

Phonological and Morphological Transfer among Arab ESL Learners

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Abstract

The present study illustrates some of the phonological and morphological shifts that confuse the reading process of Arab ESL Learners. The study proves that this student group tends to transfer some of the Linguistic schemas they acquired during their acquisition of their first Language (Arabic Language) into the process of L2 learning, confusing their reading process in L2. The study also shows how Arab ESL learners' knowledge of English phonology and morphology rules affects their reading process, and how their reading process improves or deteriorates based on their awareness of the distinctive nature of both languages. The study concludes with some pedagogical recommendation for teaching English vocabulary strategies and reading exercises for this student group.

Introduction

Of course, spelling can be a problem, both in school and out, but it is a problem of writing, not of reading. Knowing how to spell does not make a good reader because reading is not accomplished by decoding spelling. And good readers aren't necessarily good spellers. (Smith 148) When an ESL teacher reads these lines from Frank Smith's *Understanding Reading*, he gets heartburn. There is something fundamentally wrong in these lines, or we have been cheated all these years of learning English. Smith's emphasis on the naturalness of the reading process undermines some of the basic skills of reading, of which phonemic/orthographic awareness and word identification are essential. His attempt to illustrate the process of reading is based on his elaboration of how native speakers read in their L1 (native language), although one might argue that reading is not that natural even among natives. This generalization never addresses the reading process among ESL learners. The present study analyzes how ESL learners' knowledge of English phonology and morphology affects their reading process. In this study, researchers work with Arab ESL students enrolled at Jazan University in their first year of college. The study proves that there is a phonological and morphological shift between L1 and L2 among Arab ESL learners, especially early in their L2 learning, so their reading process improves or deteriorates based on their awareness of the distinctive nature of both languages. This linguistic shift between L1 and L2 among Arab ESL learners happens because of the difference in the function of consonants and vowels in word formation in English and Arabic Languages. Arabic Language emphasizes the consonantal root in the word as the essential part of the word's lexical meaning, while vowels and affixes carry only the syntactical and grammatical meanings of the word in the sentence. This confusion not only interrupts their reading, but also disturbs or sometimes prevents their comprehension of a particular text. In the following pages, researchers describe some of these linguistic shifts that happen between L1 and L2 among Arab ESL readers, confirm the importance of phonological, orthographic, and morphological awareness of English words during the reading process, and finally discuss some pedagogical implications that might improve students' vocabulary learning and reading process.

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Methodology

The researchers in this study decide to test some of Smith's above mentioned hypotheses on ESL learners. We asked a number of Arab ESL students, who are still in the first year of college study at the Dept. of English, at Jazan University, to read a page from *Barchester Towers*. Our observation of their reading process raises two concerns. The first concern, unsurprisingly, was their poor reading skills and lack of comprehension. We believe this lack of comprehension was due to their inadequate mastery of English vocabulary, in addition to other deficiencies in grammatical and syntactical rules, a sharp contradiction to Smith's above statements. However, this observation was very expected. Several researchers in ESL learning and acquisition have argued that vocabulary knowledge is very essential to reading and comprehension, especially among ESL learners (the idea is discussed further in the following section). However, the second major concern was the students' techniques to identify and guess the meanings of new words; most of these techniques came from their phonological and morphological training of L1 (Arabic Language). To these students, the words *assume* and *consume*, *allude* and *elude*, or *adopt* and *adapt* should have some similar lexical meanings. They interpreted the vowel change in these pair of words as a mark of tense, case, or person, but the lexical meaning remains the same since both words in each pair share the same or similar consonant cluster (a morphological shift from L1). To verify these hypotheses, we conducted a case study on twenty other ESL Arab students, attending a course of advanced reading at the Dept. of English at Jazan University, and offered them two weeks of one hour vocabulary teaching daily, including helping them read their homework assignments. We explained to them that this teaching experience will investigate some of the problems that they may have in learning English vocabulary and develop new ways of teaching/learning new vocabulary with them. We also took their consent to document this experience in a research project. In two weeks, we read three short stories: James Joyce's *Eveline*, Tim O'Brien's *The Things They Carried*, and Edgar Allan Poe's *The Cask of Amontillado*. We followed every reading by a small reading and comprehension exercise that involves explaining sentences in which we used new vocabulary which the students learned in the stories. In some of the exercises, we replaced few words with others that have similar consonantal components and asked the students to see if there was any change in the meaning (for example, we changed the word *avenue* to *revenue* in Joyce's sentence: *the evening deepened in the avenue*). We also developed lists of homonyms, homophones (*there*, *their*), and homographs (*bank*, *bank*) and tried to see how much confusion these pairs of words could affect students' comprehension.

