



Using Phonetics in Teaching

A Workshop by Training Fellow Ruth Wickham at IPGKDRI

This workshop was facilitated in response to a number of requests for professional development in using phonetics. However, there is a lot more to USING phonetics than just knowing the symbols. Phonetics is presented here in a way that is designed to be practical for teachers.

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Using Phonetics in Teaching

Workshop at IPGKDRI by Training Fellow Ruth Wickham

Introduction

Understanding phonetics and phonemics can be very useful as an English Teacher or English Lecturer. It is not necessarily useful to attempt to teach the phonemic symbols to young Malaysian school children who are struggling to learn to read in two languages.

School children learning English need to learn the 44 phonemes of English. This workshop suggests one approach to accomplishing this.

Also recommended is 'THRASS' which stands for 'Teaching Handwriting, Reading, And Spelling System'. This commercially available program offers charts and other aids to assist teachers and students in mastering the phonemics of English. In order to purchase and use this excellent program, teachers need to attend a brief THRASS course. (The nearest one is in Singapore and it can be discovered on the Internet.) The purpose of this workshop, however, is not to advertise THRASS. Teachers can achieve good results using the suggestions here and developing their own materials.

Applications for this material

Presenters wishing to use this material need to be personally conversant with the material before attempting to present to others. Teachers may also find the material useful in cementing their skills in the area of teaching phonics.

Workshop Duration

The workshop was originally presented as a 2-3 hour session at IPGKDRI. In another situation the time required would depend on the number of participants and their capabilities.

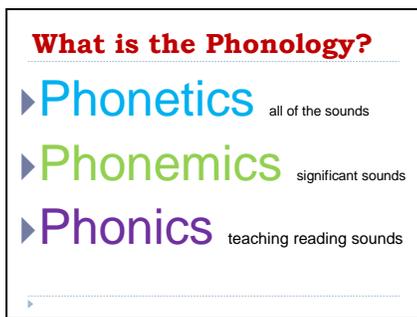
Workshop Session: Using Phonetics in Teaching

Slide 1



This workshop was facilitated in response to a number of requests for professional development in using phonetics. However, there is a lot more to USING phonetics than just knowing the symbols. Phonetics is presented here in a way that is designed to be practical for teachers.

Slide 2



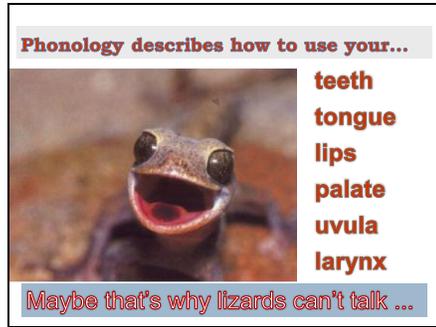
Many people are confused regarding the use of these three similar words.

When a linguist studies 'phonetics' they examine ALL of the different sounds in a language.

For example, in English there are (at least) two 'p' sounds. One is an unreleased [p] like at the end of a word 'hop'. The other is an aspirated sound like at the beginning of a word such as 'pit'. You can demonstrate the difference by putting a piece of paper in front of your lips when you say them and noticing the puff of air with the aspirated sound. In some languages this is a significant difference and there are 'minimal pairs' to prove it. (Two words with different meanings, the only difference being in the pronunciation of the 'p'.) In English it is not significant, it is not a phonemic difference, and so both sounds can be represented by the one symbol 'p'.

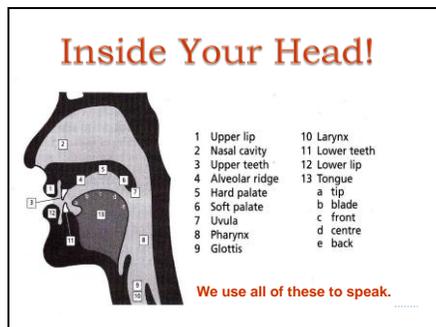
Traditionally, phonetic symbols are placed in square brackets [p], phonemic symbols in slash brackets /p/. Phonics is about teaching children to read by 'sounding out' words.

