

The Use of *Ajami* Script to Enhance English Pronunciation among Adult Learners of English with Arabic Script Background

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Abstract

This article investigates the ways *Ajami* can serve as a teaching aid to enhance English pronunciation among adult Kanuri and Hausa learners in Damaturu, Yobe State, Nigeria. These learners are already literate in Arabic script through Qur'anic education but often struggle with pronouncing English words because of inconsistencies in English orthography and the absence of some English phonemes in their native languages. Using a multi-method approach and the theories of shaping and consistency, the study transliterated 100 English words into Arabic script and tested their efficacy in pronunciation training. Thirty volunteers participated in a pilot study using *Ajami* materials. Findings revealed that the Arabic script—especially when modified to accommodate missing English consonantal sounds like /p/, /v/, and /z/, along with diphthongs such as /aʊ/, /ɔʊ/, /ɪə/, and /ʊə/—provided a more intuitive and accurate framework for learners to decode and pronounce English words. Learners' prior exposure to phonological features in Qur'anic recitation, such as assimilation and vowel length, also aligned well with elements of English connected speech. The research concludes that Ajamisation, when systematically implemented, can serve as an effective pronunciation teaching strategy and recommends integrating standardized *Ajami*-based pronunciation charts, modified orthography, and culturally responsive materials into ESL curricula.

Keywords: Ajami; ESL adult learners; English pronunciation; transliteration; Arabic

Abstract in Kanuri-ajami form using Arabic letters

ذيس ريسياتش انبستيعيت هوو اجامي سكربت فو وريتين نون ارابيك لانغيجس كان ساب اس اتيتشن ايد

English has gained high recognition worldwide across native-speaking regions, second-language environments, and foreign-language contexts. It is currently being spread or spreading itself through international relations, education and travels, sports, advertisement, mainstream and social media and of course; modern technology such as films, television, software, the internet and other multimedia devices. Thus, in most countries, possession of the procedural knowledge of English language enhances upward social and academic mobility among citizens. In Nigeria for example, the English language plays a critical sociolinguistic role of being the only language that can guarantee communicative unity amongst people from the divergent ethno-linguistic backgrounds in the country, although this role is currently more obvious in Nigerian Pidgin. But then, it is a second language in Nigeria. Therefore, the background competence of Nigerian learners of English as a second language strongly influences their pronunciation. This has led to different Nigerian ‘Englishes’ when viewed from the phonological perspective. For this reason, it is the responsibility of the applied linguists to guide the Nigerian English speakers to internalise the phonology of Nigerian English that is closely related to the Received Pronunciation (RP) or an accepted standard pronunciation.

Orthography refers to the writing system of a language, comprising both its graphic symbols and the rules governing their use (Williamson, 1984). It represents the conventions for encoding speech in written form (Dobrovolsky, 2011). It is essentially a system of spelling that links a language’s sound structure with the alphabet that records it (Finegan, 2012). In this sense, orthography establishes the standards by which spoken language is represented through visual symbols. To create functional writing systems, linguists have employed logographic scripts (logograms) as well as phonographic systems such as syllabaries, consonantal alphabets, and alphabets (Dobrovolsky, 2011; Fromkin, Rodman, & Hyams, 2011). Historically, earlier forms of writing included pictograms, ideograms, cuneiform, rebuses, and hieroglyphics (Denham & Lobeck, 2013). In the Nigerian context, most languages are today written using either Roman or Arabic scripts.

This study attempts to investigate how the use of *Ajami* script can serve as a veritable tool in making the adult Nigerian learners of English that are also literate in Arabic language to improve their performance in English pronunciation. This is because in most cases, some of the people the learners consider as models do engender induced English pronunciation errors in the learners. In such situations, the learners fall back to the orthographic spelling of the words as guide. Unfortunately, the arbitrariness and inconsistency between the orthographic and phonetic spelling of English words can exacerbate stunted progress in English pronunciation among such learners because of their weak background in English orthography. Consequently, the study aims to investigate how *Ajami* can be applied in

transliterating English to support adult ESL learners with Arabic script literacy in improving their English pronunciation. It also aims to establish the possible problems one may encounter while using *Ajami* to guide adult ESL learners with Arabic script literacy in improving their English pronunciation. The study is significant because it will help teachers of English as a second language in integrated Qur'anic schools to use Ajami – which the learners are familiar with – as a scaffold for transcription instead of the International Phonetic Alphabet. It will also help the learners to use Ajami to write in the English language thus enhancing both written and spoken communication in English. Damaturu, the capital of Yobe State, provides a fertile context for this study. The area is predominantly inhabited by the Kanuri and Hausa speakers who have a foundational literacy in Arabic due to extensive engagement with Qur'anic recitation and Islamic instruction. This linguistic background presents an opportunity to utilise Ajami (Arabic-based scripts adapted for African languages) as a bridge for learning English pronunciation.

The historical development of Hausa and Kanuri Ajami in Nigeria

Ajami, derived from the Arabic word *Ajami* (meaning "non-Arabic" or "foreign") denotes the adapted use of Arabic script to represent languages of Africa. In Northern Nigeria, two most notable examples are Hausa Ajami and Kanuri Ajami, both of which have played significant roles in Islamic education and literacy (Ngom, 2016). Both Hausa *Ajami* and Kanuri Ajami exemplify the linguistic creativity and adaptability of West African Muslim communities in indigenising the Arabic script for local use. While digital technologies and Western education systems have shifted preference toward Roman scripts, Ajami continues to serve as a marker of Islamic identity, heritage literacy, and grassroots education in Nigeria.

