

The Sound Systems in English and French: A Contrastive, Phonological Analysis

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Abstract

The purpose of this paper is to examine briefly the implications of some recent developments in linguistics and phonology for the contrastive analysis of English and French as two foreign languages taught/learned simultaneously. This can alert the teacher to what teaching two foreign languages simultaneously needs.

This study - adopting the analytical approach - deals with those non-native speakers formally learning English as a first foreign language as well as French as a second foreign language in the classroom setting.

The first part of the paper deals with segmental phonology and represents an inventory of the sounds that occur in both languages: (I) vowels, diphthongs/semivowels, and (II) consonants. The second part deals with suprasegmental features in French, focusing on: stress, vowel length, elision and liaison, which are notable features of French, and which are most likely to constitute problems for the bilingual learner of English and French.

Segmentally, the major conclusions of the study assert the fact that though the orthography of the two systems is similar, the points of articulation of some sound segments as well as their pronunciation are not the same; the two phonetic alphabets include sounds that do exist in one system but do not in the other; silent letters are more common in French rather than in English; and the production of final sounds does differ in the two systems. Suprasegmentally, the study comes to major conclusions with regard to nasalization, diphthongization, liaison, elision, and stress.

Introduction

Learning foreign languages with any level of competence is a lengthy and conscious effort. Every language is composed of complex systems, which operate within a social, cultural, and linguistic framework. Any speech event includes not only linguistic elements but also codes of gesture, facial expression and other paralinguistic cues.

All these factors may not be available to the learner plus the fact that he is subjected to a new system with a native language pattern (with its linguistic and extra linguistic factors) pre-imposed on his memory. If the basic areas of contrast between the systems of two languages are not made explicit to the learner, he will not be able to use the foreign language effectively or in accordance with the special characteristic codes of speech.

This paper takes into account recent developments on the teaching of phonology, and a number of improvements have been made in response to feedback from users in the Arab World.

A preliminary important note

English and French are taught as foreign languages in the schools of Kuwait. The two languages are taught separately, one at an earlier stage than the other; in other words, one as a first foreign language and the other as a second foreign language. Hence, the distinctive features of one language interfere with the other. Normally, the former influences the latter. Although the two languages belong to the Indo-European family, which is completely different from the Semitic family - to which Arabic belongs; yet, there is no comprehensive, scientific field study in Kuwait on the phonological systems of English and French in combination. Nor have there been any conferences held in Kuwait on the topic. A thorough search for a scholarly material on the topic came to nothing. The ground, then, has been left bare for much research to be desired. Therefore, the researchers feel the need for a specific, analytical contrastive study on the phonological systems of English and French in combination.

The study objectives

The purpose of this paper is to examine briefly the implications of

some recent developments in linguistics and phonology for the contrastive analysis of languages. By contrastive analysis is meant the analysis of the similarities and differences between two or more languages. The value of such analysis to the foreign-language teacher has been recognized. This value stems from the fact that students tend to transfer the features of their native language to the language they are learning. From this it follows that the features of the foreign language that are similar to those of the native language will present little difficulty, while features of the foreign language that are different from those of the native language will require some amount of attention on the teacher's part. A contrastive analysis, by specifying just which features the two languages have in common and which they do not, can thus alert the teacher to what in the foreign language really needs to be taught. For the learner, the burden becomes even heavier when it comes to learning two foreign languages - in our case English and French - simultaneously.

In this study, differences between ESL and EFL are not considered. We suggest a continuum where EFL is for those whose purpose in learning English is cultural and their native language remains dominant, while ESL is for those who have a functional purpose in learning English or the need to join an English-speaking community. This study deals with those non-native speakers formally learning English as a first foreign language as well as French as a second foreign language in the classroom setting.

In this paper we shall contrast the phonological systems of both English and French in an attempt to determine the basic areas of differences between the two systems and to establish the relevant areas most likely to result in interference, particularly when the two languages are taught and learned simultaneously.

The first part of the paper is mainly concerned with identifying the phonemes of English and French. It deals with segmental phonology and represents an inventory of the sounds that occur in both languages: (I) VOWELS, DIPHTHONGS/SEMIVOWELS, and (II) CONSONANTS. After this preliminary presentation of how sounds are pronounced, we look at the phoneme and at the use of symbols in a

theoretical way. Then, although the same alphabet is used in French and in English, which letters in the orthography represent the same sounds in both languages and which ones do not? Which sounds are exclusive to English and do not exist in French, and which ones are exclusive to French and do not exist in English? In other words, which sounds in French are new for English-speaking students? A large number of the phonetic symbols used to transcribe French vowels are also found in the table for English vowels. But, does this mean that these sounds are exactly the same in the two languages? Or are there rather important phonetic differences? Does nasality mean the same in the two languages? Do all sounds have exactly the same place of articulation in French and in English? How is voicing realized in the two languages? English liquids are syllabic when positioned in certain environments, are there syllabic sounds in French? What is the place of silent letters in the two languages? The comparative overview is an attempt to give answers to all these questions.

After the phonemes of English and French have been introduced, the rest of the paper goes on to look at larger units of speech such as the syllable and at aspects of speech such as stress, which could be roughly described as the relative strength of a syllable. What are the rules that govern word stress placement in the two languages? What are the major linguistic roles played by other parameters inherently entered into the pronunciation of utterances in connected speech? The second part deals with Suprasegmental features in French, focusing on: STRESS, VOWEL LENGTH, ELISION and LIAISON, which are notable features of French, and which are most likely to constitute problems for the bilingual learner of English and French.

Languages have different accents: they are pronounced differently by people from different geographical places, from different social classes, of different ages and different educational backgrounds. Differences of accent are pronunciation differences only. The accent that we concentrate on and use as our model is the one that is most recommended for foreign learners, and has for a long time been identified by the name Received Pronunciation (usually abbreviated to its initials, RP).

It is hoped that this will provide a guideline for the elements of focus for bilingual learners of English and French, and for teachers of English as a first Foreign Language as well as teachers of French as a second Foreign Language.

The First Part: Vowel Systems

The object of this part is to compare the vowel systems of French and English. But, before we draw up an inventory of French and English vowels and embark on a detailed contrastive study, a few preliminary remarks are necessary concerning stress and rhythm in the two languages, because the fundamental differences separating English and French in this area are the source of a number of traits characterizing an English pronunciation of French and a French pronunciation of English.

By *stress* is meant the effect of relative prominence that distinguishes one syllable as salient in relation to others. For example, in the English word *photographer*, the second syllable is stressed, the other three are not: *phoTOgrapher*. In the corresponding French word *photographe*, the last pronounced syllable is stressed, the other two are not: *photoGRAPHe* (the final *e* is not pronounced).

In English, word stress placement varies depending on the word, and a word may receive more than one stress; for instance, *PHOtoGRAPH* is stressed on the first and last syllables, *phoTOgrapher* is stressed on the second syllable, and *PHOtoGRAPHic* is stressed on the first and third syllables. The distribution of stress in English words is not random, but the principles that govern it are relatively complicated (Picard, 1987: 29,30).

In contrast, word stress placement in French is determined by a single simple rule: the stress always falls on the last pronounced syllable: *phoTO*, *photoGRAPHe*, *photograPHIQUE*. It must be added that in French, as in English, word stresses do not all keep the same strength in a phrase or a sentence; phenomena of stress subordination occur which are regulated in particular by the syntactic structure of the phrase or sentence. What is important to remember for now is that word stress

placement is fundamentally different in French and in English, so that one cannot apply the principles of one language to the other without sounding foreign.

