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Common Pronunciation Mistakes among Spanish Speakers of English with the
Focus on Vowels

Běžné výslovnostní chyby španělských mluvčích anglického jazyka se
zaměřením na samohlásky

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Základy společenských věd se zaměřením na vzdělávání

Declaration

I hereby declare that this bachelor thesis **Common Pronunciation Mistakes among Spanish Speakers of English with the Focus on Vowels** is completely my own work and that no other sources than those listed on the works cited page were used in its compilation. I also declare that this work was not used to obtain another or the same university degree.

Prague, 15 April 2016

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ANOTACE

Tato práce se zaměřuje na výslovnost španělských mluvčích anglického jazyka, přičemž zvláštní důraz je kladen na výslovnost samohlásek. Teoretická část obsahuje popis rozdílů mezi samohláskovými systémy angličtiny a španělštiny a jejich vlivu na výslovnost španělských mluvčích anglického jazyka. Na základě těchto rozdílů byl sestaven krátký anglický text, při jehož čtení bylo nahráno 15 rodilých mluvčích španělštiny. Praktická část se pak zabývá percepčním rozbořem těchto 15 nahrávek, s cílem prokázat častý výskyt vybraných charakteristik španělské výslovnosti angličtiny.

KLÍČOVÁ SLOVA

kvalita, kvantita, samohláska, španělská výslovnost anglického jazyka, vokální systém

ANNOTATION

This thesis focuses on the pronunciation of Spanish speakers of English, with a special attention being devoted to the pronunciation of vowels. The differences between the vocalic systems of English and Spanish as well as their influence on the pronunciation of Spanish speakers of English are described in the theoretical part. Based on these differences, a short English text was compiled and 15 native Spanish speakers were recorded reading it. The practical part of this thesis is then concerned with the perceptual analysis of these recordings. The aim of this experiment is to prove the frequent occurrence of selected features of Spanish pronunciation of English.

KEYWORDS

quality, quantity, vowel, Spanish pronunciation of English, vocalic system

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INTRODUCTION

The importance of the English language in the context of our current world is undeniable. Its continuous rise in popularity over the last century and spread across continents has led to English becoming the Lingua Franca of today (Jenkins 2). This status as the world's most prominent language in international relations has also caused English to be the most commonly taught second language in the majority of countries. Thus, English is exposed to the influence of a considerable amount of languages, mainly through the transfers non-native speakers make from their mother tongues when using English for conducting their affairs.

The target group of English user described and analysed in this thesis was selected on the basis of personal experience. Thanks to the international Erasmus+ exchange programme founded by the European Union, I was able to study in Spain for one year. As I did not speak any Spanish (or any foreign language other than English at that time), I used English as the only language of communication. The region of Barcelona, where I was studying, is particularly known for its internationality and for being a favourite Erasmus destination and I have therefore encountered many manifestations of transfers from a native language to the foreign one. One gets a chance to have a conversation with people coming from various backgrounds and speaking many different languages of distinct origins. As a result, the amount of English accents one comes across is enormous. Certain groups of speakers, especially those speaking a language from the same language family as you, are fairly easy to understand, even when their speech is accented. Others are more difficult to talk to and the conversation is not as effortless, but one still feels quite confident that they managed to get the message across. Spanish speakers, however, have proved to be by far the most difficult to talk to. Certain conversations consisted mostly of smiling and polite nodding, in order not to offend the conversation partner, as one could not be sure of what the conversation was about. There were a lot of misunderstandings due to the language barrier and some were extremely difficult to sort out and even more difficult to get used to, as certain mispronunciations occurred more frequently than others and formed what could be called a rule, rather than an exception. Certain pronunciation mistakes even resulted in outright comic situations one hears about in jokes. The mispronunciation of the word *sheet* by one student was especially humorous, considering it was used as an object to the verb *take*. For the listener, then, the person that the student was talking about did not pick up a piece of paper, but ended up doing something completely different.

This thesis will therefore primarily focus on vowels as it aims to identify the features of English pronunciation that pose the biggest threat on the road to comfortable comprehensibility for a specific group of foreign speakers – speakers whose native language is Spanish. The identification of these features will be based on the comparison of vocalic systems of both languages and will draw upon previous research made in this field. The theoretical findings will be confronted with empirical research in the practical part of the thesis, with the goal to either confirm or refute these findings.

THEORETICAL PART

1 The distinction between vowels and consonants

Before the individual vocalic systems are described, it is fitting to universally differentiate the sounds that make up the language inventories and to talk about their qualities, as well as to draw a line between the sounds that influence the meaning in a certain language and those that do not. The fundamental distinction is being set between vowels and consonants. Vowels and consonants vary not only in the way they are articulated, but they also have dissimilar physical properties and we seem to perceive them differently. The following chapter thus examines all the ways in which vowels and consonants can be contrasted.

1.1 Articulatory differences between vowels and consonants

Firstly, vowels are tones produced with an unobstructed expiratory air flow, meaning that the air stream passes freely through the vocal tract and no turbulence, arising from a close proximity of two articulators, is produced. If such turbulence is present or the air flow is stopped completely for a moment on its way out of the lungs, a consonant sound is created (Roach 15-16). However, some sounds make the distinction between consonants and vowels quite blurry. English approximants /w/ and /j/, for example, are produced with a very close narrowing in the oral cavity. The articulators approach each other, yet the expiratory air is not constricted enough for friction to take place. In this way, they are very similar to vowels. Vowels and consonants should therefore not be viewed as two definite categories, but rather as opposite extremes on the same scale of air stricture, with other factors including the distribution of the sounds in question across syllables helping us to classify them (Cruntenden 93-94). Consonants are further divided by the way the air is blocked or stopped and the part of the oral cavity where the obstruction takes place, which highly influences what kind of sound is produced, again stressing the importance of such blockages in the production of sounds and their respective qualities (Crystal 58-62).

Another difference between vowels and consonants is that of voicing. All vowel sounds are voiced, which means that the vocal chords are vibrating when producing them (Cruntenden 11). On the other hand, consonants can be both voiced and unvoiced. Sometimes, voicing is the only feature contrasting two consonants as, for example, /p/ and /b/ are articulated exactly the same way, but b is voiced while p is not (Crystal 69).

1.2 Acoustic differences between vowels and consonants

After the articulation of a sound is complete, all speech sounds must be transmitted through some medium, with the most common one being air. They are transmitted in the form of a changing air pressure and acoustics deals with what makes this transmission possible. Every sound needs a source of energy that starts a vibration of a certain medium. When producing human speech, our lungs and the egressive air stream fulfil the role of the source of energy and our vocal folds are most commonly the source of vibration. For the voiceless consonants, no vocal fold vibration is present. Instead, turbulence is created by the air stricture in the cavities above the larynx and this turbulence is then transmitted through the air. The exact shape and configuration of the supraglottal cavities further modify the air stream and help us distinguish individual sounds, as they give them their inherent timbre. Vocal fold vibration creates tones, which means that the produced vibration is of a regular pattern. On the other hand, turbulence caused by air constriction gives rise to irregular patterns of pressure changes and the resultant sounds are labelled as noises. Sounds can thus be tones, noises, or a combination of the two, if an obstruction in the mouth is present and vocal folds are vibrating. All consonantal sounds, except nasals and approximants, have this noise component, while all vowels are tones. (Cruntenden 18-19, Roach 39-46).

Sounds can be displayed in the form of a waveform or a spectrogram, which itself comes from a spectral analysis that breaks down complex waveforms “into simple waveforms of different frequencies” (Roach 40). Looking at a spectrogram, the vertical axis shows us the frequency scale, the horizontal one represents time and the shades of black point to “the amplitude at different frequencies in the signal at a particular point of time” (Roach 41). While the energy is distributed quite widely across the frequency scale for consonants, it has three or four clear peaks, called formants, for vowels. It is also worth noting that the energy is greater in higher frequencies for consonants, but the formants of vowels occupy “the lower part of the spectrum” (Roach 41). Considering the formants of vowels further, a certain correlation between the vowel quality and these formants can be observed. Roach notes that “the lowest formant (F1) corresponds roughly to the open/close dimension of vowels” (42), while the second formant (F2) can help us distinguish whether a vowel is front or back. If the F1 is low, we can expect the vowel to be close and if it is high, the vowel is likely open. With F2, the lower the formant is, the more back the vowel is (Roach 42).

