

## دور اللغة الأم في نطق طلاب اللغة الإنجليزية السوريين للصوامت المتتابة الأولية من نوع ( صامت + ي )

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### المخلص

يعتبر الكثير من خبراء اللغة أن اللغة الإنجليزية لغة صعبة التعلم لأنه يتوجب على المتعلم دراسة عشرين صوتاً متحركاً بالإضافة إلى قواعدها الإملائية المعقدة. لكن قد يواجه متعلمو اللغة الإنجليزية تحديات من ناحية أخرى، وبالأخص لغة المتعلم الأم التي قد تتدخل و تدفعه إلى ارتكاب العديد من الأخطاء خصوصاً في مجال النطق.

ولعل نطق الصوامت المتتابة الأولية تشكل أحد التحديات التي يواجهها هؤلاء الطلاب.

إن هذا البحث يدرس أداء طلاب اللغة الإنجليزية في جامعة البعث فيما يخص النطق بأحد أنواع الصوامت المتتابة الأولية ألا وهو ( صامت + ي )، /C+z/، إذ أنه يبحث كيفية تدخل اللهجة السورية أثناء نطق طلاب اللغة الإنجليزية السوريين لهذا النوع من الصوامت المتتابة.

ولتحقيق هذه الغاية تلجأ الباحثة لاختبار يتم من خلاله تسجيل أصوات 30 طالب وطالبة وهم يقرؤون جملاً تبدأ كل منها بصوامت أولية متتابة من نوع (صامت +ي).

تدل النتائج على مواجهة الطلاب - متأثرين بلغتهم الأم - للصعوبات خلال نطق هذا النوع من الصوامت المتتابة، كما أنها تظهر لجوء الطلاب إلى استخدام العديد من استراتيجيات التعديل كمحاولة منهم لتسهيل النطق بها.

الكلمات المفتاحية: القيود اللفظية، الصوامت المتتابة الأولية، اللغة الأم.

## The Role of L<sub>1</sub> in Producing /C+j/ Clusters by Syrian Students of English

### Abstract

Many linguists believe English to be a difficult language to learn, for a learner has to learn twenty vowel sounds in addition to its complex orthography. However, learners of English may encounter other challenges. In particular, learners' mother tongue may interfere and lead them to make different errors especially in the pronunciation domain. The production of English initial clusters is one of these difficulties these learners may face. The current paper surveys the production of one type of these clusters, namely /C+j/, by a number of Syrian students of English at Al-Baath University. It tackles how Syrian Arabic, as L<sub>1</sub>, interferes while Syrian students of English articulate these clusters. To achieve this goal, the researcher employs a pronunciation test where thirty students are recorded while reading aloud sentences, each of which begins with an initial /C+j/ cluster. The results show that Syrian students, influenced by their mother tongue, do face difficulties in producing /C+j/ clusters. In addition, it is found that various modification strategies have been used by these students to facilitate the articulation of these clusters.

**Key Words:** phonotactics, onset (initial) clusters, mother tongue.

## 1. Introduction

learning a foreign language (henceforth FL) may involve challenges at different levels. In comparison with other skills, the speaking skill, as many linguists assert, requires more effort and practice. Thus, becoming a native-like speaker is a major challenge for those who desire to master a language. This is because every language has its own phonology, i.e. its own phonemes and phonotactics. *Phonotactics* are the restrictions that determine the permissible combinations of phonemes in language. They define the permissible syllable structures, consonant clusters, and vowel sequences in a syllable. Within a syllable, all the segments before the vowel constitute the left margin: *the onset*, segments after the nucleus are the right margin which is called *the coda*. When the margin has two or more consonants, they are called a *consonant cluster*. It is an initial<sup>1</sup> cluster if it occupies the onset position, and a final cluster when it occurs in the coda position. A third type which occurs in the middle of the word, between two vowels, is referred to as medial clusters. As far as the current study is concerned, only one type of initial clusters will be discussed, namely /C+j/<sup>2</sup>.

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<sup>1</sup> Throughout this paper, *initial* is meant to refer to clusters which occur at the beginning of the syllable, not only the beginning of the onset.

<sup>2</sup> C: any consonantal sound other than /j/

Generally speaking, it is something normal for an FL learner to make many mistakes while practicing the pronunciation of FL utterances. In fact, three major factors are behind such mispronunciation: perception problems, production problems, and the interference of the mother tongue. This study; however, is mainly concerned with the third factor, the interference of the mother tongue, due to its prominent role in committing errors. In Syria, two varieties have complementary functions. The high variety is the Modern Standard Arabic (henceforth MSA), the official language across the Arab world. It is the language of news, political speeches, education, religious rituals, and almost all written material. The second (low) variety is the colloquial one, Syrian Arabic (henceforth SA), which is used in markets, cafes, everyday dealings, and all social meetings. SA mainly branches from MSA, in addition to a variety of borrowed words from other languages such as French, Turkish and Persian. Furthermore, SA itself branches into several regional varieties, such as Damascene, Homsy, and Aleppian dialects. At Al-Baath University, Syrian students at the English Department struggle to give up their own mother tongue in order to master English. Of the various dialects of these students, the researcher has chosen the Damascene dialect as L<sub>1</sub> and Standard English as FL in the current paper.