Another essential difference between the two languages is the strength of the stress: stress is much stronger in English than in French. Thus, all else being equal, the stressed syllable of the English word , *phoTOgrapher* is much more prominent than the stressed syllable of the French word *phoTO*. Looking at things from the reverse perspective, one can say that unstressed syllables in English are much less prominent than unstressed syllables in French. In fact, unstressed syllables in English generally contain a reduced vowel, i.e. the ‘schwa’ [ə]. For example, comparing the pronunciation of the sequence *photograph-* in the English words *photograph*, *photographer*, and *photographic*, one notices that the consonantal skeleton remains more or less the same in all three words (f-t-gr-f), whereas the vowel melody varies considerably depending on the position of the stress: [-o-ə-æ-], [-ə-ɑ-ə-], [-o-ə-æ-]; we see here that a full vowel under stress ([o], [ɑ], [æ]) reduces to [ə] when it is no longer stressed. The phenomenon of *vowel reduction* in the absence of stress is characteristic of English but radically unlike what occurs in French. In standard French, unstressed syllables are never reduced; vowels always maintain their full quality; thus, the sequence *photograph-* is always pronounced [fɔtɔɡraf-] in the French words *photographe* and *photographique*. In a sense, one could say that the relative strength of stress in English imposes a compensatory reduction of unstressed syllables, whereas in French, the relative weakness of stress allows all syllables to preserve the full quality of their vowels (Casagrande, 1984:43).

The English Vowel System

We shall provide here only a very brief sketch of the vowel system of English generally considered as standard. Our goal is not to go into details, but simply to provide a base to facilitate comparison with the vowel system of French. The following phonetic symbols represent all the vowel sounds of the English language.

SYMBOL	SOUND	EXAMPLE
[æ]	The mouth is slightly more open than for /e/; the lips are neutrally open. Relatively longer before a voiced sound. More close than the a produced as [a] in French carte (card) [kart]	sat, hand, lamp, cat [kæt]
[ɑ]	Long: bar, farm, hard Reduced: arch. Like a in French carré (square) [kare]. Note: /ɑ:/ in 'vase', and in recent borrowings from French in which the French -oir [wa:r] is realized in English as /wɑ:/, e.g. 'reservoir'.	a: father ar: car [kɑ(r)] ear: heart er: clerk al: calm, palm au: aunt, laugh
[ɛ]	Like e in French bête (stupid) [bet]	e: bet [bet] ea: dead, head, breath a: many
[e]	Like e in French récit (recital) [resi], or the first e in verbe (verb) [verb]. Particularly in final position followed by [ɪ], thus produced as [eɪ] in English.	face [feɪs] pay [peɪ]
[ɒ]	This short vowel is articulated with wide open jaws and slight, open lip-rounding	o: dog, gone a: what ou, ow: cough, knowledge au: because
[ə]	This is a schwa, which is a silent e in French, like e in French Petit (small) [pəti]. May be spelt with most vowel letters and their combinations.	comma [kɒmə] possible, woman, oblige, suppose, particular, mother, doctor, famous, colour, figure
[i]	Like i in French si (if) [si], or oui (yes) [wi] Long [i:]: see, seed Reduced [ɪ]: seat, piece	ee: tree e: be ea: leaf ie: piece ei, ey: receive, key i: machine [məʃi:n] she [ʃi:].

SYMBOL	SOUND	EXAMPLE
[ɪ]	Less close than i in mirage (mirage) [mirəʒ]	i: sit [sɪt] y: city, symbol e: English, except a: village, private
[ɔ]	Long [ɔ:]: saw, war, board Reduced [ɒ]: ought, chalk A little more close than o in French bonne (good) [bɒn].	or: cord, horse aw: saw, jaw, law [lɔ] ou, au: bought [bɒt], caught a: all, salt, talk ore, oor, oar, our: more, door, oar, four
[o]	Like au in French haut (high; loud) [o], or eau (water) [o]. Particularly in final position, [o] followed by [ʊ], thus produced as [əʊ] in English. (See [ə], <i>DIPHTHONGAL GLIDES</i> , below)	boat [bəʊt] no [nəʊ]
[u:]	Long [u:]: two, blue, food Reduced [ʊ]: boot, fruit, group Like ou in French double (double) [du:bl] or rouge (red) [ru:ʒ]	oo: food [fu:d] o: move [mu:v] ou: soup u: rude ew, ue, ui, oe: chew, blue, juice, shoe
[ʌ]	Is articulated with a considerable separation of the jaws and with lips neutrally open.	u: sun, o: son [sʌn] ou: couple oo: blood, flood oe: does [dʌz]
[ʊ]	A little close than ou in French double (double) [dubl].	U: put o: woman oo: book [bʊk] ou: could
[ɜ:]	Long [ɜ:]: fur, burn, bird, urge Reduced [ɜ]: first, earth, worse,	ir: girl er, ear: her, heard ur, urr: turn, purr w + or: word, world our: journey

English vowels (summary)

		Front	Central	Back	
		Unrounded	Unrounded	Unrounded	Rounded
Closed	Tense	i			u
	Lax	ɪ			ʊ
Half-closed	Tense	e			o
Half-open	Lax	ɛ	ə		ɔ
Open	Lax	æ	ʌ	ɑ ɒ	

DIPHTHONGIZATION

The vowel system of English includes several falling diphthongs. This type of vowel does not exist in modern standard French, where all of the vowels are monophthongs. In Old French and Middle French, there were diphthongs and even triphthongs, but these complex vowels have been progressively reduced to simple vowels (Casagrande, 1984: 46).

DIPHTHONGAL VOWEL GLIDES

SYMBOL	SOUND	EXAMPLES
	Long, when in final position or followed by a voiced sound	
[eɪ]	Long [e:ɪ]: day, made, game, save Reduced [eɪ]: eight, late, safe	a: ape, late, make ai, ay: aim, rain, may ei, ey: eight, they ea: great, break
[aɪ]	Long [a:ɪ]: fly, die, hide, mine Reduced [aɪ]: fight, like, ice, ripe	i, y: time, cry igh, eigh: high, height ie, ye: die, dye ei, ai: either, aisle
[ɔɪ]	Long [ɔ:ɪ]: boy, noise, void, coin Reduced [ɔɪ]: voice, choice	oi, oy: voice, toy
[əʊ]	Long [ə:ʊ]: go, home, road Reduced [əʊ]: boat, oak, both	o: so, old, home oa: soap, toast oe: toe ou, ow: soul, know
[aʊ]	Long [a:ʊ]: how, loud, town Reduced [aʊ]: shout, mouse, mouth	ou, ow: house, sound, out, town now

CENTERING DIPHTHONGS

SYMBOL	SOUND	EXAMPLES
[ɪə]	Long [ɪ:ə]: dear, here Reduced [ɪə]: pierce, fierce	-eer, ear, ere: deer, dear, here -eir, ier, ir: weird, fierce, fakir -ea, ia, eu, eo: idea, museum, theology
[ɛə]	Long [ɛ:ə]: pair, there Reduced [ɛə]: scarce	-are: care, rare, share -air: air, fair, pair, chair -ear: bear, wear, pear
[ʊə]	Pure, tour	-oor: poor -ure: pure, sure, endure -ur: during, curious -our: tour

The French Vowel System

Although the same alphabet is used in French and in English, letters do not always represent the same sounds in both languages. A large number of the phonetic symbols used to transcribe French vowels are also found in the table for English vowels. This does not necessarily mean, however, that these sounds are exactly the same in the two languages. In fact, there are, in most cases, rather important phonetic differences. That the same symbols are used is certainly an indication that the sounds in question are relatively close phonetically; but above all the same symbols are used to mark the parallel between the relative articulatory characteristics of the vowels within each of the two systems. Vowel sounds are most different. French has no diphthongs - no sounds that slide from one vowel to another. French vowel sounds are shorter and tighter. Not only do French vowels maintain a constant quality, but at least in open syllables, they are also relatively short. For example, the words *si* [si] 'if', *sous* [su] 'under', *C* [se] (the letter C), *sot* [so] 'stupid' end quickly and abruptly compared with the English words *sea* [si], *Sue* [su], *say* [se], and *so* [so]. In fact, in English, it is impossible to have short vowels in this context. Most French consonants are similar to English ones, though in French they are more clipped. Also, most final consonants are not pronounced in French. The following phonetic symbols represent all the sounds of the French language.

