

The Sounds of English

Theory and Practice for Latin American Speakers

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To Jesus

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INTRODUCTION

This book was conceived as a pronunciation course textbook to be used under the guidance of a trained instructor; however, it can also be used for independent study by learners with an English proficiency level of B1 or above. Both teachers and students can read the book in sequence if they seek to work comprehensively on pronunciation, or they can use it as reference material by looking into any one of the English sounds for which they may need specific information and practice.

The text is aimed at Spanish speakers who are in pursuit of improving their English pronunciation. It specifically targets pre-service and in-service English teachers who are required to know how English sounds are pronounced. The text's main objective is to offer essential theory and practice on the pronunciation of the English consonant and vowel sounds. It particularly seeks to help English teachers whose mother tongue is Spanish not only to hone their pronunciation but also to acquire the technical elements necessary to teach the pronunciation of English sounds to others.

The body of the book is divided into three main parts. The first part focuses on theoretical and technical aspects of phonetics and phonology. It provides a definition of essential concepts, such as those of phoneme and speech sound; discusses the challenges posed by the spelling-pronunciation mismatch in English; presents the adjusted version of the International Phonetic Alphabet used in this book; and describes the process of speech production.

The second and third parts describe and provide practice on the English vowel and consonant sounds respectively. Each of the units covers two or more closely related sounds and is made up of the following sections:

- **Presentation.** It shows the sounds' phonetic symbols and describes the sounds' pronunciation, classification, and relation with Spanish.
- **Images.** Frontal pictures of the face and cross-section diagrams of the head show how each sound is made.
- **Spelling Patterns and Positions.** A table shows the most common spelling patterns for each sound and the positions within words where these patterns occur. Teachers are prompted to have their students repeat the pronunciation of each sound and the words included in the table in preparation for the following sections.

- **Interest note.** This section provides additional information about the sounds that are being studied in regard to aspects such as dialectal variations, pronunciation instructions, and associated theoretical concepts.
- **Introductory practice.** The exercises in this section are meant to provide practice in recognizing, producing, and contrasting sounds. They usually involve contrasting minimal pairs and choosing the word pronounced. These exercises require the guidance of the teacher. Although suggested answers are given for these exercises, teachers have the discretion to conduct them as they see fit.
- **Appropriation.** These exercises, which can be done individually or in pairs, are meant to facilitate students' appropriation of the sounds through a class guided practice. Teachers are encouraged to verify that students understand the instructions before they do the exercises and to correct the exercises as a whole-class activity once students have had enough time to complete them. Nevertheless, these activities do not require the teacher's guidance while students are doing them. Students are expected to do them on their own instead.
- **Consolidation.** These exercises are meant to promote the retention and transference of sounds by having students recognize, assess, and manipulate them in contexts other than the language classroom. They include suggestions to creatively use the sounds for communicative tasks or to assess how the sounds are used in the media by other speakers. They may also include tasks such as doing dictionary searches or visiting online sources to obtain further information and practice. These exercises are for students to complete by themselves as independent practice. Later revision and correction is at the discretion of the teacher.

1 | Essential Concepts

1.1 Phonetics and Phonology

The term *phonetics* comes from the Greek word **fonetike**, which means *the sounds of a language*. Phonetics is the branch of Linguistics that studies the sounds of speech; that is, the sounds humans use to communicate with one another through the spoken word.

Oral communication involves three physical elements: the transmitter of the message, the means through which the message is carried, and the receptor of the message. As a result, phonetics is divided into three branches that study each of these elements separately. Articulatory phonetics looks into the physiological processes involved in the production of speech sounds. Acoustic phonetics analyzes the environmental conditions under which those sounds occur. Receptive phonetics considers the physiological processes that allow for the reception of sound in the human ear. This book focuses primarily on articulatory phonetics.

Phonetics is complemented by phonology in the description of human speech. Phonetics studies the physical production, transmission, and reception of speech sounds. Phonology, on the other hand, focuses on how those sounds are processed by the human brain to convey and comprehend meaning.

1.2 Phonemes and speech sounds

The minimal phonological unit is the phoneme. To understand what a phoneme is, we must first distinguish what constitutes a speech sound. Not all the sounds we make with our phonatory organs are sounds of speech. Consider, for example, the sounds that you make when you laugh, cry, or yawn. Unlike them, speech sounds are systematically produced by our brain to form words. Speech sounds, therefore, have both a physical and a mental nature. A speech sound may be produced in various ways. For example, the sound [r] can be made with the tongue either curled up towards the teeth or bunched up towards the back of the mouth. These physical realizations of a speech sound are called **allophones**. A speech sound must also leave an unequivocal imprint in the mind of speakers and listeners that they will use to form words. This mental representation of a sound that constitutes a word-forming unit is called a **phoneme**.