### **1.1. Statement of the problem**

In comparison with other languages, English has a big number of vowels. Moreover, it has a complex orthography, i.e. each letter may be pronounced in more than one way. This is why it is not an easy goal since a learner should give up his/her L<sub>1</sub> phonology and absorb that of English. Otherwise, L<sub>1</sub> interferes negatively and leads him/her to commit various errors. For instance, many Syrian students of English find themselves facing two different phonological systems: the system of English and that of their mother tongue, SA. These two languages differ in many aspects. Talking about clusters, English allows up to three consonants in initial positions, but SA allows only up to two consonants. However, there may be some similarities. The Arabic word /kru:t/ 'cards' starts with the cluster /kr/ which is also found in English words like /kraɪ/. Accordingly, producing English clusters would be problematic for Syrian students when practicing initial clusters which are unpermitted in his/her L<sub>1</sub>, whereas it is expected to be easier with clusters that are shared in both L<sub>1</sub> and FL.

## **1.2. Significance of the Study**

This study is significant for improving students' oral skills while learning English. As many people believe, knowing the problem is part of the solution, studying the reasons behind students' mispronunciation will help them get a better comprehension of the sound system of the target language and a chance to avoid their errors.

### 1.3. Objectives of the Study

Highlighting the influence of SA phonotactics on the pronunciation of English initial /C+j/ clusters for Syrian students is a main aim of this paper. In light of the results, Syrian teachers will be able to predict which structures will be easy to learn and where pronunciation problems would appear. The fundamental points at which this research aims can be summed up as follows:

- 1) Drawing a brief comparison between the phonotactics of Syrian Arabic and those of English in forming initial /C+j/ clusters
- 2) Highlighting the reasons behind SA learners' errors in producing English initial /C+j/ clusters
- 3) Pinpointing the primary role played by these learners' mother tongue in committing pronunciation errors
- 4) Providing practical solutions for both teachers and students of English to overcome the difficulties posed by L<sub>1</sub> phonotactics.

### 1.4. Research questions

This study raises the following research questions:

- 1) To what extent do the differences between English and SA phonotactics trigger problems for Syrian students of English?
- 2) How does learners' mother tongue affect the pronunciation of English initial /C+j/ clusters?

## 2. Literature Review

The purpose of this section is to consider two areas: the first one is a theoretical discussion of part of the phonotactics of both SA and English. Particular attention is paid to their initial /C+j/ clusters. The second area tackled in the current study is surveying some linguistic theories about the interference of the mother tongue in committing pronunciation errors. In addition, it examines the various strategies upon which students of English rely to facilitate the pronunciation of certain English utterances. Moreover, there is a summary of relevant studies which have been conducted on English consonant clusters production.

### **2.1. Syllable Structure**

As phonological theories keep evolving, the interest in the concept of the syllable increases. Generally speaking, a syllable consists of an obligatory nucleus and two optional margins. The nucleus is usually a vowel, while the margins are consonants. The need for the margins differs from one language to another. Consonantal segments preceding the nucleus are called the onset. It is a simple onset when it contains one consonantal segment and complex if it has more than one. Consonantal segments that follow the nucleus constitute the coda which, in turn, may be simple or complex. As mentioned earlier in the introduction, a complex onset is known as a consonant cluster.

### **2.2. Syllable Structure in Syrian Arabic**

Both Adra (1999) and Al-Omar (2011) present the basic syllable structures in SA. Table (1) is the outcome of both representations:

Syllable Shape	Example	Glossary
CV	/ha.dʒam/	he attacked
CCV	/msə.ka/	hold it (M.S.)
CVV	/dʒa:.ri/	My neighbor (M.)
CVC	/mak.tu:b/	written
CVVC	/du:r/	turn (M.S.)
CCVC	/msak.kar/	closed
CVCC	/kənt/	I was
CCCVC	/stri:h/	rest (M.S.)

**Table 1: Basic syllable structures (adapted from Adra, 1999 and Al-Omar, 2011)**

We can conclude the following general formula where parentheses refer to optional existence of the segment:

$$C(C)(C)V(C)(C)$$

Clearly, onsets are obligatory in SA, while codas are optional. This justifies why Syrian learners of English repeatedly insert a glottal stop /ʔ/ in onsetless syllables. For instance, a /VCCC/ structure is not accepted in SA, where the glottal stop is inserted or the first vowel is omitted: /ʔVCCC/, /CCCVC/.

### 2.3. /C+j/ clusters in SA

SA has a number of bi-consonant clusters that consist of /C/ + /j/. As a Syrian, the researcher believes that there are about 18 of



these clusters in her mother tongue. However, only eight of them are common in both SA and English. They are: /mj/, /fj/, /tj/, /dj/, /sj/, /nj/, /lj/, /kj/.

## 2.4. Syllable Structure in English

English has a good deal of syllable structures. Table (2) presents some examples:

Syllable Shape	Example
V	/eɪə/
CV	/se.lər/
CVC	/fil.tər/
VC	/ʌn/
CCVC	/brəʊk/
CCVCC	/frend/
CCCVCC	/stri:ts/
CCVC	/splæʃ/
CCCVCCC	/splɪnts/
CVCCCC	/teksts/

**Table 2: English syllables with examples**

Thus the general formula can be as follows:

$$(C)(C)(C)V(C)(C)(C)(C)$$

Complex margins are then allowed as well as simple ones. Onsets may have up to 3 consonantal phonemes, while codas may have

up to 4 consonants which is not allowed in SA. Since, unlike SA, onsets and codas are optional in English, we may have syllables lacking an onset or consisting of only a vowel or a diphthong like 'oar' /ɔ:/ which is something not possible in SA. Therefore, in the case of a /VCCC/ structure, there is no need to insert a consonant at the beginning or drop the first vowel unlike the case in SA.

