**The Academic College for Education in Israel-Haifa**

**המכללה האקדמית הערבית לחינוך- חיפה**

**English Department**

Topic:

The Influence of Mother Tongue (Arabic) on the Spelling of Novel Graphemes in English as a Foreign Language

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# Introduction

Language is considered a fundamental element in the communication process that enables humankind to convey messages, thoughts and beliefs among each other. Acquiring an additional language requires special linguistic knowledge including phonology, syntax, morphology, and many others. As English and Arabic are two distinct languages, each with its own unique linguisticsystem, Arab native learners face various difficulties while acquiring the English language. Numerous arguments have been presented regarding mother-tongue interference, with many researchers (Sabbah, 2015; Derakhshan & Karimi, 2015; Alsaawi, 2015) showing that the spelling performance in the target language is influenced by the use of the L1 of the learners. This study focuses on one such difficulty: the spelling performance of Arab learners (EFL) on specific, novel phonemes (/p/, /g/ and/v/).

Spelling is a process that converts the spoken form of a word into written form. Thus, learners’ spelling acquisition depends on two fundamental elements: phonological awareness of phonemes and alphabetical knowledge. As a result, differences in the phonological aspect and the correspondence of phoneme and grapheme in Arabic and English can affect learners’ spelling performance. This may lead to a negative transfer, caused by native Arab learners using their first language when they learn to spell in English. There are particular graphemes which exist in English but are absent in the Arabic system of graphemes such as, (/p/, /g/ and/v/). The absent graphemes are considered novel to learners of English as a foreign language.

It is important to emphasize that the absence of novel phonemes from the phonemic inventory of the first language causes difficulties for the leaners to correspond the phonemes with their written representations (Russak & Saiegh-Haddad, 2010). Consequently, leaners substitute the novel phoneme with another close phoneme from their first language. Among Arab Israeli learners, the difficulty of accurately representing the phonological structure of novel phonemes is a stumbling block in acquiring the English language (Russak, 2013). This issue has been studied among native Hebrew learners of English (Russak & Saiegh-Haddad, 2010) but not among Arab Israelis. Hence, the main aim of this study is to examine how the native language of foreign learners of English, in this case Arabic, affects the spelling performance on novel phonemes (/p/, /g/ and/v/).the absence of particular phonemes (/p/, /v/ and /g/) from the target language (Arabic), causes spelling errors among Arab learners. Subsequently, learners tend to substitute the novel phonemes with the corresponding phoneme pairs that exist in both the target language and the foreign language (e.g. Arab learners of English tend to substitute /b/ for /p/).

Learning and teaching English is a challenging task for both teachers and leaners. Arab students experience problems in phonological encoding that may be due to difficulties in the phonological representation of certain novel phonemes. Therefore, this study will attempt to clarify the spelling performance on novel phonemes. Consequently, the findings will enable teachers and learners to base their actions on a more empirically-based understanding of the spelling acquisition process. In addition, teachers together with learners may be able to come up with strategies to avoid certain spelling errors while acquiring English. Fundamentally, we hypothesize that novel phonemes will be more difficult to spell than non-novel phonemes. We can further speculate that novel phonemes that occur word-finally will be more challenging for native Arabic speakers to spell accurately compared to non-novel phonemes.

This study will attempt to answer the following questions:

1. In what way does the Arabic language affect the spelling performance of novel consonant graphemes in EFL, in particular (/p/, /v/, /g/)?
2. Does the absence of particular consonants novel phonemes (/p/, /v/, /g/) influence the learners' spelling performance?
3. Does the phonological environment (initial/final positioning) of a novel sound affect spelling?

L1: refers to Arabic language as a mother tongue language.

L2: refers to English as a second or foreign language.

Transfer: refers to the manner in which the L1 influences the acquisition of the L2.