When phonemes are put together in our brains, we hear not just strings of noise but comprehensible words. I will use two situations to illustrate this phenomenon. First, when you are mentally reading a passage, you are not physically producing sounds, but the sounds of letters are reproduced in your brain. Each of those sounds that form words in your mind are phonemes. Also, consider when you first started to learn English and heard a conversation between competent speakers. Even if you were able to hear every sound they made, what they said was incomprehensible to you (although it was perfectly clear for them). This shows that for listening comprehension to occur we must not only hear the sounds made by other speakers, but also train our brains to recognize phonemes as they form words in everyday conversation.

From the situation above we infer that yet another quality of phonemes is that they determine meaning. For example, when you combine the sounds [b]+[e]+[t], you hear the word *bet*. But if you substitute the [p] sound for the [b] sound, you will get the word *pet* instead. This situation can prove problematic if you do not accurately produce a correct version (allophone) of the phoneme you need to make a word, because then your interlocutor will not understand what you are trying to say or will understand something completely different.

1.3 The English spelling - pronunciation mismatch

There are languages in which almost every letter has a direct and unchanging correspondence to a sound. In Spanish, for instance, the vowel *a* is always pronounced [a]. That is why it is relatively easy to read Spanish, even before learning to communicate with it. English, however, is a horse of a different color. There is a well-known mismatch between the way words are written and the way they are pronounced. This apparent lack of correspondence between the written and the spoken word makes learners of English feel that they have to learn two languages for the price of one. A number of cases exemplify this phenomenon.

1. The same letter may be pronounced with different sounds. For example, the letter *a* sounds [æ] in the word *mat*, but it sounds [eɪ] in the word *mate*. The letter *t* sounds [t] in the word *table*, but it sounds [tʃ] (as *ch* in *church*) in the word *future*.
2. The same sound may be represented with different letters. For example, the sound [eɪ] is represented as *a* in *pane*; as *ai* in *main*; as *ay* in *day*; and as *ey* in *they*.
3. Many letters are pronounced with only one sound. For example, the *-ough* combination sounds [ɔ] in *brought*, and the *-ugh* combination sounds [f] in *laugh*.
4. Many sounds are represented with only one letter. For example, the letter *u* in *university* is pronounced [ju].
5. Some letters are silent. For example, *k* is silent in *know*, and *l* is silent in *walk*.
6. Some sounds have no letter to represent them. For example, the sound [æ] is made between the letters *m* and *c* in *McIntosh*.

For regular English students, learning some elements of phonetics and phonology is convenient because it can help them work out the challenges posed by this mismatch; for pre-service and in-service English teachers, doing it is indispensable because they have to teach pronunciation.

1.4 The phonemic alphabet

The phonemic alphabet, a system of symbols that represent speech sounds, is a useful tool in dealing with the spelling-pronunciation mismatch. In the study of English phonetics and phonology, the first and perhaps the most important step students must take is to learn such alphabet. At the beginning, however, this task poses some challenges. First, because many letters from the orthographic alphabet are used as part of the phonemic alphabet, speech sounds are represented between bars or brackets to distinguish them from letters. For example, the letter *a* (pronounced *ei*) is very different from the sound [a], and the letter *p* (pronounced *pi*) is different from the sound [p]. An accompanying challenge is learning to pronounce the sounds in isolation and not as part of words, as we do in regular conversation. Also, students must be aware that there are many phonemic alphabets. In fact, almost every English dictionary from a well-known publishing company has its own phonemic alphabet. Most of the symbols, especially those used for consonant sounds, are the same across different alphabets, but a few symbols may vary from one alphabet to the other. Students must become familiar with these variations.

In this book I use a variation of the alphabet proposed by the International Phonetic Association (IPA). This book's alphabet includes 14 vowel sounds, taking the four versions of schwa as only one sound; and twenty four consonants, not including some allophones, such as flap *t* [ʔ].

Table 1 shows the phonemic alphabet with some examples of words that include each sound. Right next to the examples in English, I indicate whether the sound is present in Spanish or has similarities to one of its sounds, and I give examples in this language when appropriate. Naturally, it is more difficult for Spanish speakers to recognize and produce those sounds for which they have no reference in their native language. Conscious and continuous practice, however, will prove effective in overcoming all these challenges.