Hausa Ajami has existed since at least the 15th century and gained prominence during the 19th-century Sokoto Caliphate flourishing (Last, 1967; Skinner, 1996). It was widely used by Islamic scholars, especially Usman dan Fodio and his followers, to write religious and didactic texts (Boyd, 1989). Hausa Ajami adapted Arabic script with modified letters and diacritics to suit Hausa phonology (Mumin & Versteegh, 2014). It flourished not only in religious contexts but also in administration, education, mass media such as newspapers, magazines and literary composition. Though modern Hausa is now predominantly written in the Latin alphabet (Boko), Ajami remains an important medium in Islamic schools (*makarantu*) and among traditional scholars, particularly in Northern Nigeria (Ngom, 2016; Musa, 2012).

Kanuri Ajami developed in parallel with the coming of Islam to Kanem-Borno Empire, extending back to the 11th century (Balogun, 1980). In Kanem-Borno, the *Sangaya* system laid the foundation for Arabic literacy and the eventual development of Kanuri Ajami. Beginning with Qur’anic recitation, Arabic sounds, and diacritics, learners advanced to writing and *tajwīd*, a process that embedded Arabic script within Kanuri society and prepared it for adaptation to local phonology (Modu & Usman, 2018). According to Modu (2012), Kanuri Ajami—the adaptation of Arabic script to Kanuri—has a long history rooted in Islamic scholarship and poetry (see also Gazali, 2005; Kabara, 2010). Scholars used it for Qur’anic instruction, poetry, history, and Islamic sciences, adapting Arabic script with diacritics and umlaut (*Guda*) to represent local vowel sounds, while semi-vowels served as lengtheners (Mustapha, 1979; Laminu, 1988, 1992; Modu, 2012). From as early as the 13th century, scholars such as Abu Ishaq Ibrahim bin Yaq‘ub Al-Kanemi, Tahir bin Ibrahim Fairamma, and Muhammad Al-Amin Al-Kanemi composed *Nazamu* in Ajami, blending Arabic orthography with Kanuri phonology (Gazali, 2005; Kabara, 2010). Because Arabic lacks certain Kanuri vowels, writers employed diacritics and innovations such as umlaut (*Imala* in Arabic, *Guda* in Kanuri) to approximate [e] and [o]. Semi-vowels (‘*alif*, *wāw*, *yā*’) were also used both as consonants and as lengtheners, thereby shaping the prosodic patterns of Kanuri poetry (Modu, 2012). To accommodate Kanuri phonology, scribes introduced diacritics and orthographic innovations such as *Guda* (umlaut) and *Sukun* to represent vowels like /e/ and /ə/ absent in Arabic, while Arabic *Madda* letters (‘*alif*, *wāw*, *yā*’) extended short vowels to long forms /aa, ii, uu/ (Modu & Abba, 2012).

While not as widely used as Hausa Ajami, Kanuri Ajami played a crucial role in transmitting Qur’anic knowledge, Sufi teachings, and legal documentation (Kuna & Yusuf, 2014). Kanuri Ajami adapted the Arabic script to suit the phonological structure of Kanuri, which contains several sounds not present in Arabic. Though its use has declined significantly, Kanuri Ajami persists in religious texts and among traditional scholars (Mumin & Versteegh, 2014). Recent scholarly interest has focused on preserving and digitising existing Ajami manuscripts, recognising their cultural and linguistic value (Ngom, 2016). As in classical Arabic, Kanuri Ajami uses *wāw*, *yā*’, and *alif* to represent long vowels /ū/, /ī/, and /ā/. The long vowel /ē/ was indicated using either an additional *yā*’ or a dotless *yā*’ with a "red alif" above it (Bondarev & Dobronravin, 2019). Only two Kanuri consonants /p/ & /tʃ/ are problematic in having appropriate Arabic scripts to represent them in Kanuri ajami. A combination of two Arabic script /ش ت/ is used for /tʃ/, and three dots are written below /b/ for /ب/ to denote /p/ in Kanuri *Ajami*, and by extension are used for English *Ajami*.

Given that Hausa and Kanuri are the native languages of the target learners, Arabic serves as their primary language of literacy due to its central role in Qur’anic and Islamic religious education, and English is the target language they aim to acquire in a formal classroom setting, it becomes essential to examine the phonological systems of English, Kanuri, Hausa, and Arabic. This comparison has helped to identify familiar phonemes and script conventions that may be leveraged to support English pronunciation instruction for these adult learners. In other words, understanding how the phonological systems of English, Hausa, Kanuri, and Arabic intersect can inform strategies for using Ajami in ESL pronunciation instruction.

Phonological comparison of English, Arabic, Hausa, and Kanuri consonants

English contains 24 consonants: /p, b, t, d, k, g, tʃ, dʒ, f, v, θ, ð, s, z, ʃ, ʒ, h, m, n, ŋ, l, r, j, w/ (Roach, 2009). Hausa, on the other hand, contains 32 consonants: /b, t, d, k, g, k^w, g^w, kⁱ, gⁱ, ʔ, ʔⁱ, ɓ, d, s’, k’, k^w, kⁱ, m, n, ɸ, ɸⁱ, s, z, ʃ, h, tʃ, dʒ, l, r, r, j, w/ (Sani, 2005), while Kanuri has 18 consonants: /b, t, d, k, g, f, s, z, n, l, r, dʒ, tʃ, m, ŋ, ŋ, h, j, w/, while [p] and [ʃ] are variants of /b/ and /s/ (Cyffer & Hutchison, 1979; Bulakarima & Shettima, 2012). In addition, the language employs six prenasalised consonants - /mb, nd, nj, ng, ny, nz/ - which function as single phonemes, though they are represented orthographically as digraphs (Bulakarima & Shettima, 2012; Modu, 2012). Other consonantal realizations arise through phonological processes, including [ɸ] (bilabial fricative), [ʔ] (glottal stop, predictable at the onset of vowel-initial words), [ŋ] (velar nasal), and [ɣ] (voiced velar fricative).