### 2.5. /C+j/ clusters in English

Similar to SA, English allows /C+j/ clusters; eight of them are found in SA as mentioned earlier, in addition to three other clusters found in English but not in SA. These are: /pj/, /vj/, /hj/.

### 2.6. Mother Tongue Interference

Barros (2003) states that English speakers have the ability to identify different accents like the French accent, the Spanish accent, the Arabic accent, the German accent, etc. This indicates that while speaking an FL, learners make use of their mother tongue.

Cook (1991, cited in Khanbeiki & Rokni, 2015) states that when similarities between L<sub>1</sub> and FL are found, mother tongue interference is then said to create positive transfer. For example, the /sm/ cluster is allowed both in English and in several Arabic dialects. This is why Arab learners rarely encounter problems in pronouncing it. On the other hand, they may pronounce a word like 'know' incorrectly as \*/knəʊ/ because /kn/ is allowed in some

Arabic dialects unlike English. Here, it is negative transfer. Barros (2003) referred to a study conducted about Arabic speakers' difficulties with pronouncing English clusters. A word like 'spy' was mispronounced as \*/espαI/, 'floor' as \*/filɔ:t/.

According to Hassan (2014), the English consonants /θ/, /ð/, /p/, and /v/ have proved to be problematic for Sudanese students and have been replaced by /s/, /z/, /d/, /f/, respectively. Nonetheless, it is noticeable that Sudanese students share other Arab students in changing the bilabial /p/ into /b/ in words like 'pupil', 'paper', and 'apple'.

## 2.7. Modification Strategies

Interlanguage involves certain phonological changes of certain target utterances made by learners in order to simplify the pronunciation of those problematic utterances. Lin (2001, cited in Arnold, 2009) conducts a study within which 20 Taiwanese students were given word lists and sentences with English initial-consonant clusters. He concludes that subjects depended mainly on 3 main strategies: insertion while articulating words in isolation, and substitution and deletion while reading sentences and questions.

## 2.8. Previous Studies on Producing English Onset Clusters

Chen (2003) examines pronunciation errors by Chinese learners of English while producing English initial clusters. She involves 9

participants and gives them 10 sentences containing words with tri-consonant onsets and bi-consonant onsets. All these onsets are restricted to /s + voiceless stop/ clusters. The subjects are recorded and then the recorded utterances are transcribed. It has been noticed that the subjects replace certain English sounds by other ones available in their native language. For example, English /r/ is frequently changed into /w/ when occurring after a voiceless stop, and changed into /ʃ/ when occurring after /t/. This is due to the absence of /tr/ clusters from Chinese and the allowance of /w/ after a voiceless stop.

Marzouk (1993, cited in Barros, 2003) investigates the phonological transfer from Arabic to English regarding vowels and few English consonant clusters. Participants in his study, Syrian Arab learners, show a tendency to insert vowels inside some problematic clusters. However, Marzouk's attention is paid to the subjects' production of English vowels.

Al-Saidat (2010) has been more specific in his research which tackles pronunciation problems encountered by Arab learners of English placing considerable emphasis on English clusters mispronunciation in addition to the negative role of L<sub>1</sub>. His study focuses on the process of *declusterisation* – breaking up clusters– made by learners and the potential sources of such errors. To achieve these goals, Al-Saidat involves 20 Jordanian students of English at two public universities. He gives them a pronunciation test containing words with complex onsets and codas. The testees,

whose L<sub>1</sub> is Ammani Arabic, read the words while being recorded on a computer. A brief comparison between English and Ammani Arabic drawn by the researcher indicates that both languages allow complex onsets. However, English shows more flexibility especially in allowing tri-consonant clusters. This justifies why bi-consonant clusters, in general, have been less problematic for the testees than tri-consonant clusters. Subjects have repeatedly broken up problematic clusters by inserting the same vowel, namely the high front vowel /i/. Al-Saidat adds that the subjects' strategy to overcome difficult structures-vowel insertion- is basically the result of mother tongue interference.

### **3. Methodology**

#### **3.1. The test material**

After considering this paper's objectives, the researcher has decided to use a pronunciation test. Generally speaking, most studies conducted in the pronunciation domain rely mainly on phonetic tests which contain voice recordings. The researcher has chosen 11 English words, each of which begins with one initial /C+j/ cluster so that all possible onset /C+j/ clusters in English are covered. Moreover, each word is embedded initially in a sentence to distract the participants' attention from the target words. As for the tested words, the majority of them are commonly-used such as '*music*', and '*new*'. There are, at the same time, some other rarely-used words chosen from the Oxford Dictionary such as '*cumulus*'.

However, all items can be categorised into two main groups:

- a) clusters that are common in SA and English
- b) clusters that occur in E but not in SA

Further distinction can be stated between the test words. Most of them are familiar to the testees, i.e. they have previously come across and practiced these words at school and university. Nonetheless, few words are considered unfamiliar by the testees.

### **3.2. The test sample**

The above-mentioned pronunciation test targets 30 Syrian students of English at Al-Baath University; all of them are at their first year. This means that all testees have learned English at school as an FL for at least 7 years. As far as L<sub>1</sub> is concerned, both Homs and Damascene dialects have almost identical phonological structures in terms of word-initial clusters. This is why I asked for the participation of students who originally came from either the city of Homs or Damascus. Each participant was given the test on a piece of paper in order to be recorded individually. Then they were asked to underline any word they came across for the first time.