Slide 3



Phonology – the study of sound – describes how we use all of our mouth parts to articulate a particular sound. Your tongue interacts with your teeth, and the ‘alveolar ridge’ behind your teeth, your palate, and your lips. The air can be stopped and then released, or allowed to slowly push past. Some sounds vibrate through your nose. Your uvula (the little thing hanging at the back in your throat) can also get involved, and your larynx (voice box) engages for some sounds and not others. You can breathe in or out, and use lung or mouth air, and even use clicking sounds with your teeth and/or tongue. All of these are parts of someone’s language.

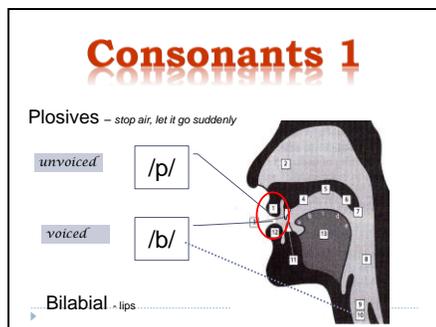
Slide 4



Here is a chart showing the parts of your head that are involved in speech, and which can be included in an explanation of any one sound.

We are going to briefly describe each of the English phonemes (significant sounds).

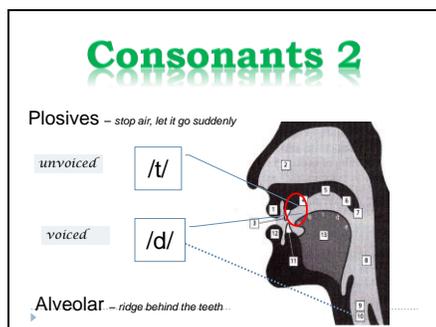
Slide 5



‘Plosives’ are sometimes referred to as ‘stops’. The air is stopped completely at the point of articulation, and then suddenly released.

There are 2 bilabial plosives (between the 2 lips) - /p/ which is unvoiced (and also usually aspirated at the beginning of a word, with a puff of air following, but often unreleased at the end of a word), and /b/ which is voiced (and generally not aspirated). As mentioned above, these other differences are only phonetic and not significant. But for children learning English as a second language – if the differences are significant in their language, or in order to help them improve pronunciation – it is good to be aware of the phonetic factors.

Slide 6



The next 2 plosives are articulated between the tip of your tongue and the alveolar ridge behind your top teeth. Again there is an unvoiced plosive - /t/ - and a voiced plosive - /d/. Again the unvoiced plosive, /t/, tends to be aspirated at the beginning of a word and unreleased at the end.

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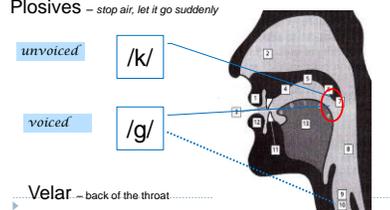
Consonants 3

Plosives – stop air, let it go suddenly

unvoiced /k/

voiced /g/

Velar – back of the throat



The diagram shows a sagittal cross-section of the human head and neck. The vocal tract is highlighted in grey. A red circle is drawn around the velar region (the back of the throat). Blue arrows point from the labels /k/ and /g/ to this red circle. A legend at the bottom left identifies the velar region as the back of the throat.

Thirdly there is the velar plosive which is articulated at the back of the throat, and there is the unvoiced /k/ and the voiced /g/. Again the unvoiced plosive is often aspirated at the start and unreleased at the end of a word.

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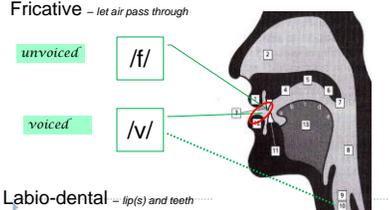
Consonants 4

Fricative – let air pass through

unvoiced /f/

voiced /v/

Labio-dental – lip(s) and teeth



The diagram shows a sagittal cross-section of the human head and neck. The vocal tract is highlighted in grey. A red circle is drawn around the labio-dental region (the lower lip touching the upper teeth). Green arrows point from the labels /f/ and /v/ to this red circle. A legend at the bottom left identifies the labio-dental region as the lip(s) and teeth.