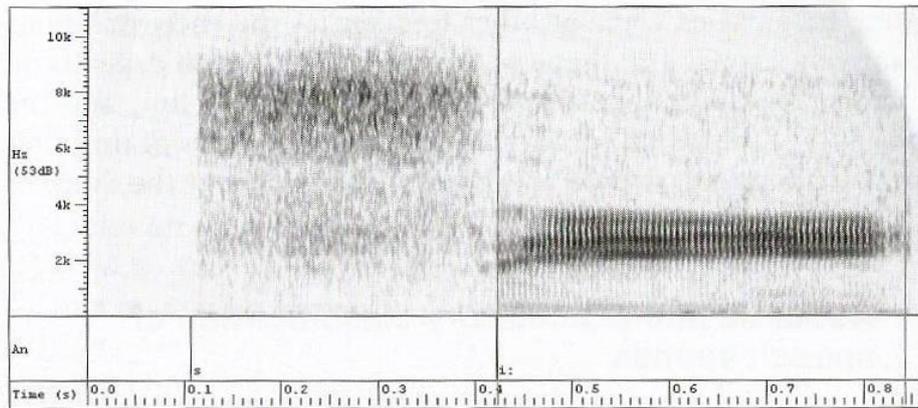


Figure 1. Spectrogram of the word /si:/, showing clear differences between the representations of vowels and consonants on a spectrogram (Adapted from Roach 41).

When we talk about sounds, we can either describe them acoustically, using objective and measurable variables, or we use our perception of sounds, which is highly subjective and is the concern of auditory phonetics. However, it is safe to assume that a certain relationship between the acoustic and auditory characteristics of a sound exists. Fundamental frequency, depicting the rate at which the vocal folds vibrate, translates to the pitch of a voice when it is received by a listener. In a similar way, the amplitude of the vibration results in what is perceived as loudness of the sound. Furthermore, the duration of the vibration is perceived as length (Cruntenden 18-24). Finally, what is heard by the listener as the timbre (or quality) of the sound is caused by the configuration of articulators. Of the acoustic correlate of timbre, Ladefoged notes: “Differences in vowel quality have more complex acoustic correlates, loosely summed up as differences in the shape of the sounds wave (as opposed to its repetition rate and size)” (8).

1.3 Auditory difference between vowels and consonants

As was indicated above, there is a relationship between acoustic properties of sounds and the way sounds are perceived by the listener. Generally speaking, vowels are considered to be more prominent sounds than consonants. That is to say, they have a greater sonority, which is in part due to the sound’s inherent timbre. As a result, vowels would be more sonorous or resonant than voiced consonants, and voiced consonants would be more prominent than their unvoiced counterparts, should they appear in the same context. Nevertheless, the prominence of a sound is often largely altered by other phenomena, like stress placement and intonation, in a sequence of sounds. Thus, a situation may occur when an inherently less sonorous sound would be made more prominent than another sound with greater sonority in isolation, shall

that sound be enhanced by its position in a stressed syllable and the pitch of our voice (Cruntenden 23).

1.4 **Phonotactical difference between vowels and consonants**

Related to the prominence of sounds is the position they usually occupy in a syllable. The peak of a syllable, called a syllabic nucleus, is also the syllable's most prominent part. Then, it should come as no surprise that vowels, inherently more sonorous sounds than consonants, create the peak of syllables in most cases, while consonants normally fill the margins (onsets and codas) of syllables (Crystal 71). The distribution of sounds across syllables is dealt with in phonotactics, generally described as a phonological discipline concerned with combinations of phonemes that are permissible in a certain language (Mott 32-33). These patterns of possible phoneme combinations within a syllable or its part are considerably divergent among languages. Consequently, apart from the variances in phonetic inventories of languages, phonotactics also plays a sizable role in determining what aspects of pronunciation will be problematic for a learner of a foreign language, even though it is often more relevant to consonant clusters.

1.5 **Phonemes and allophones**

The difference between positional variants of sounds called allophones and phonemes is of the utmost importance. Phoneme is a meaning changing sound, while allophones are non-contrastive sounds, the usage of which is most commonly determined by their distributional rules. All speech sounds, whether they are vowels or consonants, may be further influenced by their neighbouring sounds (Roach 17). English, for example, recognizes two kinds of /p/. The first, appearing before stressed vowel, is aspirated – produced with a “delay of voice onset time” (Volin 71). The other, pronounced in unstressed syllables and after /s/, lacks this aspiration. Hence, a competent speaker of the language would produce an unaspirated /p/ in the word *sport*, as they notice that /p/ is preceded by /s/. Should the speaker produce the /p/ with aspiration however and realize it as [p^h], no change of meaning would occur, as these sounds are merely allophones in English, not meaning distinctive sounds. The pronunciation of the word could be considered marked, because it does not follow the general consensus of the distribution of these two sounds, yet it would still be the same word. The same cannot be said for other languages, such as Thai. In Thai, the substitution of an unaspirated /p/ for its aspirated opposite could produce a whole new meaning, as these sounds are separate phonemes, not allophones, in the said language. It is therefore vital to realize that different

languages may use the same sounds, consonants or vowels, in a completely different way and that two sounds may be allophones in one language, but phonemes in another (Mott 258).

2 General description of vowels

All vowels can be said to have a different quality and quantity. Even though some languages do not employ length as a distinctive feature, it is important for future contrast of English and Spanish to mention this characteristic generally, as well as to describe all the different qualities vowels can have. The distinction of vowels is based mainly on the position the tongue assumes in the oral cavity during the articulation, as the tongue is the most flexible and active articulator. There are two main features connected to the tongue position and one feature concerned with the shape of lips that help us differentiate vowels from one another in a majority of languages.

2.1 Vowel Quality

The first is the vertical position of the tongue. If during the articulation the tongue is raised and is therefore close to the roof of the mouth, we are talking about a high or a close vowel. Conversely, if the tongue remains low, creating an open space in the oral cavity, the produced vowels are classified as low or open. There are also vowels called half-open and half-close vowels. The tongue is slightly raised during their production, but is nowhere near the position it has while producing close vowels.

The second feature reflects part of the tongue that is actually raised. If the front part of the tongue is raised, we call the subsequent vowel front. Similarly, back vowels are produced with the back part of the tongue raised. As was the case with open and close vowels, a certain intermediate position exists – central vowels are created by raising the central part of the tongue against the roof of the mouth (Roach 18-19).

The third feature, concerned with the shape of our lips, tells us to what degree our lips are rounded or spread during the production of the vowel in question (Crystal 62), or whether they assume a neutral position, during which the lower jaw is slightly lowered (Cruntenden14). Back vowels are often rounded, as they possess a grave resonance and elongation of the oral cavity caused by the rounding of the lips further amplifies this graveness, making back vowels even more different from front vowels as a result. While it is very common, rounding of the back vowels is not a rule, as unrounded back vowels exist in many languages, and so do rounded front vowels (Mott 71, Čermák 66, as translated by Jaroslav Pýcha).

In certain languages, French for example, the classification of vowels can also be based on whether the egressive air escapes through the oral cavity only, or whether a part of the

airstream is redirected to the nasal cavity and escapes through there. This phenomenon is achieved through the raising and lowering of the soft palate (Crystal 62). Even though certain vowels will become nasalised if they are in a close proximity to a nasal consonant, a nasalization of a vowel can never change the meaning of a word in both English and Spanish. To put it another way, nasalised vowels are not considered separate phonemes in English and Spanish, as they are in French, but merely allophones of the same phoneme (Čermák 66, as translated by Jaroslav Pýcha).

2.2 Vowel quantity

All the above described features determine vowel quality. Yet another feature, vowel quantity, can alter a sound, too. While vowel quality describes the position of the articulators during the production, vowel quantity or length speaks to the resultant duration of the produced vowel. In some languages, length functions phonologically and differentiates sounds with otherwise identical qualities. Such phonemes with inherently more extensive duration will be called long and their counterparts short (assuming they exist in one-on-one opposition). The vowel length is usually indicated in phonetic transcription by a length mark [ː] or a colon [:] after a vowel (McArthur 596). The fact that these sounds are phonemes in some languages differentiated only by their physical duration is crucial. Czech is a perfect example, as the vowels in words /plakat/ and /plaka:t/ share identical qualities except for the length. As a result, the words have completely different meanings. On some occasions, the terms lax and tense are also incorporated into this distinction to help demonstrate the difference. During the articulation of sounds with longer duration, the articulators have a sufficient amount of time to reach their target configuration and remain in such a configuration for a while. More muscular tension is required for the articulation of this kind and the produced sounds are therefore called tense. In comparison, the articulators are quite lax when producing sounds labelled as short, during the articulation of which the articulators move from their target positions almost instantly (McArthur 592).

In other languages, such as Spanish, length has no distinctive value. Nevertheless, vowels in these languages can become lengthened or shortened, with no influence on the meaning of the word in question. The term length will then be used to mark the prolonging or the shortening of vowels based on their circumstances of appearance. These specific realizations create positional variants of the vowels, not separate phonemes (Čermák 67, as translated by Jaroslav Pýcha). Such circumstances that may influence the length of a vowel include: inherent vowel duration, the quality of the following sound, the rate of the speech, the number

of syllables the word is comprised of, stress placement, the position the syllable occupies in a word and the position said word occupies in a sentence (Hrychová, Čermák 67, as translated by Jaroslav Pýcha).