## **4. Analysis and Discussion of the Results**

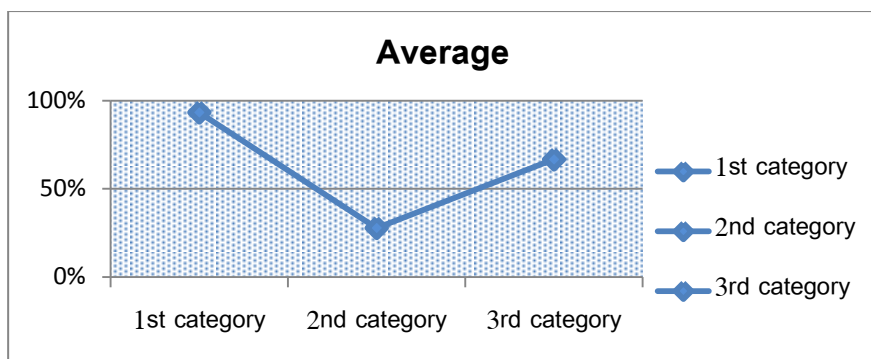
### **4.1. Test analysis**

Throughout the test, students committed different errors including mispronunciation of onset clusters, coda clusters, single

consonants, and vowels. However, in line with the main objective of this study, only errors related to the onset clusters will be analysed. Table (3) displays the two categories in this test. It provides the number of words in each category, the total number of pronunciations as well as the number and percentage of correct pronunciations and those of wrong ones. We can put these categories in order of difficulty as follows:

wrongly pronounced clusters/total clusters	number of given words	number & percentage of correct pronunciations	number & percentage of errors	total number of pronunciations
1-common /C+j/ clusters (in familiar words)	5	140 93.33%	10 6.67%	150
2-common /C+j/ clusters (in unfamiliar words)	3	25 27.78%	65 72.22%	90
3-uncommon /C+j/ clusters (in familiar words)	3	60 66.67%	30 33.33%	90

**Table 3: Performance of the participants in the test**



**Figure 1: Means of test results**

1- The second category- common /C+j/ clusters within words that testees are not familiar with- comes first. It caused the highest number of errors with a percentage of 65% of the total number of pronunciations. This category contains three /C+j/ initial clusters which are allowed in both English and SA. These clusters were embedded within words that testees came across for the first time.

2- Then comes the third category- uncommon /C+j/ clusters within familiar words- in terms of difficulty with a percentage of errors estimated as 33.33%. There are three /C+j/ clusters that are found in English but not in SA. However, the words within which these clusters are put are not new to the testees as most of them stated they came across these words before.

3- Finally, the category that caused the least number of errors was the first one, namely common /C+j/ clusters within familiar words. It has five clusters shared in both SA and English. Moreover, these clusters are embedded in words that testees are familiar with.



## 4.2. Discussion of the test

### 4.2.1. Common /C+j/ clusters ( within unfamiliar words)

The second category comes first in terms of difficulty. It has three clusters shared in English and SA: /sj/ in 'suet', /lj/ in 'lurid', /kj/ in 'cumulus'. The words in which clusters are embedded are new to the participants. Table (4) clarifies that the items of this category do not seem easy to the testees as the majority of them mispronounced the target clusters. However, the percentage of errors differs from one cluster to another.

Clusters of the second category	number & percentage of students who pronounced it correctly	number & percentage of students who pronounced it <b>incorrectly</b>	Number of correct but slow pronunciations	Wrong pronunciations
1) /sj/ in /sju:t/	<b>20 chose</b> /su:ɪt/ 66.67%	<b>6</b> 20%	4 13.33%	4*/sw/ + 2 /seit/
2) /lj/ in /ljʊəɪd/	3 10%	<b>27</b> 90%		22 omitted /j/+ 3*/ləj/+2*/li/
3) /kj/ in /kju:mjələs/	10 33.33%	<b>19</b> 63.34%	1 3.33%	14 omitted /j/ +5 changed /j/ into /w/

**Table 4: Performance of the participants in the 2<sup>nd</sup> category of the test**

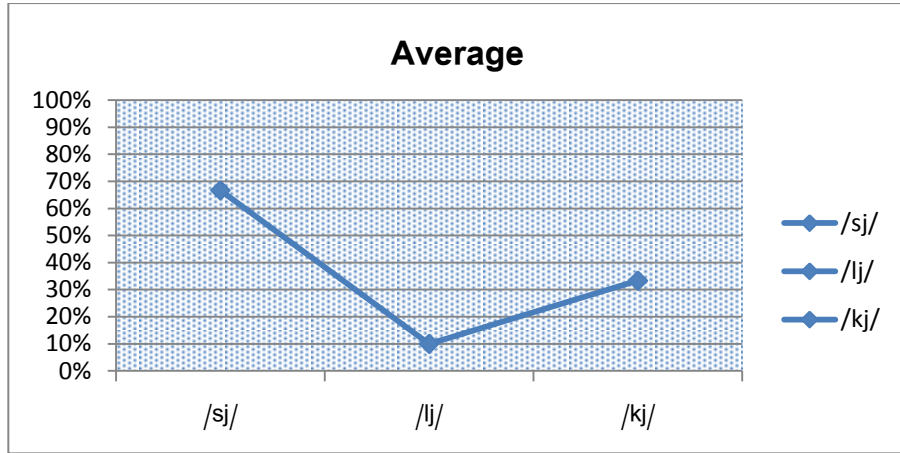


Figure 2: Correct production of the second-category clusters

As for the /lj/ cluster, 90% of the participants produced it wrongly although they have it in their mother tongue in words such as /ljɔ:m/ 'today'. In addition, 22 out of 30 testees deleted the sound /j/ while pronouncing /lju:ɾɪd/. As stated earlier, English has a complex orthography where in many words spelling does not go in line with pronunciation unlike MSA which is the language for written material in Syria. Thus, being unfamiliar with the word 'lurid', testees relied on its spelling in order to guess the right pronunciation. Consequently, testees depended on how they often read the letter 'u' in other words such as 'hurry', 'butter', 'burn', etc. So, they overgeneralised this pronunciation of the letter 'u' to cover all situations. Surely, this does not work in words as 'lurid' and 'pupil' where 'u' should be pronounced as a consonant and a vowel, /ju:/. So, we see the English orthography here playing a negative role and confusing learners.