FRENCH VOWELS

SYMBOL	SOUND	EXAMPLE
[a]	A little more open than the a produced as [æ] in English cat [kæt]	carte (card) [kart]
[ɑ]	Like a in English car [kɑ(r)]	carré (square) [kare]
[ɛ]	Like e in English bet [bɛt]	bête (stupid) [bɛt]
[e]	Like a produced as [eɪ] in English face [feɪs], but without the glide the English sound sometimes has.	verbe (verb) [verb]
[ə]	Like a in English comma [kəmə]	petit (small) [pəti]
[i]	Like i in English machine [məʃi:n] or like e in English she [ʃi:].	si (if) [si] oui (yes) [wi]
[ɔ]	A little more open and rounded than aw in English law .	bonne (good) [bɔn]
[o]	Like o produced as [ə] in English no , but without the glide the English sound sometimes has.	eau (water) [o]
[u:]	Like oo in English food [fu:d]	rouge (red) [ru:ʒ]
[y]	The lips are rounded for [u:] and held without moving while the sound [i] is pronounced.	suc (juice) [syk]
[ø]	The lips are rounded for [o] and held without moving while the sound [e] is pronounced.	deux (two) [dø]
[œ]	The lips are rounded for [ɔ] and held without moving while the sound [ɛ] is pronounced.	œuf (egg) [œf]

NASAL VOWELS

To produce the nasal vowels in French, sound is emitted through both the nasal cavity and the oral cavity by means of a lowering of the velum. In other words, nasal or nasalized vowels, air escapes through nose and mouth simultaneously. The orthographic **m** or **n** has no consonantal value.

English has no distinct nasal vowels, but nasalization is often heard on English vowels, when they display the articulatory influence of an adjacent nasal consonant, as in **man** [mæ̃n]. Such cases, where nasality comes from other sounds, would be referred to as 'nasalized' vowels, and this applies to English. On the other hand, the term 'nasal vowels'

suggests that the nasality is an essential identifying feature of the sound, and this applies to French. If the consonant following a vowel is an **n** or an **m**, the resulting sound is called a *nasal vowel*. There are four nasal vowels in French (Casagrande, 1984: 114).

- [ã] written **an**, **en**, **am**, or **em**;
- [ɔ̃] written **on** or **om**;
- [ɛ̃] written **in**, **im**, **yn**, **ym**, **ain**, **aim**, **ein**, or **eim**; and
- [œ̃] written **un** or **um**.

SYMBOL	SOUND	EXAMPLE
[ã]	Like a in English car [kɑ(r)] and nasalized. That is, start with /a/, as the a in <i>car</i> . Make a slightly nasal sound. Do not pronounce n or m .	en (in) [ã] tant (so much) [tã] temps (time) [tã] lampe (lamp) [lãp]
[ɛ̃]	Like e in English met [met] and nasalized. That is, start with /ɛ/, as in <i>met</i> . Make a slightly nasal sound. Do not sound n or m .	pin (pine) [pɛ̃] pain [pɛ̃] faim (hunger) [fɛ̃] simple (simple) [sɛ̃pl] syndicat (syndicate) [sɛ̃dika] symphonie (symphony) [sɛ̃fɔ̃ni] bien (good) [bɛ̃]
[ɔ̃]	More close than aw in English law [lɔ] and nasalized. That is, start with /o/ as in <i>rose</i> . Make a slightly nasal sound. Do not pronounce n or m .	bon (good) [bɔ̃] bombe (bomb) [bɔ̃b]
[œ̃]	Like [œ] of French bœuf (beef) [bœf] and nasalized. This sound is very close to [ɛ̃]. There has been a tendency in this century to assimilate the nasal sound [œ̃] to the nasal sound [ɛ̃], making brun (dark-brown) [brœ̃] and brin (blade) [brɛ̃] sound much the same.	un (one) [œ̃] parfum (perfume) [parfœ̃]

SEMIVOWELS

The sounds [j], [y], and [w] are used to form French semivowels - with no Diphthongization. In French, no sounds slide from one vowel to another.

SYMBOL	SOUND	EXAMPLE
[j]	Like y in English year or like y in English toy .	hier (yesterday) [jɛr] papier (paper) [papje] crayon (pencil) [krɛjɔ̃] fille (daughter) [fiʝ] ail (garlic) [ɑ̃]
[ɥ]	Non-syllabic u [y] pronounced with consonantal value preceding a vowel.	nuît (night) [nɥi] puis (then; next) [pɥi] situation (situation) [sitɥasjɔ̃]
[w]	Like w in English water .	oui (yes) [wi] soir (evening, night) [swar] jouer (to play) [ʒwe]

French vowels and semi-vowels (summary)

		Front	Central	Back	
		Unrounded	Unrounded	Unrounded	Rounded
Semi-vowels		j	ɥ		w
Oral vowels	Closed	i	y		u
	Half-closed	e	Ø		o
	Half-open	ɛ	œ		ɔ
	Open	a		ɑ	
Nasal vowels		ẽ	œ̃	ã	õ

The Contrastive Study

Comparing the English and French vowel inventories reveals that the transition from one language to the other presupposes the elimination of certain vowels and the acquisition of new ones, particularly the diphthongs and the lax vowels [ɪ] and [ʊ] of English; the nasal vowels and the front rounded vowels of French. What these inventories do not show is that some vowels which may at first seem transferable from one language to the other in fact require important modifications in their articulations.

CONCLUSION:

In closing this contrastive study of the vowel systems of English and French, two golden rules should be emphasized concerning the production of standard French:

- (i) maintain a full constant quality for each vowel (no reduction, no diphthongization), and
- (ii) make sure to round and project the lips forward in the production of the rounded vowels.

The Second Part: Consonantal System

This part is devoted to a comparative survey of the English and French consonantal systems, and to an examination of the most articulatory differences between phonetically close consonants in these systems.

English consonants

Manner of articulation			Place of articulation						
			Bilabial	Labiodental	Interdental	Alveolar	Alveopalatal	Velar	Glottal
Stops	Nasal		m			n		ŋ	
	oral	– voi	p			t		k	
		+ voi	b			d		g	
fricatives		– voi		f	θ	s	ʃ		h
		+ voi		v	ð	z	ʒ		
affricates		– voi					tʃ		
		+ voi					dʒ		
approximants		lateral				l			
		central				r			

(adapted from Ladefoged, 2001:35)

French consonants

Manner of articulation			Place of articulation						
			Bilabial	Labiodental	Dental	Alveolar	Alveopalatal	Palatal	Velar
Stops	Nasal		m		n			ɲ	
	oral	– voi	p		t				k
		+ voi	b		d				g
fricatives		– voi		f		s	ʃ		
		+ voi		v		z	ʒ		
approximants		lateral				l			
		central							ʁ

(Adapted from: The Principles of the International Phonetic Association, 1949)

Comparative overview

- 1 - English uses a slightly larger consonant inventory than French: there are 22 consonants in English [m, p, b (bilabial), f, v (labiodental), θ, ð (interdental), t, d, s, z, n, l, r (alveolar), ʃ, ʒ, tʃ, dʒ (alveopalatal), ŋ, k, g (velar), and h (glottal)]; compared to 17 in French [m, p, b (bilabial), f, v (labiodental), n, t, d (dental), s, z, l (alveolar), ʃ, ʒ (alveopalatal), ɲ (palatal), k, g (velar), and ʁ (uvular)].
- 2 - The stop systems closely resemble each other; however, the nasal series differ in that English has the velar [ŋ], whereas French has the palatal [ɲ]. The existence of the velar nasal [ŋ] in English does not create great difficulties for French speakers learning English. As a matter of fact, this consonant tends to enter into the French consonantal system; thus, some speakers use it in the ending *-ing* often found in words borrowed from English (such as *camping, living, marketing, meeting, parking, shopping*), as well as in pseudo-

borrowings (as in *footing* ‘jogging’, *smoking* ‘tuxedo’. Sometimes [ŋg] is heard in stead of [ŋ]; other speakers use the palatal nasal [ɲ] rather than [ŋ].