Fricatives only partially stop the air, and sound is created by the friction of the air passing between the two parts.

The first of these is labio-dental – that is the lower lip (labio) lightly touching the top teeth (dental). The unvoiced fricative here is /f/, and the voiced fricative is /v/. A lot of people have difficulties with these sounds, often confusing the /v/ with the bilabial approximant /w/.

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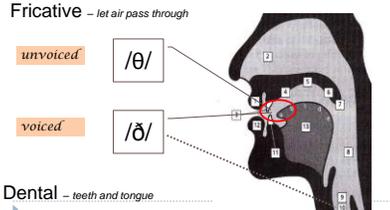
Consonants 5

Fricative – let air pass through

unvoiced /θ/

voiced /ð/

Dental – teeth and tongue



The diagram shows a sagittal cross-section of the human head and neck. The vocal tract is highlighted in grey. A red circle is drawn around the dental region (the tip of the tongue touching the upper teeth). Orange arrows point from the labels /θ/ and /ð/ to this red circle. A legend at the bottom left identifies the dental region as the teeth and tongue.

The dental fricative is articulated by placing the tip of your tongue between your teeth. This sound is common in European languages, but not in Asian languages and so often causing a problem. There are two phonemic symbols, /θ/ for unvoiced and /ð/ for voiced. However, both are written in English as 'th'.

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Stick your tongue out!

/θ/ and /ð/ are both written 'th'.

Many learners of English mispronounce these as /t/, /d/, /f/, /v/, /z/, /s/ or /ʃ/

While this rarely affects understanding, if you do not pronounce this sound correctly, you will always have a distracting accent.

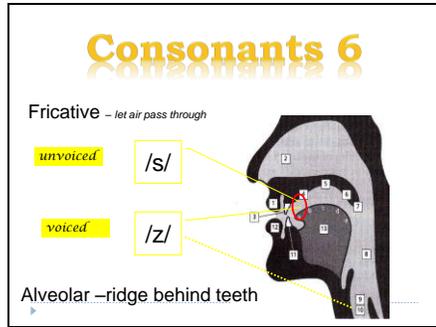


The slide features a photograph of a young girl with blonde hair, smiling. The text on the slide discusses the common mispronunciation of the 'th' sound by English learners and notes that while it rarely affects understanding, it can result in a distracting accent.

These two phonemes are mispronounced in a variety of ways. Even some native English speakers, especially children, mispronounce by putting their teeth against the bottom lip (/f/) instead of sticking their tongue out.

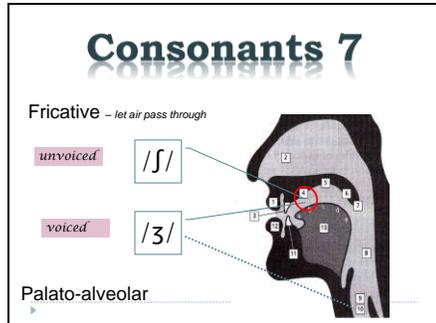
Generally this does not cause misunderstanding, but it does cause distraction from what you are trying to say. (In native English speakers it can mark the speaker as childish or poorly educated.) It is worth making the effort, especially as a teacher, to pronounce this sound correctly.

Slide 11



The next fricative is articulated between the tip of the tongue and the alveolar ridge behind the top teeth. The unvoiced sound is /s/ and the voiced sound is /z/.

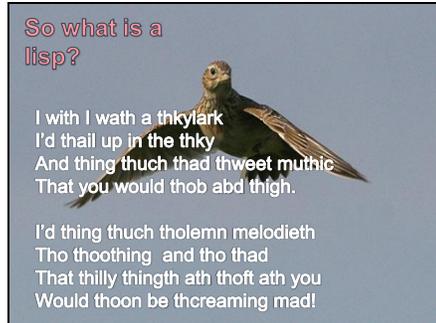
Slide 12



Very similar to (but significantly different from) the alveolar fricative, is the palato-alveolar fricative. If you try making these two sounds and observe the difference inside your own mouth, you will notice that now your tongue-tip is still on your alveolar ridge, but the middle of your tongue is pushing up against your palate. The unvoiced fricative here is written /ʃ/ and the voiced one is /ʒ/.