Then come /sj/ and /kj/ clusters with the same degree of difficulty as table (4) displays. About 63% of participants failed to correctly produce these clusters. As for /sj/, it was put in 'suet' which has two correct pronunciations in the Oxford Dictionary: /su:t/ and /sju:t/. SA has this cluster in words as /sju:f/ for 'swords' and /sja:ʒ/ for 'fence'. Yet, most participants ignored this cluster and relied on the second possible pronunciation of the word 'suet': /su:t/. This is because it was a new word to the testees who relied on its spelling. Similar to /lj/ in 'lurid', /sj/ in 'suet' was produced in the way participants used to hear the letter 'u'.

To confirm the test results, acoustic analysis was carried out. On the spectrogram, different errors were detected. For instance, figure (2) shows the spectrographic pattern of the cluster /lj/ as produced by one student. We can see a voicing bar and three formants which indicate the existence of a vowel immediately after the /l/ sound. This student has dropped /j/ from the /lj/ cluster unlike figure (3) which represents the spectrogram of the same cluster correctly articulated by a native English speaker. This voice was recorded from an electronic dictionary. Here, the acoustic cues of two consonants are clear indicating the production of this bi-consonant cluster.

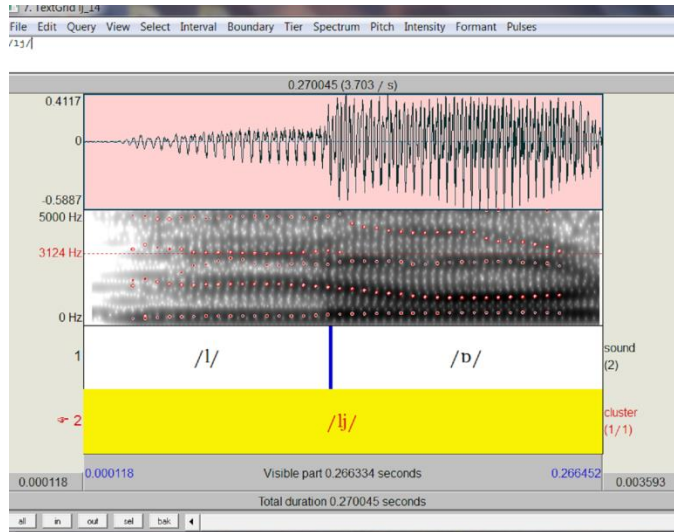


Figure 2: A spectrogram of the cluster /lj/ by a participant

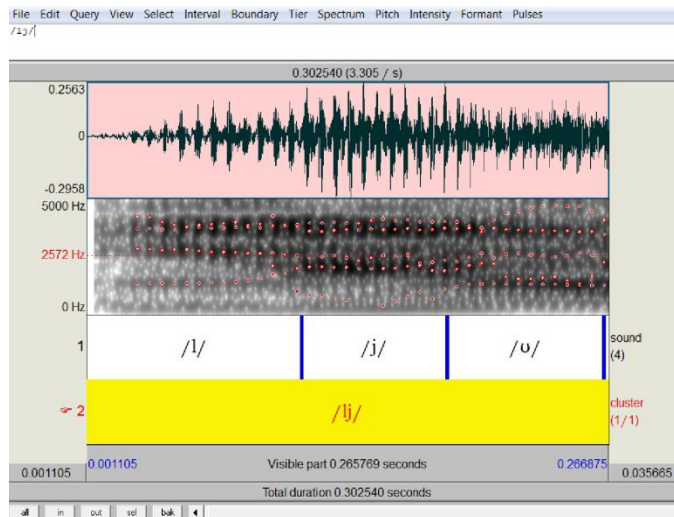


Figure 3: A spectrogram of the cluster /lj/ by a native speaker

Similar to the /lj/ and /sj/ clusters, the /kj/ sequence confused most testees who dropped the /j/ sound. Moreover, five testees changed it into /w/. Again, students here depended on the word spelling

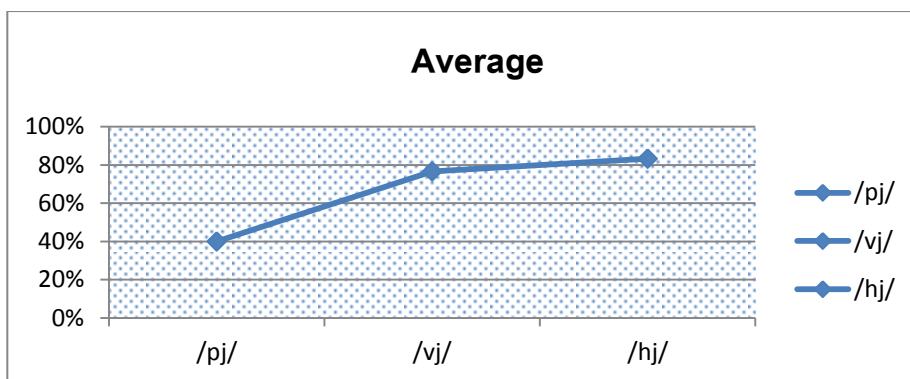
and how 'u' is pronounced after the /k/ sound in words such as 'quite', 'quality', 'square'.

