acadtech/phonetics/about.html#)

This University of Iowa website focuses on the sounds of US English. It may not be the most attractive homepage on the internet, but the site provides learners with valuable information about what they are trying to do, especially with regard to the articulation of consonants. It does this through a very effective combination of sound bites, videos and animated illustrations. However, once again, there is no corrective feedback.



/dʒ/  play

Mouth diagram for /dʒ/ from *The Sounds of American English*

Technology for listening

There is a huge overlap between good pronunciation and good listening skills. Good pronunciation teaching involves exposing learners to a range of accents. These accents could be regional native-speaker accents, but in today's globalised world, they are more likely to be non-native-speaker accents. A number of sites allow learners to get this much-needed exposure.

The Speech Accent Archive

(<http://accent.gmu.edu>)

You can use the Speech Accent Archive to get your students interested in different accents, and there are hundreds available on this valuable site. My learners really enjoy listening to speakers from their own first-language background to get started. After that, it's a question of each learner's most likely needs. The only thing that bothers me about this site is the artificial-sounding elicitation paragraph that all of the speakers use. When was the last time you had to buy 'six spoons of fresh snow peas'?



Map of Asia from *The Speech Accent Archive*

The International Dialects of English Archive

(www.dialectsarchive.com)

This site was created to provide actors with real-life models for learning different accents, so it lacks specific guidance or instructions for EFL students. But there are over 1,000 recordings of native and non-native speakers of English reading a scripted paragraph and then talking freely about a topic of their choice. The transcript of the unscripted texts is available, allowing learners to match what they thought they heard against what was said, and then to focus on the pronunciation issues that often lie behind any differences.

Technology for recording

Making recordings is where I first began to look seriously at using technology to teach pronunciation. Even if I can't listen to every student in class, I can listen to the recordings they make and give them a mark, as I suggested in *ETp* Issue 93.

Recorder Pro

(www.davaconsulting.com/products/recorder-pro/)

Computer programs like *Audacity* or *WavePad* allow users not only to make recordings, but also to edit them. But for classroom use, it's enough for students to use the recording facility on their mobile phones or, in the absence of this, to use an app like *Recorder Pro*.

The advantage of such apps is that they can be used anywhere (place), with the learners working at their own speed (pace), and with no limits as to how many times a student repeats a task (abundant repetition). They also encourage the learners to be critical of what they record. My own students, for example, admit to asking friends to listen to their different attempts at a target feature before choosing the one to send to me for marking. This process goes some way to providing that essential corrective feedback I insisted on earlier.

Dragon Dictate

(www.nuance.com/dragon/index.htm)

For more immediate feedback, you can let your learners loose on speech recognition software. This can be computer-based, or as an app on a smartphone or tablet. One example is *Dragon Dictate*.

As you speak, the app transcribes what you say. Users need to be online to get this particular app to work, so that doesn't entirely satisfy 'the place' criterion. Nor are there any instructions, though the app is intuitive to use. Another limiting factor is that the speech recognition software behind the app has problems dealing with connected speech and different speakers' accents, but it does provide immediate feedback, and many learners generally find this highly motivating, if a little frustrating at times.



Modern technologies have the potential to bring a lot to pronunciation. They can allow learners to:

- work at their own speed in a time and place that suits them;
- practise as often (repetitively) as they want;
- access a huge range of accents to improve listening skills;
- make their own recordings and send

them to a teacher for marking and feedback.

Today's technologies also allow teachers to give individualised feedback. This is especially meaningful if the teacher includes advice on how to correct problems. But for the moment, as stand-alone learning devices, especially in terms of self-directed tuition, current technologies do not do everything a trained teacher does.

Pamela Rogerson Revell sums the situation up nicely when she suggests that '*technology-based pronunciation materials complement rather than replace the teacher and need to be used and evaluated carefully*'. But who knows what tomorrow will bring? **ETp**

Rogerson Revell, P 'Can or should we teach pronunciation?' *Speak Out!* 47 (20) 2012



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COMPETITION RESULTS

23	N	8	A	4	R	4	A	8	20	T	7	9	25	V	25	15	Q	2	8	16
8	A	8	A	20	T	6	C	13	7	18	X	23	2	U	8	16	2	8	16	
20	T	25	21	20	11	Y	E	25	22	13	P	4	25	21	21	21	21	21	21	
7	I	6	C	8	13	A	8	24	16	25	E	25	22	22	20	20	20	20	20	
10	O	5	A	13	7	I	4	4	26	4	8	13	25	4	4	4	4	4	4	
23	N	16	L	25	6	C	20	25	4	23	N	7	16	25	25	25	25	25	25	
21	S	2	6	1	16	7	5	25	9	25	4	11	21	21	21	21	21	21	21	
13	P	4	R	25	25	E	7	10	23	25	25	10	10	10	10	10	10	10	10	
25	E	11	25	12	25	8	4	6	7	20	8	26	25	16	16	16	16	16	16	
6	C	8	8	8	8	16	16	25	26	16	16	7	7	7	7	7	7	7	7	
2	U	13	22	8	4	K	25	20	19	25	12	25	16	16	16	16	16	16	16	
16	L	13	P	16	16	8	A	26	14	25	8	10	10	10	10	10	10	10	10	
8	A	22	2	21	7	23	3	7	4	5	25	26	15	15	15	15	15	15	15	
20	T	17	17	25	16	23	7	25	25	2	2	2	2	2	2	2	2	2	2	
25	E	17	17	25	4	V	25	21	6	25	23	20	11	11	11	11	11	11	11	



Congratulations to all those readers who successfully completed our Prize Crossword 65.

The winners, who will each receive a copy of either the *Macmillan Collocations Dictionary* or *Macmillan Phrasal Verbs Plus* are:

1	2	3	4	5	6	7	8	9	10	11	12	13
H	U	G	R	K	C	I	A	V	O	Y	W	P
14	15	16	17	18	19	20	21	22	23	24	25	26
Z	Q	L	F	X	J	T	S	M	N	B	E	D

7	17	8	20	17	7	4	21	20	20	1	25	7	26	25	8	
I	F	A	T	F	I	R	S	T	T	H	E	I	D	E	A	
7	21	23	10	20	8	24	21	2	4	26	20	1	25	4	25	
I	S	N	O	T	A	B	S	U	R	D	,	T	H	E	R	E
7	21	23	10	1	10	13	25	17	10	4	7	20

Albert Einstein