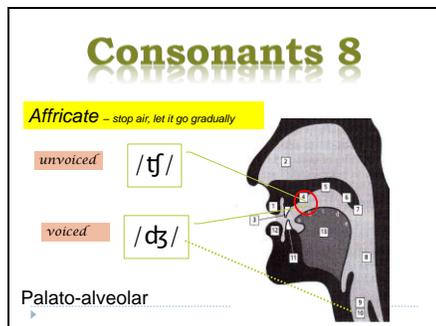
These are phonemic symbols, and /ʃ/ can be represented in more than one way – usually ‘sh’, but also ‘-ti-’ / ‘-si-’ / ‘-ci-’ in words such as ‘station’, and occasionally ‘ch’ such as ‘chef. /ʒ/ can be spelt using ‘s’ as in ‘treasure’.

Slide 13



When a person (often a child) puts their tongue too far forward to pronounce these sounds, we say that they have a ‘lisp’. Essentially they are creating a dental fricative, with the tongue-tip between the lips. This little poem is an example of someone speaking with a lisp. Can you say it? Can you say it without a lisp?

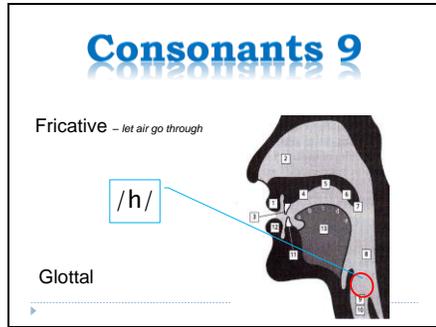
Slide 14



An affricate is a combination of a plosive and a fricative – the air is stopped and then released slowly. This is articulated at the palato-alveolar position, as with the two sounds above. The phonemic sounds are unvoiced /tʃ/, and voiced /dʒ/.

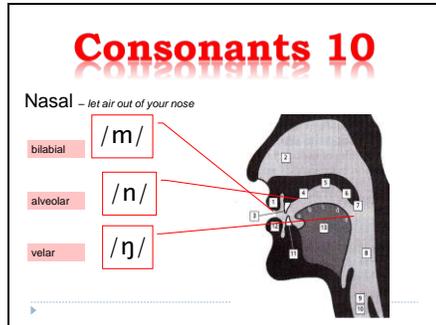
/tʃ/ is usually written as ‘ch’ or ‘tch’. /dʒ/ can be variously written as ‘j’, ‘ge’, ‘gi’ and ‘dge’.

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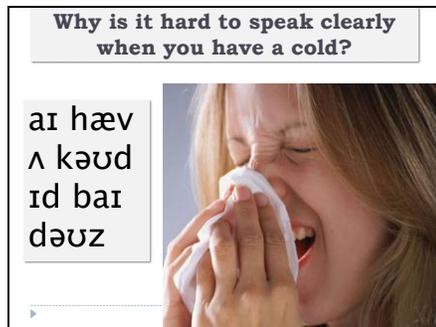
This unvoiced glottal fricative, /h/, is articulated right down in the throat and the written symbol is the same as the phonemic symbol. However, sometimes when the symbol is present, the sound is not, as in 'honour' or 'hour'.

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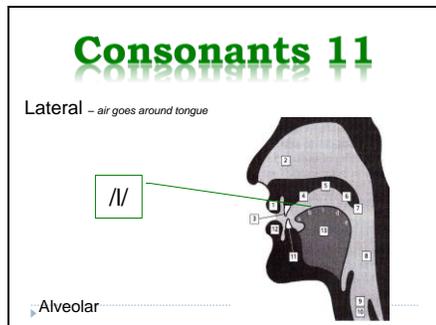
With nasal consonants the air passes through, and resonates through, your nose at the same time as certain mouth parts are touching. The bilabial nasal, /m/, is articulated with the lips closed. The alveolar nasal, /n/, is articulated with the tongue-tip against the alveolar ridge (behind the top teeth), and the velar nasal, /ŋ/, is articulated in the back of the throat. These phonemes are represented by the same alphabetic symbols for 'n' and 'm', and the velar symbol is indicated with 'ng'.