The length of English vowels, which will be dealt with in greater detail later on, is quite a special case, as certain vowels are labelled as short and other vowels as long (based on their duration), but this distinction is not definite at all. It is in fact ever-changing and rather fluctuating. In various contexts, the vowels previously marked as short will in fact have a longer duration than those marked as long. As a result, some confusion concerning the terminology describing vowel length, the role it plays in differentiating vowels and even vowel transcription arises even among phoneticians (Crystal, Mott, Volín, Cruttenden, Ladefoged). Some phoneticians, McArthur for example, therefore suggest the distinction between vowel length and vowel quantity (831). This thesis will, however, use the terms vowel quantity and length synonymously, as vowel length does not have a decisive role in distinguishing separate vowels even in English.

3 The description and comparison of English and Spanish vocalic systems

Every language makes use of a different amount of sounds, combines the sounds differently and can also represent them in different ways in writing. In order to predict what aspects of English vowel pronunciation might be problematic for Spanish speakers of English, vocalic systems of both languages must be described and compared.

3.1 Spanish vocalic system

Spanish, being a Romance language, has developed from Latin after the fall of the Western Roman Empire. While the written and grammatically correct form of Latin was being preserved by the clergy and did not undergo any major or rapid changes, the vulgar Latin spoken by the uneducated public began to diversify and was no longer the unifying language it was meant to be for the citizens of the entire empire. Every major region of the former Roman realm started to develop its own version and pronunciation variety of Latin. These modifications of Latin were growing apart rapidly and they were no longer intelligible after a fairly short amount of time (Ostler 343-355). As is usually the case, the colloquial version of a language tends to simplify it and exactly the same happened when Spanish began to form from Latin.

The Latin of that time had a vocalic system consisting of five vowels with each existing in a long-short opposition, thus totalling ten vowels. In Spanish, however, this opposition does not exist. Latin was developing toward the substitution of this opposition with the differentiation of vowels based on their height, with former long vowels becoming more close than their short counterparts. The vowel height gained importance in Spanish as well. This process resulted in some vowels merging together and creating a seven-vowel system. Latin became fossilised and preserved this seven-vowel system, but Spanish developed further and came to abandon the original long-short opposition completely (Čermák 168-169, as translated by Jaroslav Pýcha).

Spanish thus has a fairly simple five-vowel system comprising of the vowels /a/, /e/, /i/, /o/ and /u/. This simple five-vowel system common for many languages is usually displayed on a triangle, which represents the space speakers use for maneuvering their tongue in the oral cavity. In contrast to other more elaborate vocalic systems, a triangle is sufficient for such a representation as “oppositions at the open level are not particularly common” (Mott 75).

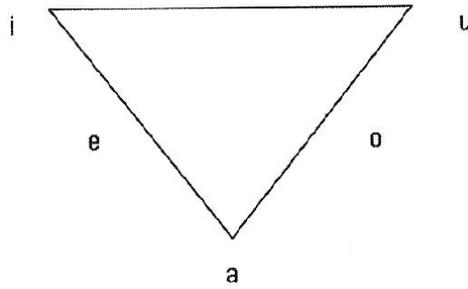


Figure 2. Five Spanish vowels displayed on a triangle, with each vowel representing an approximate tongue position during the articulation of the vowel in question.

As is manifested in Figure 2, Spanish has two front vowels /i/ and /e/, one central vowel /a/ and two back vowels /o/ and /u/ based on the horizontal position of the tongue. Considering the vertical position of the tongue, Spanish recognizes two close vowels /i/ and /u/, two mid-high vowels /e/ and /o/ and one low vowel /a/. Labialization is more of an accompanying attribute of the back vowels in Spanish, rather than a phonetically relevant feature, as there are no two vowels that would be only distinguished by this phenomenon. Length likewise does not play any role in contrasting any of the vowels.

Nevertheless, certain Spanish vowels can be longer, or rather prolonged, if the speaker chooses to give them more prominence. Vowels in an accented syllable can be prolonged and have a greater duration than they would normally have, while unstressed vowels will retain their respective quantity. Such an extension will be done for the purpose of emphasis only, with no change of meaning taking place. In other words, length only creates allophonic variations of vowels with no semantic and distinctive value in Spanish (Čermák 44-47, as translated by Jaroslav Pýcha).

3.1.1 Spanish diphthongs

Spanish diphthongal system is, however, a bit more complicated. All Spanish diphthongs are realized as glides, meaning that the tongue is moving to a more open or a more close position within a syllable and a rapid quality change is taking place. As was described earlier in this work, approximants /w/ and /j/, sometimes being labelled as semi-consonants, are quite close to vowels. In certain languages, including Spanish, they are treated as vocalic elements. Thus, any combination of these sounds with a vowel is classified as a diphthong. Furthermore, the vowels /i/ and /u/ can also form a diphthong when combined with another vowel. As a result, Spanish recognizes 14 diphthongs that can be easily divided into two groups.

In the first group, consisting of 8 members, the diphthong is created by combining a semi-consonant with a full vowel. The arising diphthongs therefore are /ja/, /je/, /jo/, /ju/, /wa/,

/we/, /wo/, and /wi/. During the articulation of these glides, the tongue moves to a more open position. The second element receives more prominence, thus creating diphthongs called rising. The second group comprises the diphthongs created by the connection of a full vowel with vowels /i/ and /u/, also described as semi-vowels when creating a diphthong in Spanish, as the tongue does not fully reach the configurations necessary for producing syllabic /i/ and /u/. The tongue moves to a more close position and diphthongs /ai/, /ei/, /oi/, /au/, /eu/, and /ou/ are created. The first element is the most prominent, which might be quite obvious from the fact that the articulation of the second element of these diphthongs is not complete, and the emerging diphthongs are consequently considered to be falling. (Čermák 70-72, as translated by Jaroslav Pýcha).

3.2 English vocalic system

English, a Germanic language in its origin, has gone through an extensive development over the centuries, which is most commonly linked to its affiliation with French, a Romance language which emerged from Latin. After the Norman Conquest, French became the language of royalty, but it did not secure a substantive role in the everyday life of commoners. That is not to say, however, that French has not played a major role in shaping English into the language we speak of today. In fact, a sizable amount of the English lexicon consists of words of French origin. More importantly, during the period of the superiority of French, English existed in spoken form only (despite the fact that some of Europe's oldest literary works were being written on British Isles in Old English before the Norman Conquest), which led to many dramatic changes in the language, including its loss of inflections and many other grammatical simplifications.

Another drastic change came with the invention of the printing press and the resulting normalization and fossilization of spelling (Ostler 491-508). This stabilization of the spelling system came about while the pronunciation of the language was experiencing one of the greatest changes in its history – The Great English Vowel Shift. During this developmental stage of the English language phonology, long vowels (or rather vowels with heavier quantity) underwent qualitative changes and became more close, which resulted in their transformation into different vowels or diphthongization (Mott 328-329).

Modern English has an abundance of vowels, as is common for the languages of Germanic origin. The language recognizes twelve pure vowels, thus presenting a much more complex

vocalic system than Spanish. The system is best depicted on a trapezoid, as opposing vowels at the open level exist in English.

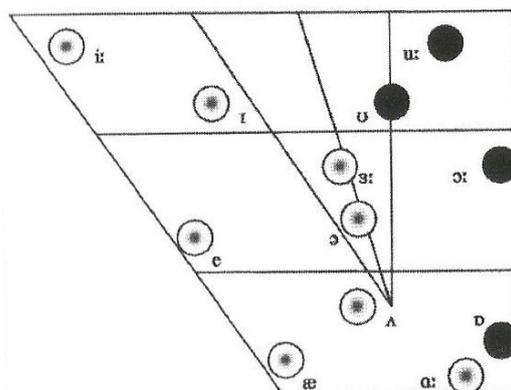


Figure 3. Twelve English vowels displayed on a trapezoid, with the dots representing approximate tongue positions. Rounded vowels are coloured in black (adapted from Mott 69).

The English vowels are quite diversified as to the positions the tongue assumes during the articulation. In certain cases, the use of only three categories of the horizontal and vertical positions of the tongue might not be sufficient and may lead to distortion. It is therefore suitable to repeat that these categories are not definite, but rather form a continuum.