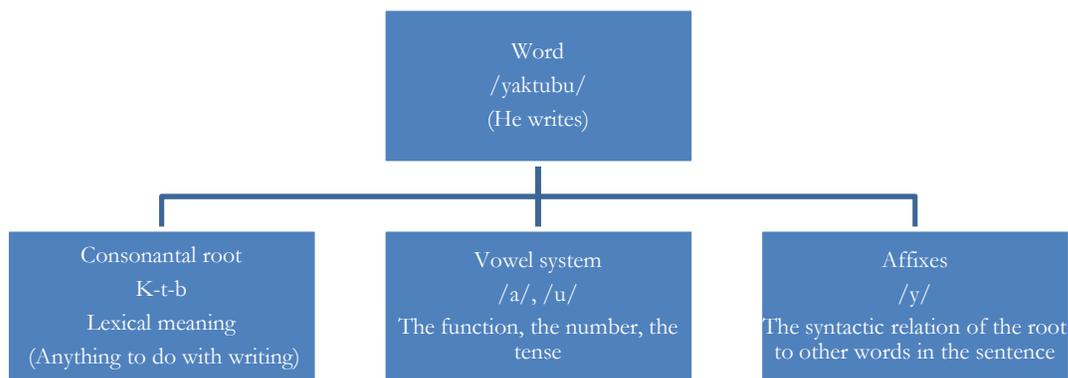
Surprisingly, most of the students' answers were identical. They tried to guess the meanings of new words by approximating them to words they knew before which share similar consonantal makeup. In one of the observation, we noticed that their interpretations of new words differ from one student to another based on which word each student related the new word to. However, the process of word identification was the same. For example, in O'Brien's *The Things They Carried*, when they encountered the word *grenade*, and one student interpreted the word as something big assuming its possible relation to the word *grand*; another student guessed the meaning as something that has to do with the color *green*. When we told them that both answers were wrong, their third interpretation was that *grenade* might be another form of the verb *grind*. In the last two days of the study, we designed some exercises that involved some confusing words such as *sour/ sore*, *feet/ feat*, *illusion/allusion*, *alter / altar*, *apart/ a part*, *adapt/ adopt*, and *forward/ foreword* and asked them to select the proper word and put it in the sentence, in a fill-the-blank exercise. They poorly did in these exercises. Although these pairs of words could be confusing even to the native speaker, Arab ESL learners (especially beginners) are almost certain about the lexical relation between these words, and have harder time distinguishing between the words in each pair.

Supporting Literature and Analysis

Though there are many theories that define the nature of reading and the process of making meaning, ranging from the new criticism school with its emphasis on the text as the source of meaning, to reader-response theory where the reader makes the meaning, most of these theories agree that reading is a dynamic interaction between the reader and the text. In case of ESL students, their reading process and ultimately comprehension of the text can not be accomplished without understanding the linguistic structure of L2 and some knowledge of L2 vocabulary. Salim Khalideh, an ESL scholar and researcher, argues that ESL students have to develop "awareness of the phonology and script, background knowledge, discourse and content familiarity, and knowledge of the linguistic features of the L2, such as grammar and vocabulary-lexical and syntactic recognition" (417). Similarly, Vermeer, Crow, and Schulz in three different studies confirm that effective communication and comprehension of a particular text is largely based on the students' mastery of vocabulary.

Therefore, a successful interaction between an ESL reader and a text requires basic understanding of the text’s diction, besides some knowledge of the syntactical and semantic rules of the language. The next question is how ESL learners acquire their L2 diction. Studies in ESL acquisition make a distinction between child and adult ESL learners. L2 vocabulary acquisition is much harder among adults than children because of the existence of already well-established lexicon among adults in their L1. Nan Jiang, an ESL researcher who conducted two studies on the possible semantic shifts that exist among Korean and Japanese ESL learners, explains: Adult L2 learners often do not have as much contextualized input as children do, which makes the extraction and integration of lexical meanings difficult. More important, adults already possess a well- established conceptual and lexical system, and most L2 words have a correspondent concept and translation in the adult learner's first language (L1). (417) This paper argues that this linguistic shift not only happens on a semantic level, it also exists on phonological and morphological levels among adult ESL learners if their L1 and L2 share similar linguistic systems. The following paragraphs provide a quick introduction to Arabic phonology and morphology, explaining how Arabic and English languages share some similar linguistic characteristics, and the possible linguistic shifts that might happen for Arabic ESL learners during their learning process. Unlike orthographic languages such as Chinese and ancient hieroglyphic languages where the logograph is the basic linguistic element, both Arabic and English languages are morphophonemic, meaning phonemes and morphemes are the basic elements of their linguistic structures. Readers of both languages have to develop some awareness of the different representations of these phonemes and morphemes, their linguistic combinations, and their semantic and syntactical representation in the sentence.