#### 4.2.2. Uncommon /C+j/ clusters ( within familiar words)

Table (5) shows that the third category consists of three /C+j/ clusters existing in English but not in SA. However, they are embedded in words that testees are familiar with, which in turn facilitated producing them.

Clusters of the third category	number & percentage of students who pronounced it correctly	number & percentage of students who pronounced it <b>incorrectly</b>	Number of correct but slow pronunciations	Wrong pronunciations
4) /pj/ in /pjʊə/	12 40%	<b>18 60%</b>		13 omitted /j/+ 2*/prʊ/+3*/bj/
5) /vj/ in /vju:ɪŋ/	23 76.67%	<b>7 23.33%</b>		5 omitted /j/ + 1*/weviŋ/+1*/vəj/
6) /hj/ in /hju:ɔː/	25 83.33%	<b>5 16.67%</b>		all omitted /j/

**Table 5: Performance of the participants in the 3<sup>rd</sup> category of the test**



**Figure 4: Correct production of the third-category clusters**

In fact, two clusters in this category were produced with few errors: /hj/ in 'huge', and /vj/ in 'viewing'. Only /pj/ in 'pure' sounded problematic to some extent since half of the participants failed to correctly articulate it. Actually, /pj/ has the phoneme /p/ which has proved to be a difficult sound for Arab learners of English. To the best of my knowledge, all Arabic dialects lack this phoneme; therefore, it is something predictable among Arab students to face problems with it. This is why three testees have substituted /p/ for /b/. This can be easily detected on the spectrogram as figure (5) exhibits the spectrogram of the cluster /pj/ in 'pure' wrongly produced as \*/bl/ by one participant. In contrast, figure (6) shows the same cluster produced by a native speaker where there is no voicing bar as /p/ is voiceless unlike /b/ which is voiced.

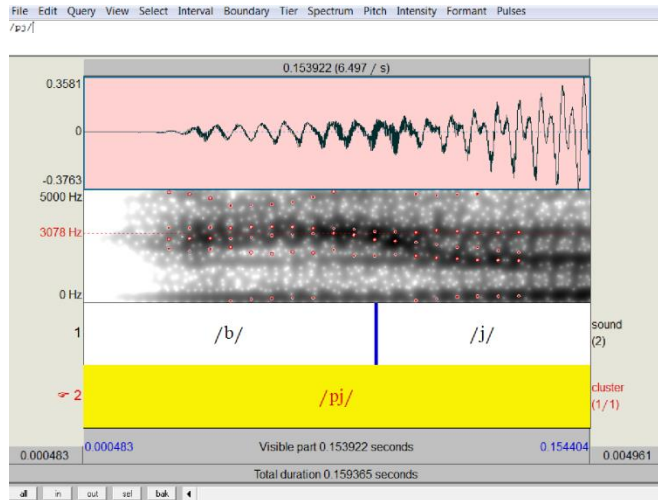


Figure 5: A spectrogram of the cluster /pj/ by a participant

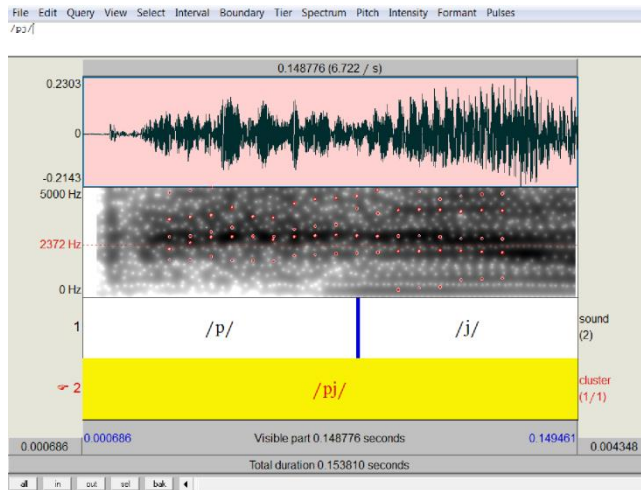


Figure 6: A spectrogram of the cluster /pj/ by a native speaker

Still, the main problem seems to be again with the letter 'u' in *'pure'* since 13 students dropped /j/ and produced a simple onset instead.

As for the /vj/ cluster, it involved errors estimated as 23.33%. The phoneme /j/ was dropped by five testees. Similarly, five

participants dropped the /j/ sound in the /hj/ cluster. It seems that the problem of pronunciation–spelling mapping comes out again with the /j/ sound.

All what has been stated assures the prominent influence of L<sub>1</sub> on producing FL initial /C+j/ clusters. Clusters that have foreign sounds were modified, and those whose spelling does not go in line with their pronunciation were mispronounced. However, it is worth noting that testees' being familiar with the target words of this category– as they have practiced them before– helped them to overcome difficulties while reading them.