Three vowels are fully front – /i:/, /e/ and /æ/, four are fairly back – /ɒ/, /ɔ:/, /u:/ and /ɑ:/, and two are central – /ə/ and /ɜ:/. The vowel /ɪ/ is positioned between front central, while the vowel /ʊ/ occurs between central and back. The vowel /ʌ/ is slightly more central than front. As to the vertical position of the tongue, three vowels can be considered as fully open – /æ/, /ɑ:/ and /ɒ/, and two as fully close – /i:/ and /u:/. The rest occupies middle positions, but can be further divided into half-close – /ɪ/, /ʊ/ and /ɔ:/, and half-open – /e/ and /ʌ/, with vowels /ə/ and /ɜ:/ right in the middle between half-open and half-close positions. Rounded vowels are /ɒ/, /ɔ:/, /ʊ/ and /u:/.

3.2.1 English diphthongs

As was the case with Spanish, every English diphthong is also realized as a glide. To put it another way, a vowel quality change is taking place within a syllable. Diphthongs can thus be said to be comprised of two elements, with most prominence and stress being focused on the first element (falling diphthongs), although in some cases, the diphthong /ɪə/ can be heard as having more prominence placed on the second element. (Cruntenden 37-38, Mott 74-75). It should also be noted that the tongue never fully reaches the qualities of the second element in the glide and that these elements are only used to illustrate the direction of the glide (Mott

125). Any of these vowels can assume the role of the first element: /a/, /e/, /ɪ/, /ɔ/, /ə/ and /ʊ/; the identity of the second element is more restricted and only the following vowels can function as such: /ɪ/, /ə/ and /ʊ/. As a result, the English diphthongs are easily further distinguished into two subtypes based on the direction in which the tongue moves. The first type are closing diphthongs, during the production of which the tongue moves to a more close position (/aɪ /, /eɪ /, /aʊ/, /ɔɪ /, /əʊ/), the second type are centering diphthongs, which are gliding towards schwa (/ʊə/, /ɪə/ and /eə/) (Cruntenden 129-138).

3.2.2 Length in the English vocalic system

In layman's terms, length is believed to be representing a phonetically relevant feature in English. The pure English vowels are usually divided into long – /i:/, /ɔ:/, /u:/, /ɑ:/ and /ɜ:/, and short – /ɪ/, /ɒ/, /ʊ/, /ʌ/, /e/, /ə/ and /æ/. Consequently, length is wrongly believed to be the sole factor in distinguishing these pairs of vowels: /ɪ/ and /i:/, /ɒ/ and /ɔ:/, /ʊ/ and /u:/, /ʌ/ and /ɑ:/, /ə/ and /ɜ:/. In fact, the vowels in the aforementioned pairs are separated by much more than their length, even though they occupy the same phonetic space. There are mainly qualitative differences among these pairs of vowels, as is obvious from their individual descriptions above. The opposition between /ə/ and /ɜ:/ is said to be the only one that can be considered as based mainly on the difference in length (Cruntenden 95). On the issue of length, Cruntenden further comments that “In the other cases the opposition between the members of the pairs is a complex of quality and quantity; and of the two factors it is likely that quality carries the greater contrastive weight” (95).

It is probably more useful, then, to use the lax/tense opposition to describe English vowels instead, as length is mainly context-bound in English. As a matter of fact, the length of a vowel can be significantly influenced by many factors (see 2.2). When appearing in the same context, long vowels will, of course, have a longer duration than the short ones, but vowels preceding voiceless consonants will be greatly shortened. This phenomenon is called a pre-fortis shortening. Hence, a situation may arise, when a long vowel – /u:/ for example – will in fact have a shorter duration than /ʊ/ (the vowel said to be in an opposition of length with it). Cruntenden provides his readers with a practical example of this: “/u:/ in *boot* is only about half as long as the /u:/ of *do* or *food* and has about the same duration as the /ʊ/ of *good*” (95). The crucial importance of the qualitative differences among the pairs of vowels in long/short oppositions then becomes clear. Pre-fortis shortening affects all 20 English vowels – /ɪ/ in *kit* will also be noticeably shorter than the /ɪ/ in *kid*. Consequently, should a foreign speaker of English fail to shorten his vowels before voiceless consonants accordingly, they might give

the impression of pronouncing a different word, which can lead to misunderstanding and confusion between words such as *food* and *foot* or *pig* and *pick*. A close attention should therefore be paid to the qualitative differences among vowels as well as to the variations in length brought about by neighbouring sounds, as both of these features help us differentiate words like *live*, *leave* and *leaf* (Cruntenden 302).

3.3 Comparison of English and Spanish vocalic systems

When people learn a foreign language, they learn not only the vocabulary, but also a whole new set of rules, including the phonological ones. Before we learn these rules and patterns of the new language, however, we are inclined to look at it through our native language and make assumptions about it based on our own phonological and grammar system. This means we might not hear the difference between various sounds of the foreign language, if these sounds do not display contrastiveness in our own native language, or we might find it tricky to combine certain sounds that we are not used to combining (Mott 258). These transfers from the native to the foreign language can cause many mispronunciations and make conveying a meaningful message quite problematic sometimes. The most common mispronunciations and general struggles Spanish speakers encounter when learning English are listed and analysed below.

3.3.1 General differences between English and Spanish vowels

Firstly, Spanish vowels are shorter in duration than English vowels, but they are tenser. Generally speaking, only one degree of length and tenseness is present in Spanish vocalic system. On the other hand, English recognizes both tense and lax, as well as short and long vowels (Mott 262). Moreover, the process of vocal fold vibration also differs among English and Spanish vocalic systems. “In the articulation of English vowels the vibration of the vocal folds begins abruptly and dies away slowly. On the other hand, in Spanish (and Catalan) the opposite happens: vocal folds vibration begins gently and stops brusquely if no further voiced segment follows” (Mott 263). Neither English nor Spanish make use of nasal vowels, since nasalized vowels are treated as allophonic variations in both languages and nasalisation appears only if a vowel is positioned next to a nasal consonant.

3.3.2 Differences in vowel inventories of English and Spanish

Based on the description of English and Spanish vocalic systems in chapters 3.1 and 3.2, it can be assumed that quite a lot of English vowels and diphthongs might pose a considerable problem to Spanish speakers of English. As it is mentioned above, Spanish vowels are quite

tense in their nature. In this way, they are fairly comparable to the English long vowels. On the other hand, Spanish vowels have a very short duration. In fact, even the longest of them are still substantially shorter than the English long vowels (Čermák 66-67 as translated by Jaroslav Pýcha). Spanish vowels are thus similar to both English long and short vowels in different aspects – to the long ones in tenseness and to the short ones in duration. Gonzalez comments that Spanish speakers “may find it difficult to produce or even perceive the tense-lax and long-short distinctions because these contrasts have no phonemic status in Spanish” (87). As a result, Spanish speakers have the greatest difficulty with clearly distinguishing the vowels in the pairs /ʌ/ and /ɑ:/, /ɪ/ and /i:/, /ɒ/ and /ɔ:/, /ʊ/ and /u:/ when speaking English. Instead, they “often produce the two vowels of each pair identically using neither the tense nor the lax vowel, but a vowel between the two” (Avery 96).

Further problems arise when we look at the English open vowels. Spanish has only one vowel at the open level – /a/, while English has four. Out of these, only the vowel /ɒ/ presents little trouble to Spanish speakers, as it is separated from other open vowels mainly by being rounded. The three remaining open vowels, /æ/, /ɑ:/ and /ʌ/, are difficult to differentiate for Spanish speakers, as they require more delicate changes in tongue position and can be the source of many mispronunciations with a significant effect on the overall meaning of the produced message. It is not uncommon to hear the word *heart* being realized as /hat/ or the vowel /æ/ in *bad* being replaced by /a/ (Avery 98, 152). Avery further notes that sometimes even the difference between /e/ and /æ/ can cause trouble for the speakers of languages with five vowel systems. Both vowels /e/ and /æ/ are front, with /æ/ being a bit lower than /e/, yet some speakers might fail to lower their jaw enough as they are used to differentiating only two front vowels – /e/ and /i/ (Avery 96).

The nonexistence of central vowels /ə/ and /ɜ:/ in Spanish also proves to be troubling for Spanish speakers of English. The vowel /ɜ:/ is unlike any Spanish vowel and needs to be learned from scratch. Spaniards who have not been taught the pronunciation of this vowel properly may replace it with a different sound or a combination of sounds, most commonly the combination of a vowel and a /r/ sound, due to the common orthographical representation of the vowel (Mott 118). Also, English vowels tend to be reduced to schwa in unstressed positions and weak forms of grammatical words, which is not the case in Spanish, where all vowels retain their timbre and no qualitative change takes place (Čermák 67, as translated by Jaroslav Pýcha). Spanish speakers therefore do not reduce the vowels and pronounce them as if said in stressed positions, which causes them sound very strange to native speakers of

English, who are very much used to vowel reduction and see it as a crucial characteristic of English pronunciation. Brian Mott also adds: “The rhythm of English gives rise naturally to such forms and, if they are not used, the important parts of a sentence will not receive due emphasis and stand out from the rest” (157).