Classical Arabic has 28 consonants: /ʔ, b, t, θ, dʒ, ħ, x, d, ð, r, z, s, ʃ, ʒ, d, t, z, ʕ, y, f, q, k, l, m, n, h, w, j/ (Watson, 2002). The consonant phonemes are typically represented in Arabic script as follows: /ʔ/ as ء, /b/ as ب, /t/ as ت, /θ/ as ث, /dʒ/ as ج, /ħ/ as ح, /x/ as خ, /d/ as د, /ð/ as ذ, /r/ as ر, /z/ as ز, /s/ as س, /ʃ/ as ش, /ʒ/ as ص, /d/ as ض, /t/ as ط, /z/ as ظ, /ʕ/ as ع, /y/ as ي, /f/ as ف, /q/ as ق, /k/ as ك, /l/ as ل, /m/ as م, /n/ as ن, /h/ as ه, /w/ as و, and /j/ as ي (Watson, 2002). Common sounds across all languages include /f/, /s/, /z/, /b/, /k/, /g/, /j/, /w/, /h/, /l/, /t/, and /d/, though /g/ is absent in Classical Arabic and may require substitution or script modification. English /v/ and /ʒ/ may pose challenges as they are absent in Arabic and Kanuri, but Hausa has [ʒ] in some contexts. The voiceless bilabial plosive /p/, while not phonemic in Kanuri, does occur as an allophonic variant, giving Kanuri learners an intuitive advantage in perceiving and articulating this sound. In Hausa, however, /p/ is generally absent in the native phoneme inventory and is often replaced by /f/ in everyday speech. In practical *Ajami* applications, extended characters such as پ with three dots

marked at the bottom (for /p/) and ف with three dots marked at the top (for /v/) — already used in Persian and Hausa Ajami — can be introduced to represent these sounds more explicitly.

Comparison of English consonant phonemes reveals both similarities and divergences between English and the three languages (Arabic, Hausa & Kanuri). For instance, the dental fricatives /θ/ and /ð/, which are key sounds in English, are absent in both Kanuri and Hausa. However, these sounds do exist in Classical Arabic (represented as ث and ذ), and learners familiar with Qur’anic recitation are likely to have passive or active phonological awareness of them. This creates an opportunity for cross-linguistic transfer, allowing Arabic-script-based instruction to scaffold English pronunciation more effectively than if learners relied solely on Roman script orthography. The postalveolar affricate /tʃ/, as in *church*, is absent in Arabic but present in both Kanuri and Hausa, facilitating accurate articulation of this sound among learners from these language backgrounds. Similarly, the voiced affricate /dʒ/ and the voiceless fricative /ʃ/ are common to all three languages and pose little difficulty. Conversely, /ʒ/ (as in *measure*) is found in Hausa (mostly through loanwords), but not in Kanuri or Classical Arabic. Nasal sounds such as /m/, /n/, and /ŋ/ are shared between English, Hausa, and Kanuri, though /ŋ/ is not represented in Classical Arabic.

Classical Arabic and English share several consonant phonemes—such as /b/, /t/, /d/, /k/, /θ/, /ð/, /m/, /n/, /f/, /s/, /z/, /ʃ/, /h/, /w/, /j/, /l/, and /r/—though they often differ in articulation. For instance, Arabic /t/ and /d/ are dental, while in English they are alveolar and often aspirated. English /r/ is typically an approximant, whereas Arabic uses a trill or tap. Both languages share nasals /m/ and /n/, but English includes the velar nasal /ŋ/, which Arabic lacks. Fricatives like /f/, /s/, /z/, /ʃ/, and /h/ are common to both, though English uses voicing contrast more extensively. The lateral /l/ appears in both, but English distinguishes between “clear” and “dark” variants. Approximants /w/ and /j/ are shared as well, though Arabic also treats them as semivowels in its vowel system. Despite these shared phonemes, differences in articulation, allophony, and phonotactics reflect the distinct phonological systems of the two languages.

Some English consonant phonemes are absent from Classical Arabic, including the labiodental fricative /v/, which Arabic lacks. English also has the voiceless postalveolar affricate /tʃ/ (as in *church*), which is not a phoneme in Classical Arabic, though it may occur in loanwords or regional dialects. Another absent phoneme is the velar nasal /ŋ/ (as in *sing*), often substituted with /n/ or a nasal-plosive sequence such as /ng/. Additionally, Standard British English uses the approximant /ɹ/ for /r/, while Arabic employs a trilled or tapped /r/, leading to a notable articulatory mismatch.

Vowels

Arabic contains six vowel phonemes, which include the three short vowels /a/, /i/, and /u/ - represented by the diacritics fatha (َ), kasra (ِ), and damma (ُ)— along with their long counterparts /a:/, /i:/, and /u:/, usually represented by the letters alif (ا), yā' (ي), and wāw (و), respectively (Watson, 2002).

