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

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**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 (AL-sobeh, 2017; 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/).

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.

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 lack of phonological knowledge of the phonemes (/p/, /g/ and /v/) in Arabic affect the spelling performance of EFL?

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

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

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).(Adam,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. (Sabour, 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 require element in the literacy acquisition process among language learners for L1 and L2, and thus has been the focus of much research (Saiegh-Haddad & Geva, 2007; Russak & 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.(Btyant&Goseami,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 &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& 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, (Nijmegen, 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& 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& 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

The acquisition of spelling (which Miriam-Webster defines as “the forming of words from letters according to accepted usage”) relies on three major factors, namely phonological knowledge, aliphatic knowledge, and morphological awareness. (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 & 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 & 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 Firderego, 2006, p. 25). Such knowledge transfer often prompts spelling errors (Fender, 2008). That said, (Saiegh-Haddad &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~~s~~ and Aim~~s~~ of the Study

The main aim of this study is to outline and investigate the types of spelling errors made by native Arabic-speaking EFL students at High School, in the village of Judida-Maker 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 explanation of the learners’ errors. The main objectives for the current study are:

1. To identify the spelling errors of novel consonants made by EFL students who have Arabic as an L1.
2. To explore the main causes for spelling errors made by EFL students who have Arabic as an L1.

The present work seeks to answer the following research questions:

* How does having Arabic as a native language affect the spelling performance of the novel consonant phonemes /p/, /v/, and /g/ in English?
* What motivates particular errors in the spelling of consonants among Arab EFL students?
* To what extent does phonological awareness of the target language affect learners’ spelling accuracy in English?

## Participants

The participant pool is comprised of 60 ninth-grade students (35 females and 25 males) possessing 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.

## Instruments

I will utilize dictation tests in order to uncover the factors prompting spelling errors of the novel consonant phonemes /p/, /v/, /g/, phonemes which are not present in the native language of the participants. The test will contain a list of 60 randomly-selected English words (possessing consonants in different phonological environments) split into two categories, one of which is comprised of low-frequency words while the other is comprised of high-frequency words. The phonological environment of the consonants varies between word-initial and word-final. The participants’ usual English teacher will carry out the test, and the students will be unaware that they are being tested. It should be noted that not all of the words presented in the dictation task are relevant to this study, as, during the task, the teacher will add other, irrelevant words (see appendix 1). The purpose of these irrelevant words is to ensure the validity of the dictation task and to identify general reasons for error. 20 words contain each of the target phonemes /p/, /v/, and /g/ -- each in a different position and with a different level of frequency.

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# Appendix 1.

Dictation task for the novel consonant graphemes /p/, /v/, and /g/ (a list of high frequency words and a list of low frequency words).

**High Frequency Words**

Initial Position

|  |  |  |
| --- | --- | --- |
| Consonant /g/ | Consonant /v/ | Consonant /p/ |
| glove | victim  | Pen |
| glue | vote | Pear |
| grass | van | Pizza |
| green | volume | Pie  |
| gray | Vegetables  | paper |

Final Position

|  |  |  |
| --- | --- | --- |
| Consonant /g/ | Consonant /v/ | Consonant /p/ |
| dig | shiv | tap |
| lag | live | map |
| big | give | slap |
| fog | have | up |
| frog | grave | tip |

**Low Frequency Words**

Initial position

|  |  |  |
| --- | --- | --- |
| Consonant /g/ | Consonant /v/ | Consonant /p/ |
| gallon | verify  | purse |
| geothermal | valley | pudding |
| gather | varoom | peas |
| genuine | vacant | pop |
| governor | varlet | paper |

Final position

|  |  |  |
| --- | --- | --- |
| Consonant /g/ | Consonant /v/ | Consonant /p/ |
| uninteresting  | serve  | skycap  |
| corresponding | native | scup  |
| incorporating | attractive | syrup  |
| multitasking | relative | cowslip |