Connected to the nonexistence of central vowels is the trouble Spanish speakers have producing centring diphthongs that are gliding towards schwa. No such diphthongs exist in Spanish. Further comparison of diphthongs is irrelevant, as Spanish treats the combinations of vowels and semi-vowels /w/ and /j/ as diphthongs, but English does not. The sounds /w/ and /j/ are listed and treated as consonants in English mainly because they combine freely with all vowels and diphthongs (Mott 265). One feature of Spanish diphthongs that deserves further comment, though, is that the glide is more complete during the articulation of Spanish vowels (Mott 266).

3.3.3 Differences in phonotactical patterns and orthography

Apart from having trouble articulating unfamiliar sounds, Spanish speakers of English can have various pronunciation problems emerging from the rules governing sound combination in English. Undoubtedly, the most evident example is external epenthesis, in other words the addition of the vowel /e/ to the beginning of word-initial consonant clusters starting with the sound /s/. The /s/ sound can be followed by another consonant in Spanish, but the /s/ sound, then, always belongs to a different syllable than the other consonant it is followed by, such as in the word *escuela* – /es.ku.e.la/. Consequently, Spanish speakers experience great difficulty in pronouncing word initial combinations of /s/ and another one or two consonants. The above mentioned strategy of adding a vowel to the beginning of words starting with consonant clusters of this kind is most commonly used to deal with this problem. By doing so, Spanish speakers achieve the division of the initial consonant cluster into two syllables comprised of more acceptable consonant clusters, or two syllables with no consonant clusters at all. Words like *sport* and *straight* are then realized as [es.pɔ:t] (more likely [es.pot] if we take the previously mentioned pronunciation problems into account) and [es.treit] (Mott 272-273).

It is of great importance to realize that the English spelling system is much more complicated and opaque than the Spanish one, since the relationship between spelling and pronunciation can cause some serious mispronunciations as well. As far as vowels are concerned, the Spanish orthography is very transparent and /i/ is the only phoneme that can be represented by more than one letter – <i> and <y> to be exact (Castillo 2-3). As a result, Spanish speakers

will experience many difficulties in getting used to the English spelling system, especially to the vast variety of orthographical representations the English vowels can have.

EMPIRICAL PART

The practical part of this thesis is focused on confronting the theoretical findings against the speech reality and assessing the pronunciation of selected English vowels among Spanish speakers of English. Based on the differences between English and Spanish described in the previous part of the thesis, the following hypotheses were formed:

Spanish speakers of English will fail to produce sufficient vowel qualities and quantities needed to distinguish English vowels /i:/, /ɔ:/, /ɑ:/ and /u:/ from /ɪ/, /ɒ/, /ʌ/ and /ʊ/. The English front open vowel /æ/ is expected to be replaced by either the front Spanish vowel /e/ or the open Spanish vowel /a/.

Spanish speakers of English will have problems with English mid-central vowels /ə/ and /ɜ:/ and consequently with vowel reduction and centring diphthongs.

Spanish speakers of English will insert extra vowel sounds in unknown English consonant clusters.

With the aim to either confirm or refute these hypotheses, a small scale experiment evaluating the Spanish production of selected English vowels was carried out.

4 Method

The experiment consisted of recording native Spanish speakers reading an original English text and analysing the obtained data in order to identify the anticipated problem in the Spanish pronunciation of English vowels.

4.1 Material

First of all, an original English text was created by the author. The text includes several appearances of each of the vowels thought to be difficult to pronounce for Spanish speakers. Stress placement was also considered as a criterion for choosing additional words, as insufficient vowel reduction is highly probable in grammatical words and in words with reduced first syllable and the nuclear stress placed on a later one. The text is comprised of 17 sentences. In these sentences, a total of 55 tokens of the target vowels occur, along with other 74 instances of vowel reduction and 9 cases where unfamiliar consonant cluster is thought to cause an insertion of an extra vowel. For the tense vowels /i:/, /ɔ:/, and /ɑ:/, at least one minimal pair contrasted by the appearance of their short counterparts /ɪ/, /ɒ/, /ʌ/ only was included. These minimal pairs also helped to determine the speaker's ability to differentiate these vowels sufficiently. Furthermore, several words with problematic consonant clusters

were also added, to find out whether epenthesis is going to be employed by the respondent. The text is arranged to tell a story rather than being a compilation of separate sentences in order to mirror an every-day narration and to be more closely related to a natural discourse. Apart from reading of the text, a short conversation eliciting spontaneous speech was also recorded before the respondents were presented with the prepared text.

Along with the text, a brief questionnaire containing six open questions was compiled. Even though some of the questions from the questionnaire were already asked in the initial conversation, the main purpose of this conversation was to record a spontaneous speech, but the questionnaire itself was aimed to piece together a profile of the respondent. The respondents were asked about their age, city of origin, field of study, how long they have studied English, how frequently they use it, and they were also asked what they think their English level is and whether they have a certificate of some sort to prove it.

4.2 Participants

The research was conducted in two parts, the first part taking place in Barcelona and the second in Prague, with the exception of one speaker, who was recorded while on vacation in the United States of America. The decision to change the location of the recording came after the author realized that Catalonians, and the citizens of Barcelona in particular, did not produce a representative sample of Spanish speakers, as most of Catalonians are bilinguals of Spanish and Catalan. Catalan of Barcelona uses a different vocalic system than Spanish, which can have a noticeable influence on some of the investigated phenomena. Additionally, due to the political situation in Catalonia and the obvious disdain all Catalonians share for other parts of Spain (Madrid and Andalusia especially), it was quite problematic to obtain respondents from other parts of Spain in Barcelona. It is not very common for people from other regions of Spain to live in Barcelona, the same way the people of Barcelona usually do not want to leave the city for another one in Spain. Many citizens of Barcelona have never even visited the capital of the country – Madrid, because they despise it and blame the national government residing in Madrid for all the misfortunes of the country. A bitter rivalry is perceptible between Barcelona and Madrid, with Barcelona and the Catalan government accusing Madrid of impeding Barcelona's advancement and using the Catalan tax money to fund other regions (namely Andalusia), which is the main reason for the separatist movement that is currently in full swing in Barcelona. For that reason, the rest of the research was carried out in Prague, where chances of acquiring speakers from different parts of Spain were higher, and focused mainly on Erasmus students from all other regions of Spain and students from

other Spanish speaking countries as well. On top of that, the process of obtaining respondents was further complicated by the fact that Spanish speakers are aware of being considered to have a thick and strong accent. In consequence, many respondents were discouraged from participating in phonological research of any kind and refused to take part in the research because they feared they would embarrass themselves by their poor pronunciation.

All in all, 15 respondents were recorded – six in Barcelona, eight in Prague, and one in the United States of America. All information about the respondents was gained through either the short initial conversation that preceded the reading of the text, or by means of a questionnaire. The respondents were between 19 and 29 years of age, with the majority being younger than 24. On average, the participants have been studying English for 13.87 years and all but two of the respondents have studied English for more than 10 years. Concerning the place of origin, 5 respondents were from Barcelona, 2 from Madrid, 2 from Andalusia, 2 from the north of Spain, 2 from Venezuela, 1 from Mallorca and 1 from Mexico. Six participants stated that they possess a certificate attesting their level of English. Five of those certificates are for a B2 level of international language standard (FCE or equivalent). One participant acquired a CAE certificate from the University of Cambridge. All of the other respondents assessed their English themselves and claimed it to be on a B1-B2 level of the international language standard. Furthermore, six of the respondents were majoring in English. All participants also claimed to be using English very frequently at the time the research was conducted, which is not surprising given that eleven respondents were either studying English or studying an English-taught programme in Czech Republic. However, four of them admitted that they do not use English frequently under regular circumstances back at home. The rest of the respondents claimed that they come into contact with English quite frequently, as they watch a lot of English/American TV series without subtitles or play computer games and communicate with other players in English.

4.3 Procedure

Due to the lack of adequate resources, participants in Barcelona were recorded on a mobile phone, which resulted in quite a poor quality of the recordings, whereas participants in Prague were recorded either on a digital device Edirol R-09 HR version 2.0 or a personal hand-held recording device. All recordings took place in an empty room and participants were recorded individually. However, none of the rooms was sound-proof or designed specifically for recording audio materials. Consequently, not all surrounding noises could be eliminated, despite the efforts to produce recordings with the highest quality possible.