Kanuri also contains a set of six vowel phonemes: /ɪ, e, ə, a, u, o/ (Bulakarima & Shettima, 2012), but it does not contrast vowel length in normal speech. However, early studies (Lukas, 1937; Cyffer & Hutchison, 1979; Bulakarima, 2003) describe Kanuri as having a set of six short vowels /i, e, a, u, o, ə/, with no contrastive long vowels. Jarrett (1978) argued that Kanuri historically operated with two parallel series of short and long vowels (e.g. /i ~ ii, e ~ ee, a ~ aa, u ~ uu, o ~ oo/), although this distinction has been lost in modern spoken usage. A more recent description (Bulakarima & Shettima, 2012) confirmed that vowel length is no longer phonemically contrastive in everyday speech. Nonetheless, poetic traditions show that long vowels and diphthongs remain active in Kanuri. Modu (2012) demonstrates that vowels are lengthened in rhyme positions, especially line-final open syllables, and Arabic loanwords introduce systematic lengthening through the semi-vowels 'alif, wāw, and yā'. Diphthongs also appear in recitation through syllable reduction, idiophones, and umlaut (*Guda*). Thus, while everyday Kanuri is best described with short monophthongs, the poetic register preserves long and diphthongal vowels as prosodically significant features.

In contrast, Hausa features a more elaborate vowel system of 12 phonemes, consisting of five short monophthongs, their long equivalents, and a couple of diphthongs—/a, ɪ, o, u, e, a:, ɪ:, o:, u:, e:, ai, au/ (Newman, 1997). English, the target language, has the richest vowel system of the four, with 20 phonemes: seven short monophthongs, five long monophthongs, and eight diphthongs—/i:, ɪ, e, æ, ʌ, ɑ:, ɒ, ɔ:, ʊ, u:, ɜ:, ə, eɪ, aɪ, ɔɪ, aʊ, əʊ, ɪə, eə, ʊə/ (Roach, 2009). These vowel systems vary significantly in terms of length contrast, vowel quality, and presence of diphthongs—differences that have important implications for second language acquisition and phonological interference. These differences in vowel inventory and structure have important implications for second language acquisition. Arabic focuses on vowel length with limited vowel quality, while Kanuri offers a broader range of vowel qualities without a length contrast. Hausa adds both vowel length and diphthongs, increasing phonological complexity. English, with its extensive set of vowels and diphthongs, presents the greatest challenge for learners from these linguistic backgrounds.

Table 1 outlines the key commonalities and distinctions across the consonant and vowel inventories of the four languages in focus. The target learners (Hausa and Kanuri speakers with literacy in Arabic) may struggle with English’s central vowels (e.g., /ʌ/, /ə/, /ɜ:/) and diphthongs due to mismatches in both vowel quality and length or diphthong inventory. For the consonants, they may struggle with the voiced labiodental fricative /v/, velar nasal /ŋ/ and alveolar approximant /ɹ/ due to their absence in Arabic, Hausa and Kanuri. Extra effort should therefore be made to hasten their learning.

Table 1. Comparative summary of consonant and vowel systems in English, Arabic, Hausa, and Kanuri

Feature	English	Arabic	Hausa	Kanuri
Total Consonants	24	28	32	18
Shared Consonants with English	N/A	/b; t; d; k; θ; ð; m; n; f; s; z; ʃ; h; w; j; l; r/	/b; t; d; k; g; m; n; f; s; z; ʃ; h; tʃ; dʒ; l; r; j; w/	/b; t; d; k; g; m; n; f; s; z; h; tʃ; dʒ; l; r; j; w/
Consonants Missing from English	N/A	/ʕ; ħ; x; q; ʁ; ʔ; emphatics (ʕ; d; t; ʔ)/	/β; d; sʰ; kʰ; kʷ; ʕ; ejectives/	/ŋ; ɽ; mb; nd; nj; ng; ny; nz/
English Consonants Missing in the 3 Languages	N/A	/p; v; tʃ; ʒ; ŋ; ɹ/	/θ, ð, v, ʒ, ŋ, ɹ/	/θ; ð; v; ʒ; ɹ/
Ejectives & implosives	No	No	Yes	No
Total Vowels	20	6	12	6
Vowel Length Contrast	Yes (short vs. long)	Yes (short vs. long)	Yes (short vs. long)	No: Only in Kanuri poetry
Diphthongs	8	No	2	No: Only in Kanuri poetry
Central Vowels	Yes (/ʌ/, /ə/, /ɜ:/)	No	No	Yes (/ə/)

Script and Orthography	Latin script	Arabic script with diacritics	Latin & Ajami (Arabic-based)	Latin & modified Arabic script
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Developing the orthography of a language requires a structured and deliberate process. In this operation, a group of corpus planners collaborates to design and standardise the writing system, guided by established principles, in order to achieve effective graphisation and codification. The orthography of any language can be *ajamised*. This is possible when the principles of scriptural transferability are applied. For instance, in Iraq and Syria, Kurdish is written with an adapted form of the Arabic script, whereas in Turkey it is represented using a Roman-based script (Adamu, 2004). As such, this study is primarily concerned with how the learners' background in Arabic script can be used as a scaffold towards making them absorb and externalise English pronunciation that is nearly proximate to the Received Pronunciation (RP) or an accepted standard pronunciation.

Theoretical framework

The theoretical framework is eclectic in nature. The study adopts an eclectic theoretical stance because no single framework can adequately explain the interplay of phonological, orthographic, and sociocultural factors in Ajami-based pronunciation teaching. Combining different frameworks and perspectives provides a more comprehensive explanation than any single framework could offer. It is important to note that no unified theoretical framework exists for applying the outcomes of linguistic research (Leech & Short, 2007). For this reason, this study is underpinned by a combination of orthographic, phonological, and sociocultural perspectives that together explain the potential of Ajami as a pedagogical tool for improving English pronunciation among Kanuri and Hausa learners.