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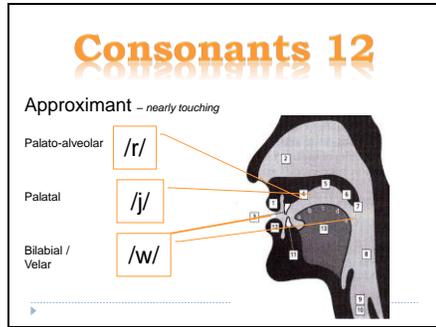
When you have a cold and your nose is blocked, it is very difficult to pronounce the nasal consonants; they tend to come out as plosive.

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The alveolar 'lateral', /l/, allows air to pass around the sides of the tongue while the tongue is raised to the alveolar ridge (behind the top teeth).

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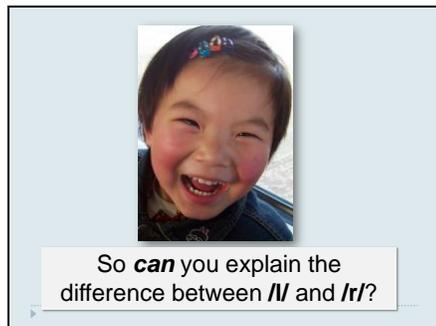
With approximants, the two parts are nearly touching.
 For /r/, the tongue-tip is close to the area between the alveolar ridge and the palate. In different languages, and in different dialects of English, there is variation in how this sound is produced. (/r/ is sometimes called a 'liquid' sound.)
 The sound /j/ is usually written as 'y' in English, and is articulated with the tongue close to the palate further back.

/w/ is articulated with the lips *nearly* touching and then moving apart.

Sometimes /w/ and /j/ are called 'semi-vowels' because /w/ is similar to (and is sometimes replaced by) the vowels /u/ and /ʊ/, and /j/ (or 'y') is similar to the vowels /i:/ and /ɪ/.

Asian people in particular have difficulty differentiating between the lateral /l/ and the approximant /r/. Can you feel what your tongue does differently between these two? Could you explain this to your students?

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Slide 21

**See your handout:
Putting it all together**

		Consonants										
		Front					Back					
		How to make the sound:					Don't use your voice:					
		Put both lips together	Use top teeth and bottom lip	Use tongue behind top teeth	Touch bumpy behind teeth with tongue	Between	Hard bit of the roof of mouth	Touch roof of mouth (the soft bit) with your tongue	Use your throat			
What happens?	Stop air. Let it go suddenly. Stop air. Let it go gradually.	p	b		t	d		tʃ	dʒ		k	g
	Let air pass through.		f	v	θ	ð	s	z		ʃ	ʒ	
	Let air out of your nose.		m			n					ŋ	
	Air pops out of tongue.					l						
	Nearly touching.	(w)					r	j		w		

Here is a simple chart explaining all of the consonants – without using any difficult words!

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BM Consonants

		Consonants										
		Front					Back					
		How to make the sound:					Don't use your voice:					
		Put both lips together	Use top teeth and bottom lip	Use tongue behind top teeth	Touch bumpy behind teeth with tongue	Between	Hard bit of the roof of mouth	Touch roof of mouth (the soft bit) with your tongue	Use your throat			
What happens?	Stop air. Let it go suddenly. Stop air. Let it go gradually.	p	b		t	d		tʃ	dʒ		k	ŋ
	Let air pass through.		f	v	θ	ð	s	z		ʃ	ʒ	
	Let air out of your nose.		m			n					ŋ	
	Air pops out of tongue.					l						
	Nearly touching.	(w)					r	j		w		

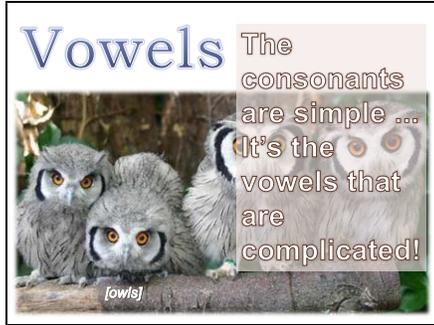
ny
c
sy

Thinking particularly of Malaysians learning English, there are only a few differences in the consonants. (It's the vowels that can be a problem!)