Before the beginning of recording, the respondents were informed that the research would consist of a short conversation, a brief questionnaire and a reading a short text in English (while being recorded). Further, they were told that the research was strictly unanimous and would be used only for academic purposes. They were not given any information regarding the objective of the research, in order not to influence their performance. After the recording started, a short conversation was held between the researcher and the respondent with the aim to elicit a spontaneous speech sample and to get the respondent to warm up and practice English a little before reading the actual text. Afterwards, the respondent was presented with the text. All respondents were instructed to go through the text before reading it out loud and to ask about any words they did not know or they were not sure how to pronounce them. The respondents were also informed that if they wanted to correct themselves once reading the text, they should read the whole sentence or a phrase again. After the recording, the participants were asked to fill in the questionnaire and were provided with additional explanation of some questions if needed. The recordings and questionnaires were then labelled based on the order in which they were acquired, using labels Speaker 1 to Speaker 15.

4.4 Analysis

To draw conclusions from the amassed data, the recordings were analysed perceptually. Each of the vowels /i:/, /ɔ:/, /ɑ:/, /u:/, /æ/, and /ɜ:/ was examined individually. Every token of these vowels was scrutinized and compared with other tokens of the same vowel. Conversely, the three centring diphthongs and all of their tokens were examined together as one type, since only the second part of these glides, common for all of them, was predicted to be problematic for Spanish speakers of English. Similarly, vowel reduction and unfamiliar consonant clusters were also inspected separately.

The next step included creating of a chart in Microsoft Office Excel 2007. The chart contained the aggregate number of tokens for each of the examined phenomena and a slot to be filled with the amount of mispronunciations. The programme was also set to calculate the percentage of mispronounced vowels (or inserted vowels) in each group. A separate sheet was created for every participant and one sheet was dedicated to combining the results of every individual speaker and producing the overall success rate in each group.

The perceptual analysis of the recordings followed. A headset of high quality was used for the analysis to eliminate all surrounding noises that could distort the extracted data. Each

recording was played multiple times, as every playing focused on assessing only one particular phenomenon. Nevertheless, many rewinds and pausing took place, in order to reliably evaluate the pronunciation of all the tokens. This process was repeated after a week, in order to produce results as objective and accurate as possible. In cases that were unclear or where the results from the individual analyses did not match, a colleague was consulted. The final verdict on whether to label the token in question as a mispronunciation or not was decided with the help of the colleague after a careful consideration. The data extracted in this way were then inserted into the charts and the results were calculated. Finally, certain noteworthy mispronunciations were written down and the reading of the text was also compared with the spontaneous speech.

5 Results

The following presentation of results is based on the data obtained during the current research and it is focused on identifying which English vowels are the most difficult to pronounce for Spanish speakers. The most common trends and patterns of mispronunciations are scrutinized as well. The relationship between the results and the socio-cultural background of the respondents is also taken into consideration. Certain exemplars are pointed out and the reader is referred to the recordings made by the author.

5.1 Individual vowels and diphthongs

5.1.1 The long vowels /i:/, /ɔ:/, /ɑ:/ and /u:/

The results of the conducted research show that Spanish speakers indeed have difficulties with pronouncing English long vowels. The analysed vowels /i:/, /ɔ:/, /ɑ:/ and /u:/ were most commonly insufficiently differentiated from their short counterparts /ɪ/, /ɒ/, /ʌ/ and /ʊ/ and were realized as the Spanish vowels /i/, /o/ /a/ and /u/. Even though these Spanish vowels are tenser than the English short vowels, they are also considerably shorter in duration than the English long vowels. Therefore, if one of these Spanish vowels is produced, it will most definitely lead to a misunderstanding, as the Spanish vowels are not fully identical with either vowel from the long/short pairs /ɪ/ and /i:/, /ɒ/ and /ɔ:/, /ʊ/ and /u:/, /ʌ/ and /ɑ:/. The Spanish vowel pronounced instead of the English long vowel can thus be easily identified as an English short vowel, despite the increase in tenseness. During the course of this research, the pronunciation of the long vowels /ɔ:/ and /ɑ:/ seemed to be the most difficult for most of the respondents, as the average percentage of mispronunciations reached 65%. Nevertheless, the average percentage of mispronunciations surpassed 50% for all the English long vowels.

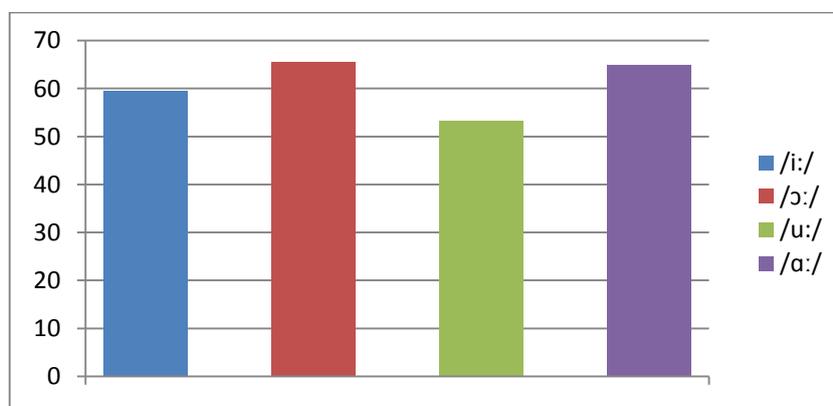


Figure 4. The average percentage of mispronunciations among the English long vowels /i:/, /ɔ:/, /ɑ:/ and /u:/ by Spanish speakers.

Among very frequent and repetitive mispronunciations were the words *sheep*, *leave*, *region*, *brought* and *heart*. In the recording of speaker 11, for example, we can clearly hear the word *sheep* being pronounced as [ʃip], whereas speaker 10 pronounced the phrase *I had to leave it there* as [aɪ hed to liv it ðer]. The eyebrows-raising mispronunciation of the word *sheet* also occurred on several occasions. These mispronunciations can largely confuse the listener, as they not only sound strange and unnatural, like the word *after* being produced as [aftr], but they also completely change the meaning of the produced sequence of sounds. Furthermore, Speaker 1 not only mispronounced the word *heart*, but produced the same incorrect pronunciation [he:r] for the words *heard* and *herd* as well, realizing them as homophones, which can also bring about a tremendous confusion. The word *brought* was often realized with Spanish /o/ as [broʔ], and the pronunciation of the vowel /i:/ in the word *region* was based on the orthographical representation of the vowel in a great deal of cases. For instance, speakers 1, 6 and 8, produced [redʒn] instead of /ri:dʒən/.

5.1.2 The open vowel /æ/

As far as the English open vowel /æ/ is concerned, the final percentage of mispronunciations was 54.29%. Of all the mispronunciations, 55% were realized as the Spanish vowel /a/ and 45% as the vowel /e/, which is in line with the initial predictions. Such mispronunciations can be heard in speakers 1 and 9. Speaker 9 produces /e/ instead of /æ/ in the word *rapidly*, while speaker 1 pronounces /a/ in the very same word.

5.1.3 The mid-central vowel /ɜ:/

The English mid-central vowel /ɜ:/, for which Spanish has no qualitatively similar vowel, also proved to be problematic for Spanish speakers of English, but the results were expected to be more uniform than they turned out to be. On average, 50% of tokens of this vowel were pronounced incorrectly in our sample. Most usually, the pronunciation of this vowel was accompanied by a flapped /r/. For example, the word *worse* was mispronounced as [wors] on several occasions, namely in the recordings of speakers 9 and 11. The pronunciation of this type covered 92% of all the mispronunciations and is probably caused by the fact that the letter <r> is present in the orthography of the words containing the vowel /ɜ:/ that are used in the text (*bird*, *herd*, *hurt*, etc.). It is worth noting, however, that the flapped /r/ was quite regularly present in otherwise correct pronunciations as well. Hence, the word *bird* was realized as [bɜ:rd] on regular basis.

5.1.4 Centring diphthongs

The English centring diphthongs emerged as by far the most difficult to pronounce for Spanish speakers, for the average percentage of mispronunciation reached an overwhelming 84%. Most of the speakers did not produce a gliding sound and rather realized the diphthongs as a combination of a single vowel and a flapped /r/. Most of the mispronunciations were based on the orthographical representations of the words in question. As a result, the word *year* was often pronounced as [jir] and the word *cure* as [kjur]. Both of these mispronunciations can be heard in speakers 13 and 14, for example. Mispronunciations of this nature covered 94% of all the mispronunciations.