First, this study adopts Williamson's principles of accuracy and consistency in orthography, serve here as a conceptual model rather than a theory, guiding the design of the Ajamised materials. These principles emphasize a regular correspondence between phonemes and graphemes (Williamson, 1984). While English often shows inconsistency in this mapping, Ajami does not. Skinner's theory of shaping holds that complex behaviours can be acquired through reinforcement of successive approximations (Skinner, 1996). This evidence suggests that participants can be guided to use Ajami as a scaffold for accurate English pronunciation through step-by-step reinforcement. Hawkins's (1984) phonological theory further stresses that phonemes are the basic units of sound and that

phonology is concerned with their classification into phonemes and allophones. Secondly, the Orthographic Depth Hypothesis (Katz & Frost, 1992) offers a basis for explaining the challenges learners encounter with English spelling-pronunciation correspondences. English, with its deep orthography, presents inconsistent mappings between graphemes and phonemes, often confusing learners with limited exposure to alphabetic scripts. In contrast, Arabic script—already familiar to participants through Qur’anic education—represents a relatively shallow orthography when adapted to mark sound-symbol correspondences consistently. By *ajamising* English words, the study leverages the learners’ existing script literacy to create a more transparent pathway between orthography and pronunciation.

Third, this study relies on theories of second language speech acquisition, notably Flege’s Speech Learning Model (1995) and Best’s Perceptual Assimilation Model (PAM-L2). These frameworks account for how learners map unfamiliar L2 sounds onto their L1 phonological categories, a process that frequently produces substitution errors (e.g., /p/ → /b/, /v/ → /f/). By introducing modified Arabic letters to represent these English phonemes explicitly, the transliteration system provides a visual-phonological cue that facilitates the establishment of new phonemic categories. This process supports learners in distinguishing between sounds absent in their L1 and approximating more target-like English pronunciations. Finally, the study is situated within a sociocultural and translanguaging perspective (Vygotsky, 1978; García, 2009), which views learning as mediated through cultural tools and learners’ full linguistic repertoires. Qur’anic recitation practices, with their emphasis on vowel length, assimilation, and rhythmic articulation, provide learners with transferable phonological skills that align with features of English connected speech. Ajami, therefore, functions not merely as an orthographic device but as a culturally embedded resource that bridges learners’ religious literacy practices and English language acquisition. In this sense, the *ajamisation* of English words constitutes both a form of corpus planning (Cooper, 1989) and a culturally responsive pedagogy, embedding pronunciation training within familiar semiotic systems. Together, these frameworks justify the study’s central claim: that Ajami, when systematically modified and integrated into ESL pedagogy, can function as an effective scaffold for pronunciation training by aligning cognitive, phonological, and cultural dimensions of learning.

Methodology

To achieve the objectives of the study, multi-method research design was adopted. A multi-method research design entails the utilization of more than one method of data collection within a single study. The first part is secondary research where a body of literature was

reviewed to establish the possibility of scriptural transferability. The second part is corpus planning-based where attempts were made towards *ajamising* English. The third part is experimental in nature where the *ajamised* words were pilot tested on some subjects to enable this study to establish the efficacy of the *ajamised* words in prompting the accurate or near accurate pronunciation of English words. The researchers transliterated one hundred (100) English words in the Arabic script (*Ajamisation*). The *ajamised* words were subjected to reliability and validity tests. Ten subject matter experts (SMEs) who are members of academic staff at Yobe State University, Damaturu (YSU) in the Departments of Arabic and Islamic Studies were commissioned to validate the *ajamised* words by the means of transliterating them in the Roman script. A reliability of 0.95 was established thus serving as the basis for acceptance when the submissions of the SMEs were compared. As a result, the *ajamised* words were adopted for transmission to the target subjects.

Thirty adult Hausa and Kanuri learners of English, literate in Arabic script through Qur'anic education, participated as volunteers in the pilot test. Some Qur'anic schools purposively selected for the study. The researchers introduced the objectives of the pilot study to the heads of the schools. Forty-three adult learners volunteered to participate but thirty were selected via balloting as subjects of the study. One must be literate in Arabic script for one to participate in the study. All the participants were male, and they were between twenty-five and forty years. They were exposed to the *ajamised* English words to enhance their pronunciation of the words in question. The volunteers were given a post-test where they were asked to pronounce the English words written in Roman script. Each utterance was recorded and marked/assessed in respect of the expected accuracy. The *ajamised* English words were presented to the participants, and the pronunciation of the words were elicited from them at the onset of an English lesson. The researchers piloting the material confirm the correct pronunciations, correct the incorrect ones and record their performances in the task. Their performance in guessing or attempting to pronounce the *ajamised* words even before the teaching began were recorded. This was compared with the result of the post-test where they were asked to pronounce the English words written in the Roman script.

First, the project targets the English dental fricative phonemes, which have equivalents in Arabic but not in both Hausa and Kanuri. Second, it also targets phonemes with multiple orthographic representations in English but having a match between their phonetic and orthographic representation in Arabic, Hausa and Kanuri. For example, letter <s> is realised in four ways in English: [s, z, ʃ, ʒ] as in <rose, design, has, sure, sugar, issue, pressure, measure, vision> or even silent in some cases. In the *ajamised* English words, the letter <s> is given one definite representation [s] in Arabic. The aim is therefore to extract

the most common words where /s/ is realised as [z, ʃ, ʒ], and group them in the *ajamised* material. By doing this, the confusion and inconsistencies of how it is pronounced can be reduced.