In case of Arabic language, despite the existence of a number of dialects and varieties of colloquial Arabic in many Arab countries, the standard Arabic (also called Modern Standard Arabic) is relatively uniformed in the Arab world (Gadalla ix). Arabic formal “written form is taught at school,” and its spoken form is the formal speech of educated people, media, and the print (Gaber 1). This standard dialect has twenty eight letters that represent twenty eight consonant, of which three letters can also be used as vowels. The vowel system can be classified into two groups: short vowels /a/, /i/, and /u/ and long vowels /aa/, /ii/, and /uu/ (Gadalla 5). In writing, short vowels are represented by diacritics above and under letters (◌َ, ◌ِ, ◌ُ) and long ones by letters (/a:/i:/u:). The syllable structure of Standard Arabic can be summarized in the formula, $C'V (V) C^{n-2}$, which means there are five basic different syllable patterns in Standard Arabic: CV, CVV, CVC, CVVC, and CVCC (Gadallah 8). In terms of word formation in Arabic, there are three basic elements in the formation of a word: a consonantal root, a vowel pattern, and one or two affixes (Gadallah 28). The consonantal root represents the core lexical characteristic of the word which is the most important part of the word regarding meaning; however, its consonantal components are not usually continuous or sequential (Ghaly 15). These consonants can come as one sequence or might be divided by vowels in different cases. The consonantal root carries the lexical meaning of the word, while the vowel pattern usually signifies the function, the number, or the syntactic role of the root (Schmidt 108). The affixes used in word formation can be prefixes, suffixes, or infixes. Derivational affixes usually change the grammatical category of the word, while inflectional affixes signify the syntactic relationship of the word in the sentence (Gadalla 30). This diagram illustrates the three components of the word /yaktubu/ which means *he writes*:



The following is also another detailed descriptive example of the variations of the verb /write/ according to number: Arabic language defines three variations of verbs in regards to the number-pronoun (with two gender variation in each): singular, dual, and plural. The following is an example of the variation of the consonantal root [k-t-b] in the three numbers:

Third person

Singular	m	/yaktubu/	he writes
	F	/taktubu/	she writes
Dual	m	/yaktubani/	they (the two men) write
	f	/taktubani/	they (the two women) write
Plural	m	/yaktubuna/	they (the men) write
	f	/yaktubna/	they (the women) write

Second person

Singular	m	/taktubu/	you (talking to a man) write
	f	/taktubina/	you (talking to a woman) write
Dual	f/m	/taktubani/	you (talking to two men or women) write
Plural	m	/taktubuna/	you (group of men) write
	f	/taktubna/	you (group of women) write

First person

Singular	f/m	/aktubu/	I (man or woman) write
Plural	f/m	/naktubu	we (men or women) write

The consonantal root [k-t-b] also carries all the meanings of writing and anything related to it. It can produce /kataba/ he wrote, /yaktubu/ he writes, /kaatib/ writer, /maktab/ office, /kuttaab/ writers, /maktabah/ library, ...etc., and each one of these verbs or nouns has its own variations to signify tense, case, and other syntactical relation in the sentence. These rules for word formation in L1 create some confusion in the learning of L2 vocabulary among Arab ESL students and subsequently affect their reading process. The emphasis on consonantal root for the lexical meaning does not exist in English. A change of vowels can change the lexical meaning of the word: the word *vain* is entirely different from *vein*; the verb *break* has no lexical relation to *brake...etc.* Moreover, a change of vowels in some nouns or verbs does not necessarily signify a change of tense, case or number, or a change in the syntactical relation of the word in the sentence (another linguistic shift from L1). For example, a change of vowels does not change the lexical meaning of *feet* and *foot*, *break* and *broke*, but *break* and *brake*, *area*, *era*, and *arena* have no lexical relation whatsoever.