As mentioned above, /θ/ and /ð/ need to be learnt specifically.

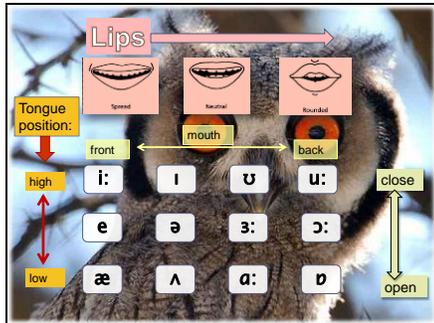
In BM the letter 'c' is used for the phoneme /tʃ/ rather than the 'ch' commonly used in English, and 'sy' is commonly used for /ʃ/ where 'sh' is common in English.

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So it's the vowels (not the owls) that can cause confusion.

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This chart of simple vowels (i.e. not diphthongs) is designed to demonstrate where and how each one is articulated.

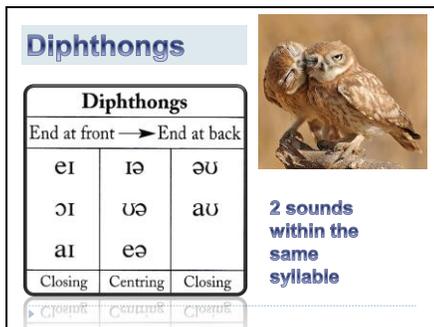
Going from the top to the bottom of the chart – the tongue position goes from high to low, and mouth goes from ‘close’ to ‘open’.

Going from left to right on the chart, the vowel is produced at the front of the mouth (left) to the back of the mouth (right).

The shape of the lips goes from spread (left-hand vowels) to rounded (right-hand vowels).

This information is mostly useful in trying to explain the difference when a vowel is mispronounced.

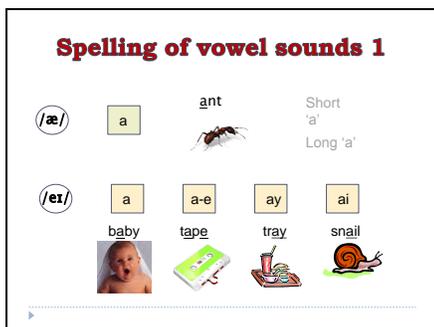
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The English diphthongs – two vowels blended in the one syllable – are particularly difficult for BM speakers as essentially only simple vowels exist in BM.

We are going to look at each of the vowels alongside similar or related vowel sounds, and relate to possible spelling of each.

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These two vowels used to be commonly called ‘short ‘a’ and ‘long ‘a’’. /æ/ is the sound usually given for the first letter of the alphabet, and is not the same as the BM ‘a’. It is always spelt with an ‘a’.

When English words with /æ/ are transliterated into BM, the ‘a’ usually becomes ‘e’ – such as English ‘pack’ to BM ‘pek’.

The ‘Long ‘a’ is in fact the diphthong /eɪ/, but it is called ‘long ‘a’ because it matches the letter name in the alphabet. It can be spelt a number of ways, such as in ‘baby’, ‘tape’ (with a ‘silent ‘e’’), ‘tray’ and ‘snail’.

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Spelling of vowel sounds 2

/eə/ air hair are square

/a:/ a banana ar car

Phonemically the 'long' or lengthened 'a' is the /ɑ:/ phoneme (generally the ':' indicates a lengthened sound), and this is more similar to the BM 'a' – and in fact the 'a' sound in many other languages. In English this is generally spelt with an 'a', or an 'ar'.

The diphthong /eə/ contains the letter 'a' when it is written, but it sounds more like a lengthened 'short 'e''. It is usually spelt 'air' or 'are'.