The Phonemic Alphabet			
	Symbol	Example	Presence in Spanish
Vowel Sounds	[i:]	feet - sheep	In words such as <i>iglesia</i> or <i>indio</i>
	[i]	fit - ship	Not in Spanish
	[eɪ]	pay - day	In words such as <i>peine</i> or <i>reina</i>
	[e]	pet - bed	In words such as <i>entre</i> or <i>enano</i>
	[æ]	mad - fat	Not in Spanish
	[a]	arm - hot	In words such as <i>casa</i> or <i>ala</i>
	[ɔ]	fall - bought	Similar to the o in <i>hora</i>
	[oʊ]	so - boat	Not in Spanish
	[u:]	food - fool	In words such as <i>uva</i> or <i>uno</i>
	[ʊ]	put - full	Not in Spanish
	[ʌ]	fun-up	Not in Spanish
	[ə]	away - about	Not in Spanish
	[ə]	father	Not in Spanish
	[ɜr]	girl	Not in Spanish
	[aɪ]	mine - five	In words such as <i>aire</i> or <i>traiga</i>
	[ɔɪ]	boy - toy	In words such as <i>estoy</i> or <i>oiga</i>
[aʊ]	house - mouse	In words such as <i>causa</i> or <i>aurora</i>	
Consonant Sounds	[b]	bed - boy	In words such as <i>base</i> or <i>burro</i>
	[p]	pet - pool	In words such as <i>pisos</i> or <i>pato</i>
	[d]	dip - do	Different, though similar to the second d in <i>dedo</i> .
	[t]	tip - to	Different, though similar to the second t in <i>tanto</i>
	[g]	give - go	In words such as <i>gato</i> or <i>guerra</i>
	[k]	kid - cow	In words such as <i>casa</i> or <i>kilo</i>
	[v]	vine - very	In words such as <i>vaca</i> as pronounced in Spain
	[f]	fine - fire	In words such as <i>fiera</i> or <i>fuego</i>
	[ð]	this - father	Similar to the first d in <i>dedo</i>
	[θ]	thanks - both	Similar to the z in <i>corazón</i> as pronounced in Spain
	[s]	so - bus	In words such as <i>sopa</i> or <i>susto</i>
	[z]	zoo - buzz	Similar to the s in words such as <i>mismo</i>
	[ʒ]	pleasure - beige	In words such as <i>yo</i> as pronounced in Argentina
	[ʃ]	shoe - wash	Not in Spanish, but similar to the sound used to quiet
	[h]	hat - house	In words such as <i>jarra</i> or <i>juego</i>
	[tʃ]	cheese - church	In words such as <i>chorro</i> or <i>chicha</i>
	[dʒ]	jet - judge	In <i>llama</i> as pronounced in parts of Colombia
	[m]	man - moon	In words such as <i>mujer</i> or <i>mamá</i>
	[n]	net - name	In words such as <i>nené</i> or <i>nube</i>
	[ŋ]	sing - wing	Similar to the sound made in words such as <i>tango</i>
[l]	lemon - let	In words such as <i>limón</i> or <i>labio</i>	
[r]	rose - car	Not present in Spanish. Not to confuse with Spanish r	
[w]	what - await	Similar to the u sound in words such as <i>guayo</i>	
[j]	yes - cure	Similar to the i sound in words such as <i>nieve</i>	

Table 1 The Phonemic Alphabet

1.5 Speech production

Our bodies are perfectly designed to ensure our survival on the planet. Following a principle of natural economy, many organs often perform multiple functions. Speaking, for instance, is a by-product of breathing, so the organs involved in breathing also play a part in the production of speech.

As air leaves our lungs and passes through the trachea (or wind pipe), it meets a pair of membranous folds known as the vocal cords. The cords are protected by an armor of cartilages known as the larynx (or voice box), which forms the Adam's apple. When we engage in breathing, the folds remain open to let the air pass through the resulting space, called glottis, but when we speak or sing, the folds are brought together by the muscles that control the movements of the larynx. Then, the pressure of the air below the folds causes them to vibrate, thus producing the human voice.

The vocal folds are extremely flexible membranes that crash together as many as 170 times per second to produce sound. On average, the folds measure between 1 to 1.5 centimeters long in women and children, and between 1.5 to 2.5 centimeters long in men. These dimensions account for the different registers of the human voice.

Voice professionals such as teachers, singers, radio hosts, and salespersons must take special precautions to keep their vocal cords in good health. Some recommendations include a) keeping your cords well hydrated, b) warming them up before any demanding vocal work, c) breathing deeply while speaking in public or singing, and d) avoiding any overuse caused by continuous screaming or whispering.

