

**ФИЛОЛОГИЯ. ТЕОРЕТИЧЕСКАЯ, ПРИКЛАДНАЯ И
СРАВНИТЕЛЬНО-СОПОСТАВИТЕЛЬНАЯ ЛИНГВИСТИКА
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**ВЛИЯНИЕ ТОНАЛЬНЫХ МОДЕЛЕЙ ПЕРВОГО ЯЗЫКА НА
УДАРЕНИЕ В СЛОВАХ АНГЛИЙСКОГО ЯЗЫКА: ФОНЕТИЧЕСКАЯ
ИНТЕРФЕРЕНЦИЯ У НОСИТЕЛЕЙ АРАБСКОГО ЯЗЫКА,
ИЗУЧАЮЩИХ АНГЛИЙСКИЙ ЯЗЫК**

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Аннотация. В настоящем исследовании изучается влияние тональных/просодических свойств арабского языка как родного на постановку ударения в английском языке как иностранном. Из-за нефиксированной системы ударения и зависимости от тональных изменений и высоты тона распределение ударения в английских словах может вызвать трудности у носителей арабского языка, когда они начинают изучать английский язык, поскольку английское ударение фиксировано и играет важную роль как в скрытом значении, так и в структуре предложения. Это означает, что если не все ударение поставлено в правильной части слова при смещении ударения, смысл теряется или непоправимо изменяется. Исследование выявило систематические ошибки в постановке ударения в английских словах, особенно многосложных, и рассмотрело, как происходит интерференция первого языка в английском произношении этих учащихся. Исследование иллюстрирует проблемы, связанные с разборчивостью и беглостью речи носителей арабского языка, изучающих английский язык, путем анализа передачи арабских тональных моделей (например, ровные контуры высоты тона, равномерное распределение ударения). Основные выводы подчеркивают необходимость целенаправленного обучения для выявления и исправления помех на языке первого языка (особенно в ударении гласных и высоте тона), а также предоставляют информацию о лучших методах обучения английскому языку как иностранному для этой группы учащихся.

Ключевые слова: просодическая система языка; просодическая корректность; тональные паттерны; высота тона; фонетическая интерференция; исправление просодических ошибок

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THE INFLUENCE OF L1 TONAL PATTERNS ON ENGLISH WORD STRESS: PHONETIC INTERFERENCE IN ARABIC-SPEAKING EFL LEARNERS

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Abstract. The present study explores the effects of Arabic L1 tonal/prosodic properties on the production of English word stress produced by speakers of English as a foreign language (hereafter, EFL) with Arabic as L1. Due to its non-fixed stress system and dependency on tonal variation and pitch, the allocation of stress on English words can cause difficulty for Arabic speakers when they become English learners as English stress is fixed and has a major role both in hidden meaning and structure of a sentence, meaning that if not all stress is put in the correct part of a word, the meaning becomes lost or irreparably changed. The study indicates systematic errors in stress placement for English words – especially multisyllabic – and investigates how L1 interference occurs in the English pronunciation of these learners. The study illustrates the challenges to intelligibility and fluency in the speech of Arabic speakers learning English, by analyzing the transfer of Arabic tonal patterns (e.g., flat pitch contours, even stress distribution). The major conclusions highlight the needs for targeted instruction for identification and correction of L1 interference (specifically in both the vowel-stress placement and pitch) and it provides information for better methods of EFL instruction to this group of students.

Keywords: prosodic language system; prosodic correctness; tonal patterns; pitch variation; phonetic interference; correction of prosodic errors

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The origins and development of language are a subject not entirely understood, particularly how sound relates to written symbols and the mispronunciation of terms. Languages also exhibit heterogeneous features. Therefore, linguists recommend familiarizing yourself with intonation, striving to pronounce words correctly, and being flexible [1], [2].