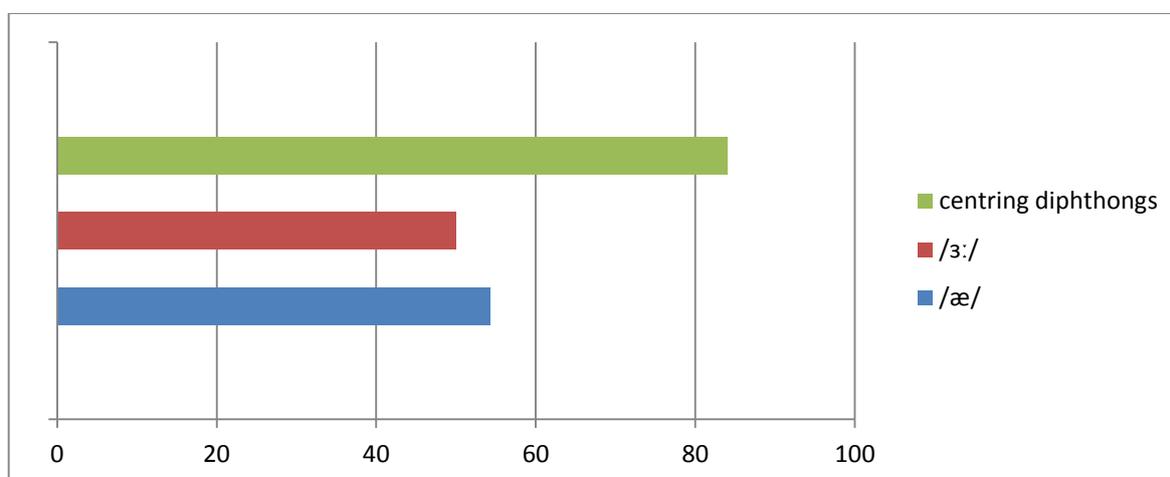


Figure 5. The average percentage of mispronunciations of the front open English vowel /æ/, the mid-central vowel /ɜ:/ and centring diphthongs

5.2 Vowel insertion

Regarding the insertion of vowels, the phenomenon did not occur as frequently as was originally predicted. On average, an extra vowel was added to a word containing an unfamiliar initial consonant cluster in 38.06% of cases. Additionally, some speakers did not produce any extra vowels at all (e.g. speakers 5, 13, and 14). On the other hand, certain speakers used epenthetic vowels quite often, proving that these clusters can indeed be troublesome for some Spanish speakers of English. In the recording of speaker 10, the words *stare* and *spot* are clearly produced with the typical Spanish /e/ sound at the onset of the word. The same can be heard in words *Spain* and *specifically* in the recording of speaker 1. The word *specifically* shows a vowel insertion on many occasions, but speakers 8, 10, and 11 chose a rather unconventional way of dealing with the initial consonant clusters – they exchanged the word *specifically* for *especially*, which contains the same consonant cluster, but the cluster is already preceded by a vowel. Since the words were not exactly

mispronounced, but rather replaced by a word with a similar orthographical representation, these pronunciations were not counted as mistakes, and the number of expected vowel insertions was also adjusted accordingly for these speakers, so that a fair percentage would be calculated for them as well.

5.3 Vowel reduction

As far as the vowel reduction is concerned, the average percentage of instances where insufficient vowel reduction took place was 52%. A special comment must be made about the speakers from Barcelona that may shed some light on our findings. A vast majority of people from Catalonia are bilinguals and speak both Spanish and Catalan from a very early age. The languages are somewhat related, but their vocalic systems are quite different. While Spanish only recognizes 5 vowels, the Catalan of Barcelona (and neighbouring towns) possesses 8 vowels, with one of them being a neutral mid-central vowel, almost identical to the English schwa. As a result, speakers from Barcelona should be quite familiarized with schwa and they should be considerably more efficient at using it in unstressed positions. However, the same cannot be said for all Catalan speakers in general, as the Catalan of Valencia does not have schwa in its inventory and neither does the Catalan spoken in the South of France (Mott 262). Consequently, if the recorded speakers are divided into 2 groups, speakers of Barcelona-based Catalan and the rest, and these 2 groups are looked at separately, the results show that Speakers from Barcelona are evidently more proficient in vowel reduction. The average percentage of insufficient vowel reduction among speakers from Barcelona reached 43% only, while the average of the rest of the speakers jumped to 60%.

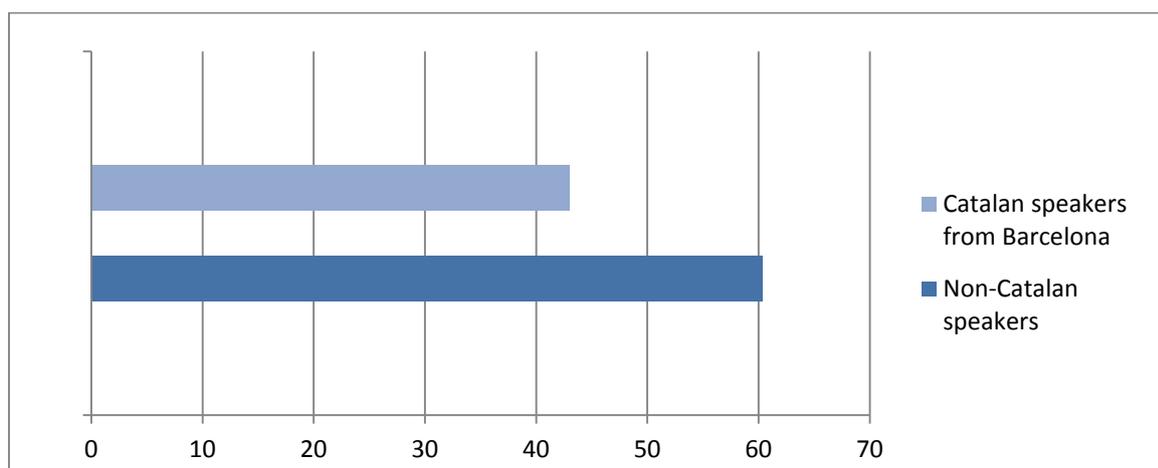


Figure 6. The average percentage of insufficient vowel reduction among speakers from Barcelona compared with the rest of Spanish speakers.

Words such as *amazement*, *horizon*, and *several* were among the most problematic for the respondents and the reduction was absent. However, some exemplary reduction could be detected in the recordings of speakers from Barcelona, such as the pronunciation of the word *paper* in the recording of speaker 6. The pronunciation of the word *horizon*, which a great deal of speakers pronounced as [horizon] was also perfectly produced in the recording of speaker 2. In contrast, the same speaker did not sufficiently reduce the initial vowel in the pronunciation of the word *amazement*. Furthermore, the word *several* being realized as [several] can be heard in speaker 10, which points to the fact that reduction truly is insufficient among speakers from regions other than Barcelona and that Spanish speakers are often affected by the orthographical representations of words.

5.4 Factors influencing the results

Apart from the effect the knowledge of Catalan of Barcelona is believed to have on vowel reduction, other characteristics of the recorded participants can influence the interpretation of results as well. The fact that 6 of the respondents are university students of English and that all of them have passed (or were studying at the time of recording) a phonetics and phonology course is definitely one of the characteristics, that may have severe impact on the results. Indeed, if we look at the results of participants who do not study English at a university separately, the average percentage of mispronunciations increases significantly in all the analysed phenomena. As can be seen in the graph below, the average percentage of mispronunciations surpasses 70% for all of the long vowels, except the mid central vowel /ɜ:/.

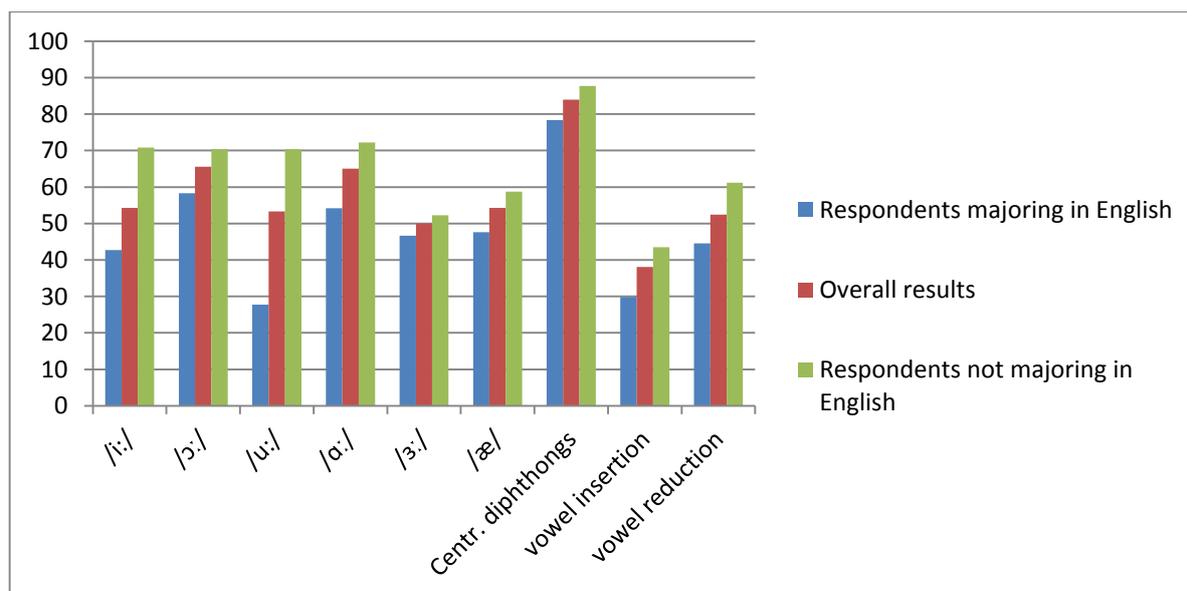


Figure 7. A comparison of the results achieved by respondents majoring in English at a university and the results of the rest of the respondents. Overall results can also be seen.