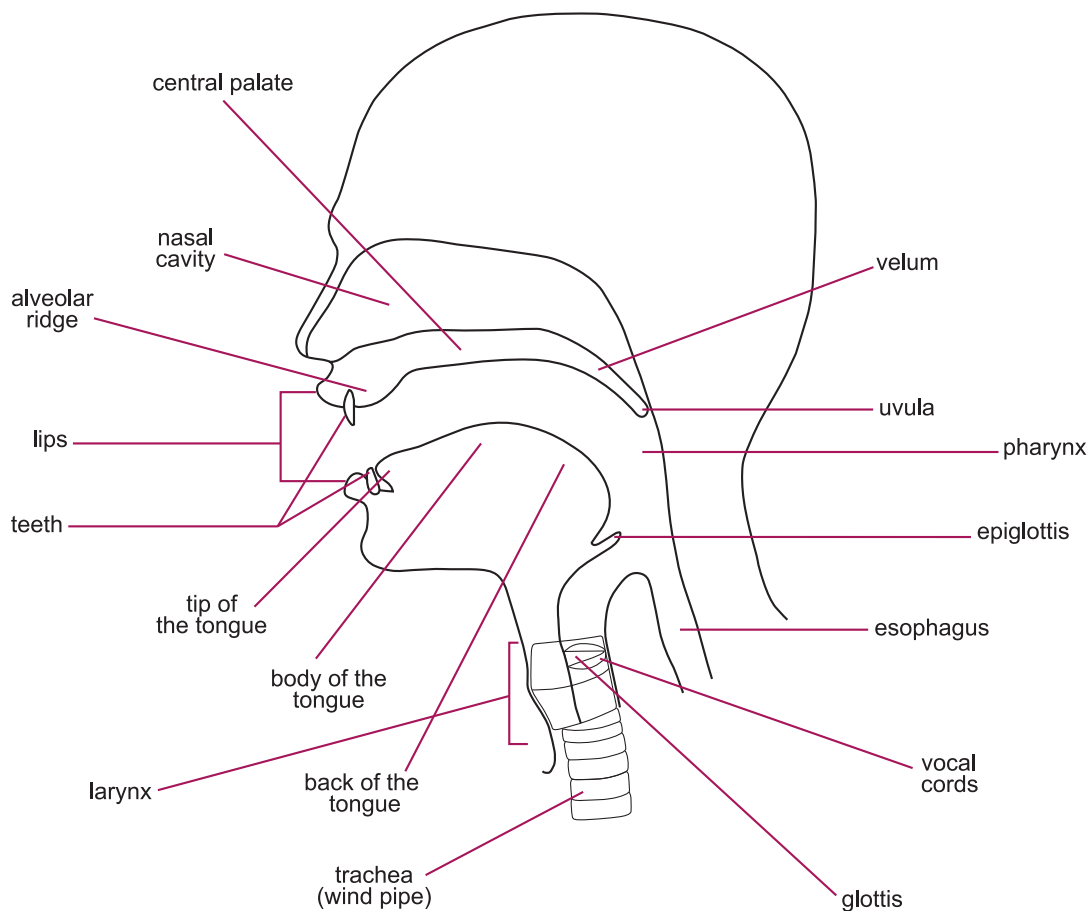
An initial classification of speech sounds is based on voicing; that is, on whether the cords vibrate to make the sound. **Voiced sounds** involve the vibration of the vocal cords. All vowel sounds and most consonant sounds fall into this category. **Voiceless sounds**, on the contrary, are produced without any vibration of the vocal cords. Classification based on voicing will be later described in the following chapters.

The primary sound produced by the cords is unintelligible. Only when it is transformed by the articulators in the face and the mouth it becomes speech. The main articulators are the teeth, the lips, the jaw, and the tongue. They adopt multiple positions to give each speech sound its distinctive qualities.

For the study of phonetics, the tongue has been divided into three main sections: tip, body, and back. Likewise, the palate is divided into three main sections: The alveolar ridge, or hard palate; the central palate; and the soft palate, or velum. All vowels and some consonants are classified according to the point in which the tongue approaches (for vowels) or touches (for consonants) a specific section of the palate.

To perform functions as varied as eating, breathing, and speaking, the body has other organs that help separate those processes. After the velum there is a dangling extension of the palate called the uvula. You may see this organ moving if you open your mouth widely and gag. The uvula plays the role of a door. It remains closed when we eat to prevent food from going into the nasal cavity, but it opens when we breathe through our nose and also when we make nasal sounds.

At the far end of the mouth you can see the pharynx, which is the vestibule that leads into different passages of the human body. At the base of the tongue there is another organ called the epiglottis, which also plays the role of a door. When we eat or drink, the epiglottis closes to prevent food from going into the wind pipe. But when we breathe, the epiglottis opens to let the air through the trachea. Both the uvula and the epiglottis are perfect examples of how the human body has specialized to perform multiple functions in a systematic way. On figure 1 you can see an illustration of the phonatory organs described above.



The organs of speech