Word stress in English is also important, as words with different stress patterns may convey different meanings or lead to differences in sentence grammar, which can be problematic for L2 learners whose L1 is stress and prosodically different from English. Arabic-speaking learners of English as a Foreign Language (EFL), in particular, find English word stress hard to master, as Arabic phonetic interference be-

comes an obstacle. In contrast to English, where the stress pattern is fixed, Arabic has a much freer stress assignment, that often correlates with morphological or syntactic properties, rather than lexical distinction [3], [4]. This phonological contrast triggers Arabic speakers to carry over L1 prosodic features such as pitch patterns in to English and lead to wrongly placed stress, nonnative sounded rhythm and limited intelligibility [5].

The following paper explores the impact of Arabic L1 tonal and prosodic features on the production of English word stress in order to redress this oversight, through a literature review, comparisons and case studies. This study attempts to bridge this gap by gaining insights into the contribution of L1-specific Arabic phonetic features to lexical stress placement in Arabic L1 learners and providing suggestions for successful EFL pedagogy based on theoretical findings in order to enhance the teaching and learning of second-language pronunciation.

- To what extent in your opinion do Arabic tonal patterns influence the production of English word stress in EFL learners?
- How can knowledge of L1 tonal influences help teach English word stress?
- Which particular systematic features of Arabic phonetics are most responsible for stress errors in English?

The significance of this research is that highlighting the unique characteristics of Arabic that lead to stress errors could help the instructor to direct her focus towards the most problematic areas when it comes to pronunciation. Since it points out interference issues, it can help with targeted pronunciation instruction. When researchers understand the potential problem related to the mother tongue interference of the students that they are teaching, the techniques of teaching could be improved considering this problem, due to which, the efficiency of EFL pronunciation can be made more effective and productive.

Key theories such as language transfer or phonetic interference help us understand how L1 characteristics affect our acquisition of an L2, with a special focus on phonological patterns. Language transfer is the term used in second language acquisi-

tion (SLA) to reflect the effect that the native language exerts over the production and perception of a second language. This is especially prominent in those aspects of language that have similar or different structures in the two languages, such as phonology, syntax or morphology [6, p. 72]. This phonetic interference is a kind of language transfer, and it accentuates elements of L1 speech and affects L2 pronunciation and prosody (stress placement, intonation, and rhythm).

Phonological Interference from L1-L2 Stress Patterns in L1 Acquisition Correct placement of stress, and for that matter, ability to reproduce stress have been viewed as key components through which stress is an important element of L2 pronunciation, and English language learners, for one, who place stress incorrectly may lead to misunderstanding or, worse still, a breakdown in communication [7, p. 384]. Zhumabayeva et al. [8] support this, finding that prosodic differences in multilingual settings, including stress and intonation, result in persistent L2 pronunciation errors, particularly for learners from non-stress-timed languages.

English, in contrast to Arabic, uses word stress and a lot of it to distinguish word meanings and grammatical categories (record noun vs. record verb). Arabic speakers face a major challenge to ESL prosody because they continue to apply their L1 fixed stress system to words in English, each of which may have multiple syllables, in a way that is radically different than how English prosody works.

Arabic has a prosodic system that is quite different from that of English, which may be a contributory factor to its learners' difficulties in the acquisition of stress. In Arabic, on the other hand, stress is less rigidly tied to word structure but rather shifts with syllable weight and morphology, meaning that in Arabic some syllables don't have stress [3, p. 123]. Thus, for Arabic speakers fixed stress might be unusual, in the sense that in English the stress placement in words has been shown to be a crucial factor in distinguishing meanings, even in minimal pairs (e.g., “permit” vs “permit”). On the part of English, fixed stress necessitates that learners emphasize syllables and place stress, a challenging task for learners whose L1 is not following fixed stress patterns [5, p. 6].

There are several features that sets Arabic phonology apart from other languages, English and Chinese for example, particularly in terms of stress and tone. Arabic phonology is an interesting aspect of the language as its morphology is based around a consonantal root system, where words are typically built upon a triconsonantal root that denotes the essential and general semantic content of the word [3, p. 47]. The Arabic language, for example, features a complex system of pharyngealized and emphatic consonants that influence the way words are pronounced and produced, and produces a prosodic structure not found in English [9, p. 67].