The focus was on how to make the participants pronounce English words correctly. It should be noted that the participants know the meaning of some of the words. However, where it was found that they do not know the meaning of an English word, the Kanuri and/or Hausa equivalent is provided. Data from the pilot study were analysed descriptively by comparing participants' pre-instruction and post-instruction performance. Pre-instruction attempts, based on intuitive guessing from Arabic phonetic logic, were compared to post-instruction outcomes after exposure to *ajamised* and Roman-script words. Accuracy rates were calculated as percentages, and differences were interpreted in relation to phoneme-specific challenges. As earlier mentioned, reliability of the transliterations was established through expert validation, and inter-speaker variation was noted qualitatively, with attention to recurring error patterns in phoneme production.

4. Results

The results of this study are presented below in relation to each research objective. This study found that English language can be *ajamised*. The result of the pre-test given to the volunteers when they guessed or attempted to pronounce the *ajamised* words due to their knowledge of the Arabic script, acquired due to their Qur'anic expertise, even before the teaching revealed 91% accuracy. The performance increased to 98% during post-test after they have been exposed to teaching and presented with the Roman script equivalent of the *ajamised* words. This is given the fact that the Arabic alphabets used in *Ajami* represent most of the sounds found in the English language. Furthermore, the results derived from the validation and reliability test processes reveal authenticity and consistency. As a result, it is concluded that English language can be *ajamised* in such a way that there will be high correlation between written inscriptions and physical phonemic sounds.

The Arabic script is based on the alphabetic system. The alphabetic systems are characterized by tenet of each symbol representing a sound. So, the volunteers were exposed to inter-orthographic errors and intralingual errors in respect of pronouncing what is written in English in the Roman script. This is because *ajami* entails the presentation of the written form of a language that is non-Arabic in the Arabic script. This process is not novel. This is because Hausa and several languages have been *ajamised* (Yalwa, 2013). Furthermore, it has been reported that in Northern Guinea, alongside literacy in the Roman script, writing in the Arabic script is a robust practice in many communities of the Atlantic-speaking area

thus former colonial languages such as French also occasionally appear in the Arabic script (McLaughlin, 2017). An *ajamised* English as an emerging system of writing English will help adult learners of English language that have knowledge of the Arabic script to learn English very fast. In addition, it will serve as a tool for checking the challenges generated by morphophonemic orthography in English.

Scriptural transfer from one language to another is not usually an easy task. This is more apparent in a situation whereby the source script lacks some orthographic symbols that would represent some of the phonemes found in the target language. Therefore, the written representation of a language should align with its spoken form. In the case of the *ajamisation* of English, findings from preliminary investigation by the current researchers indicate that there are some English sounds that lack equivalent symbols in the normal Arabic script. This is a challenge that necessitates gap bridging to engender strict adherence to the alphabetic system. One of the major challenges one may encounter in the *ajamisation* of English is the absence of normal Arabic equivalent of the consonant sounds: /p/, /v/, /tʃ/, /ŋ/ and /z/. Furthermore, the English vowel sounds, /e/, /ʌ/, /ɜ:/, /ə/, /ei/, /aʊ/, /iə/, /eə/, and /ʊə/ appear not to have their equivalents in the normal Arabic script. This has in a sense created some challenges in the *ajamisation* project.

However, the study found that the problems identified are surmountable. This is given the fact that *Ajami* is not a direct replication of Arabic language but transliteration of English words by the means of using Arabic scripts. Accordingly, the Arabic script needs to align with the English sound system, which can be realised by adapting and modifying the existing Arabic script to represent the sounds in question. Thus, the study relies on the harmonization made in respect of the *Ajami* of other non-Arabic languages to propose what should be used as the replacements of the consonants and vowels in question. However, the vowels /ʌ/, /ɜ:/ and /ə/ can be replaced with the *Ajami* equivalents of /æ/ and /ɑ:/. This is suggested because they have near proximity in their physical realization. It should be noted that /e/ and /ɔ/ appear in the harmonised *Ajami* system; /e/ is indicated with a dot placed beneath a character adapted from the *Warsh* tradition. (one of the accepted methods of reciting the Holy *Qur'an*) style of spelling Qur'anic words and used in Kanuri *Ajami* is adopted, and for /ɔ/, a damma on top of an Arabic letter and waw < و >, is used respectively. To avoid the confusion the use of ب and ف may cause as the replacement of /p/ and /v/ it is suggested that پ and ف should be adopted or adapted as their equivalent respectively. As for /tʃ/ and /ŋ/, ظ and ب are suggested in an ESL context. In the case of /z/ the *Ajami* equivalent of /dʒ/ would be feasible in an L2 English learning environment.