All the respondents claimed to be using English quite frequently, therefore this variable cannot be used to compare and contrast the results. Moreover, even though some respondents have attained an English certificate and others have not, the participants owing a certificate mostly overlap with university students of English. Consequently, comparing the results of respondents with and without a certificate seems redundant, as the discovered values are almost identical to the comparison of students of English and the rest of the respondents. Additionally, the quality and level of education is thought to be of a much greater importance, than the amount of years spent studying English. For example, both speakers 5 and 10 have been studying English for 14 years at the time of the recording, but speaker 5 is a university student of English while speaker 10 is not. If we compare their results, we can see that speaker 5 was substantially more successful in all the examined phenomena, except for the pronunciation of the long vowel /u:/, where the two speakers achieved the same results.

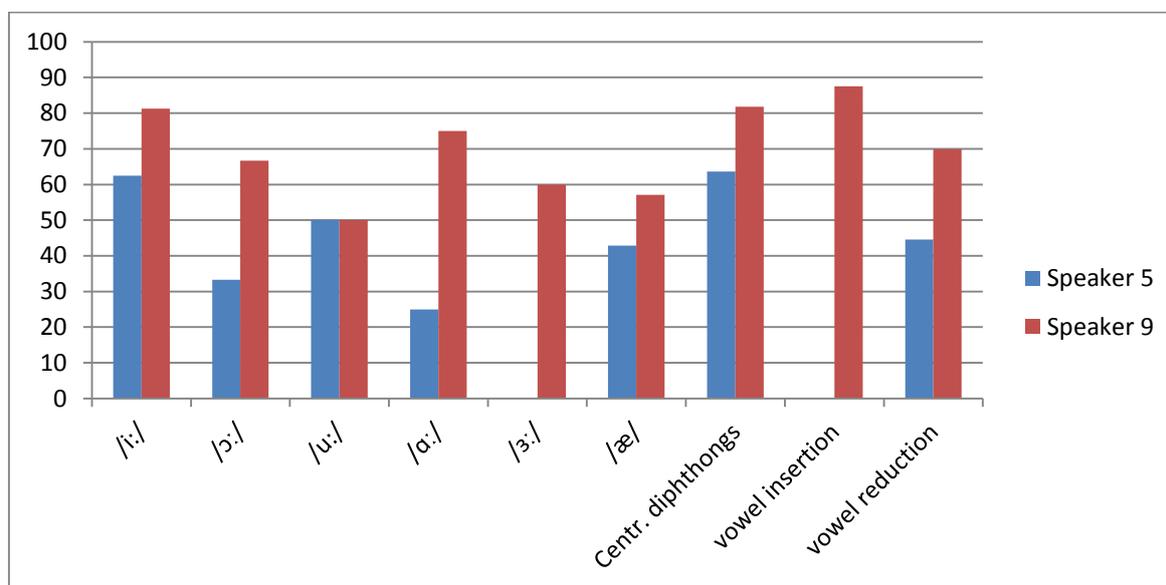


Figure 8. A comparison of the percentage of mispronunciations in the recordings of speakers 5 and 9.

5.5 Comparison of the spontaneous speech and the reading of the text

The spontaneous speech elicited at the beginning of the recordings appears to be in line with the pronunciation the speakers demonstrated while reading the text. For example speaker 8, who pronounced the vowel /i:/ as Spanish /i/ in almost 69% of cases, uses the word *speaking* in their spontaneous speech, but realizes it as [spikin]. A vowel insertion can also be heard in the spontaneous speech of some speakers. Speakers 1 and 10, who both added an extra vowel to over 60% of the unfamiliar consonant clusters in the reading task, produced an extra vowel at the beginning of words like *studying* and *Spain*. Even though no rigorous analysis of the

spontaneous speech was carried out, the mistakes the speakers made in the opening conversations correspond to those analysed in the reading of the text.

CONCLUSION

This thesis set out to examine and compare English and Spanish languages and was based on a personal experience with the poor intelligibility of Spanish accent in English. Given the fact that vowels received the main focus of this thesis, vowels were contrasted from consonants on many different levels in the theoretical part. The description and comparison of vocalic systems of English and Spanish followed and other differences between the languages were outlined as well. Based on the divergences between the languages, three hypotheses were formulated and a research was designed to investigate their validity.

The results of this research confirmed most of the hypotheses. For the long English vowels, the average percentage of mispronunciations was in the proximity of 60%. The vowels /ɔ:/ and /ɑ:/ proved to be the most problematic, as 65% of tokens of these vowels were pronounced incorrectly. Regarding the front open vowel /æ/ and the mid central vowel /ɜ:/, the average percentage of mispronunciations surpassed 50% for both of these vowels. Furthermore, the other mid-central vowel /ə/ was also difficult to produce for Spanish speakers of English, as vowel reduction was insufficient in more than 52% of cases and schwa was substituted by another vowel. Additionally, the average percentage of mispronunciations reached almost 84% for centring diphthongs, whose second element is schwa. On the other hand, external epenthesis was employed in 38% of cases only. Nevertheless, after the elimination of university students of English, the results became much more unequivocal and representative of the broad Spanish-speaking public. Among those who do not study English at a university, the average of mispronunciations increased in each category of the examined data and it even surpassed 70% in 5 out of 9 of the scrutinized phenomena. It should, however, be remembered that the results of this research are based on quite a small amount of respondents and that the obtained data and conclusions should therefore not be generalised.

Several other researchers have been concerned with a similar topic. For instance, You an Alwan focused on Spanish-accented English of children aged from 5 to 7 years and arrived at the conclusion that “there are significantly large pronunciation variation for phonemes that do not exist in Spanish” (4). Furthermore, they expressed their plans to use the amassed data about pronunciation variation for a speech recognizer for a Spanish-accented English in the future. Gorman and Stubbe Kester also aimed their research at children, but they were mainly concerned about children growing up in a bilingual setting. In their research, they stress the need for bilingual children to be assessed in both of their native languages and also the importance of correct identification of language transfers – “for both the monolingual and

bilingual practitioner, understanding that normal patterns in bilingual development often look like hallmarks of language impairment in monolingual development will lead to greater accuracy in the assessment of bilingual language skills” (11).

Since those respondents who study English at a university level have clearly achieved a great success in bringing their pronunciation closer to a native-like level, further research should be dedicated to discovering which techniques have the greatest impact on perfecting the pronunciation of Spanish speakers of English. Moreover, additional research delving into the comparison of reduction between speakers from Barcelona and other regions of Spain could also produce some interesting results. In general, a research dedicated to contrasting the pronunciation of speakers from different parts of Spain, where other languages like Galician and Catalan are spoken locally, and investigating to what extent they influence English pronunciation, might provide us with a more comprehensive understanding of the language abilities of Spanish speakers of English. If speakers from different parts of Spain really encounter difficulties with various features of English pronunciation, the obtained results could be used to design more personalised teaching plans across Spain.

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APPENDICES

Appendix 1. The text used for recording.

A few years ago, I spent my vacation in Spain. Andalusia is my favourite region, so I headed there. One day, I decided to take a long walk instead of doing some sport, because the heat was unimaginable. I chose a route that led me to the beach. I discovered that walking in the sand was hard, but the view seemed extraordinary. There is nothing like it. Specifically, I admired a golden ship on the horizon. I found a nice spot, took a photo and put my camera back in my pocket. Then I heard strange noises and my heart started beating rapidly. To my amazement, a herd of sheep appeared. Stare at them, I did. After a while, I noticed that one sheep was hurt. It had presumably hit its leg somewhere, because it was bleeding. I tried to cure the sheep, but a bird flew up and scared it away. So I had to leave it there. The following morning, I hid in my hut, as the weather got even worse. I brought several sheets of paper and a pen to my bed and continued writing my thesis from there, because the temperature outside was extreme and not a leaf moved on the trees

Apendix 2. Questionnaire.

Where are you from? (Country, city/region)

How old are you?

How long have you been studying English?

Have you ever obtained any official certificate of competency in English? If yes, what kind?
(FCE, CAE...)

What is your field of study?

How often and in what way do you use English in your everyday life? (watching English TV series/movies, communication with native speakers, playing video games...)