Arabic is a non-fixed, stress language as regards stress patterns and the stress on Arabic words does not follow a regular pattern and is more likely to differ based on syllable structure, morphological structure and syntactic function [3, p. 122]. Stress in Arabic often lands on the last or second to last syllable, but its position can change according to the structure of the word or its place in the sentence. Thus, this absence of a fixed stress system is in stark contrast with English, in which stress plays an important role in word identification and semantics. For instance, one example is in Arabic whereby the noun (doctor) ṭabīb has a variable stress from syllable to syllable, while in English there is a single fixed stressed syllable when repeated, and that is on the first syllable (DOCTOR).

On the other hand, the pronunciation of words in English is not only unique to its own natives, but is also quite different from that of the Arabic language. In other words, Word stress is lexical and morphological in English. For instance, the stress can distinguish nouns from verbs in English: 'record (noun) vs. re'cord (verb). Lastly, stress is also of vital importance in sentence prosody, where adjustment of stress on certain words assists with highlighting important information and getting a natural rhythm. One of the difficulties of English is that unpredictability of word stress; there are no rules that will generalize to all multisyllabic words. Stress in English can be on the first, second or penultimate syllables but (and there are always the exceptions in English) which makes it difficult to learn the rising stress patterns for non-native speakers [4, p. 44].

Phonetic transfer is a key idea in second language acquisition (SLA), addressing the extent to which the phonetic systems of learners' first language (L1) interfere with the production of sounds and prosodic structures in a second language (L2). A transfer of L1 phonetic features, including the length of vowels, pitch, and stress, has a notable involvement in errors in pronunciation made by L2 learners. Many Arabic-speaking learners of English exhibit transfer of mother tongue (L1) phonetic features resulting in mispronounced words that hinder intelligibility and communication. Arabic has some features of its phonological system, including, for example consonantal roots, vowel length, or specific pitch contours¹, and these features have been found to be of great importance in the developmental processes of acquisition regarding English pronunciation.

Arabic features a unique vowel length system, whereby vowels are classified as either short or long, and the length of the vowel can change the definition of a word. In Arabic vowel length is a phonemic feature with lexical implications though it is not similar to vowel length in English — which is more a function of stress and syllable structure [10, p. 112]. Sometimes this difference becomes a difficulty for Arabic-speaking learners of English due to the use of their L1 vowel length system, as a result, a common mistake in pronunciation occurs, predominantly in the case of unstressed syllables. In a case study by Flege [11] on the transfer of L1 vowel length, for example, the Arabic speaker produced English vowels similar to his L1 system, with long vowels being over-articulated or vowels being shortened inappropriately [11, p. 245]. Shortened vowels in unstressed syllables of English are particularly problematic for English learners. According to the study of Bassetti and Backley [12], Arabic speakers lengthened vowels in English syllables of a word especially if they coincided with weak syllables. Arabic also has contrast between long and short vowels, so the overgeneralisation of vowel length from Arabic to English disrupted the flow of the English language, leading to confusion because this is not a feature of English [12, p. 358]. Vowel length transfer interference may cause the mispronuncia-

tions of English words while also affecting the natural cadence of spoken English, thus influencing both the collegiate intelligibility and fluency of the learners.