#### 4.2.3. Common /C+j/ clusters ( within familiar words)

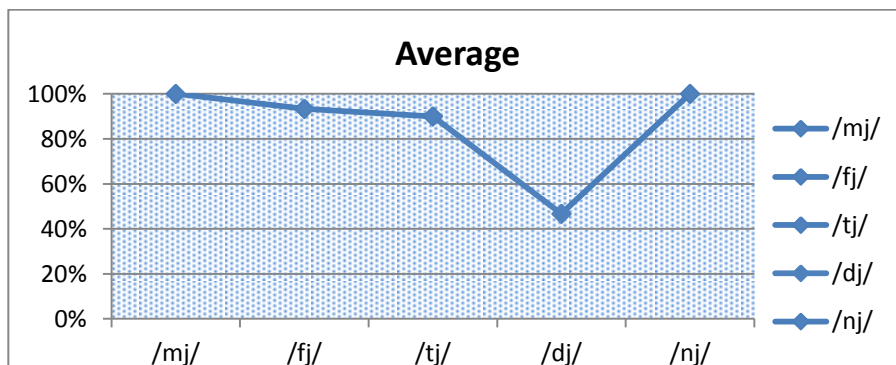
The first category, which comes last in terms of difficulty, consists of five clusters found in English and SA. They are embedded in words known to the testees. During the test, two clusters in this category triggered no problems and were correctly articulated by all testees as shown in table (6). They are: /mj/ in '*music*', and /nj/ in '*new*'. In addition, /fj/ in '*few*' had less than 10% errors. Only two clusters showed an error percentage from 10 to 20%: /tj/ in '*Tuesday*', and /dj/ in '*due*'.

Clusters of the first category	number & percentage of students who pronounced it correctly	number & percentage of students who pronounced it <b>incorrectly</b>	Number of correct but slow pronunciations	Wrong pronunciations
7) /mj/ in /mju:zɪk/	30 100%	<b>0 0%</b>		



8) /fj/ in /fju:/	28 93.33%	2 6.67%		1*/fij/ + 2 omitted /j/
9) /tj/ in /tju:zdeɪ/	27 90%	3 10%		1*/təj/+2*/twi:/
10) /dj/ in /dju:/	15 50% (11 chose /du:/, also correct)	5 20%	10 30%	4 omitted /j/ (* /dəʊ/+* /dɑɪ/+ * /dɔ:/+* /dɒ/)+1 * /dʊj/
11) /nj/ in /nju:/	30 100%	0 0%		

**Table 6: Performance of the participants in the 1st category of the test**



**Figure 7: Correct production of the first-category clusters**

Concerning the /tj/ cluster, one student inserted a schwa; two others omitted /j/ in order to overcome oral difficulty. Another student produced /tw/ instead of /tj/ as figure (8) displays the spectrographic pattern of the sound /w/ after /t/. On the contrary, figure (9) shows the spectrographic pattern of the sound /j/ as correctly articulated by a native speaker.

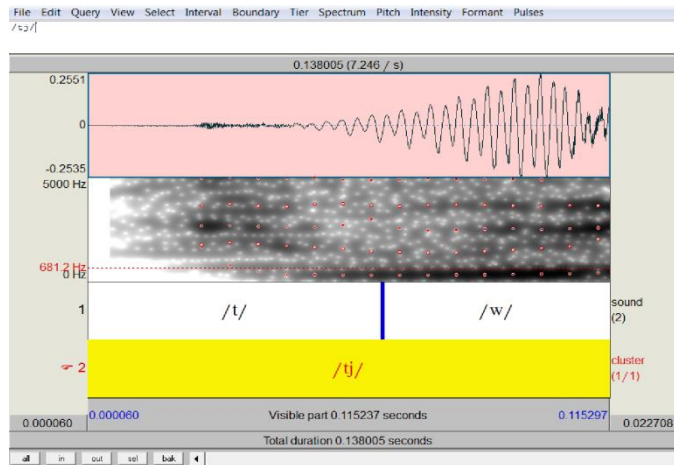


Figure 8: A spectrogram of the cluster /tj/ by a participant

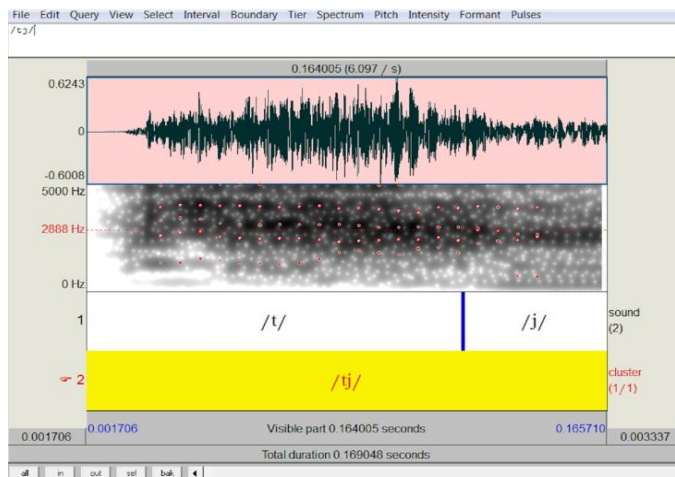


Figure 9: A spectrogram of the cluster /tj/ by a native speaker

Concerning the /dj/ cluster, deleting /j/ was the most common strategy by testees while pronouncing it. However, it should be noted here that ten testees chose another correct pronunciation for the word 'due' which involves no cluster: /du:/. Clearly, this way of pronunciation sounded easier. Moreover, ten other participants produced 'due' slowly in order to facilitate its pronunciation.

Although they could pronounce it in a correct way, they sounded more as non-native.