Pedagogical Implications

Richard Anderson et al. argued that “every act of comprehension involves one's knowledge of the world as well”(369). This philosophy has later developed into schema theory that explains the different schemas, cognitive bodies of information, through which a person relates and understands new concepts. Widdowson defines these schemas as “cognitive constructs which allow for the organization of information in long-term memory” (34). These knowledge schemas cover everything a person knows from everyday knowledge and needs to his or her most specialized knowledge, including the knowledge of language (Wallace 33). Most of these schemas are usually constructed at early age, especially the ones regarding L1 language acquisition, which later influence the process of L2 acquisition. This research proves that Arab ESL learners, especially those in early stages of L2 acquisition, activate the wrong schemas regarding word formation in L2. They try to understand new words in their L2 based on schemas they developed in the process of their L1 acquisition, resulting in confused readings of texts in L2. This research aims first and foremost at familiarizing the teachers of this group with some of these linguistic shifts. This understanding can help teachers of this group address these problems and design or modify their teaching methods to accommodate these changes. We believe that Arab ESL learners need to learn very early in their L2 acquisition the distinctive nature of L2 linguistic system, the intra-structure of words, and the importance of both vowels and consonants in producing the lexical meaning of words in English. A detailed list of words that share similar consonantal roots, or any similar consonantal combination, and have different lexical meanings, can help shape their perception of word formation in English.

In this case study, we developed a similar list using words such as *sour/ sore; illusion /allusion; alter / altar; break/ brake; capital/ capitol*; forward/ foreword, which, though confused them for awhile, helped them understand the idiosyncratic nature of English, explaining the difference between their L1 and L2 phonological and morphological systems. In the same time, we found it very useful to teach ESL Arab students some concepts of English, namely homonyms, homophones and homographs, and some of their confusing meanings, stressing the importance of the syntactical and semantic relations in the sentence to distinguish between their meanings. For example, in a sentence like I bought their car, ESL students need to know the grammatical/syntactical rules of possessive pronouns to choose their not its homophone there. Similarly, when they read a sentence such as, I deposited all my money in the bank; they should understand which one of the meanings of the word bank is signified. In addition, teachers of this linguistic community can build on the already-established linguistic schemas that these students have developed during their L1 acquisition. One of these linguistic concepts is affixation. These students already know what an affix is, the difference between prefixes, suffixes and infixes, and how different they are from the word root. They might still have some misunderstanding about the functions of affixation in English, but teachers can explain these functions as they teach affixation rules simultaneously. The students who participated in this study explained that they had no problem understanding this concept; rather, they felt that the knowledge of affixation helped them better recognize new words that have some of these affixes. Examples of affixation in English are:

Prefixes

Mono: meaning *one*. Examples: monograph, monosyllabic
 Multi: meaning *many*. Examples: multilingual, multifaceted;
 Bi: meaning *twice* or *double*. Examples: bilingual, bicycle, bipolar
 Omni: meaning *all*. Examples: omnipotent, omniscient;
 Auto: meaning *self*. Examples: automation, autobiography
 Mal meaning: *ill* or *evil*. Examples: malnutrition

Suffixes

-ful meaning *full of something*. Examples: skillful, helpful
 -age meaning *condition, state*. Examples: coinage, postage
 -ism meaning *system of thought or philosophy*. Examples: constructivism, modernism

To help students avoid any possible phonological shifts between their L1 and L2, we introduced these students to consonant cluster rules in English and stressed the irregularity of English in this regard. Arabic Language has very loose consonant clusters, meaning vowels can divide the consonantal root in many ways to signify tense, case or number; however, English consonant clusters come in very systematic combinations. One example of the systematic consonant clusters in English is that any three consonant clusters have to start with /s/ like *sprint, squire*, and *stew*; “nasal consonants cannot occur in word-initial consonant clusters unless the first consonant is /s/” (Harrington 2). Therefore, there is no word in English that has /bm/ or /dn/, and if there are some words that have a consonant cluster with a nasal consonant like *knight, knife*...etc., the first consonant has to be silent. Some of these rules do not apply on English words that were borrowed from other languages. Moreover, the idea of word formation through derivation and inflexion is very familiar to these students because of the existence of similar schemas in their L1. They scored very high in the exercises that involve making new words based on some word formation rules. These word formation rules increased their vocabulary knowledge tremendously and boost their self confidence in their L2 competence as well. Examples of some of the rules we covered in this study:

Teach-er/ ing/; employ-/er/, /ee/, /ment/
 Colony / [i]al/, / [i]ze/, / [i]zation/
 Wash/ machine = washing machine
 To walk, have a walk; to bite, have a bite
 Blending: International police= Interpol
 Clipping: Laboratory=lab; condominium=condo
 Zigzag; abracadabra