So far, phonetic analysis studies have reported important findings on the role of L1 phonological features in the realization of word stress in English. Al-Bulushi [5] investigated the English word stress production of Omani Arabic–English bilingual speakers. The analysis unequivocally demonstrated that L1 interference manifested, especially in the production of multisyllabic words, where Arabic learners applied the stress-placement rules of their first language. Arabic syllables are either light (CVC) or heavy (CVC or CVCC) and the stress falls on either the first or penultimate syllable of a word, except in some morphological contexts. Unlike the fixed stress of the English language (as in noun-verb pairs 'permit' vs. 'permit'), Arabic is much more flexible with the location of stress placement in a word. Al-Bulushi [5] who found that Arabic speakers have difficulty placing stress in the appropriate positions of English words, especially longer words which take stress away from the beginning syllables. Words such as “photograph” (pho'tograph) and “photographer” (pho'tog'rapher), for example, had stress incorrectly on the first syllable, a perplexing echo of the Arabic stress pattern. The study stresses that the phonetic challenge Arabic-speaking learners encounter in acquiring English word stress patterns is reflective of the successful operation of L1 transfer [5, p. 6]. This phonetic interference becomes especially problematic in English because of the language's dependence on stress to mark meaning and grammatical contrasts.

Supporters of this argument often point to theories of Universal Grammar (UG) [13] that claim that some linguistic structures, such as stress placement, are characterized across all languages. UG stipulates that when learners are exposed to the L2, they will retain the correct placement of stress according to the universal principles, despite the different system operating in their L1 with regard to stress or prosody. So, learners with L1 from tonal as well as non-tonal languages should have the same challenges while acquiring English word stress (ESW).

The issue of spelling transfer in word stress, in particular for Arabic language learners, is not an easy problem for teachers to adapt to. The real problem here is that the stress patterns in English are relatively complex and prosody is often neglected or given limited attention in many EFL curriculum. These features make it difficult to help learners solve specific L1 interference problems.

In this study it was shown that due to tonal and prosodic features of L1, Arabic learners of English struggle with the acquisition of English word stress. Arabic does not emphasize fixed stress placement as English does, and it has a relatively predictable but more flexible pattern of stress placement that generally does not convey meaning or grammatical category the way fixed stress patterns do in English. The prosodic system of Arabic, with tonal variations and no fixed stress assignment, directly hinders Arabic-speaking learners from mastering English stress patterns. Misplaced stress, level stress, and the transfer of prosody from Arabic to English are some of the causes of difficulties experienced by Arabic-speaking learners in acquiring word stress in English. As we have discussed throughout this paper, tonal features such as pitch variation and flexible stress placement in Arabic have a considerable impact on how Arabic speakers interact with stress in English. These features carry over into the learners' pronunciation of English, resulting in errors of stress placement and rhythm, and diminished intelligibility.

The empirical studies discussed in this paper furnish strong empirical evidence to argue that the interference of the L1 (e.g. Arabic) is central to the acquisition of English word stress. Citing this particular influence, some key studies [5], [11] reported deviations in stress patterns and tonal features in Arabic learning. These studies concluded that Arabic speakers tend to misplace stress in multisyllabic words of English when they are stress-timed; they would commonly place stress on the first syllable, which represents the prosodic properties of their language, Arabic (i.e. stress in Arabic is often not fixed and is conditioned by its morphological structure). These findings are further supported by Vannestål [14] and Flege and Liu [15] who concluded that Arabic speakers bring pitch and rhythm patterns from Arabic to English,

leading to a misplacement of stress patterns and negatively impacting their pronunciation. It appears from these studies that the distinctive characteristics of the Arabic phonological system such as tones, and also its flexibility in placing stress, interfere greatly with acquiring English stress; hence, errors are expected, predictable and recurrent with Arabic speakers.

Based on the findings, it can be concluded that the tonal and stress features of Arabic influence how Arabic speakers acquire word stress in English, which means that tone affects the perception of word stress among Arabic speakers, and word stress among these learners is poorly generalised or transferred. The reviewed practical studies also give solid evidence of systematic errors such as misplaced stress and the transfer of pitch and rhythm patterns from Arabic with inappropriate adjustments. These results underscore the necessity of tackling L1 interference in EFL word stress teaching. Focusing on these errors will provide teachers with insight on what issues Arabic speakers face in learning how to stress in English, thus allowing teachers to refine their techniques to make learning English stress patterns more achievable and enhance Arabic speaking learner's pronunciation and their ability to communicate.

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