- 3 - The palatal nasal [ɲ] is a new sound for English-speaking students. This sound (represented by the digraph *gn* in the orthography) commonly appears intervocalically (as in *oignon* [ɔɲɔ̃] ‘onion’) and in word-final position (as in *montagne* [mɔ̃taɲ] ‘mountain’); it appears in initial position in just a few words (as in *gnognote* [ɲɔɲɔ̃t] ‘junk/trash’).
- 4 - Concerning the fricatives, English has three sounds which do not exist in French and which create definite problems for French speakers learning English; these are [θ], [ð], and [h]. In general, French speakers tend to replace the (inter)dental fricatives [θ] and [ð] with the alveolar fricatives [s] and [z], and they tend to eliminate the glottal [h] altogether. The spelling *th* simply represents the sound [t] (as in *orthographe* [ɔrtɔɡraf] ‘orthograh’y’, *rythme* [ritm] ‘rhythm’, *théâtre* [teatr] ‘theatre’) and the *h* does not represent any sound at all.
- 5 - The affricates which exist in English [tʃ and dʒ] have no real counterparts in French. Affricates in French are found only in borrowed words, such as *bridge*, *match*, and *sandwich* (from English).
- 6 - English and French both have the consonants *l* and *r*, but these consonants have extremely different phonetic realizations in the two languages.
- 7 - The voiced stops [b, d, g] have a tendency to be only partially voiced in English (at least when they are not preceded by another voiced sound), whereas they are completely voiced in French.
- 8 - The French voiced fricatives [v, z, ʒ] are more completely voiced than the corresponding voiced fricatives in English.
- 9 - It should also be noted that, in word-final position, English voiced consonants tend to lose their voicing (i.e. become devoiced), whereas this is not at all the case in French.

- 10- The stops [t, d, n] do not have exactly the same place of articulation in French and in English: these consonants are dental in French, but alveolar in English. They are dental only in the presence of a subsequent [θ] or [ð], in French they always have a dental articulation.
- 11- Roughly speaking, English *l* and *r* are syllabic when they are finally positioned and preceded by a consonant (*table* [teb^l], *history* [histri^l]). In French, *l* and *r* are never syllabic (*table* [tabl] ‘table’, *sucré* [sykr] ‘sugar’).
- 12- In English, there are two varieties of *l*: clear or light [l] and dark, or velarized [ɫ]. The distribution of these two types of *l* depends on the phonetic context, more precisely on the position of the *l* in the syllable. In general, clear *l* occurs in initial position, i.e. in the onset of the syllable (as in *look*, *leaf*, *left*, *plane*) and darkɫ occurs elsewhere (as in *cool*, *feel*, *felt*, *apple*). In modern French, there is only one type of *l*; regardless of its position in the syllable, French *l* is a clear *l*.
- 13- English and French *rs* are extremely different from an articulatory point of view. English *r* is formed in the front of the oral cavity, whereas French *r* is formed in the back. For English *r*, the tongue tip generally plays an active role and is directed upward. With French *r*, the tongue tip is always inactive and remains behind the lower teeth in a resting position; it is the back part of the tongue and its root which play an active role.
- 14- In French, word-final consonant-letters are silent to a point probably unsurpassed in any other written language. It is, nonetheless, true that French allows pronounced final consonants, and that a good number of these phonetic final consonants are also written final consonants. Certain overall tendencies seem to emerge which may be helpful to the language learner:
 - i - Consonants which are markers for grammatical endings such as plurals (in nouns and adjectives) or person (in the conjugation of verbs) are silent.
 - ii - With only a few exceptions, final consonants are silent in adjectives.

- iii - Even though all consonant-letters occurring in word-final position (except *h*) may in fact be pronounced in one case or another, some among them have, from a statistical point of view, a more marked propensity than others to appear phonetically. These are *b, c, f, k, l, m, q*, and *r*.
 - iv - In borrowed words, final consonants are usually pronounced.
 - v - The greatest difficulties concern *s* and *t*, but essentially in a few groups of nouns identifiable by the preceding vowel. Elsewhere, various clues are generally available and sufficient to help determine whether or not the consonant is pronounced.
- 15- Conclusion: Aside from *l* and *r*, English consonants and their French counterparts are on the whole relatively close, phonetically speaking. There exist, however, several differences of detail which play determining characteristic roles in the two languages.

ENGLISH CONSONANTS

SYMBOL	SOUND	EXAMPLE
[b]	A bilabial, plosive sound made with the two lips, regularly spelt with <i>b</i> , like <i>b</i> in English <i>baby</i> .	Initial, partially devoiced: big, banana, begin Intervocalic, voiced: rubber, labor, husband Final, voiceless: rib, robe Silent in: limb, thumb, comb, debt, doubt
[d]	An alveolar, plosive sound made with the tongue tip or blade, regularly spelt with <i>d, dd</i> .	Initial, partially devoiced: do, double Intervocalic, voiced: leader, middle Final, voiceless: mad, loved Silent in: Wednesday

SYMBOL	SOUND	EXAMPLE
[dʒ]	A voiced palato-alveolar affricate, made by briefly stopping the airstream completely and then releasing the articulators slightly so that friction noise is produced i.e. an affricate complex - a combination of a stop [d] and a fricative [ʒ]. (Spelt: <i>j, g, dg</i> , sometimes <i>gg, dj, d</i> , as in <i>jam, gem, bridge, suggest, adjacent, grandeur, soldier</i>). In French this sound can be produced as a sequence of two sounds: a stop followed by a fricative, as in French djinn (jinn).	Word initial: judge , general, George Word medial (intervocalic): margin , major, agenda, residual, soldier Word final: ridge, edge
[ð]	A voiced interdental fricative sound, where the apex (tongue tip) is ejected between the front teeth. Spelt always th .	Word initial: there, this word medial: breathing, father, either Word final: with , clothe
[f]	A labio-dental fricative sound, made with the lower lip against the upper front teeth, like f in English father . Spelt <i>f, ff, ph, gh</i> : fork, off, phone, enough.	Word initial: feet , photo Word medial: offer , defend Word final: leaf, laugh , staff
[g]	A velar plosive sound, made with the back of the tongue and the soft palate (velum). Regularly spelt <i>g, gg</i> , like <i>g</i> in English <i>go</i> , and <i>gg</i> in <i>egg</i> .	Initial, partially devoiced: go, girl , guess Intervocalic, voiced: eager, hunger , ago Final, voiceless: dog , leg, vague Silent in: gnat, sign , resign, reign
[h]	A glottal fricative. Since English /h/ occurs only in syllable initial, pre-vocalic positions, it may be regarded as a strong, voiceless onset of the vowel in question.	Word initial: heat, who Word medial: Ahead, behave Not pronounced in: hour, honest, vehicle , exhibit, exhaust
[j]	Unrounded palatal semi-vowel. Spelt <i>y, i, u</i> , ew: yes, spaniel, tune, new	Word initial: yes, yield , union following accented /p,t,k,h/: pure, tune, cure, huge