Phoneme: the smallest unit of individual sounds (unit of sound)

Grapheme: the written form of verbal sounds (unit of encoding)

# Literature Review

## Phonological Awareness

Research has shown that young children generally start to develop phonological awareness when they begin to understand simple spoken words, typically at the preschool age (Adam, 1998). Bryant and Goswami (2016) have shown that children first begin to recognize words as separate entities, and then they become aware of how group of sounds operate in words (syllables and rhymes).Adams (1998) adds that after developing an awareness of these individual sounds (phonemes) children begin to attach and manipulate them in words. Phonological awareness emerges initially in oral language, and does not require that children possess any level of literacy. Abedalsabour (2016) defines phonological awareness as the ability to divide verbal language into smaller units and manipulate these smaller units into new word combinations. Phonological awareness is a fundamental required element in the literacy acquisition process among language learners for L1 and L2, and thus has been the focus of numerous research Saiegh-Haddad and Geva (2007); Russak and Saiegh-Haddad (2010). Many definitions have been proposed for this phenomenon, one of the most basic of which is that of Bryant and Goswami
(2016), who state that "someone who can explicitly report the sound in any way is ‘aware’ phonologically (p. 3).”, Children, when first learning to read and write, must recognize that each orthographic letter corresponds to a specific sound (or sounds) and that the sequence of these sounds can indicate spoken words. Such phonological awareness enables children to recognize that the word *mat*, for instance, can be produced by connecting the letters *m*-*a*-*t* (Bryant & Goswami, 2016). Other definitions are generally similar in their fundamental descriptions, though some are vaguer than others are. For instance, Abu-Rabia & Abu Rahmoun (2012) suggest that phonological awareness is the capacity to analyze spoken words into phonemes and syllables, and Blachman (2010) states that phonological awareness, which develops progressively over time and has a fundamental equal relationship with reading, focuses on the phonological structure of the spoken words as opposed to their meaning while Stahl and Murray (1994) define phonological awareness as "an awareness of sounds in spoken or written words that is revealed by such abilities as rhyming, matching initial consonants, and counting the number of phonemes in spoken words (p. 221).” Additionally,Anthony & Francis (2005); Stahl & Murray (1994) posit that phonological awareness is comprised of different skills that are discriminated by the kind of task performed, and they divide the phonological process into five different stages, the last of which they deem the most fundamental: i) the ability to recognize rhymes (e.g., *bat* and *mat*); ii) the ability to recognize alliteration (e.g.,*p-en*, *p-at*, *p-ell*); iii) the ability to blend and split syllables (e.g., *fl-ight*, *fi-ve*); iv) the ability to segment a syllable into phonemes (e.g., *m-at*, *c-at*, *p-at*); v) the ability to manipulate phonemes of spoken words (e.g., *m-a-t*, *c-a-t*). For the purposes of the present work, I will take ‘phonological awareness’ to mean the phonological recognition, distinguishing, and manipulation of sounds throughout an individual’s language development period. Bryant& Goswami (2016) explain that, as there are different manners in which words and syllables can be parsed into smaller segments of sound, there are also different forms of phonological awareness. They express that one form of phonological awareness is the parsing of words into smaller morphemes. For instance, *mailman* can be broken down into *mail* and *man*. They add that another form of phonological awareness is the manipulation of the sequence of phonemes to indicate different words. As words are comprised of sequences of phonological units, the alteration of theses sequences can change the meaning of a word. For example, the phonemes *a*, *b*, *e,* and *k* can be arranged to render *bake* or *beak*. Therefore, children must recognize the correspondence between graphemes and phonemes.

 Finally, another type of phonological awareness is the ability to recognize the onset (i.e., the initial phonological unit of a word) and rime (i.e., the string of letters that follow the onset) of a word.

## Phonological Awareness in L1 and L2

Phonological awareness and phonological representation are considered fundamental elements for the different stages of language development, namely the content and use of words, the phonology of the language, and the utterance of words (Abu-Rabia & Abu Rahmoun, 2012). It is important to assert that phonological awareness of the L2 is a basic requirement for decoding and encoding words (Saiegh-Hadadd & Geva, 2007). Furthermore, Russak and Saiegh-Haddad (2010) maintain that phonological awareness is considered an essential demanding factor when acquiring literacy in any language. Many factors (such as phoneme identity) influence the development and performance of phonological structure. For instance, phonemes that are shared between the L1 and L2 are ‘familiar’ phonemes (as they are already in the phonemic inventory of the L1 and thus already familiar to the L2 learner) and present less difficulty for L2 learners compared with ‘novel’ phonemes (i.e., phonemes that occur in the L2 but are absent in the L1).

 Russak and Kahn-Horwitz (2013) explain that the capacity for an individual to create sound-letter correspondence is contingent upon varying underlying abilities, starting with the ability to recognize and distinguish spoken sounds and ending with the ability to match the spoken sound with the correct orthographic symbol. Additionally, Verhoeven (2007) asserts that the ability of phonological awareness “requires children to consciously reflect upon the phonological segments of spoken words and manipulate these segments in a systematic manner (p. 427).” According to Anthony and Francis (2005), children begin acquiring phonological awareness from the preschool through early elementary school period and continue to revise their previous knowledge of phonological awareness while learning additional phonological skills.