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Spelling of vowel sounds 3

/e/ e bed ea bread Short 'e' Long 'e'

/i:/ e ea ee ey y me beach tree key pony

These two vowel sounds used to be commonly known as 'long 'e'' and 'short 'e'', and again the term 'long' simply meant that it was the same sound as the alphabetic symbol name.

/e/ or 'short 'e'' is very similar to the BM 'e', and is usually spelt with just 'e', but sometimes (and confusingly) 'ea'.

/i:/ or 'long 'e'', is in fact a 'lengthened /i/ in phonemic terms, and is very similar to the BM 'i', and has a number of possible spellings, such as 'e', 'ea', 'ee', 'ey', and 'y'.

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Spelling of vowel sounds 4

/ɪə/ ear eer deer

/ə/ er ir or ur fern shirt worm fur

The diphthong /ɪə/ is like a 'long 'e'' plus a 'schwa', and can be usually spelt 'ear' or 'eer'.

The simple 'schwa' /ə/ is very similar to one of the two BM 'e' sounds. In a single syllable word it is usually spelt with a vowel + 'r' such as 'er', 'ir', 'or', or 'ur'.

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Spelling of vowel sounds 5

/ə/ er ar or ure teacher collar doctor measure

a e i o u zebra garden fossil lion circus

The 'schwa' phoneme, /ə/, also often (but not always) replaces the vowel phoneme in unstressed syllables. As you can see in these words, it can appear as all sorts of other vowel letter symbols.

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Spelling of vowel sounds 6

/ɪ/	i	tin	e	rocket	Short 'i'
					
					Long 'i'
/aɪ/	i	i-e	igh	y	
	tiger	kite	light	fly	
					

These two phonemes were commonly called ‘short ‘i’ and ‘long ‘i’’, again because the ‘long’ sound replicates the alphabetic name.

‘Short ‘i’’, /ɪ/, is almost always written with ‘i’, but - particularly with some English dialects – sometimes the ‘e’ (in an unstressed syllable) is pronounced /ɪ/.

The ‘long ‘i’ is the diphthong /aɪ/ and is spelt with an ‘i’ or ‘y’ – as in ‘tiger’, ‘kite’, ‘light’, or ‘fly’.

‘Long ‘o’’, and ‘short ‘o’ are similarly a simple vowel phoneme /ɔ/ and a diphthong /əʊ/ (which matches the alphabetic letter name). This sound is very similar to the BM ‘o’, and is usually spelt ‘o’, but uncommonly ‘wa’ (as in ‘swan’).

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Spelling of vowel sounds 7

/ɔ/	o	frog	wa	swan	Short 'o'
					
					Long 'o'
/əʊ/	o	oa	o-e	ow	ew
	go	boat	note	snow	sew
					

Depending on type of accent, the diphthong /əʊ/ is sometimes depicted as /oʊ/. It has a number of different possible spellings, most of which include the letter ‘o’ as in the words ‘go’, ‘boat’, ‘note’, ‘snow’, and ‘sew’.

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Spelling of vowel sounds 8

/ʌ/	u	bus	o	glove	Short 'u'
					
					Long 'u'
/u:/	oo	moon	ew	screw	ue
					
					
/ʊ/	oo	book	u	bull	
					

‘Long ‘u’ and ‘short ‘u’ are all simple vowels.

‘Short ‘u’’, the phoneme /ʌ/, is the pronunciation of the simple letter ‘u’, as in ‘bus’ or ‘umbrella’, and can also (uncommonly) be written as in ‘glove’. Some accents (such as in northern UK) pronounce this like /ʊ/.

‘Long ‘u’’, the phoneme /u:/, sounds the same as the alphabetic name for the symbol. This is usually spelt with ‘oo’, ‘ew’, or with a ‘silent ‘e’ as in ‘glue’.

There is a second ‘short ‘u’’, or ‘short ‘oo’’, which can be confusing. Words such as ‘book’, or ‘bull’ have this sound which is depicted phonemically with /ʊ/.

Again, in some English accents words vary between /u:/ and /ʊ/ on the same word. Words such as ‘room’ can be said with either vowel sound depending where the speaker originates from.