SYMBOL	SOUND	EXAMPLE
[k]	A velar plosive sound, made with the back of the tongue and the soft palate (velum). Spelt k, c, cc, ch, q.	Accented, aspirated: come, kin, quick, queue Accented after /s/, unaspirated: skin, scar Weakly accented, relatively unaspirated: income, secret Syllable final: leak, desk, back Silent in: knew, knit
[l]	An alveolar lateral sound. Regularly spelt l, ll. Three main allophones: - Clear [l]: before vowels and /j/ as in look, lie, lip, slip ; - voiceless [l̥]: following accented (aspirated) /p, t, k/ as in play, clean ; - dark [ɫ], finally after a vowel, before a consonant, and as a syllabic sound following a consonant: all or old, dull, milk, table ,	Word initial: leave, let Word medial: silly, caller, foolish, hopeless Word final, after a vowel: feel, fill Word final, before a consonant: help, solve Syllabic: middle, little
[m]	A bilabial nasal, regularly spelt with m, mm. Like m in English <i>meal</i> , and mm in <i>summer</i>	Word initial: meal, move Following word initial /s/: smile, smoke Word medial: lemon, summer, glimmer Word final: seem, game Syllabic: rhythm, prism, terrorism
[n]	An alveolar nasal sound, regularly spelt with n, nn. Like n in English <i>name</i> . and nn in <i>funny</i> . Also /ɒn/ as a realization of French [ɑ̃], e.g. 'rendez-vous'	Word initial: neat, knit, Following word initial /s/: sneeze, snore, snow Word medial: dinner, many Word final: mean, pen Syllabic: ribbon, sudden, oven

SYMBOL	SOUND	EXAMPLE
[ŋ]	A velar nasal sound. Occurs only in post-syllabic positions. Regularly spelt ng , like ng in English <i>sing</i> - or n followed by a letter indicating a velar consonant - e.g. <i>sink</i> , <i>anxious</i> , <i>uncle</i> ; also /ɒŋ/ as a realization of French [ɑ̃], e.g. 'restaurant'. [ŋ] occurs usually after the short vowels /ɪ, æ, ɒ, ʌ/; rarely after /e/	Word medial: singer , hanger , anxiety , longing Word medial + g: finger Word medial + k: thinker , Word final: sing , hang Word final + k: sink
[p]	A bilabial, plosive sound made with the two lips, regularly spelt with p , like p in English <i>pen</i> .	Accented, aspirated: pin , pill , pain , impatient Accented after /s/, unaspirated: speak , spin Syllable final: cheap , lip Silent in: pneumonia , receipt , cupboard
[r]	Post-alveolar frictionless continuant. Regularly spelt r , rr as in <i>red</i> , <i>carry</i> respectively.	Word initial: road , royal Word medial, intervocalic: mirror , very , sorry , arrive Word final followed by a word beginning with a vowel: far away , here and there
[s]	An alveolar fricative sound, spelt s , ss , c , sc , x as in English <i>sit</i> , <i>essay</i> , <i>city</i> , <i>science</i> , <i>fix</i> respectively.	Word initial: cease , sample Word medial: concert , whisper Word final: niece , famous
[ʃ]	A palato-alveolar fricative sound, produced with the tongue blade and the back of the alveolar ridge. Spelt sh (shall), ch (machine), s before u (sure), ss before u (assure), -ti- (nation), -si- (mission), -ci- (special), or -ce- (ocean)	Word initial: sheet , sugar Word medial: Asia , mission , cushion Word final: dish , cash

SYMBOL	SOUND	EXAMPLE
[t]	An alveolar, plosive sound made with the tongue tip or blade, regularly spelt with t , tt , sometimes with th ; also -ed in verbal past tense and past participles after voiceless consonants other than /t/.	Accented, aspirated: take, attend, between Accented after /s/, unaspirated: steak, stone Syllable final: beat, late, fetched, looked Silent in: castle, Christmas
[tʃ]	A voiceless palato-alveolar affricate, made by briefly stopping the airstream completely and then releasing the articulators slightly so that friction noise is produced i.e. an affricate complex - a combination of a stop [t] and a fricative [ʃ]. (Spelt: <i>ch</i> (chain), <i>tch</i> (watch), <i>t</i> + <i>ure</i> (nature), <i>eous</i> (righteous), and <i>t</i> + <i>ion</i> when <i>t</i> is preceded by <i>s</i> (question). In French this sound can be produced as a sequence of two sounds: a stop followed by a fricative, as in French caout<u>ch</u>ouc (rubber).	Word initial: cheese, chin Word medial (intervocalic): feature, merchant, nature Word medial (consonant preceding): gesture, mischief, lecture Word final: catch, much, coach Word final (consonant preceding): inch, branch
[θ]	A voiceless interdental fricative sound, where the apex (tongue tip) is ejected between the front teeth. Spelt always th .	Word initial: thief, thumb, thought Word medial: ethics, author, worthless Word final: breath, fourth, health
[v]	A labio-dental fricative sound, made with the lower lip against the upper front teeth, like v in English voice . Spelt <i>v, f, ph</i> : visit, of, nephew.	Word initial: veal, vast Word medial: ever, over, nephew, event Word final: leave, have

SYMBOL	SOUND	EXAMPLE
[w]	A sound made by raising the back of the tongue toward the velum while rounding the lips at the same time, so it is classified as a voiced bilabial glide (or labio-velar semi-vowel). Spelt <i>w</i> (west), <i>wh</i> (which); or <i>u</i> after <i>q, g</i> (quick, language).	Word initial = [w]: weed, wet, one Following accented /t, k/ = [w̥]: twelve, twin, twice, queen, quick Intervocalic = [w]: away, always, language Possible /hw/ or /ɹw/: wheat, what, white, whether, which Possible oppositions /w/, /hw, ɹw/: witch, which; weather, whether; wear, where
[z]	An alveolar fricative sound, spelt <i>s, ss, z, zz, x</i> (= /gz/) as in English <i>rose, scissors, zoo, dizzy, exact</i> respectively.	Word initial: zeal, zest, zero, zoo, zone Word medial: easy, lazy, husband, thousand Word final: fees, is, does
[ʒ]	A palato-alveolar fricative sound, produced with the tongue blade and the back of the alveolar ridge. Spelt -si- (vision), s before u (measure), z before u (seizure), and in French loan words, final -ge (beige).	Word initial: (in French loan words): gigolo, gigue Word medial: pleasure, leisure, usual, decision Word final (only in French loan words; an alternative pronunciation with [dʒ] is possible): prestige, rouge, beige

FRENCH CONSONANTS

The speaker of French characteristically keeps the tip of the tongue down behind the lower teeth and arches the back of the tongue at the same time. Thus, sounds such as [t], [d], [n], [s], [z], [l], and [r] must in French be articulated with the tongue tip and blade in the proximity of the back surface of the teeth (Picard, 1987: Chapters 4,5).

SYMBOL	SOUND	EXAMPLE
[b]	Like b in English baby .	bonsoir (good evening) [bɔ̃swar]
[d]	Like d in English dead .	Doux (sweet) [du]
[f]	Like f in English father .	Femme (woman) [fam]
[g]	Like g in English go .	garçon (boy) [garsɔ̃]
[k]	Unaspirated [k]. Like k in English skin , or in English back . Not like the aspirated k [kʰ] in English kit .	Cas (case) [ka]
[l]	Clear [l]. Like l in English lip , or in English slip pronounced toward the front of the mouth. Not dark [ɫ], like l in English all or old .	Livre (book) [livr]
[m]	Like m in English meal .	maman (mamma) [mamā]
[n]	Like n in English name .	nous (we) [nu]
[ɲ]	Like ny in English canyon , or like ni in English onion .	signe (sign) [sjɛn] magnifique (magnificent) [majɛfik]
[ɲ]	Like ng in English sing .	parking (parking) [parkɲ]
[p]	Unaspirated [p]. Like p in English speak , or in English keep . Not like the aspirated p [pʰ] in English pen .	porte (door) [pɔ̃rt] soupe (soup) [sup]
[r]	Sometimes the uvular rolled r [ʀ], but for some decades now usually a uvular fricative r [ʁ], with the point of articulation between the rounded back of the tongue (dorsum) and the hard palate. The tip of the tongue must point down near the back of the lower teeth and must not move during the utterance of the French [r].	voir (to see) [vwar] caractère (character) [karakter] roi (king) [rwa/a]
[s]	Like s in English sit .	ce (this) [sə] classe (class) [klas] si (if) [si] nation (nation) [nasjɔ̃]