Then again, we had to stress the irregularity of English language regarding some of the rules of word formation. These rules are not applicable to every noun or verb in English. We read some excerpts from Richard Lederer's *Crazy English: the ultimate joy ride through our language*. Even if blackberries were really black and blueberries really blue, what are strawberries, cranberries, elderberries, huckleberries, raspberries, and gooseberries supposed to look like?...To add to this insanity there is no butter in buttermilk, no egg in eggplant, no grape in grapefruit, no bread in shortbread, neither worms nor wood in wormwood, neither mush nor room in mushroom, neither pine nor apple in pineapple, neither peas nor nuts in peanuts, and no ham in a hamburger... A writer is someone who writes, and a stinger is something that stings. But fingers don't fing, grocers don't groce, hammers don't ham. (qtd. in *Looking at Language* 1) We have to confess that this discussion of the irregularity of word formation rules in English depressed them for a short time, but it helped them realize the distinctive nature of English language, some of its irregularities, and how it is different from their L1. We also found it very useful to build on their understanding of words in interrelated groups, networks and families. Having developed similar schemas in their L1, they respond to groups of words in diagrams, tables, and trees more easily than individual words. Aly Amer in "Advanced Vocabulary instruction in Teaching EFL" explains that "the lexical content of a language is best treated not as a mere aggregation of independent words or an unstructured list of words but as a collection of interrelating networks of relations between words" (1). This method of vocabulary teaching helps them memorize these words and understand the semantic relations between them at the same time. Fortunately, many of these diagrams, trees, and other shapes that connect words based on their semantic relations are already available in many online sources and thesauruses. The following is one example from an online thesaurus called *Thinkmap* that generates a tree of synonyms and antonyms of any given word:



However, this wide scope of vocabulary teaching may possibly create some confusion among ESL students. A very big tree of the word *finish* in the above *Thinkmap* thesaurus may confuse ESL learners of the different specific meanings and connotations of the different synonyms and antonyms of the word *finish*. So, teachers might think of introducing similar trees in small chunks, teaching synonyms in one day and antonyms in another, and stressing the meanings and connotations of each alternative. Finally, this massive vocabulary teaching methods require a change of the nature of the exercise as well. Teachers might need to develop vocabulary exercise that stress the semantic relations of different words in the same group, but still distinguish between their particular meanings and connotations, or pragmatic and collocational usage.

The following is a very good example of such exercises:

Word	Affect with wonder	Because Unexpected	Because difficult to believe	So as to cause confusion	Because shocking so as to leave speechless
Surprise	+	+			
Astonish	+		+		
Amaze	+			+	
Astound	+				+

(From: Rudska et al. 1982).

- o A) They were clearly _____ at our sudden arrival.
- o B) I was _____ at the three year old boy’s ability to swim.
- o C) The tropical islanders were _____ to see snow for the first time in Europe.
- o D) His parents were _____ to learn that their young son had robbed a bank.
- o E) I was _____ to receive so many presents on my birthday. (Amer 3)

Some of these strategies of vocabulary teaching and exercises are already taught in many ESL classrooms, but this research explains how these techniques might be more productive among Arab ESL learners. In most of these vocabulary teaching methods, teachers build on some already-established schemas that these students have previously learned during their L1 acquisition.

Conclusion

We believe this study has provided a detailed description of how some Arab ESL learners during their early process of L2 learning get confused with some of the phonological and morphological rules they acquired in their L1. Unlike, other ESL students, Arab ESL learners are more sensitive to orthographic similarities in the consonantal makeup of English words, resulting in some assumptions of possible relations of lexical meanings between these words. This confusion can develop into many reading and comprehension problems. These conclusions negate Smith’s hypothesis that reading does not require the knowledge of words or spelling. The study also elaborates on the similarities and differences between phonologies and morphologies of Arabic and English languages, highlighting some possible linguistic shifts between the two linguistic systems. This paper explains how the understanding of the two linguistic systems could be utilized in teaching English vocabulary to this student group, describing a vocabulary instruction method that might help students of this group avoid some of the confusion when reading new words in L2. This method might also help them learn new words faster and more proficiently. This research concentrates only on Arab ESL’s receptive knowledge of vocabulary, meaning focusing only on how they receive or guess the meanings of words when they read them. It does not discuss how these students produce (speak or write) words in English and how this process might also be related to some schemas they have developed in their L1 acquisition process. This question might be researched in a different study later.

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