Based on the above, the study's findings indicate that although the normal Arabic script lacks some orthographic symbols that correspond to some English phonemes, it does not mean that English cannot be *ajamised*. *Ajamisation* is all about adapting (modifying and not necessarily adopting) Arabic writing system to meet the orthographic requirements of other languages. For example, Soviet history shows that the government once permitted the Turkic republics to design alphabets that incorporated sounds absent in Russian but native to their own languages (Adamu, 2004). This in essence necessitated concerted and deliberate corpus planning and language engineering. In the case of Arabic, *ajamisation* became inevitable. Thus, the *ajamisation* process entails the modification of existing symbols to meet the needs of English or creation of entirely new symbols. The Roman script of English language capitalises on the use of mirror-image or reversed/inverted forms of the alphabet (Thomson, 1979). Consider the letters p, b, d, m, w among others. Depending on other *ajamisation* projects (in respect of other languages), this study provided alternatives to those sounds that are not found in the normal Arabic script. The proposed *ajamised* English was based on the alphabetic system where each orthographic symbol represents a particular phoneme. This will check the problems generated by the Roman script orthography in exacerbating intralingual errors in the pronunciation of English words by adult learners of English with prior knowledge of Arabic orthography. Tables 2, 3, 4 and 5 in the appendix summarise the proposed Arabic scripts and the English exemplar words written using the Arabic scripts.

Discussion

The phonological overview justifies the *Ajamisation* approach advocated in this study. By adapting Arabic script to match the phonemic inventory of English, learners can engage in more predictable and phonetically consistent pronunciation training. Their existing literacy skills in Arabic offer a strong foundation upon which targeted pronunciation instruction can be built, particularly when attention is paid to phonemes that are shared, approximated, or missing in their native phonological systems. This study explores the use of Ajami (Arabic script) as a tool for enhancing the English pronunciation of adult second-language learners in Northern Nigeria, particularly among Kanuri and Hausa speakers with a strong foundation in Qur'anic Arabic. The results strongly indicate that *Ajamisation* can provide significant phonological and pedagogical benefits for such learners.

First, the study reveals a strategic advantage in utilising the learners' prior literacy in Arabic script. This is especially important given their weak grounding in English orthography, which is often arbitrary and inconsistent with its phonetic realisations. For

instance, the multiple pronunciations of the English letter “s” [s, z, ʃ, ʒ] often confuse learners. In contrast, Ajami provides one-to-one sound-symbol correspondences, thereby reducing orthographic ambiguity and offering clearer pronunciation cues. Secondly, the findings show that while Classical Arabic lacks certain English phonemes—notably /p/, /v/, /tʃ/, /ŋ/, and /z/—these gaps can be bridged through script modification. Borrowed and harmonized orthographic symbols like پ (for /p/), ف (for /v/), and ز (for /z/) have been effectively used in other non-Arabic languages such as Persian, Kurdish, and Hausa Ajami. This supports the view that script adaptation is a feasible linguistic engineering solution, especially when motivated by educational need (Fishman, 1974; Coulmas, 2003; Grenoble & Whaley, 2006).

Furthermore, the experimental pilot study confirmed the potential of *ajamised* English in shaping accurate pronunciation. Learners who were exposed to *ajamised* forms prior to Roman-script instruction showed marked improvement in pronunciation, particularly with problematic phonemes. Learners’ pre-instruction attempts showed intuitive reliance on Arabic phonetic logic, while their post-instruction performance demonstrated clear evidence of positive learning transfer. The study, therefore, demonstrates that *Ajamisation* can serve as an effective scaffold for English pronunciation among Hausa and Kanuri adult learners’ literate in Arabic script. The findings confirm the relevance of the theoretical frameworks adopted. The Orthographic Depth Hypothesis (Katz & Frost, 1992) is reflected in learners’ improved performance, as Ajami provided more consistent sound–symbol correspondences than English orthography. The successful production of problematic phonemes such as /p/, /v/, and /z/ aligns with Flege’s Speech Learning Model (1995) and Best and Tyler’s PAM-L2 (2007), which explain how new perceptual cues facilitate the creation of novel phonemic categories. Learners’ reliance on Qur’anic recitation features such as assimilation and vowel length further validates the sociocultural and translanguaging perspective (Vygotsky, 1978; García, 2009), showing that cultural literacy resources can support L2 phonological acquisition.

Conclusion

This study demonstrates that *ajamisation* of English is a viable and effective strategy for improving the pronunciation skills of adult second-language learners in Northern Nigeria who are literate in Arabic script. By leveraging learners’ existing literacy practices and phonological intuitions, the transliteration of English into Arabic script provides a bridge that can bypass orthographic confusion, promote phonemic awareness, and accelerate accurate speech production. In spite of the difficulties arising from the lack of certain

English phonemes in Classical Arabic, the study shows that systematic adaptation of Arabic script, using harmonized or newly devised symbols, is not only possible but educationally beneficial. Moreover, ajami-based materials present a culturally responsive approach to English language teaching that aligns with learners' lived realities and religious learning histories. Phonological processes provide another vital means through which the ajamisation of English words can support learners in improving their pronunciation. Assimilation in particular, is the most common process cutting across all languages. It is commonly found in the English connected speech. Most of the learners use *WARSH*, style of Qur'anic recitation, and this style resembles the English connected speech in several ways. In *warsh*, consonant and vowels are interconnected both at intra and inter-lexical boundaries. It is therefore anticipated that *ajamising* the aspect of connected speech in English would enhance and facilitate rapid pronunciation learning.