SYMBOL	SOUND	EXAMPLE
[ʃ]	Like sh in English shall or ch in English machine .	chambre (chamber) [ʃābr] chauffeur (driver) [ʃofœr] dimanche (Sunday) [dimāʃ]
[t]	Unaspirated [t]. Like t in English steak , or in English eat . Not like the aspirated t [tʰ] in English tea .	thé (tea) [te] table (table) [tabl]
[v]	Like v in English voice .	vert (green) [ver] wagon (car) [vagō]
[z]	Like z in English zoo .	zéro (zero) [zero] chaise (chair) [ʃɛz] deuxième (second) [døzjem]
[ʒ]	Like s in English pleasure or vision .	gym (gymnasium) [ʒim] rouge (red) [ruʒ] je (I) [ʒə]

Part three: Suprasegmentals

The preceding two parts dealt mainly with the study of the articulation of the sounds (or segments) which make up words in English and in French. But an utterance in any language does not simply consist of a succession of various articulations. Other parameters inherently enter into the pronunciation of every utterance, and their own modulations play extremely important linguistic roles. Because variations in these parameters are *superimposed* upon the spoken chain of sounds (i.e. segmental chain), the term *suprasegmentals* is used to refer to the linguistic manifestations of these particular parameters.

In the rest of this paper, we shall confine ourselves to the specific cases of suprasegmental phenomena related to our discussion in this paper without going into detailed coverage.

FRENCH STRESS

Stress is not a fixed characteristic of the pronunciation of French words. It depends on the position of the word in the sentence and it

falls on the last syllable of the word that terminates a rhythmic or sense grouping unless the vowel of that syllable is a mute *e* [ə], in which case it falls on the immediately preceding syllable.

A French speaker does not stress each word in a group. A French speaker stresses the last syllable of the last word.

- C'est la class d'allemand. 'This is the class of German'
- Je suis le professeur. 'I'm the professor'
- Tu es etudiant? 'You are a student'
- Bonjour, madame. 'Good morning, madam'

In French, only the last syllable of a word bears a light stress; all the other syllables are pronounced with equal emphasis.

Contrast:

English	French
<u>ju</u> stice	ju <u>sti</u> ce
<u>ge</u> neral	gé <u>né</u> ral
at <u>trac</u> tion	attra <u>cti</u> on
uni <u>ve</u> rsity	universi <u>té</u>

VOWEL LENGTH

Vowel length, like stress' is not a fixed characteristic of the pronunciation of French words. The following vowel sounds in the positions indicated are long when stressed:

- 1 - all when followed by [r], [z], [v], [ʒ], or [vr];
- 2 - all spelled with circumflex accent and followed by a consonant sound; and
- 3 - [ā], [ṡ], [ē], [œ], [a], [o], and [ø] followed by a consonant sound.

When these conditions are not fulfilled, all vowel sounds are normal in length (or sometimes they may be short in length, even when stressed, if followed by [k], [p], [t], [kt], [rk], [rp], or [rt].

LIAISON

French tends to form syllables made up of consonant and vowel

(CV). One very obvious case where this takes place is in 'liaison', in which a consonant is, as it were, revived to create a CV syllable. Such a syllable is formed of the last segment in a word (a consonant) and the first segment of the following word (a vowel), e.g. *plusieurs amis* 'several friends'. When the consonant thus used to create this CV syllable is not otherwise pronounced, e.g. *plusieurs copains* 'several pals/chums', the process is called 'liaison' (from the French *liaison*) (Casagrande, 1984: Chapter 19).

Liaison in French is comparable to certain phenomena which occur in English. For example, the English indefinite article 'a' before a word beginning with a consonant (*a book*) and 'an' before a word beginning with a vowel (*an old book*). In some English dialects (for instance British English) words which end in a 'vowel + r' sequence in the orthography (for example, *far*, *never*) are pronounced without a final [r], unless the next word begins in a vowel (compare *far* [fɑ:] and *faraway* [fɑ:rəweɪ], *never* [nɛvə] and *never again* [nɛvərəgeɪn]). The absence/presence of these consonants [n] and [r] in English is, on a reduced scale, similar to the pervasive phenomenon of liaison in French, where ordinarily silent word-final consonants may be pronounced before vowel-initial words (see Table below).

il est petit	[ilɛpti]	'he is little'
un petit cable	[ɛptikabl]	'a little cable'
un petit abricot	[ɛptitabrik]	'a little apricot'

NASAL VOWELS AND LIAISON

Let us consider the possessive adjective *son* 'his/her/its'. When this word is cited in isolation, it is pronounced [sɔ̃]. To say *son livre* 'his book', one also pronounces [sɔ̃], and then [livr]: [sɔ̃livr]. But to say *son arbre* 'his tree', one does not simply produce [sɔ̃] and then [arbr]; an [n] is introduced between the two words: [sɔ̃arbr]. Liaison (or linking) is said to have occurred. More generally, liaison is the appearance of a consonant between two given words, under certain conditions. The conditions for the appearance of liaison consonants are roughly the following: the second word must begin with a vowel and the syntactic relation between the two words must be relatively close. The nature of the liaison consonant depends on the first word.

Thus, there are liaisons not only with:

[n] (*son arbre* [sɔ̃narbr] 'his tree'), but also with:

[t] (*petit arbre* [ptitarbr] 'small tree'), with

[z] (*petits arbres* [ptizarbr] 'small trees'), with

[r] (*dernier arbre* [dɛrnjɛrarbr] 'last tree'), and more rarely, with

[p] (*trop actif* [tropaktif] 'too active'), and

[g] (*long été* [lɔ̃ngete] 'long summer').

What specifically concerns us here are the words governing liaison with [n], because these words end in a nasal vowel which in liaison may, depending on the case, remain nasal or on the contrary be denasalized. Thus, in *son arbre*, the [ɔ̃] of *son* remains nasal: [sɔ̃narbr] but in *bon ami* 'good friend' (masculine), the [ɔ̃] of *bon* becomes oral: [bɔnamɪ] (so that [bɔnamɪ] may mean *bon ami* as well as the corresponding feminine *bonne amie*).

ELISION AND LIAISON

Elision - the omission of sounds in connected speech - and liaison - transition between sounds, where a sound is introduced at the end of a word if a certain context follows - are notable features of French. Elision and liaison are usually made with words beginning with a vowel or a mute **h**. For example, **ce** [sə] (or **cet** [set] before vowel or mute **h**). The final **e** of **ce** is elided when followed by a vowel, **c'est**. The final **t** of **c'est** is pronounced when followed by a vowel, as in *C'est une dame* (This is a lady), *Comment allez-vous?* (How are you?), or *Vous êtes le professeur* (You are the professor). The definite article **le** is pronounced [lə]; **la** is pronounced [la], but the vowel is elided, i.e. **L'** blends with the vowel following it: *l'animal*, *l'étudiante*, *l'homme*. Elision and liaison are made with some words beginning with **y**, such as: **yèbe**, **yeuse**, **yeux**.

However, there are words, which begin with a vowel or an **h** with which elision and liaison are not made. Most of these words begin with **h**, called aspirate **h**, although it has not been pronounced for centuries, e.g. **hall** (lobby; hall) [ol], **handicap** (handicap) [ãdikap], **onze** (eleven) [ɔ̃z], **a** (first letter of the French alphabet) [ɑ], **s** (nineteenth letter of the French alphabet) [es] (Casagrande, 1984: Chapter 19).