## Phonological representation

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Phonological awareness is imperative for understanding spoken language— the human brain does not analyze arbitrary noises to interpret the semantic implication lent by an utterance, but rather, drawing upon phonological representation, works in an ordered system to analyze connected sounds and structures(Pierrehumbert,1990)That is to say, phonological representation is intrinsically connected to the speaker’s previous semantic and phonological knowledge (Pierrehumbert,1990). When acquiring an additional language, learners must possess a strong understanding of the phonology of each sound and its respective orthographic representation in order to achieve spelling accuracy in the additional language. Russak and Kahn-Horwitz (2013) postulate that in order for a learner to accurately represent the correlation between phonemes and their orthographic representations two fundamental criteria must be met. Firstly, the learner must possess the capacity to recognize, distinguish, and memorize sounds, and secondly, s/he must possess the capacity to match particular sounds to the accurate corresponding orthographic symbols.

# Type of Transfer

The process of transferring phonological knowledge from the L1 and applying it to the L2 can either facilitate or hinder L2 acquisition. Consequently, by examining the factors motivating inaccurate spelling of particular phonemes, the present work focuses on the phonological awareness of English (L2) learners and their representations of the novel consonant graphemes which do not exist in Arabic (L1). Sabbah (2015) states that there are two types of transfer: positive transfer and negative transfer. Perkins and Salomon (1992) claim that "positive transfer occurs when learning in one context improves performance in some other context, adding that speakers of one language find it easier to learn related rather than unrelated second languages… negative transfer occurs when learning in one context influences negatively on performance in another (e.g., despite the generally positive transfer among related languages, contrasts of pronunciation, vocabulary, and syntax generate stumbling blocks (p.4)).” In short, when there are linguistic similarities between the L1 and L2, positive transfer (i.e., applying rules from the L1, which facilitate or have a positive influence on the acquisition to the L2) may arise. Conversely, negative transfer (i.e., the application of rules from the L1, which impede of hinder the acquisition of the L2) may arise due to the differences between the L1 and L2. As regards an Arabic (L1) and English (L2) context, the assumption is that Arabic’s distinctive nature will negatively affect the learner’s acquisition of English.

# Spelling

Abu-Rabia and Sammour (2012) define spelling as the process of segmenting words into smaller phonemic units and then accurately matching the grapheme with the phoneme it represents..The acquisition of spelling. Mahmoud (2013) states that "spelling is a language skill whereby sounds (phonemes) are represented by letters (graphemes) which constitute the smallest building blocks of written language. The structure and texture of written language begins with spelling. Most researchers, past and present, highlight the importance of spelling in writing (p.6).” English contains obvious spelling rules that administer the phoneme–graphemes correspondence. To clarify Khullar (2017) compares the consonant sounds of English (which has 24 consonant sounds) and Arabic (which has 32 consonant sounds). Although both languages share some common consonantal phonemes, they also possess a substantial number of distinct consonantal phonemes. Another major difference is that Arabic does not differentiate between many voiceless and voiced consonantal sound pairs (e.g., /p/ and /b/; /g/ and /k/ (plosives or stops) and /f/ and /v/ (fricatives). Unlike English, they are not distinct phonemes but rather allophones in Arabic.

## Spelling Transfer among EFL

Due to the differences in the phonological systems of English and Arabic, it is unsurprising that Arabic EFL learners consider accurately spelling English words a difficult task (Mohamed, 2014). English presents irregularity in the degree of correspondence between phonemes and graphemes, while Arabic possesses a clear, and generally consistent, correspondence between phonemes and graphemes the lack of phoneme, grapheme correspondence in English presents serious difficulties for Arabic EFL learners Abu-Rabia and Siegel (2006). Furthermore, instances in which the phonological structure of the L2 is highly divergent from/possesses phonemes that are lacking in the L1 prompt the learner to transfer the background knowledge of the phonemes from their L1 to their L2 Russak and Saiegh-Haddad (2010). Moreover, Fender argues that the L1 influences the spelling of EFL learners in that they transfer their knowledge of phonology/phoneme-grapheme correspondence from their L1 (e.g., native Arabic speakers who learn English as an L2 realize the /p/ in *pen* as /b/ and the /v/ in *van* as /f/) (as cited in Figueredo, 2006, p. 25). Such knowledge transfer often prompts spelling errors Fender (2008). That said, Saiegh-Haddad and Geva (2007) suggest that a strong phonological awareness of English may positively influence the learner's acquisition of the L2, particularly in reading and writing and may potentially simplify spelling difficulties.