Furthermore, the following are recommended in the light of the findings of the study:

Educational institutions in Northern Nigeria should consider integrating *ajamised* English pronunciation materials into adult literacy and ESL programs, particularly for learners with Qur'anic education backgrounds. To make this effective, linguists, educators, and policy-makers need to collaborate on the standardization of modified Arabic orthographies—for example, پ for /p/, ف for /v/, and ژ for /z/—ensuring that these forms are harmonized through corpus planning and validation. Teaching materials should also place a strong phonological focus on problematic English phonemes such as /ʃ/, /ʒ/, /ð/, and /ŋ/, as well as orthographically inconsistent sounds like “s,” which may represent /s/, /z/, /ʃ/, or /ʒ/. Presenting these sounds in grouped and context-specific forms can help reduce learner confusion. Additionally, English pronunciation instruction can draw on Qur'anic phonology by incorporating Warsh-style recitation techniques to teach connected speech and rhythmic features of English, thereby building on learners' existing auditory training in Arabic prosody. Further research is needed, particularly longitudinal studies, to evaluate the long-term impact of Ajami-based ESL instruction on learners' pronunciation, reading fluency, and communicative competence. Finally, policy-makers should recognize Ajami as a legitimate support system in ESL pedagogy for Qur'an-literate populations and promote inclusive, context-aware strategies in language education.

Despite these promising results, the study has some limitations. The pilot was restricted to a small sample of thirty participants from Damaturu, limiting generalisability. The focus was primarily on segmental phonemes, while suprasegmental features such as stress, rhythm, and intonation were not systematically addressed. Moreover, the study relied on short-term post-test measures, which do not capture long-term retention. Some of the proposed script modifications also remain provisional and require further corpus planning

and validation. Another limitation of the study is cultural issues barred adult female literate in Ajami to participate in the study. In addition, inadequate financial support limited the ability of the researchers to recruit many participants for the study. It is therefore recommended that future research should focus on the Ajamisation of connected English speeches using Warsh as a model. Future studies should also adopt longitudinal and multi-site designs to test durability and variation across contexts, extend analysis to suprasegmental features, and compare Ajami-based with Roman-script-only instruction. Collaborative corpus planning research is also needed to refine and standardise modified orthographies for English Ajami.

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Appendix

Table 2. English consonants with Arabic script as pronunciation guide for Kanuri and Hausa Adult Learners of English in Damaturu, Nigeria.

/f/ fan, life	/v/ van, love	/θ/ think, bath	/ð/ this, mother	/s/ see, bus	/z/ zoo, buzz	/tʃ/ chip, match
ف	ف	ث	ذ	س	ز	تش
فان، لايف	فان، لوف	ثينك، باث	ذس، مادر	سي، بس	زو، بز	تشيپ، ماتش
/dʒ/ jam,	/ŋ/ sing,	/p/ hope, pin	/b/ bat, cab	/ɪ/ ladder	/j/	/k/ cat, back
ج	ن	پ	ب	ر	ي	ك
جام، اج	سنگ، لوڭگ	پن، هوپ	بَت، كاب	لادر	يس، يلو	كات، باك
/g/ big	/ʃ/ shoe	/z/ measure	/w/	/m/ man	/n/ no, son	/h/
ج/ك	ش	ز	و	م	ن	ه
فو، بگ	شو، كراش	مزر	وي، ون	مان، سم	نو، سن	هت، بهابند
/l/ full	/t/ cat	/d/ dog, bad				
ل	ت	د				
فل، لت	تَب، كات	دوگ، باد				

Table 3. English monophthongs with Arabic script as pronunciation guide for Kanuri and Hausa Adult Learners of English in Damaturu, Nigeria.

/ɪ/	/ʊ/	/e/	/ə/	/ʌ/	/ɒ/	/æ/	/i:/	/u:/	/ɜ:/	/ɔ:/	/ɑ:/
إِ	أُ	إِ	أَ	أُ	وُ	أَ	إِي	أُو	إِر	أُوأَ	أَ

bit, sit	put, good	bed, said	about, ago	cup, luck	hot, not	cat, bad	see, beat	blue, food	her, bird	saw, talk	car, father
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Table 4. English Diphthongs with Arabic Script as Pronunciation Guide for Kanuri and Hausa Adult Learners of English in Damaturu, Nigeria.

/ɪə/	/ʊə/	/eə/	/aɪ/	/eɪ/	/ɔɪ/	/aʊ/	/əʊ/
إِي	ؤَا	إِي	آي	إِي	ؤَاي	أُو	أُو
near, hear	poor, sure	there, care	my, cry	say, day	boy, toy	now, how	go, no

Table 5. English consonants with Arabic script as pronunciation guide for Kanuri and Hausa Adult Learners of English in Damaturu, Nigeria.

IPA Symbol	Exemplar Words	Suggested Arabic Script	Suggested Arabic Script example words
/f/	fan, life	ف	فان، لايف
/v/	van, love	ف	فان، لوف
/θ/	think, bath	ث	ثينك، باث
/ð/	this, mother	ذ	ذس، ماذر
/s/	see, bus	س	سي، بس
/z/	zoo, buzz	ز	زو، بز
/tʃ/	chip, match	تش	تشيب، ماتش
/dʒ/	jam, edge	ج	جام، اج
/ŋ/	sing, long	نْ	سينگ، لونگ
/p/	pen, hope	پ	پن، هوپ
/b/	bat, cab	ب	بت، كاب

/r/	ladder (AmE)	ر	لَادَر
/j/	yes, yellow	ي	يَس، يَلُو
/k/	cat, back	ك	كَات، بَاك
/g/	go, big	ج/ك	قُو، بِيْگ
/ʃ/	shoe, crash	ش	شُو، كَرَاش
/ʒ/	measure, vision	ژ	مِژَر، قِژَن
/w/	we, win	و	وِي، وِن
/m/	man, some	م	مَان، سَم
/n/	no, sun	ن	نُو، سَن
/h/	hat, behind	ه	هَت، بِيْهَائِنْد
/l/	let, full	ل	لَت، فُل
/t/	top, cat	ت	تُب، كَات
/d/	dog, bad	د	دُوْگ، بَاد