#### 4.2.4. Summary of the test results

The conducted test targets Syrian students of English at Al-Baath University. Its results display, in detail, pronunciation problems encountered by Syrian students of English. The major focus has been on the role of L<sub>1</sub> in articulating English initial /C+j/ clusters. It is induced that when differences between English and SA come out such as having a cluster with some foreign sound, testees face considerable difficulties. This is because they have to give up their SA phonotactics and adopt those of English. Attempting to overcome such difficulties, testees resort to one of the following modification strategies:

1) Deletion: statistically, there were 67 cases of deletion during the test (i.e., 84.44% of the total number of errors). In contrast with many hypotheses, students resorted to deletion more than insertion to overcome pronunciation difficulty. Surprisingly, the same sound, /j/, was dropped about 67 times during the test. It was deleted from the /sj/, /lj/, /kj/, /pj/, and /hj/ clusters. Most of these clusters were embedded in unfamiliar words. The onset of these words are spelled as a consonant followed by the letter 'u' which is pronounced different ways in different contexts. It is articulated as a vowel in words such as 'run', 'sure' and 'purpose'. On the other hand, it should be pronounced as /j+vowel/ sequence as in 'pupil',

and *'during'*. Here, L<sub>1</sub> interferes negatively as it has, unlike English, simple orthography, i.e. every letter is pronounced the same way in all situations. Accordingly, students were confused about the pronunciation of 'u', so they relied on their competence of L<sub>1</sub> and applied it to English utterances. Therefore, they mispronounced words with 'u' letter as *'lurid'* and *'cumulus'*. In fact, what has been mentioned in this section provides clear answers to the main questions of this study about the interference of the mother tongue.

2) Substitution: there were about 14 cases of substitution (i.e., 15.56% of the total number errors). /j/ was replaced by /w/ 11 times in the /kj/, /sj/ and /tj/ clusters. This proves that students are confused with the pronunciation of the letter 'u'; therefore, they articulated it in *'cumulus'* in a similar way to words such as *'quantity'* and *'quick'*. Such words are more familiar to the testees than *'cumulus'*. In addition, /p/ was replaced by /b/ 3 times. This resembles the case with other Arab learners of English in similar studies.

3) Insertion: there were about 9 cases of insertion during the test (i.e., 10% of the total number errors). In the first place, the vowel /ə/ was inserted 5 times and /ɪ/ comes in the second place with 3 times. Testees dependence on this strategy was less than on deletion. This actually contradicts with the results of previous studies where insertion has been the most common adopted strategy.

Nonetheless, it is worth mentioning here that pronunciation problems become relatively fewer when the testees produced words they have practiced before unlike new ones. For instance, the word '*new*' has been correctly articulated by all testees even though its onset resembles those of '*cumulus*' and '*lurid*' in having /j/ sound. This can be justified by the fact that testees are familiar with '*new*' unlike the two other words. This proves that "practice makes perfect".

## 5. Conclusion

This paper has examined the pronunciation of English initial /C+j/ clusters by Syrian students of English with focus on the influence of L<sub>1</sub>. The pronunciation test contains three categories of /C+j/ clusters embedded in eleven words. Thirty students have been recorded while reading these words within sentences. The results show the negative influence of SA on producing such clusters. The main problem is the complex orthography of English which confused the testees whose L<sub>1</sub> orthography is simple. For instance, testees relied on one pronunciation of the letter 'u' and ignored the other pronunciation. Being embedded in new words, the clusters in the second category caused the highest number of errors (72.22%); whereas the two other categories which contain familiar words caused fewer problems. It can be induced that testees could overcome verbal difficulties when they came across words which have been practiced before. Similar to the findings of previous

studies, the foreign sound /p/ has been substituted by some students for its voiced counterpart /b/. This is due to the absence of /p/ and presence of /b/ in the testees' mother tongue. However, it should be noted here that the sound /v/ is also a foreign sound for Arab learners since it does not exist in Arabic. Nevertheless, no one of the testees had problems with it. In fact, SA has borrowed several foreign words containing this phoneme such as /sarvi:s/ for 'omnibus', /væn/ for 'van', /sevən Δp/ for 'a soda drink'. It is worth mentioning here that these words are used a lot in Syrians' everyday speech. This helped students overcome any difficulty with this sound. Here, we can call this a positive transfer as L<sub>1</sub> helped in producing this sound. Concerning the types of errors committed by the testees, deletion showed the highest percentage (84.44%). Next comes substitution with a percentage estimated as 15.56%. Finally, insertion was the least used strategy (10%). In contrast with previous studies which considered insertion as the most common strategy among Arab learners of English, there were only few cases of inserted vowels. To conclude, goals cannot be easily obtained. Thus, mastering an FL may imply various difficulties, yet, they can be overcome throughout learners' determination and practical training.

## 6. Pedagogical implications

In light of the findings of this study, the following suggestions are made to help improve the performance of Syrian students of English:

- 1- Teachers of English in Syrian schools should have an English accent as perfect as possible so that they become perfect models for their students to follow.
- 2- Syrian curricula should be reconsidered to place more focus on the productive skills. For instance, students' speaking and listening should be scored in exams.
- 3- Utilising audio-visual aids in schools and universities helps students to absorb English more efficiently.
- 4- Students should be encouraged to use English in class and outside it.
- 5- At university, sufficient time should be allocated to English phonetics and phonology courses. Furthermore, students should be taught the main differences between English and their L<sub>1</sub> sound system with emphasis on the orthographic system of each of them.

## **7. Recommendations for further research**

In line with the present study, the following recommendations are offered for further research:

- 1) The same study could be conducted in Departments of English at different Syrian universities. Hence, L<sub>1</sub> may be any Syrian dialect other than Damascene.

- 2) The current study tackles the production of one type of clusters, initial clusters. So, further research could cover the other two types, namely medial and final clusters.
- 3) Later studies may be carried out to examine reasons behind pronunciation errors other than the interference of L<sub>1</sub>. For instance, a future study may cover verbal errors resulting from perception problems.

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