# Methodology

## Objective and Aimof the Study

The main aim of this study is to outline and investigate the types of spelling errors made by native Arabic-speaking EFL (English Foreign Learner) at elementary school, in Judida-Maker village in Israel. As well as to investigate the factors prompting such errors. In order to carry out this study, samples of dictation tasks were collected from participants. This data was subsequently analyzed and the learners’ errors were identified. The present work sets forth a discussion and an explanation of the learners’ errors. The main objectives for the current study are:

1. To identify the spelling errors of novel consonants (/p/, /v/ and /g/) made by EFL students who have Arabic as a L1.
2. To explore the main causes for spelling errors made by EFL students who have Arabic as a L1.
3. To compare between novel phonemes and non- novel phonemes, and its effect on learners' spelling performance.

The present work seeks to answer the following research questions:

1. In what way does the Arabic language affect the spelling performance of novel consonant graphemes in EFL, in particular (/p/, /v/, /g/)?
2. Does the absence of /p/, /v/, and /g/ influence Arab learners' spelling accuracy in English?
3. Does the phonological environment (initial/final positioning) of a novel consonant affect learners’ spelling?

# Methodology

## Method

I will utilize dictation tests in order to uncover the factors prompting spelling errors of the novel consonant phonemes /p/, /v/, /g/, as these phonemes are not present in Arabic (i.e., the native language of the participants).A dictation test will be administered over one session. The test will be comprised of 48 randomly-selected monosyllabic English words possessing consonants in different phonological environments (i.e., initial vs. final position). 24 of the words treat the target phonemes /p/, /v/ and /g/, while the other 24 words treat their respective phoneme pairs, i.e., /b/, /f/ and /k/.

The words contain the target phoneme in the initial and final position, in order to determine if the phonemes' position effect the learners' spelling accuracy.

The participants’ usual English teacher will conduct the tests, and the students will be unaware that they are being tested.

I will analyze the data in four different stages. Firstly, I will collect the data to be analyzed by conducting dictation and listening tasks. Secondly, I will identify the participants’ spelling errors. Thirdly, I will classify these errors. Finally, I will analyze the errors and attempt to uncover the factors motivating Arab learners of English to commit spelling errors in regards to /p/, /v/, and /g/.

## Participants

The participant pool was comprised of 60 fifth grade students (35 females and 25 males) who are learning English as a foreign language and have English proficiency levels ranging from low intermediate to intermediate. The students were selected randomly, and gender was not counted as a variable. The dictation task was administered in two classes, each consisting of 30 students. The participants had been learning English since the third grade (at the same school). Fifth grade students were selected as the most suitable participants for this study, as they have more advanced vocabulary inventories and writing abilities (compared to younger learners).

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# Appendix 1.

Dictation task for the novel consonant graphemes (/p/, /v/, and /g/) and other random words of non-novel phonemes (phonemes pair /b/,/f/, /k/)

**Words with novel phonemes**

Initial Position

|  |  |  |
| --- | --- | --- |
| Consonant /g/ | Consonant /v/ | Consonant /p/ |
| girl | Vet | Pen |
| gas | Vote | Pig |
| goat | Van | Pear |
| ghost | Vase | Pie  |
|  |  |  |

Final Position

|  |  |  |
| --- | --- | --- |
| Consonant /g/ | Consonant /v/ | Consonant /p/ |
| dig | Shiv | Tap |
| dog | Live | Cap |
| big | Civ | Lip |
| fog | Give | Top |

**Non- Novel phonemes Words**

Initial position

|  |  |  |
| --- | --- | --- |
| Consonant /ka/ | Consonant /f/ | Consonant /b/ |
| can | face | Bag |
| cat | far | Bat |
| kit | full | Bill |
| kim | fair | Ban |
|  |  |  |

Final position

|  |  |  |
| --- | --- | --- |
| Consonant /ka/ | Consonant /f/ | Consonant /b/ |
| ink | golf | Lab |
| sick | beef | Rob |
| pink | Grief  | Hob |
| ark | loaf | Job |