Main Conclusions:

- 1 - There are basic areas of differences between the two phonological systems: English and French, which most likely result in interference particularly when the two languages are learned as foreign languages simultaneously.
- 2 - Although the same alphabet is used in French and in English, not all letters in the orthography represent the same sounds in both languages. There are sounds which are exclusive to English and do not exist in French, and others which are exclusive to French and do not exist in English. In other words, there are sounds in French which are new for English-speaking students, and vice-versa.
- 3 - Not all sounds have exactly the same place of articulation in French and in English.
- 4 - Verbal consonantal production does not constitute a problem for the Arab learners of the two languages since the phonetic alphabets of them both do exist in Arabic as well. The area of concentration should be paid to the vowel system.
- 5 - A large number of the phonetic symbols used to transcribe French vowels are also found in the table for English vowels. But, these sounds are not exactly the same in the two languages and there are rather important phonetic differences.
- 6 - There are four nasal vowels in French, whereas English has no distinct nasal vowels, but nasalization is often heard on English vowels, when they display the articulatory influence of an adjacent nasal consonant.
- 7 - Voicing is realized differently in the two languages.
- 8 - English liquids (*l* and *r*) are syllabic when positioned in certain environments, but they are never syllabic in French.
- 9 - Word stress placement is fundamentally different in French and in English, so that one cannot apply the principles of one language to the other without sounding foreign. Word stress placement in French is determined by a single simple rule: the stress always falls on the last pronounced syllable.

- 10- The strength of the stress: stress is much stronger in English than in French.
- 11- The phenomenon of *vowel reduction* in the absence of stress is characteristic of English but radically unlike what occurs in French. In standard French, unstressed syllables are never reduced; vowels always maintain their full quality.
- 12- The vowel system of English includes several falling diphthongs. This type of vowel does not exist in modern standard French, where all of the vowels are monophthongs. In Old French and Middle French, there were diphthongs and even triphthongs, but these complex vowels have been progressively reduced to simple vowels. French has no diphthongs - no sounds that slide from one vowel to another.
- 13- French vowel sounds are shorter and tighter. Not only do French vowels maintain a constant quality, but at least in open syllables, they are also relatively short.
- 14- In French, word-final consonant-letters are silent to a point probably unsurpassed in any other written language. Most final consonants are not pronounced in French.
- 15- Suprasegmental features in French: STRESS, VOWEL LENGTH, ELISION and LIAISON, in particular are notable features of French, and are most likely to constitute problems for the bilingual learner of English and French.

Recommendations:

- 1 - The basic areas of contrast between the phonological systems of the two languages: English and French must be made explicit to the learner, to be able to use the two languages effectively - particularly when the two languages are learned as foreign languages simultaneously.
- 2 - Students learning the two foreign languages simultaneously should be drilled for **sound discrimination** by ear training and oral

production of the distinctive sounds that exist in one language and do not in the other. The aural-oral approach (hearing and producing) is a good exercise in this domain.

- 3 - Verbal consonantal production does not constitute a problem for the Arab learners of the two languages since the phonetic alphabets of them both do exist in Arabic as well. The area of concentration should be paid to **the vowel system**.
- 4 - The distinctive characteristics of the two languages **must not be taught in isolation**. To be properly and instantaneously acquainted with the contrast, the drills on a specific point should be given side by side (i.e. English and French simultaneously; not English by itself and French by itself). Computerized audio-visual drills and exercises could be a perfect helpful aid in this respect.

النظام الصوتي في اللغتين الإنجليزية والفرنسية: دراسة تحليلية تقابلية

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الكويت

ملخص

هذا البحث دراسة تحليلية تقابلية للنظامين الصوتيين اللغتين الإنجليزية والفرنسية في محاولة لرصد الفروق الأساسية بين النظامين وتحديد المجالات المحتملة للتداخل كنتيجة متوقعة، خاصة عندما تكون عمليتا تعليم وتعلم اللغتين متزامنتين - أي في آن واحد. ويتناول الجزء الأول من البحث قائمة الأصوات (الوحدات الصوتية) التي تحدث في كلتا اللغتين: (١) الصوائت (الحركات) VOWELS والصوائت المركبة الإنزلاقية DIPHTHONGS وأشباه الصوائت SEMIVOWELS (٢) الأصوات الصامتة (الساكنة) CONSONANTS. أما الجزء الثاني، فيتناول السمات الفوققطعية suprasegmental في اللغة الفرنسية (أي النظام الصوتي للوحدات الصوتية في الحديث المتصل) مع التركيز على ظاهرة النبرة STRESS والمد VOWEL LENGTH والحذف ELISION والوصل LIAISON حيث إنها سمات ملحوظة تتميز بها اللغة الفرنسية، كما أنها تشكل صعوبات واضحة للمتعلم ثنائي اللغة الذي يتعلم اللغتين الإنجليزية والفرنسية في آن واحد. ومن أهم النتائج التي توصلت إليها الدراسة: أنه رغم أن الأبجدية الكتابية في كلا النظامين متماثلة، إلا أن مخارج بعض الأصوات ونطقها ليس كذلك، كما أن الأبجديتين الصوتيتين تشتملان أصواتاً - صائتة (متحركة) وصامتة (ساكنة) - موجودة في واحدة دون الأخرى، وكذلك تتميز اللغة الفرنسية بكثرة الأصوات الصامتة (التي لا تنطق) مما هي عليه في اللغة الإنجليزية، كما أن نطق بعض الحروف الواقعة في نهاية الكلمة يشكل اختلافاً بيناً في النظامين الصوتيين.

أما فيما يتعلق بالنظام الصوتي الفوققطعي في اللغة الفرنسية، فقد توصلت الدراسة لفروق واضحة ملحوظة بين سمات النظامين الصوتيين فيما يتعلق بظاهرة النبرة STRESS والمد VOWEL LENGTH والحذف ELISION والوصل LIAISON ويرى الباحثان أنها تشكل صعوبات واضحة للمتعلم ثنائي اللغة، مما يتطلب تدريباً مكثفاً من خلال تمارين تقابلية - تركز على التمييز الصوتي، على وحدات صوتية/مقطعية معينة.

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Appendices

(1) Key to phonetic symbols

Vowels

i:	as in seat	/sièt/	ɔ:	as in port	/pɔ:(r)t/
ɪ	as in sit	/sɪt/	ʊ	as in put	/pʊt/
e	as in set	/set/	u:	as in boot	/bu:t/
æ	as in sat	/sæt/	ʌ	as in but	/bʌt/
ɑ:	as in part	/pɑ:(r)t/	ɜ:	as in bird	/bɜ:(r)d/
ɒ	as in pot	/pɒt/	ə	as in about	/əbat/
ɛ	as in French 'bête' (stupid)	/bet/			
Ø	as in French 'deux' (two)	/dØ/			
y	as in French 'suc' (juice)	/syc/			
œ	as in French 'œuf' (egg)	/œf/			
ɥ	as in French 'nuit' (night)	/nyɪ/			

Diphthongs

eɪ	as in bay	/beɪ/
aɪ	as in buy	/baɪ/
ɔɪ	as in boy	/bɔɪ/
əʊ	as in home	/həʊm/
aʊ	as in how	/haʊ/
ɪə	as in hear/here	/hɪə(r)/
eə	as in hair	/heə(r)/
ʊə	as in tour	/tuə(r)/

Consonants

p	as in pack	/pæk/	s	as in see	/si:/
b	as in back	/bæk/	z	as in zoo	/zu:/
t	as in team	/ti:m/	ʃ	as in she	/ʃi:/
d	as in deem	/di:m/	ʒ	as in beige	/berʒ/
k	as in come	/kʌm/	h	as in how	/ha/
g	as in gum	/gʌm/	m	as in man	/mæn/

tʃ	<i>as in chalk</i>	/tʃɔ:k/	n	<i>as in thin</i>	/θɪn/
dʒ	<i>as in joke</i>	/dʒəʊk/	ŋ	<i>as in thing</i>	/θɪŋ/
f	<i>as in fast</i>	/fæst/	l	<i>as in lead</i>	/li:d/
v	<i>as in vast</i>	/vɑ:st/	r	<i>as in read</i>	/ri:d/
θ	<i>as in thin</i>	/θɪn/	j	<i>as in you</i>	/ju:/
ð	<i>as in then</i>	/ðen/	w	<i>as in we</i>	/wi:/
ʃ	<i>as in French 'montagne' (mountain) [mɔ̃ʃaŋ]</i>				
ʁ	<i>a variety of Arabic ڤ may replace the letter r (in French)</i>				

Diacritics

- [~] over the symbol indicates nasalization, as in French 'bon' (good) [bɔ̃]
- [~] through the symbol indicates velarization, as in English 'feel' [fi:ɫ]
- [,] below the symbol indicates syllabification, as in English 'table' [tebl]
- [:] after the symbol indicates lengthening, as in English 'seat' /si:t/
- [^] in word boundary indicates liaison, as in French *Comment allez-vous?* (How are you?)