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Spelling of vowel sounds 9

/ʊə/ oor, our, ure, ur
 moor, tourist, cur, jury

/ɔ:/ or, a, au-e, aw, oor
 fork, ball, sauce, saw, door

The diphthong /ʊə/ is made up of a /ʊ/ plus a 'schwa' /ə/ - which is often the pronunciation for an /r/ at the end of a word. So this includes spellings such as 'oor', 'our', 'ure' and 'ur'.

The /ɔ:/ is essentially a lengthened /ɔ/, but has a variety of spelling possibilities such as 'or', 'a', 'au', 'aw' and 'oor'.

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Spelling of vowel sounds 10

/aʊ/ ow, ou
 cow, house

/ɔɪ/ oy, oi
 toy, coin

There are two more diphthongs to finish with.

/aʊ/ can be spelt as 'ow' (as in 'cow') or 'ou' (as in 'house'). (Unfortunately a learner could easily expect either of these to be pronounced as /əʊ/ or /oʊ/, so they need to be learnt separately.)

/ɔɪ/ is spelt pretty much like it sounds, with 'oi' in the middle of a word, and 'oy' at the end.

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How can 5 little vowels get so complicated?

And HOW can I teach them all?

(I'm exhausted just thinking about it!)

The above list can appear very exhausting, especially to a young learner.

We are going to look at some practices and principles for teaching this material, whether to native English speakers learning to read, or children learning English as a Second Language.

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What is the best way to learn? (anything)

Connect the learning to as many senses as possible.

1. hearing
2. seeing
3. smelling
4. tasting
5. touching

Action and movement

Basic pedagogy – what is the best way to learn / teach?

We need to involve as many of our senses as possible.

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Key Words

Connect each sound to:

a **WORD** which has

↓

A picture A sound

 ↓ ↓

 An action

As English does not have direct sound-symbol correlation, students need to learn with 'Key Words'. For each of the 44 phonemes, there needs to be a word which can be associated with a picture, an action, and a sound.

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Think of a key word and action for each sound

i:	ɪ	ʊ	u:	ɪə	eɪ		
e	ə	ɜ:	ɔ:	ʊə	ɔɪ	əʊ	
æ	ʌ	ɑ:	ɒ	eə	aɪ	aʊ	
p	b	t	d	tʃ	dʒ	k	g
f	v	θ	ð	s	z	ʃ	ʒ
m	n	ŋ	h	l	r	w	j

For each of these phonemes, we need to think of a (meaningful) key word. If the students can be involved (with guidance!) in deciding on the key words, they have an even better chance of remembering them.

Here is an example:

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For example:

/æ/ phonetic sound

apple word

image

taste (memory)

bite action action

crunch noise noise

For the sound /æ/, there is the phonetic sound, the image of an apple, the action of biting, the sound of the crunch, and the taste (even if it is only in the memory right now).

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In the Classroom:

Stimulus:

Response

"æ" "apple" *bite* action *crunch*

"mmm" think about taste

So, in the classroom the children receive a stimulus – point to the phonemic chart, or just to a letter 'a', or the picture of the apple ... and they respond with: "/æ/, apple!" (pointing to the picture) *bite! (action) *crunch!* (sound effect), "mmm!" (as they close their eyes and remember the taste or smell).

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Choose your own personalised Key Words

Phonemic Chart with Key Words

Pure Vowels	i:	ɪ	ʊ	u:	ɪə	eɪ		English Vowels
	e	ə	ɜ:	ɔ:	ʊə	ɔɪ	əʊ	
	æ	ʌ	ɑ:	ɒ	eə	aɪ	aʊ	
Consonants	p	b	t	d	tʃ	dʒ	k	g
	f	v	θ	ð	s	z	ʃ	ʒ
	m	n	ŋ	h	l	r	w	j

Think of some key words that might be suitable for each of the sounds.

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Take your handout, and in your group think of key words for each of the sounds. Share your ideas around. Be as 'local' as you like, choosing words that might be meaningful.

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If you are a teacher, think about the children that you teach. Do you think you can breathe new life into their lessons?

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With your encouragement and enthusiasm, children will enjoy learning correct and accurate reading and spelling in English.