(2) Technical Terms Used in This Paper

Affricate: A combination of a stop and a fricative: /dʒ/as in 'June' ,/tʃ/ as in 'chair'.

Allophone: A variant of a phoneme.

Alveolar: A sound made with the tongue tip or blade and the alveolar ridge.

Alveopalatal: A sound made with the tongue blade and the back of the alveolar ridge.

Approximants: A term used by some phoneticians in the classification of speech sounds on the basis of their manner of articulation, i.e. [w], [j], [r], [l], and all vowels.

Aspiration: A period of voicelessness after the release of an articulation, as in English 'pie' [p^haɪ].

Bilabial: A sound produced with the two lips.

Centering diphthong: Two-part vowel sound, in which the second element is the mid, central vowel 'schwa': [ɪə] as in *hear*, [eə] as in *hair*, and [ʊə] as in *pure*.

Consonant: One of the two general categories used for the classification of speech sounds, the other being VOWEL. Consonant articulation are relatively easy to feel, and as a result they are described in terms of voicing (i.e., whether voiced or voiceless), as well as place and manner of articulation.

Devoiced sounds: Sounds which are normally voiced, but which in a particular phonetic environment are produced with less voice than elsewhere, or with no voice at all.

Diphthongization: A process where a monophthong has become a diphthong (i.e., has been ‘diphthongized’).

Diphthong: A combination of two vowels, the first of which glides to the second; i.e. a vowel + a glide.

EFL: An acronym for ‘English as a foreign language’.

Elision: The omission of sounds in connected speech.

ESL: An acronym for ‘English as a second language’.

Fricative: Close approximation of two articulators so that the airstream is partially obstructed and turbulent airflow or friction is produced.

Glottal: A sound made at the glottis (the space between the vocal folds).

Interdental: A sound made with the tip of the tongue between the front teeth.

Labiodental: A sound made with the lower lip against the upper front teeth.

Lateral: An articulation in which the airstream flows over the sides of the tongue.

Liaison: Transition between sounds, where a sound is introduced at the end of a word if a certain context follows.

Lip-rounding: A term used in the classification of lip position referring to the visual appearance of the lips when they assume a **rounded** shape, as in the ‘close rounding’ of [u] and the more ‘open rounding’ of [ɔ].

Manner of articulation: The kind of articulatory process used in a sound’s production. How the airstream is modified by the vocal tract to produce the sound. The distinction between CONSONANT and VOWEL is usually made in terms of manner of

articulation. The manner of articulation of a consonant sound depends on the degree of closure of the articulators (how close together or far apart they are).

Nasal cavity: The nasal tract within the nose.

Nasalization: A secondary articulation in which the soft palate is lowered during a sound in which the air is going out through the mouth.

Oral cavity: The oral tract within the mouth and pharynx.

Orthography: The system of spelling in a language.

Palato-alveolar: A sound made with the tongue blade and the back of the alveolar ridge

Phoneme: The smallest segment of sound.

Phonemic transcription: Transcription of phonemes (only the phonemes are given symbols) without any added values. Phonemic transcription is enclosed between oblique brackets or slashes / /.

Phonetic transcription: Detailed transcription of phonemes and their added values (where different degrees of allophonic detail are introduced). Phonetic transcription is enclosed between square brackets [].

Place/point of articulation: Place in the vocal tract where the production of a speech sound is made by the articulators. It refers to where in the vocal apparatus a sound is produced. The conventionally recognized places or points of articulation for consonants correspond to main anatomical divisions: (bi)labial, labiodental, (inter)-dental, alveolar, palatal, velar, uvular, pharyngeal, glottal.

Plosive: = **A stop** made with a pulmonic airstream mechanism. Complete closure of two articulators and a velic closure as in English [p, t, k, b, d, g].

Post-alveolar: A sound made with the tongue blade and the back of the alveolar ridge.

Reduced vowel: A reduced vowel is the 'schwa' [ə].

Rhythm: The perceived regularity of prominent units in speech. These regularities (regular patterns) may be stated in terms of patterns of stressed v. unstressed syllables, syllable length (long v. short) or pitch (high v. low) - or some combination of these variables.

Rounded: A sound with added lip rounding, as in English [t^w] in *two* [t^wu:] influenced by the succeeding rounded vowel. Rounded vowels are /ʊ, u:, əʊ, ɔ:/, as in *put, boot, boat, bought* respectively.

Segmental phonology: Segmental phonology analyses the speech into distinctive units, or phonemes.

Semi-vowels: A semi-vowel is a sound articulated in the same way as a vowel, but not forming a syllable on its own, as in [w] in 'we'. It is a sound functioning as a consonant but lacking the phonetic characteristics associated with consonants, such as friction and closure; instead its quality is phonetically that of a vowel. The common examples in English are [w] and [j], as in *wet* and *yet* respectively.

State of the glottis: This refers to the closure or narrowing of the glottis where the vocal cords vibrate to produce voiced sounds, or do not vibrate to produce voiceless or unvoiced sounds.

Stops: Complete closure of two articulators.

Stress: The use of extra respiratory energy during a syllable.

Suprasegmental features: Phonetic features such as stress, length, tone, and intonation, which are not properties of single segments.

Syllabic: Nasals and laterals when they occur at the end of words without a preceding vowel, and stand by themselves as syllables.

Syllable: A unit of pronunciation which is typically larger than a single sound and smaller than a word.

Unrounded: An articulation in which the lips are in a spread or neutral position, or simply not rounded.

Uvular: A sound made with the back of the tongue against the uvula.

Velar: A sound made with the back of the tongue and soft palate (velum).

Velarization: A secondary articulation in which the back of the tongue is raised toward the soft palate. In English, syllable final /l/ as in 'feel' is strongly **velarized**. In Arabic, compare the articulation of the /l/ sound in *بسم الله* and *الله أكبر*, where the *ل* is Velarized in the latter.

Velum: The soft part of the roof of the mouth behind the hard palate (also known as the soft palate).

Voiced sounds: Sounds produced while the vocal cords are vibrating.

Voiceless sounds: Sounds produced without vibrations of the vocal cords.

Voicing: State of the glottis, or state of the vocal cords i.e. [± voi] (voiced or voiceless).

Vowel length: Length: Increased duration of sound segments. Long vowels are transcribed with the diacritic [:].

Vowel reduction: A **reduced vowel** refers to a vowel that is pronounced with a non contrasting centralized quality. The second vowel in "emphasis" /emfəsis/ is a reduced form of the vowel /æ/, as in "emphatic" /ɪmfætɪk/.

Vowel: One of the two general categories used for the classification of speech sounds, the other being CONSONANT. Vowel articulation is described in terms of tongue position, tongue advancement, lip rounding and muscular tension.

